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# OAKLAND UNIVERSITY

## UNDERGRADUATE CATALOG

1980-1982



Oakland University is a legally autonomous state institution of higher learning. Legislation creating Oakland University as an independent institution, separate from Michigan State University, was established under Act No. 35, Public Acts of 1970. The university is governed by an eight-member board of trustees appointed by the governor with the advice and consent of the state senate. The president of the university is appointed by the board of trustees and is an ex officio member without vote. The board also appoints a secretary and treasurer.

#### BOARD OF TRUSTEES

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#### PLEASE NOTE

All data in this catalog reflects information as it was available on the publication date. Oakland University reserves the right to revise all announcements contained in this publication and at its discretion to make reasonable changes in requirements to improve or upgrade academic and nonacademic programs.

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## CORRESPONDENCE DIRECTORY

Mailing address: Oakland University, Rochester, Michigan 48063. Officers of the university will be pleased to answer questions. For prompt attention address specific inquiries to the officers listed below. Telephone numbers are also included (area code 313).

**ADMISSIONS INFORMATION AND BULLETINS:** Undergraduate Students—Director of Admissions: 377-3360; Graduate Students—Graduate Admissions Officer 377-3166

**BUSINESS MATTERS:** Vice-President for Business Affairs 377-2240

**CAREER ADVISING AND PLACEMENT:** Director, Career Advising and Placement Office 377-3250

**CONTINUING EDUCATION:** Dean of Continuing Education 377-3120

**EDUCATIONAL PROGRAM, TRANSCRIPTS, ACADEMIC REPORTS:** Registrar 377-3450

**LOANS AND ON-CAMPUS EMPLOYMENT:** Financial Aid Officer 377-3370

**SCHOLARSHIPS AND GRANTS:** New Students—Director of Admissions 377-3360; Other Undergraduates—Director of Financial Aid 377-3370; Graduate Students—Dean of Graduate Study 377-3166

**STUDENT AFFAIRS AND SERVICES:** Undergraduate Students—Vice-President for Campus and Student Affairs 377-3350; Graduate Students—Dean of Graduate Study 377-3166

**STUDENT HOUSING:** Director of Residence Halls 377-3570

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# INTRODUCTION

Oakland University is a medium-size public institution with a diverse set of academic offerings at the undergraduate and graduate levels. Anchored by a strong liberal arts program, the university is organized into a College of Arts and Sciences, and Schools of Economics and Management, Engineering, Human and Educational Services, Nursing, and Performing Arts, a Center for Community and Human Development, a Center for General and Career Studies, and a Center for Health Sciences.

All academic programs of the university are accredited by the North Central Association of Colleges and Schools.

The university faculty, whose number now exceeds 400, has a distinguished record of research and scholarship. One of the focal points of the research is the Institute of Biological Sciences, a nationally recognized center for research of the eye. The university computing facilities include a modern Honeywell central computer and two Honeywell mini-computers.

The university has also established national reputations in several undergraduate and graduate degree programs.

Complementing its academic program, Oakland has a major public service program with emphasis on the professional performing arts. Meadow Brook Theatre, a professional theatre, is located on the campus. Meadow Brook Music Festival is the summer home of the Detroit Symphony Orchestra. Meadow Brook Hall, home of the university's benefactors, now serves a major conference and cultural center.

The university was founded in 1957 when the late Mr. and Mrs. Alfred G. Wilson donated their 1,500-acre estate and \$2 million to Michigan State University to begin a new college in Oakland County. Named Michigan State University-Oakland, the new campus enrolled its first students in 1959. In 1963, the name was changed to Oakland University, and in 1970 the State Legislature recognized the maturity and stature of Oakland and granted the university its independence. The governor appointed Oakland's first Board of Trustees in fall 1970.

Located between the cities of Pontiac and Rochester, Oakland is easily accessible to millions of residents in the metropolitan Detroit area because of its proximity to major freeways. The natural beauty of the campus, much of it still wooded and undeveloped, is enhanced by a comprehensive set of recreational facilities and a modern physical plant that houses the university's academic and public service programs. The university has seven residence halls.

## Equality of Opportunity

Oakland University is committed to a policy of equality of opportunity for students, faculty, and staff. In addition, the university recognizes the requirements of state and federal laws regarding equal opportunity and nondiscrimination. To carry out these commitments, the Board of Trustees of Oakland University has adopted the following policy:

*It shall be the policy of the Board of Trustees to provide equal opportunity to all students and employees and all other members of the Oakland University community regardless of race, color, religion, sex, age, national origin, or ancestry. No discrimination shall be allowed in housing, employment, the academic program, or any other activity supported or subject to approval by the university. No organization may exist on the Oakland University campus if it operates to discriminate against potential members on the basis of race, color, religion, sex, age, national origin, or ancestry.*

Some of the federal nondiscrimination laws which the university recognizes are:

Titles VI and VII of the Civil Rights Act of 1964, as amended, prohibiting discrimination in services and employment on the basis of race, color, religion, national origin, and sex.

Title IX of the Higher Education Amendments of 1972 and the regulations of the Department of Health, Education, and Welfare prohibiting discrimination based upon sex.

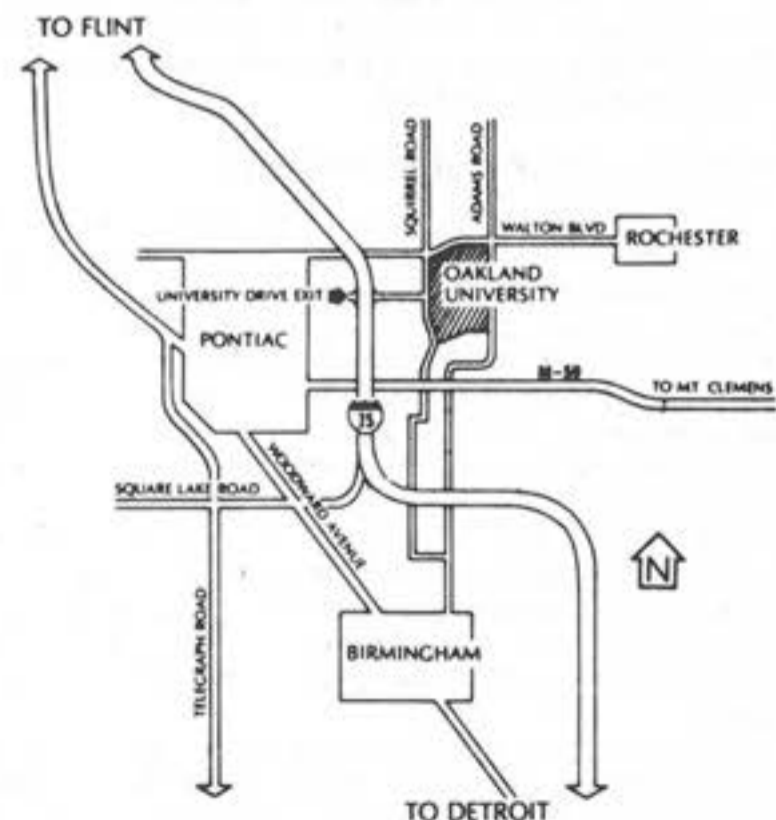
Section 504 of the Federal Rehabilitation Act of 1973 prohibiting discrimination on the basis of handicap in any program or activity receiving federal financial assistance.

Inquiries concerning the application of the above provisions and laws may be referred to the Assistant to the President and Director of Urban Affairs whose address is 140 North Foundation Hall, Oakland University, Rochester, Michigan 48063, and whose telephone number is 377-3487.

## Family Educational Rights and Privacy Act, 1974

The federal Family Educational Rights and Privacy Act, 1974, pertains to confidential student educational records. This legislation allows students the right to view upon request their own confidential educational records and restricts the use of these records by others. Copies of the Family Educational Rights and Privacy Act, 1974, may be obtained from the assistant to the dean for student life, 144 Oakland Center (377-3352), or from the U.S. Department of Health, Education, and Welfare.

Notification of Oakland University compliance with this legislation may be found in the Oakland University Policy Statement on the Family Educational Rights and Privacy Act (available at the office of the dean for student life), in the appropriate *Schedule of Classes* and the undergraduate and graduate Oakland University catalogs. The assistant to the dean for student life is the university compliance officer for the Family Educational Rights and Privacy Act. Any questions, grievances, complaints, or other related problems may be addressed to the compliance officer and/or filed with the U.S. Department of Health, Education, and Welfare.



# GENERAL INFORMATION

## ADMISSION

### Admission to Freshman Standing

Candidates for admission to undergraduate degree programs should have completed regular high-school level college preparatory work or otherwise demonstrated sufficient academic preparation to begin or continue college work. Highly qualified students may be admitted without regard to the pattern of subject matter completed at their high school. Students planning majors in the sciences, mathematics, engineering, or management should present at least three years preparation in mathematics, including algebra, geometry, and trigonometry. Consideration for admission is based upon an applicant's total background including high school academic achievement, recommendations, educational goals, and potential for success at the university.

Students entering as freshmen must submit scores from the American College Test (ACT). Prospective applicants are encouraged to take the ACT in the spring of their junior year and have scores sent to the university (School Code 2033). Students unable to submit scores from the spring testing must submit scores before enrolling as freshmen. Test scores will be used for counseling purposes only and will not be part of the credentials necessary for consideration of the applicant.

Applications for undergraduate admission are available from high school counselors or from the university admissions office. They should be submitted as early as possible in the senior year.

### Admission of Special High School Students

Specially qualified high school students may be permitted to enroll in classes on a part-time nonmatriculated basis. Students who wish to pursue course work at the university which is not available at their high school must present a letter of endorsement signed by their high school principal and counselor. An application for undergraduate admission and a copy of the current transcript must accompany the principal's endorsement. Admission as a special high school student is valid for one semester or session only. A student wishing to take subsequent courses must receive the principal's endorsement for each term for which he/she plans to enroll.

### Admission of Transfer Students

Transfer students may enter Oakland University at four different times: fall semester, winter semester, spring session, or summer session. Students are encouraged to submit their applications at least six weeks before the beginning of the term in which they wish to enroll. Applicants in good academic standing (commonly defined as a cumulative college grade point average of 2.00 or higher) at their previous college or university and who have completed 26 or more semester credits normally will be admitted. Applicants who are in good academic standing at their previous college or university and who have not completed 26 or more semester credits may be admitted if one or more of the following indicate likely success at Oakland University: high school work, letters of recommendation, test scores, or an interview with a university admissions adviser.

Every transfer candidate must complete an application and request the registrar of each college or university previously attended to send an official transcript of record to Oakland's admissions office. Oakland will review these transcripts and determine the number of credits which are applicable to the student's proposed program. (A subsequent change in program

may result in an adjustment of transfer credits applicable to the new program.) Credits will be accepted in transfer only from institutions accredited by one of the nationally recognized regional agencies and only for courses in which a grade of C (or equivalent) or better was earned. Oakland will transfer the number of semester-hour credits for which a course was taken, regardless of the number of credits a similar course at Oakland University may carry.

A student who has completed 62 semester hours of credit from any accredited institutions, including Oakland University, may not transfer additional credits from a community or junior college. Technical and applied science courses will be granted credit only where the courses relate directly to the intended major.

### Special Note for Transfer Students from Michigan Community Colleges

Oakland University's baccalaureate programs are designed to accommodate students from community colleges. Early application is recommended so that candidates can take advantage of the services extended to community college transfer students. Transfer students from community colleges are eligible for the same financial aid programs and other services available to students who enter the university directly from high school.

Oakland University participates in the Michigan Association of Collegiate Registrars and Admissions Officers (MACRAO) Articulation Agreement. Graduates of participating Michigan public community colleges whose transcripts bear the stamp "MACRAO Agreement Satisfied" are considered to have met most, and in some programs all, of Oakland's general education requirements. Prospective transfer students should consult their community college counselor or an Oakland University admissions adviser for further information.

### Admission of Students Whose Formal Education Has Been Interrupted For Three or More Years

The admission of individuals whose formal education has been interrupted for three years or more, and who would not normally meet other admission criteria, may be based on one or more of the following: sustained employment record; recommendations from employers, educators, and other professionals; success in formal training programs; and standardized test results. An interview with a university admissions adviser is required for such applicants to be considered for admission.

### Admission of Students Who Are Not Citizens of the United States

A foreign student should write to the admissions director at least one year before he/she wishes to be admitted. The candidate will be sent instructions and an application form to be completed and returned at once. When the application is approved, the candidate will receive a certificate of admission and form I-20 to enter the university. These are to be used to apply for the appropriate visa. Prior to the student's official registration, proof of adequate medical insurance plus a signed authorization for emergency medical treatment must be on file in the university health center.

Students who are not U.S. citizens and who are transferring from other institutions must apply for permission to do so through the immigration office nearest them. Before apply-

ing for permission to transfer, the candidate must have form I-20 from Oakland University and form I-538 from the school from which he/she is transferring.

### Admission to Guest Status

Students enrolled at accredited Michigan colleges and universities may apply for guest admission by filing the Michigan Uniform Undergraduate Guest Application form, which is available from the registrar's office at their home institution. It should be submitted to the admissions office six weeks before the beginning of each semester or session in which the student plans to attend as a guest. Students attending Michigan colleges or universities are not required to submit transcripts.

Students attending accredited colleges and universities outside of Michigan may apply for guest admission by filing Oakland's guest application form six weeks before the beginning of each semester or session in which they plan to attend. These applications may be obtained from Oakland's admissions office and must be accompanied by a transcript of grades from the institution to which the student plans to return.

### Post-Baccalaureate Status

Post-baccalaureate status may be granted applicants who have a bachelor's degree from an accredited college or university and wish to take additional undergraduate courses. Application for this type of admission should be made through the undergraduate admissions office. In certain special cases a post-baccalaureate student may earn a second undergraduate degree by completing an approved special program of study (see "Additional Undergraduate Degrees and Majors," page 13). Special applications for this study are available from the undergraduate admissions office.

### Advanced Placement

Credit toward graduation is granted to students presenting evidence of satisfactory completion in high school of examinations under the Advanced Placement Program of the College Entrance Examination Board. Oakland gives credit for grades "5" or "4" in the advanced placement examinations. If a grade of "3" is achieved, the examination is subject to review by the department concerned, which may grant advanced placement with or without credit toward graduation.

### Credit by Examination (CLEP)

Credit toward graduation can be granted to students demonstrating competence in the various areas tested in the College-Level Examination Program administered by the College Entrance Examination Board, Princeton, New Jersey 08540. (Candidates who wish to use CLEP tests as admissions credentials should have their scores forwarded to the director of admissions.)

CLEP examinations are of two types, general and subject. General examinations are offered in English composition, humanities, mathematics, natural sciences, and social sciences and history. Oakland grants 6 credits for each examination passed with a score of at least 600, no subscore below 55, and an average of subscores of at least 60, provided that:

- the student has not accumulated 32 credits at the time of the examination; and
- the student has not previously done work for college credit in the field of the examination.

Credit for CLEP subject examinations is granted according to the following stipulations:

- Nontransfer students must not have accumulated 64 credits at the time of the examination; transfer students must not yet have earned 32 Oakland credits.

- Examinations must have scores of 60 or better, and each subscore must be at least 60.
- The student must not previously have taken more advanced work in the field of the examination.
- The amount of credit shall be either 3 or 6 semester hours, at the discretion of the academic unit responsible for the subject.

### Financial Assistance

Oakland University offers two programs of financial assistance to students: achievement scholarships and need-based grants-in-aid. Achievement scholarship opportunities are not contingent upon financial need; however, students may qualify for both a grant-in-aid and an achievement scholarship.

### Need-Based Grants-in-Aid

Students without sufficient funds to finance their education may qualify for assistance under one or more of these programs: Basic Educational Opportunity Grant (BEOG), Supplemental Education Opportunity Grant, National Direct Student Loan, College Work Study Program, and Oakland University Grant-in-Aid.

These programs, along with the federally insured Guaranteed Student Loan and the Michigan State Direct Student Loan, allow Oakland University to assist students so that no person needs to be denied the opportunity for higher education due to inability to pay.

In addition, the following awards are made each year as part of the grant-in-aid program:

- Don Iodice Grant-in-Aid Program for Foreign Study
- Oakland Alumni Association Upperclass Scholarship
- Oakland County Medical Society Women's Auxiliary Scholarship
- Pontiac Central High School Scholarship
- Daily Tribune Carriers Scholarship

### Procedures for Applying for Need-Based Aid

Entering freshmen and transfer students must submit a Financial Aid Form to the College Scholarship Service. They must also file an Oakland application for financial aid and a copy of the family's most recent federal income tax form 1040 and the corresponding W2 forms with the university financial aid office (205 Wilson Hall). Continuing students or those applying for readmission should follow the same procedure, and application must be made each year that renewal of aid is desired. Transfer students must provide a financial aid transcript from each post-secondary educational institution attended prior to entering Oakland University.

All students requesting Oakland University need-based aid must apply for the federal Basic Educational Opportunity Grant.

All application materials may be obtained from the financial aid office. The Financial Aid Form is also available from high school counselors.

Stipends range from full tuition, room and board, to a minimal amount depending on the degree of financial need shown in the application.

### Short-Term Loans

Short-term, no-interest loans are available for personal and emergency needs, but not for payment of regular university fees for tuition, room and board, or any other fees that can be anticipated. These loans are made possible by gifts to the university from the following individuals and groups:

- Century Brick Loan Fund
- Civitan Loan Fund
- H. H. Corson Loan Fund
- Kenneth B. Covert, Jr. Memorial Loan Fund

## 6/General Information

Pat Dandurand Memorial Loan Fund  
Greater Pontiac Centennial Student Loan Fund  
W. Everett Grinnell Loan Fund  
C. Allen Harlan Loan Fund  
George N. Higgins Loan Fund  
Insurance Women of Detroit, Inc. Loan Fund  
Lathrup Village Women's Club Fund  
John A. MacDonald Loan Fund  
James Mangrum Loan Fund  
Emily Moses Memorial Loan Fund  
Oakland County Engineering Society Loan Fund  
Oakland University Alumni Loan Fund  
Eric Pelzner Memorial Loan Fund  
Piety Hill Chapter of the Daughters of the American  
  Revolution of Birmingham Loan Fund  
Mark Platt Memorial Loan Fund  
Pontiac Kiwanis Club Loan Fund  
David R. Robson Memorial Loan Fund  
Li Russ Club Student Loan Fund  
Joan Selby Memorial Loan Fund  
Paul Solonika Loan Fund  
William Spickler Memorial Loan Fund  
Student Activities Coordinating Council Loan Fund  
Henry Tiedemen Loan Fund  
Warren Tope Memorial Loan Fund  
Michael Werenski Memorial Loan Fund  
Walter K. Willman Loan Fund  
Women's Literary Club of Pontiac Loan Fund

### Achievement Scholarships

The wide range of scholarship opportunities at Oakland University indicates the scope of the university's commitment to academic excellence and student leadership. Scholarships are awarded on the basis of accomplishment and are not contingent upon financial need. Most awards are made in early spring for the next academic year.

Applicants for admission to the university who wish to be considered for an achievement scholarship should send a scholarship application to the director of admissions. Maximum consideration is given to applications received before April 1.

Many scholarships are renewable if the holder sustains the excellence which led to the original award. Renewal is not automatic, however, and scholarship recipients should apply for renewal to the financial aid office before March 1.

A limited number of new scholarships is awarded each year to continuing students. Application should be made to the financial aid office before March 1.

Major achievement scholarships are:

**American Association of University Women (Oakland and Farmington branches) Scholarships:** awarded to mature students with family responsibilities whose undergraduate education has been interrupted.

**Athletic Scholarships:** awarded to men and women athletes with ability in one of the intercollegiate sports offered at Oakland University. Stipends vary and are renewable for a maximum of eight semesters.

**Boy's Club of Royal Oak Scholarship:** awarded to a student recommended by the director of the Boy's Club of Royal Oak. The award is \$300 per semester for a maximum of eight successive semesters.

**Community College Scholarships:** recognize academic achievement of students transferring from accredited community or junior colleges in Michigan. Candidates should have a minimum grade point average of 3.00 for all college credit earned with at least 55 semester hours of transferable work. Stipends are \$500 per semester, for a maximum of four successive semesters. Students must maintain a 3.00 grade point average.

**Edith Harris Memorial Scholarship:** awarded to mature students with family responsibilities whose undergraduate education has been interrupted. Awards are based on academic excellence. Candidates must have completed 28 credits in the academic year preceding the award, and recipients must enroll for at least 12 credits in each semester in which the award is received. Stipend is one-half tuition for the academic year.

**Engineering Scholarships:** awarded to entering engineering students based on high school grades and scores on a standardized test. Stipends are \$600 per academic year and may be renewed for a total of eight successive semesters as long as a student maintains a 3.00 grade point average and continues to major in engineering.

**Honors Scholarships:** awarded to students with a 3.75 grade point average in high school. Stipend is \$100 or \$200, and is not renewable.

**Isaac Jones Memorial Scholarship:** awarded to a promising student from Pontiac. Stipends are \$800 per academic year and may be renewed for up to eight successive semesters.

**James Morrison Thompson Chemistry Scholarship:** Awarded to eligible chemistry majors for one year. Students selected must have completed their sophomore year with a minimum overall grade point average of 3.00 and a minimum grade point average of 3.50 in chemistry and mathematics courses.

**The Mary Fogarty Anibal and Eleanor Anibal Burgum Memorial Scholarship:** awarded to students who have demonstrated in high school that they are capable of superior scholarship at Oakland University. Stipends are \$2,000 per academic year and are awarded for up to eight successive semesters. The student must maintain a cumulative grade point average of 3.25 to be eligible for renewal of this scholarship.

**Music Scholarships:** awarded to freshmen or community college transfers with exceptional music performance ability. Candidates must audition with the Department of Music. Stipends normally are \$250 or \$500 per academic year for a maximum of eight successive semesters for students who enter as freshmen or four successive semesters for students who enter as transfer students. Additional awards are available to students selected as members of performing ensembles. Students must continue to major in music.

**Oakland County Medical Society Women's Auxiliary Scholarship:** awarded on the basis of merit to five eligible nursing students.

**Oakland University Competitive Scholarships:** awarded to freshmen based on high school grades and scores on the OU Competitive Scholarship Exam, normally administered each February. Stipends are \$400 to \$800 per academic year and may be renewed for a maximum of eight successive semesters as long as a student maintains a 3.00 grade point average.

**The Oakland University Foundation Scholarship:** awarded each year to a high school student of exceptional ability and achievement to permit residence at Oakland while pursuing full-time study. Candidates must be nominated by their high school principal. Stipends are \$2,500 per academic year for a maximum of eight successive semesters. A recipient must complete 30 credits each academic year with a cumulative grade point average of at least 3.25 to be eligible for renewal of this scholarship.

**Student Life Scholarships:** awarded to students who have shown leadership potential, either in high school or community college. Students must have a minimum 3.00 average and be active in cocurricular or extracurricular activities. Stipends are for room and board only and range up to \$1,000 per year. They may be renewed for a total of eight successive semesters.

**United Auto Workers Golf Classic Scholarship:** Awarded in the amount of \$1,000 to an eligible student who shows promise of fulfilling a socially worthwhile career and contributing to the advancement of the quality of life for people



in our society. Recipients are chosen by UAW Golf Classic Scholarship Committee.

**Mr. and Mrs. Roger M. Kyes Scholarship:** a tuition scholarship for one year awarded for academic excellence to an undergraduate English-major student. Scholarship recipients are selected by the English faculty.

**William Morris Scholarship:** Awarded to upperclass undergraduate students in recognition of academic excellence and effective citizenship. Scholarship recipients are recommended by the faculty and selected by the William Morris Scholarship Committee. The award is for one year, and stipends range from \$250 to \$1,000.

**Upper Class Achievement Scholarships:** awarded to continuing Oakland students based on scholastic achievement. Candidates must have a 3.50 grade point average at the end of the previous winter semester and must have earned at least 32 credits at Oakland University during the previous academic year. Recipients must be enrolled for 16 credits each in fall and winter semesters. Stipends are \$250 per academic year.

All scholarships listed above are contingent upon maintaining normal progress toward graduation. Other scholarships awarded annually include the Sally Borus Piano Award, the Lee Grekin Memorial Scholarship, the John Engerson Memorial Scholarship, and the Friends of Teruko Yamasaki Award.

Funds for the Oakland University scholarship programs are derived from the general budget, gifts from individuals, groups, and corporations, and from the fund-raising efforts of the Oakland University Scholarship Committee for Macomb County. The special scholarship funds are:

Mr. and Mrs. Benjamin Anibal Scholarship Fund  
 Marshall Page Atkinson Memorial Scholarship Fund  
 Campbell-Ewald Scholarship Fund  
 George H. Gardner Scholarship Fund  
 C. Allen Harlan Scholarship Fund  
 Herbert M. Heidenreich Scholarship Fund  
 Ormond E. Hunt Scholarship Fund  
 Harry A. MacDonald Memorial Scholarship Fund  
 Mildred Byars Matthews Memorial Scholarship Fund  
 Oakland University Women's Club Scholarship Fund  
 Village Women's Club of Birmingham Scholarship Fund  
 Ruth E. Wagner Scholarship Fund  
 A. Glen Wilson Scholarship Fund  
 Matilda R. Wilson Memorial Honor Scholarship Fund  
 Thomas E. Wilson Scholarship Fund

## TUITION/FEES

The Board of Trustees of Oakland University reserves the right to change any and all fees and rates of charge when circumstances make change necessary. Tuition and fees quoted in this catalog are from the 1979-80 academic year. The registrar's *Schedule of Classes* for each semester or session carries a listing of current charges.

All fees are assessed and payable, in U.S. dollars, at registration. Students are urged to use checks or money orders payable to Oakland University, rather than cash, for fee payment. Master Charge and Visa credit cards may be used for payments not exceeding \$300.00 when payments are made in person. If checks or money orders exceed the required payments, the balance will be given to the student. Nonpayment of fees will result in cancellation of registration. Checks returned by the bank will place a student in a nonpayment status.

Tuition and fees for graduate students also apply for post-baccalaureate students.

## Course Fees: On-Campus Programs

All course fees and special fees must be paid in full before a registration is considered final.

Michigan residents who register as undergraduates are assessed \$27.25 per credit. Those who register as graduate stu-

dents are assessed \$38.50 per credit. All students who have not maintained Michigan residence for 12 consecutive months immediately prior to enrollment are assessed tuition at out-of-state rates: undergraduates, \$67.00 per credit; graduate students, \$75.00 per credit.

## Course Fees:

### Off-Campus Extension Programs

Students who register as undergraduates for off-campus extension courses are assessed \$32.50 per credit. Those who register as graduates are assessed \$43.00 per credit.

## General Service Fees

Undergraduates who register for 10 or more on-campus program credits are charged an additional \$49.50 (\$16 Oakland Center fee, \$6 transportation use fee, \$7.50 activity fee, \$10 enrollment fee\*, \$5 athletic fee, and \$5 health service fee).

Undergraduates who register for less than 10 on-campus program credits are charged an additional \$33.00 (\$8 Oakland Center fee, \$3 transportation use fee, \$6.00 activity fee, \$10 enrollment fee\*, \$3.50 athletic fee, and \$2.50 health service fee).

Graduates who register for 10 or more on-campus program credits are charged an additional \$37 (\$16 Oakland Center fee, \$6 transportation use fee, \$10 enrollment fee\*, and \$5 health service fee).

Graduates who register for less than 10 on-campus program credits are charged \$23.50 (\$8 Oakland Center fee, \$3 transportation use fee, \$10 enrollment fee\*, and \$2.50 health service fee).

Students registered for off-campus courses are assessed a \$10 enrollment fee\*.

Special fees are also charged for applied music instruction and some special courses as follows:

ED 455	\$35.00
ED 597	\$50.00
Applied Music:	
Individual Instruction	\$75/2 credits
Group Instruction	\$20.00

\*Nonrefundable

## Course Competency by Examination Fee

Michigan residents who register as undergraduates for course competency by examination are assessed \$12 per credit. Those who register for course competency as graduate students are assessed \$15 per credit.

Students who are not Michigan residents are assessed \$33 per credit for course competency registrations. See page 13 for course competency regulations.

## Late Registration Fee

Students registering or paying initial fees after classes officially begin and up to the end of the late registration period must pay an additional nonrefundable late registration fee of \$15. Students who take courses exclusively within a program scheduled to register after the beginning of classes are not required to pay the late registration fee if they register during the special registration session scheduled for such groups. Tuition checks returned by the bank are considered nonpayment and will result in cancellation of registration or assessment of the late registration fee.

## Late Add Fee

Registered students who add classes after the end of the second week of classes (first week for spring and summer sessions) must pay a nonrefundable fee of \$5 per class in addition to the cost of the credits added. Classes may not be added after the end of the fourth week of a semester (second week for spring and summer sessions and half-semester courses).

## 8/General Information

### Late Penalty Payment

Late payment of outstanding balances due for tuition, fees, and/or housing will result in assessment of a late payment fee of \$5 per billing. Balances due paid by checks that are returned by the bank are considered nonpayment and will result in assessment of the \$5 fee.

### Application Fee

A \$15 fee must accompany all applications for admission to degree programs. This is a nonrefundable processing fee which is paid only once.

### Enrollment Deposit

Students admitted for the fall semester must pay a non-refundable \$50 deposit by May 15 preceding their fall enrollment. Students admitted after May 15 for the next fall semester must pay the deposit within three weeks of admission. This deposit will be applied to the student's account and will offset future fee assessments.

### Graduation Service Fee

Before or during their last semester or session, degree candidates must file an application-for-degree card with the Office of the Registrar and must pay a nonrefundable fee of \$10. (see "General Undergraduate Degree Requirements," page 12) by the deadline established in the Schedule of Classes for that semester or session.

### Orientation Fee

A \$35 orientation fee for freshmen (\$10 for transfer students and exclusively evening students) is charged to cover the expense of orientation and the ongoing advising process. These fees are nonrefundable. (New students whose registration consists entirely of off-campus courses are not assessed this fee.)

### Fees for Residential Services

The residence halls are financially self-supporting. Housing fees reflect the actual cost of operation and are established by the university's Board of Trustees. The rate is \$1888.00, which includes \$1847.00 for room and board, \$11.00 hall government fee, and a \$30 debt service reserve charge. Single rooms may be rented, as available, for an additional \$450.00. A special option of room only (\$1178.00) is available to upper-level students.

If the student signs a housing contract before or during fall semester, that contract is binding for both fall and winter semesters. If the contract is signed during winter semester or spring or summer sessions, it is binding for that particular period only. The housing fee may be paid in full at registration or, in fall or winter semester, paid in four installments, the first at registration. The remaining three installments are due on the 10th day of each of the three months following registration, except for December, when payment is due on the first.

If a student withdraws from the university, room and board fees are refunded on a prorated basis net of an early withdrawal assessment of \$30. Formal notice of withdrawal must be given to the residence halls office.

### Refund of Fees

A student who withdraws from the university or drops a course which reduces his/her total credit load is eligible to receive a refund of fees subject to a schedule printed in each schedule of classes, upon application to the appropriate office. Failure to drop or withdraw formally will result in forfeiture of any refund. Undergraduates withdrawing from the university should apply to the Office of Student Services. Graduate

students withdrawing from the university should apply to the Office of the Dean of the Graduate School. Reductions in a student's credit load that would result in a refund are processed in the Office of the Registrar.

Courses dropped before the beginning of classes qualify for a 100% refund. Thereafter, refunds are based on a declining percentage scale which reaches zero at approximately the midpoint of a course. The date the notification is received in the proper office determines the applicable refund. A specific schedule of refunds, with qualifying dates, is published each semester in the university's official schedule of classes.

Refunds for financial aid recipients are returned to the student based on the following calculation:

Student's original contribution toward tuition, fees, and housing costs (if applicable) ÷ total of such costs x the authorized refund. The remainder of the refund is returned to the financial assistance program(s).

Refund checks will be mailed approximately four weeks after application has been made to the appropriate office.

### Out-of-State Tuition Regulations

Students enrolling at Oakland University shall be classified at the time of admission as in-state or out-of-state students for purposes of assessing tuition charges. It is the student's responsibility to register and make full payment each semester or session under the proper in-state or out-of-state classification. For the purpose of these regulations, an in-state resident shall be defined as a person who has a Michigan domicile and has resided in Michigan 12 months immediately preceding his/her enrollment.

A student who was originally classified as an out-of-state student may be reclassified as an in-state student only if he/she has become a bona fide domiciliary of Michigan for at least 12 consecutive months, primarily as a permanent resident and not merely as a student. A student shall not be considered domiciled in Michigan unless he/she is in continuous physical residence in this state and intends to make Michigan his/her permanent home, not only while in attendance at the university, but indefinitely thereafter.

An alien who has been lawfully admitted for permanent residence in the United States shall not, by reason of that status alone, be disqualified from classification as a resident, provided, however, that aliens who are present in the United States on a temporary or student visa shall not be eligible for classification as a resident.

Any student who has acquired a bona fide domicile in Michigan subsequent to being classified as an out-of-state student may apply for reclassification to in-state status by obtaining an application for reclassification from the university registrar. The student shall complete the application and list in detail the reason(s) he/she is a bona fide domiciliary of Michigan, primarily as a permanent resident and not merely as a student, and attach documentary data in support thereof, and return the application to the university registrar 30 days prior to the beginning of classes of the semester or session for which the reclassification shall be effective. The following facts and circumstances, although not necessarily conclusive, have probative value in support of a claim of a residence reclassification:

1. Continuous presence in Michigan when not enrolled as a student.
2. Reliance upon Michigan sources for financial support.
3. Domicile in Michigan of family, guardian, or other relative or persons legally responsible for the student.
4. Former domicile in the state and maintenance of significant connections therein while absent.
5. Ownership of a home.
6. Long-term military commitments in Michigan.
7. Acceptance of offer of permanent employment in Michigan.

8. Other factors indicating an intent to make Michigan the student's permanent domicile will be considered by the university in reclassifying a student.

The following circumstances, standing alone, shall not constitute sufficient evidence of domicile to effect reclassification of a student as a resident under these regulations:

1. Voting or registration for voting.
2. Employment in any position normally filled by a student.
3. The lease of living quarters.
4. A statement of intention to acquire a domicile in Michigan.
5. Domicile in Michigan of student's spouse.
6. Automobile registration.
7. Other public records such as birth and marriage records.

Any student desiring to challenge his/her classification under the foregoing regulations of the Board of Trustees shall have the right to petition an appeal of the determination. Petitions of appeal and inquiries regarding these out-of-state regulations should be addressed to Chairperson, Out-of-State Tuition Committee.

## CAMPUS AND STUDENT AFFAIRS

The division of Campus and Student Affairs provides a variety of services and programs which complement and enhance students' educational experiences. A brief description of the major areas of the division follows.

### Orientation

All students new to Oakland are expected to attend an orientation session before their first registration. During orientation, students are advised on course selection, informed about important policies and procedures affecting students, given information on services and activities available, and introduced to the academic milieu. At the conclusion of their orientation, students select their first-semester courses. Before orientation, students are asked to attend an Oakland placement testing session.

Orientations are also held for special groups — international students, mature people entering college for the first time, etc. In addition, orientation programs are offered for parents of new freshman students.

A nonrefundable initial fee of \$35 for freshmen and \$10 for transfers is charged to all new students, whether or not they attend orientation. The fee covers not only orientation but all of the testing, advising, counseling, and other services available to Oakland students through the Undergraduate Advising and Counseling Department.

### Residence Hall Facilities

The university provides on-campus residence halls which relate to and enhance students' academic experiences. A communal living experience with one's peers has been likened to a "laboratory for living" and has value in the personal growth of Oakland students. Students are encouraged to live on campus to take maximum advantage of the activities and resources of the university community.

The university maintains seven residence halls which offer variety in program, accommodations, and size. They are attractively grouped on spacious wooded grounds overlooking a small lake, and are all within convenient walking distance of classroom buildings. Anibal, Fitzgerald, and Pryale houses are L-shaped buildings with 24 rooms in each wing; the wings are joined by a student lounge. Hill and Van Wagoner are six-story units containing 100 rooms, a lobby, lounge, and recreation room. Vandenberg is a seven-story, twin-tower structure. It contains 142 rooms, student lounges, multiple-use areas, study and seminar rooms, and recreation areas. Hamlin Hall houses 676 students. A nine-story hall, it has a main lounge, a lounge

on each floor, classrooms, and several multi-purpose areas.

Rooms are furnished with study desks and lamps, bookshelves, wastebaskets, bulletin boards, single beds, dressers, wardrobes, and venetian blinds. Residents provide their own blankets, linens, throw rugs, and draperies. Lamps, electric blankets, clocks, radios, television sets, and record players are allowed subject to safety regulations, limitations of space, and consideration of others in their use. Telephones are provided in each suite or room, and ticket-operated washers and dryers are available. Maintenance service is provided by the university in common areas. Residents assume responsibility for keeping their rooms cleaned and in order.

Food service for residents is managed by Saga, Inc., a professional catering service. The dining room in Vandenberg Hall provides cafeteria-style service for residents and their guests. Special dinners, often featuring ethnic or nationality foods, are planned regularly.

To be eligible for university housing a student must be enrolled for at least 8 credits, except with the permission of the director of residence halls. All full-time unmarried students who have earned less than 59 credits and who do not commute from the residence occupied solely by a single-member family related to the student at the time of registration, must live in university residence halls. Exceptions to this policy will be processed by an administrative committee. Exceptions granted to students under age 18 must be accompanied by a written endorsement of exception from the parent or legal guardian of the student.

To apply for residence, students should request university housing through the admissions office. Upon a student's acceptance at Oakland, his/her reservation will be processed by the residence halls office when a housing contract is submitted. Notification of assignment will be given approximately two weeks before the beginning of each semester. Returning students may renew housing contracts through the housing office.

Students may occupy their rooms the first day of registration for each semester and session. Room and board is not provided between semesters or during official recesses listed in the university calendar.

### Student Life

The Office for Student Life is responsible for the operation of the university residence halls; vending and food service; Campus Information, Programs, and Organizations; Student Enterprise Theatre; student center; and bookstore. In addition, the initiation of student programs and activities, cooperation with student government, coordination of judicial systems, and a student advocacy role are important functions of this office.

A program of cocurricular activities is designed for flexibility. Student interests annually determine the strength and scope of existing campus organizations as well as initiation of new groups. During the past year, approximately 70 student organizations have been active on campus, including academic clubs, religious and political organizations, and a variety of special interest groups, such as Women's Student Center, Association of Black Students, Ski Club, WOUX Radio Station, Abstention Coffeehouse, Human Interaction Center, *Oakland Sail* newspaper, and Society of Automotive Engineers. Any student who cannot locate a club which serves his/her particular interest is encouraged to form a new group through the Department for Campus Information, Programs, and Organizations.

Students may participate in the following music ensembles: Collegium Musicum, Oakland University Singers, University Chorus, Wind Ensemble, Jazz Band, University Orchestra, Opera Workshop, Opera Chorus, University Community Chorus, and Treble Chorus. These ensembles may be taken for academic credit or as an extracurricular activity.

## 10/General Information

The student enterprise organizations provide many opportunities for students to investigate their creative and artistic abilities. Student Enterprise Theatre productions emphasize drama, music, dance, and comedy. The developing Village concept aims to provide a unique facility through use of the Barn for Student Enterprise Theatre productions as well as to provide space for various crafts (pottery, stained glass, etc.) and a multipurpose recreation space.

University Congress is an elected, campus-wide government body which serves students' needs and opinions. In addition to its administrative duties, University Congress provides funding for the Student Activities Board, which allocates money to recognized student organizations, and for Unicon Productions, a student concert/lecture board.

Services for commuting students are provided through the Department for Campus Information, Programs, and Organizations. A variety of programs, including ride pools, student lounges, special interest groups, lockers, off-campus housing, transportation needs, and social and educational activities, are available for students.

Oakland Center, the university student center, is the hub of campus activities. Provided in this facility are the campus food service, the bookcenter, indoor recreational activities, Charlie Brown's candy counter, student lounges, meeting spaces, and exhibit areas.

### Student Services

The Office of Student Services is responsible for official undergraduate withdrawals from the university, undergraduate readmission, academic advising, testing, orientation, career advising and placement, students' master records, veterans' services, and special student service programs for women, minority students, international students, and handicapped students.

### Career Advising and Placement

The Career Advising and Placement Department provides counseling services to all juniors and seniors interested in life planning and discussing the world of work and its relationship to the academic major and the undergraduate degree. The department presents many seminars to assist students in pursuing these interests and in developing skills for job market entry. During fall and winter semesters, the department provides a variety of career day programs and hosts employers who interview and recruit seniors on campus.

Occupational guidance and counseling materials, job vacancy announcements, and an extensive library of graduate and professional school catalogs are available to students in the department's career libraries. Forms for the following examinations are provided: PACE (Federal Civil Service), National Teacher Exam, Graduate Record Exam, Law School Admission Test, Medical College Admission Test, Graduate Management Admission Test, and Foreign Service Officer Examination. Other applications for similar tests are added to the library each year.

The Career Advising and Placement Department administers the Fulbright Hays Grants for Graduate Study Abroad Program and the Rhodes Scholarship Program. Information on other scholarship programs is on file in the Career Advising and Placement Department.

### Special Needs Groups

The Department of Special Programs provides academic support for students who need special help for a successful academic experience at Oakland. This office implements the university's Special Services for Disadvantaged Students (TRIO) Program and is staffed with tutors, professional coun-

selors, peer counselors, and a curriculum innovator. The office staffs and administers the Skill Development Center, the Reading Center, and the Writing Center. The Skill Development Center provides, without cost to students, support seminars and tutorial assistance to maximize students' chances for success.

Although initiated to serve students assigned to the Summer Support Program at the time of admission, the center is open to all students. The reading and writing centers, also open to all students, assist students wishing to improve their skills in these areas. The Upward Bound Program, a precollege academic support program, is also part of the Department of Special Programs.

The Office of Veterans' Affairs is a one-stop service for veterans or others eligible for veterans' benefits. Veterans may obtain counseling, other support services, and benefit assistance from the Veterans' Affairs coordinator. Veterans are advised to keep in close contact with this office, which is responsible for reporting to the Veterans' Administration and enforcing the V.A. Standards of Progress.

Equal Educational Opportunity programs are administered in the Office of Student Services for minority students. General counseling and other support services are available to black and Latino students. Other minority students should also consult this office for assistance.

The Department of Undergraduate Advising and Counseling provides services for international students, including immigration authorizations and assistance with personal and academic concerns. This office also provides various other services to international students to assist them in learning about and participating in the life of both the community and the university.

The Department of Undergraduate Advising also assists students with physical impairments. Students should consult the office to learn of the various services offered.

Other special groups served by Undergraduate Advising are Latino students and mature students, especially women. Special counseling services are available to both groups, and women and mature students are urged to visit the Women's Center located on the lower level of the Oakland Center.

### Academic Advising and Counseling

The academic advising program provides for both faculty advising and for a variety of advising and counseling services through the Department of Undergraduate Advising and Counseling.

Each academic unit has a chief adviser who is responsible for academic advising in his/her area. Students should consult the faculty or staff adviser in the unit of their major and complete with him/her a program plan detailing the course of study to be pursued. See page 12 for the filing schedule.

Advising for students who are "undecided" as to major is provided through the Department of Undergraduate Advising and Counseling which aids such students in course selection and in choosing a major. "Undecided" students are encouraged to complete a special program plan with the aid of an adviser in that department.

The department makes available to all students a variety of information on employment requirements and opportunities. In addition, career counseling is provided to enrolled freshmen and sophomores. The department also provides several kinds of testing services. These include administration of interest tests, university placement tests, and national testing programs, including the ACT, GRE, MCAT, and the Miller Analogies Test.

Counselors are available to answer questions, make referrals, and generally to assist all undergraduate students to achieve their goals.

## Athletics, Physical Education and Recreation

**Intercollegiate Sports**—Oakland University is a member of Michigan's newest intercollegiate athletic conference—the Great Lakes Intercollegiate Athletic Conference (GLIAC). Other GLIAC schools include: Ferris State College, Grand Valley State College, Hillsdale College, Lake Superior College, Michigan Tech University, Northwood Institute, Saginaw Valley State College and Wayne State University.

Oakland University men's eight-sport athletic program is an active member of the National Collegiate Athletic Association (NCAA) Division II level. The women's six-sport athletic program actively participates in the Association for Intercollegiate Athletics for Women (AIAW) Division I level. OU male student-athletes compete in intercollegiate baseball, basketball, cross country, golf, soccer, swimming, tennis, and wrestling. OU female student-athletes participate in basketball, golf, softball, swimming, tennis and volleyball.

Oakland University's men and women student-athletes have successfully competed in the GLIAC as well as on the national level, as evidenced by the more than 50 All-Americans in its short athletic history.

**Intramural Activities**—The Hollie L. Lepley Sports Center, named in honor of OU's former director of athletics, is open seven days a week for recreational participation. The well-rounded intramural program has thousands of students involved in it every year. Fall intramural activities include men's, women's and coed softball, men's and women's touch football, three-man basketball, men's and women's two-mile cross country run, women's basketball, men's and women's floor hockey, men's and women's singles racquetball, and men's and women's golf. The winter program includes men's basketball, men's and women's swimming, and men's, women's and coed volleyball. Students, faculty and staff participate on intramural committees for organization, implementation and administration of the program.

The Hollie L. Lepley Sports Center has facilities for badminton, basketball, combatives, dance, fencing, golf, gymnastics, handball, paddleball, racquetball, squash, swimming, self-defense, weight-lifting, and wrestling. The outdoor areas include the 18-hole Katke-Cousins Golf Course, a golf practice and instruction area, softball and baseball diamonds, tennis courts, soft-surface quarter-mile track, soccer fields, touch-football fields, and acres of terrain for hiking, cross country running and skiing.

## Health Services

Students, faculty, staff, alumni, and their spouses may receive medical services at the Graham Health Center, Monday through Friday, from 8 a.m. to 5 p.m. Services include physician coverage of most acute and chronic medical problems, laboratory facilities, and an emergency room equipped to handle minor trauma and to give initial treatment to more serious emergencies. The Graham Health Center staff includes a medical doctor, three registered nurses, and a medical technician. The Graham Health Center encourages the use of its facilities and welcomes visits at any time.

The basic physician's fee is \$7 for currently enrolled students and \$12 for faculty, staff, alumni, and spouses. There is no charge to see a nurse. Graham Health Center will bill most insurance companies for eligible services. Allergy injections are given while a physician is on the premises. The patient must have a doctor's written instructions and vaccine which may be stored at the health center. A weight-control program and information on nutrition, how to stop smoking, exercises, and many other topics are available by contacting one of the nurses.

## Child Care

The School of Human and Educational Services early childhood program operates the Matthew Lowry Early Childhood Center for students, faculty, and staff with child care needs. Located at Adams and Butler roads at the southeast corner of campus, the center houses four programs: Preprimary, Preschool, Toddler, and Infant-Parent. The Preprimary Program is for kindergarten-age children who need a full-day program. The Toddler Program is for children who are walking to 3 years old, while the Preschool Program serves children from 3 to 5 years old. These programs are designed to stimulate the developmental growth of children. The Infant-Parent Program requires parent participation. Student parents participate in the weekly sessions during 12 weeks of a regular semester. The Early Childhood Center operates weekdays from 7:45 a.m. to 5:30 p.m. Registration for the programs coincides with university registration days, and parents are assessed an hourly rate that varies for students, faculty, and staff.

## University-Community Counseling and Psychological Center

The Counseling Center is staffed with clinical and counseling psychologists who provide specialized counseling, consultation, and psychotherapy to Oakland students with personal and interpersonal problems. Marriage counseling, child therapy, and family therapy also are provided. Use of the center is voluntary and is available by appointment at a minimal charge.

The center also provides psychological testing, and vocational counseling. The vocational counseling program involves a set of in-depth interviews and testing, with focus on personal issues in career development. The psychological testing services are aimed at assessing developmental growth as well as the nature of personal problems.

All of these services are intended to support students in taking full advantage of their education. All personal material is held strictly confidential and does not become part of the student's academic record.

Services of the center are also available to the public at a higher fee. Fees are based on family income, and many insurance policies reimburse these services.

## Physical Plant Services and University Engineer

The Department of Physical Plant Services provides a variety of support services to the university. The department includes six major units consisting of Public Safety, Space Utilization and Inventory Control, Property Control, Building Maintenance, Telecommunications, and the work order and billing function.

The Department of University Engineer is responsible for heating and cooling all campus facilities, maintenance of all mechanical and electrical equipment, energy conservation, grounds maintenance, and campus beautification. New construction, architectural services, and pedestrian and vehicular movement are also functions of this department.

This catalog is devoted to undergraduate degree offerings at Oakland University. The university has several other academic programs and units that are central to the university's mission. So that the reader may understand the entire institution, brief descriptions of these units are given in this section.

# ACADEMIC POLICIES AND PROCEDURES

## Student Responsibility

Each student must fulfill all general, procedural, and specific requirements and abide by all pertinent academic regulations in order to earn a degree at Oakland University. It is the student's responsibility to learn the requirements, policies, and procedures governing the program being followed and to act accordingly. Students should consult their faculty advisers regularly to verify that all degree requirements are being met in timely fashion.

All undergraduates are expected to file with their academic unit or the Undergraduate Advising and Counseling Department at least four program plans indicating how they expect to complete graduation requirements. Plans will be checked by the unit, and students will be notified of any university requirement deficiencies in the plans.

These plans are to be filed as follows:

1. Plan of first semester schedule at orientation, before first registration.
2. First program plan, filed not later than 48 credits.
3. Major program plan, to be filed with the academic unit in which the student plans to major, no later than 80 credits.
4. Final advising audit, no later than 108 credits.

## Undergraduate Degree Requirements

Undergraduate degree requirements are of two kinds: general degree requirements determined by the university to be binding on all baccalaureate programs, and specific degree requirements established by the various colleges, schools, and other academic units empowered to offer degree-level programs of instruction. The graduation requirements for any given student are those stated in the university catalog extant when the student enters Oakland University unless the student chooses to be governed by the requirements shown in a subsequent catalog.

A student may establish credit in a course to meet degree requirements either by earning a passing grade in the course, by passing a competency examination, or by receiving transfer credit from another institution. In certain circumstances a requirement may be formally waived by a successful Petition of Exception.

## General Undergraduate Degree Requirements

Oakland University has established general undergraduate degree requirements applicable to all candidates for all undergraduate degrees. In order to earn a baccalaureate at Oakland University, a student must satisfy the following criteria:

1. **Residence Requirement:** A student must offer at least 32 credits successfully completed at Oakland University. The student also must take the last 8 (4 for Bachelor of General Studies candidates) credits needed to complete the requirement for a baccalaureate at Oakland University.
2. **Grade Point Average:** A student must have a cumulative grade point average in courses taken at Oakland University of at least 2.00.
3. **Credit Rules:** A student must have completed successfully at least 32 credits in courses at the 300 level or above. If a student has accumulated 62 semester hours of work from any institution(s), that student may not transfer additional credits from a two-year institution.

4. **Writing Proficiency:** A student must demonstrate proficiency in writing at, or within a reasonable time after, entrance to Oakland. Entering students transferring 32 or fewer credits must demonstrate writing proficiency before they accumulate 48 credits in order to be permitted to register or receive credit for upper-level courses (those numbered 300 or above). Entering students transferring 33 or more credits must demonstrate proficiency before they complete 16 credits at Oakland in order to be permitted to register for upper-level courses.

Proficiency may be demonstrated in several ways:

- a. Transfer students who present two collegial-level courses (at least 6 credits) in English composition with grades of C or better will be certified proficient.
  - b. All other students will take an essay test before first registering at Oakland. Students achieving a sufficiently high score on this test will be certified proficient.
  - c. Students who do not attain a proficiency-level test score will be counseled into Learning Skills courses. Proficiency will be certified upon a successful retake of the essay examination or upon completion of LS 101, Basic Writing Skills II, with a grade of 2.0 or better.
  - d. A student may demonstrate proficiency by submitting to the Proficiency Committee of the Department of Learning Skills three papers, performed as Oakland course requirements, along with the written support of two university faculty members.
5. **Electives:** A student must present at least 8 credits of free electives.
  6. **Procedural Requirements:**
    - a. Students must be in substantial compliance with all legal curricular requirements.
    - b. Before or during the semester or session in which they expect to complete all academic requirements, degree candidates must file an application-for-degree card at the Cashier's Office with a nonrefundable fee of \$10. The deadline for filing each semester or session is indicated in the schedule of classes for that term. Failure to apply will result in deferred graduation. Application forms are available at the Office of the Registrar.
  7. **Specific Requirements:** A student must fulfill all specific undergraduate degree requirements as stipulated by the various colleges, schools, and other academic units of the university empowered to present candidates for the undergraduate degree(s) over which they have authority. For further information concerning specific undergraduate degree requirements, consult the following areas in this catalog:
    - a. Bachelor of Arts and Bachelor of Science degrees in the College of Arts and Sciences, page 19.
    - b. Bachelor of Science degree in management in the School of Economics and Management, page 95.
    - c. Bachelor of Science degrees in the School of Engineering, pages 108 and 111.
    - d. Bachelor of Science degree in elementary education, and Bachelor of Science degree in human resources development in the School of Human and Educational Services, pages 117 and 120.
    - e. Bachelor of Science in Nursing degree in the School of Nursing, page 129.
    - f. Bachelor of Music degree in the School of Performing Arts, page 131.

- g. Bachelor of General Studies degree in the Center for General and Career Studies, page 135.
- h. Bachelor of Science degrees in medical physics, medical technology, industrial health and safety, and physical therapy in the Center for Health Sciences, page 141.

### Additional Undergraduate Degrees and Majors

Under certain conditions a student may earn an additional baccalaureate or may earn a baccalaureate with multiple majors. General restrictions which apply to the awarding of more than one degree are:

1. The degrees either must have separate designations (for example, Bachelor of Arts and Bachelor of Science), or
2. The degrees must be earned in separate academic divisions (for example, the College of Arts and Sciences and the School of Engineering).

If a student at Oakland University wishes to pursue two Oakland University baccalaureates simultaneously, he/she must:

- a. Meet all specified requirements for both degree programs.
- b. Complete at least 32 credits at Oakland University beyond that required for one degree if the credit requirements are equal, or beyond that required for the degree requiring the great number if the credit requirements are unequal. Of these, 16 credits must be at an advanced level (courses at 300 level or above).

If a student already holding a baccalaureate wishes to earn another baccalaureate, he/she must:

- a. Receive written approval from the college or school concerned (and where appropriate from the department) as part of the admissions process to the new degree program.
- b. Meet all specific requirements for the new degree as stipulated by the college, school, or other academic unit in which the person is a candidate.
- c. Complete at least 32 additional credits at Oakland University.

A student holding a baccalaureate from Oakland University cannot have his/her undergraduate grade point average modified by additional work, nor can any student holding an Oakland baccalaureate be a candidate for university or departmental honors. All credits presented for an additional baccalaureate must have been earned at Oakland University.

A student who meets the specific requirements for more than one degree program but who is ineligible to receive separate degrees, due either to the general restrictions (1 and 2 above) or to an insufficient total number of credits earned, may have certified on his/her transcript that a single degree is awarded with more than one major.

### Course and Credit System

The credit-hour value of each course (the number in parentheses following the course title) is specified in semester hours. One semester hour is equivalent to a total of three hours work per week including 50 minutes of scheduled instruction and the estimated time that an average student spends in outside preparation each week. Most Oakland University courses are 4 credits. A full academic load is 16 to 18 credits per semester. With his/her adviser's permission, a student who has completed 12 or more credits at Oakland may register for as many as 21 credits if his/her cumulative grade point average is at least 2.60. All other students may take more than 18 credits only as a result of a successful Petition of Exception.

### Regulations Governing Courses

1. A course sequence joined by a hyphen (e.g., FRH 114-115) must be taken in the order indicated. The first course in such a sequence is a prerequisite to that following.

2. Course numbers separated by commas (e.g., HST 214, 215) indicate related courses, which may be taken in any order. Departmental or program requirements may sometimes govern the order, however.
3. Course numbers 000 to 099 are for courses specially designed to enrich academic skills. Not more than 16 credits in such courses and in tutorial work may count toward graduation requirements. Courses numbered 100 to 299 are introductory undergraduate courses primarily for freshmen and sophomores. Courses numbered 300 to 499 are designed for juniors and seniors. Courses numbered 500 and above are primarily for graduate students; undergraduates must obtain permission of the department in order to register for such courses.
4. The university reserves the right to cancel any course in which there is insufficient registration.
5. It is the student's responsibility to complete all prerequisites before registering for a course with such requirements. Departments may waive prerequisites in accordance with university policy.
6. Some courses are cross-listed between departments. In such cases, the course description is listed only in one department. The listing in the other department notes that the course is identical with the course in the primary department. When registering, students should select the listing under which they wish to receive credit.

### Course Competency

Students may receive credit toward graduation designated as competency credit (graded S/N) on their transcripts for Oakland University courses, subject to the following provisions:

1. That they register for the course at registration with written permission of the department chairperson, dean, or program director of the academic unit responsible for the course.
2. That they pass an appropriate competency examination not more than six weeks after registration closes. Competency credit will not be permitted for a course when a student has received credit for more advanced courses in the same area. The repeat course rule applies to the repeating of competency examinations.

A student may apply up to 60 semester credits based on nonclassroom experience (course competency and/or CLEP credits) toward a degree program.

### Petition of Exception

Any student may request a waiver or modification of specific academic requirements. Students may obtain a Petition of Exception form in the office of the dean of the student's school or college. The completed form should be signed by a faculty adviser in the student's major department or school. Petitions for modification of the normal requirements of a major in order to suit individual programs should be directed to the chairperson of the major department or school. Petitions for modification of general undergraduate degree requirements should be returned to the office of the dean of the student's school or college for referral to the appropriate committee on instruction. The student, the registrar, and the student's academic adviser or major department will receive a copy of the petition containing the action taken. Petitions of Exception relating to graduation requirements must be filed no later than the second week of the semester or session of intended graduation.

### Change of Courses

If a student decides not to complete a course, the course may be dropped any time before the last week of instruction in

## 14/Academic Policies and Procedures

that course, in accordance with the grading policies described in the next section. Courses dropped for which refund of fees is claimed must be processed in a drop-and-add form through the Office of the Registrar (see also Refund of Fees, page 9).

Previously registered students wishing to add a course should do so as early as possible in the semester or session. Courses may not be added after the fourth week of instruction (second week in spring/summer sessions and for 2-credit, half-semester courses).

### Grading System

1. The basic grading system at Oakland is a 31-point system of numerical grades from 1.0 through 4.0, by tenths, along with the nonnumerical grades W, WS, WN, I, P, S, N, and Z.
2. The first two weeks of a semester (one week in spring/summer sessions) are a no-grade period for dropping and adding full-semester courses. The no-grade period for 2-credit, half-semester courses is the first week of instruction.
3. The meanings of the nonnumeric grades are as follows:
  - a. "W" is assigned by the registrar if a student withdraws officially from a course between the end of the no-grade period and the end of the refund period for that course.
  - b. The instructor assigns a "WS" or "WN" in a course from which a student withdraws officially after the end of the refund period for that course and before the last week of instruction in that course. "WS" is assigned if the student's performance at the time of withdrawal merits a grade of 2.0 or better; otherwise, a "WN" is assigned. To accomplish this assignment a student must obtain an appropriate form in the office of the department offering the course from which the withdrawal is being made. The student takes the form to the instructor and has it completed. The student and the instructor each keep one copy of the completed form. The instructor records the grade on the final grade report.
  - c. The "I" grade is temporary and may be given only in the last week of a course in which a student is unable to complete the requirements because of a severe hardship beyond the control of the student. The work must be completed within the first four weeks of the next semester or session in which a student registers. Extensions are permitted on request of the instructor to the dean of the appropriate school or college. The "I" is changed to an "N" at the end of the four-week period if the work is not completed and an extension is not requested and approved. If more than three semesters intervene before the student next registers at Oakland, the "I" is changed to an "N."
  - d. The "P" grade is temporary and may be given only in a course that cannot be completed in one semester or session. Prior approval must be obtained from the dean of the appropriate faculty to assign a "P" grade in a particular course. The "P" grade is given only for work that is satisfactory in every respect. "P" grades must be removed within two calendar years from the date of assignment. If this is not done, the "P" is changed to an "N."
  - e. The "N" grade is assigned by the instructor in any course from which a student does not officially withdraw before the last week of instruction in the course and for which the student does not receive credit. The "N" means the student has completed the course unsuccessfully.
  - f. The "S" grade is given in certain selected courses and implies 2.0 or better. Courses in which S/N grading is used must be approved by the appropriate committee on instruction.
  - g. "R" is a temporary grade assigned by the registrar in the absence of a grade from the instructor.

h. "Z" is assigned upon registration for a course as an auditor. The student's declaration of intention to audit is required and it is understood that no credit for the course is intended at the time of registration or thereafter.

4. If none of the above applies, the course is considered to have been completed successfully, and the instructor assigns a numerical grade from 1.0 to 4.0, inclusive, by tenths. The University Senate has approved the following conversion for some external purposes:

3.6-4.0	A	2.0-2.9	C
3.0-3.5	B	1.0-1.9	D

5. All grades, other than "WS" and "WN," including numerical grades and the nonnumeric grades S, W, N, I, P, and Z, appear on a student's transcript. However, only numerical grades are used to determine the student's grade point average, which is computed to two decimal places.

### Auditing Courses

For students who wish to participate in a course on a nongraded basis, a formal audit option is available. With written permission of the instructor, students may register to audit a course during the late registration period each semester or session. Forms for auditing are available in the Office of the Registrar, Admissions Office, Graduate School, and Advising Office.

Audit registrations are governed by the following rules:

1. Regular tuition and fees apply to all courses.
2. The Registrar will assign the final mark "Z" to all formal audits.
3. Changes of registration from credit-to-audit or from audit-to-credit will not be permitted once the no-grade add/drop period has ended for a given semester.
4. Students who wish to audit courses must have been admitted to the university by either the graduate or undergraduate admissions office.
5. Students whose entire registration for a semester or session consists of formal audits will register during the late registration period each term. Late registration fees will be waived for such students.

### Repeating Courses

Students may repeat a course up to two times. Only the last grade earned in the course (excluding "N" grades) is computed in the grade point average.

For this grade point average adjustment, a student must file with the registrar a repeat card at registration time.

### Academic Honors

At the end of each fall and winter semester, undergraduates who have earned a semester grade point average of 3.00 or higher in at least 12 hours of numerically graded university credits and who have received no N or WN grades will be recognized for academic achievement. Notices of commendation will be sent to undergraduates with grade point averages of 3.00 to 3.59. Notices of academic honors will be sent to undergraduates with grade point averages of 3.60 to 4.00. Both the commendation and academic honors awards will be recorded on the official transcripts.

### University Honors

The three levels of University Honors, Cum Laude, Magna Cum Laude, and Summa Cum Laude, may be awarded with the conferral of a student's first earned baccalaureate with the following cumulative grade point averages:

3.60 to 3.74	Cum Laude
3.75 to 3.89	Magna Cum Laude
3.90 to 4.00	Summa Cum Laude



The awarding of the degree with University Honors will be based only on Oakland University credits, and the student must earn at least 62 credits at Oakland to become eligible for University Honors.

### Academic Records

Academic records are maintained in the Office of the Registrar. Standing reports are mailed to each enrolled student's permanent address of record at the end of each academic period. Transcripts of academic records may be obtained by completing a transcript request form at the Office of the Registrar, 161 North Foundation Hall, or by writing Transcript Request, Office of the Registrar, Oakland University, Rochester, MI 48063. Requests should include the name under which the student attended, the Oakland student number, the date of last attendance and date of degree (if applicable), the level of last course work, and the address to which the transcript is to be sent. A check or money order for \$2 for each transcript ordered must accompany the request.

### Academic Probation and Dismissal

An undergraduate who makes unsatisfactory progress toward a degree either by failing or withdrawing from courses will be placed on probation. Students on probation who fail to meet the minimal standard of progress established by the University Senate will be dismissed from the university. A statement of the academic probation and dismissal policy can be found in the *Schedule of Classes*, the *Student Handbook*, and the Student Services Records Office.

### Dismissal from the University

An undergraduate who is dismissed from the university for any reason does not retain the privileges of a registered student. A student who has been dismissed must apply for readmission through the Student Services Records Office unless he/she has been informed that readmission will not be considered.

### Undergraduate Withdrawals

A student who leaves the university for any reason must follow the withdrawal procedure. Undergraduates withdrawing from the university must do so through the Student Services Records Office. When a student withdraws from the university after the second week of classes (first week in spring and summer sessions) and before the end of the refund period, a "W" grade will be assigned in all courses. Students withdrawing between the end of the refund period and the beginning of the last week of classes may receive course grades of "WS" or "WN," provided that students contact instructors individually for such grading. Official withdrawal from the university is not permitted once the last week of classes has begun.

Undergraduates who plan to return to the university should consult the readmission policy below.

### Readmission

An undergraduate whose attendance at Oakland is interrupted may be required to make formal application for readmission. The regulations are:

1. Students whose attendance has been interrupted for a total of three or more fall and winter semesters must apply for readmission.
2. Students who withdraw from the university and who are not in good academic standing at the time of withdrawal must apply for readmission.
3. Students who have been dismissed from the university for any reason must apply for readmission.
4. All other undergraduates may return and register for classes without seeking formal readmission.

Students who must apply for readmission should request an application from the Student Services Records Office at least one month before the beginning of the semester or session the undergraduate expects to re-enter. (Failure to apply early could result in not being able to register.)



# OTHER ACADEMIC UNITS AND PROGRAMS

This catalog is devoted to undergraduate degree offerings at Oakland University. The university has several other academic programs and units that are central to the university's mission. So that the reader may understand the entire institution, brief descriptions of these units are given in this section.

## CONTINUING EDUCATION

### OFFICE OF THE DEAN

*Lowell R. Eklund, Dean*

There are five administrative units in the Division of Continuing Education: Conference Department, Continuum Center for Adult Counseling and Leadership Training, Course Department, Labor Education Service, and Meadow Brook Hall.

The multifaceted programs of the division are designed to help people perform more effectively as workers, parents, and citizens. The division continuously revises its offerings to meet the expressed personal or job-related needs of adults. Its programs are available to students, faculty, and staff, as well as the general public.

The Conference Department offers conferences, institutes, and seminars on a variety of subjects. Many conference programs are conducted in cooperation with the university's academic departments, as well as with off-campus populations. The conference staff works closely with the Division of Student Affairs staff to promote and implement summer residential conferences and institutes.

The Continuum Center offers counseling services and leadership training opportunities to individuals and organizations. As a service organization, the center's purpose is to assist people of all ages in the meaningful evaluation and planning of their lives. Various programs are designed to help people make necessary personal and/or career decisions at turning points throughout the life span. As a training organization, the center offers training in communications and small group leadership both to prospective paraprofessional counselors for the center and to individuals who want to become more effective helpers within their own organizations. Through its Older Adult Unit, the center conducts counseling programs for people over 55 and trains service providers who work with the elderly.

The Course Department offers primarily evening non-degree diploma programs and courses in professional, vocational, and cultural subjects at university content level on campus and at university extension sites. All programs and courses carry the nationally recognized Continuing Education Unit (CEU), of interest to persons who wish to maintain a file of their nondegree learning experiences. Increasingly, the CEU is being used by many employers and professional associations as a means of assessing the personal and/or occupational growth of individuals. One CEU is the equivalent of 10 classroom hours.

Diploma programs, a series of courses related to individual objectives, are offered in nine areas of management, in plastics technology, and for legal assistants. Independent study (correspondence) offerings include diploma programs in supervision, management, and marketing as well as coaching courses for licensing examinations for CPAs. CPA programs on campus provide review for candidates and qualifying hours for CPA relicensing, conducted in special programs during the evening, on Saturdays, and on weekends periodically throughout the year. The department also conducts an extensive small business

management program, personal financial planning courses, and courses to meet the needs of business, industry, government, and social agencies on/off site.

The Course Department offers daytime nondegree extension courses at the Birmingham Center for Continuing Education (BCCE), a cooperative undertaking among five state universities and the Birmingham Public Schools. Evening courses are offered at university extension sites in Farmington Hills and other locations.

The Labor Education Service provides residential institutes and daytime/evening courses in both on- and off-campus locations for union members. Federal and state grants have made possible a special Leadership Training Program for Union Minorities and Women.

Meadow Brook Hall, the university's cultural and conference center, is widely used both by the university and groups in the community. The hall offers a secluded setting for residential and daytime conferences, seminars, and workshops. The mansion, a remarkable revival of Tudor architecture, is open for public viewing and dining every Sunday 1 to 5 p.m. year-round without reservations; in July and August the hall is also open for tours Monday through Saturday 10 a.m. to 5 p.m. Group tours for a minimum of 20 persons can be arranged from September through June. Meadow Brook Hall's historic significance was officially documented in 1976 when the Michigan Historical Commission included it in the State Register of Historic Sites. In 1979, its golden anniversary year, the hall was also listed in the National Register of Historic Places, recognizing its importance as a national architectural treasure.

## UNIVERSITY LIBRARY

### OFFICE OF THE DEAN

*George L. Gardiner, Dean*

*Indra M. David, Assistant Dean*

**PROFESSOR:** *George L. Gardiner*

**ASSOCIATE PROFESSORS:** *Indra M. David, Robert G. Gaylor, Eileen E. Hitchingham, Janet A. Krompart, Lois L. Reilly*

**ASSISTANT PROFESSORS:** *William Cramer, Clara J. DiFelice, Linda Guyotte, Linda L. Hildebrand, Barry N. Johnson, Nancy S. Kleckner, Mildred H. Merz, Richard L. Pettengill, Ann M. Pogany, Daniel F. Ring, Elizabeth A. Titus*

**VISITING ASSISTANT PROFESSOR:** *Sharon Bostick*

### Library Facilities

Most university library materials and services are housed in Kresge Library. Preliminary plans for expansion within several years have been approved. The expanded facility will have the capacity for some 360,000 volumes, 520,000 units of microfilm, and 2,200 study stations.

The Performing Arts Library provides books, journals, acting editions of plays, musical scores, and recordings supporting area studies, communication arts, dance, English, film concentration, music, and theatre programs. The facility is located in Varner Hall.

The Audio Visual Services Center, in Varner Hall, provides media services for the university's instructional programs. These services include selecting and presenting instructional films as well as designing and producing instructional programs

ranging from slide presentations to audio-video tape presentations requiring the television studio.

## Library Collections

The University Library holds 852,372 pieces of library material, plus unprocessed materials, manuscripts, memorabilia, and museum pieces. Included are 402,195 microforms, 8,852 records and phonotapes, 42,546 periodical volumes, approximately 155,564 government documents, and 243,215 cataloged circulating and reference books.

With a \$100,000 fund, established by Oakland University students in memory of Matilda R. Wilson, the library now has an excellent reference collection. This includes atlases, bibliographies, dictionaries, encyclopedias, indexes, yearbooks and other reference materials. In 1979, with the depletion of Wilson Funds, OU students have begun to assess themselves voluntarily to continue augmenting this highly used collection.

The library receives some 1,723 paid serial subscriptions. Periodicals and other serials are generally uncataloged and shelved alphabetically by title on the third floor of the library.

Since 1964 the library has been a U.S. Government depository and receives about 80 percent of the depository items published each year. The library is also a depository for Michigan documents. These collections are indexed, respectively, by the *Monthly Catalog of U.S. Government Publications* and *Michigan Documents*.

Several of the library's special collections are listed below:  
*William Springer Collection of Lincolniana and Civil War Materials*, secondary source materials.

*Hicks Women in Literature Collection*, 900 volumes written by or about women in the seventeenth through twentieth centuries.

*James Folklore Collection*, 550 folklore monographs, some very scarce.

*Anglo-Irish Collection*, rare monographs, journal runs, literary works in the original typescripts, signed poems and reviews, and original letters to and from literary figures.

*Billie Sunday Farnum Collection*, papers from Farnum's terms in Congress and as Michigan auditor general and other public and political offices.

*Alternative (Underground) Press Collection*, one of the largest anywhere, focuses on the Midwest.

*University Archives Collection*, materials of historical or legal significance to Oakland University.

*Faculty Publications Collection*, monographs produced by Oakland University.

## Library Services

Periodicals are arranged alphabetically on shelves and are not cataloged. Most other library materials are classified under the Library of Congress system and indexed through the public card catalog.

The reserved book collection is a collection of materials that faculty members have reserved for use by specific classes.

Reference librarians help students find materials or use the library. Bibliographic instruction and data-base services supplement these traditional reference services. As part of some regular credit courses, teaching and library faculty collaborate on lectures and demonstrations for using the library. The library's on-line literature search service aids in retrieval of citations of published articles in the fields of education, engineering, medicine, psychology, and natural and social sciences.

Through interlibrary lending, members of the university community may obtain materials that are unavailable in the university library. Interloan systems share books, periodicals and newspaper articles, theses and dissertations, films and documents in microform, music scores, and research papers.

## GRADUATE SCHOOL

### OFFICE OF THE DEAN

G. Philip Johnson, Dean

Elizabeth L. Conner, Assistant to the Dean

Frederic A.H. Siegel, Director of Graduate Admissions

Course offerings and programs of study beyond the baccalaureate level constitute a major Oakland University enterprise. Most schools and departments offer some form of graduate work, and in nearly all cases these offerings comprise courses and research sufficient to satisfy requirements for advanced degrees. There are available at present two doctoral programs, an education specialist program, and 26 master's programs. Additional programs are being developed.

In each of the programs the university seeks to provide students with intellectual challenge and opportunity for scholarly and professional growth. Substantial resources in faculty, research facilities, and support functions are all directed to these ends. Students share with their advisers responsibility for constructing programs of study that are carefully structured combinations of study and research which serve the student's specific needs. Students can expect close faculty attention while planning and pursuing their studies. In turn they should ask of themselves wholehearted commitment to the program's demands.

Details of the programs and regulations of the Graduate Council, which governs graduate work, appear in the *Oakland University Graduate Catalog*. Copies of the catalog are available from the Graduate School. Prospective students should also consult the school or department in which they wish to study.

## Graduate Degree Programs

### Doctor of Philosophy

Reading

Systems Engineering

### Education Specialist

### Master of Arts

Area Studies

Clinical Psychology

Developmental Psychology

English

Guidance and Counseling

History

Linguistics

### Master of Business Administration

### Master of Music

### Master of Public Administration

### Master of Science

Applied Mathematics

Applied Statistics

Biology

Chemistry

Computer and

Information Science

Electrical and

Computer Engineering

Mechanical Engineering

Medical Physics

Physics

Systems and Industrial

Engineering

### Master of Arts in Teaching

Early Childhood Education

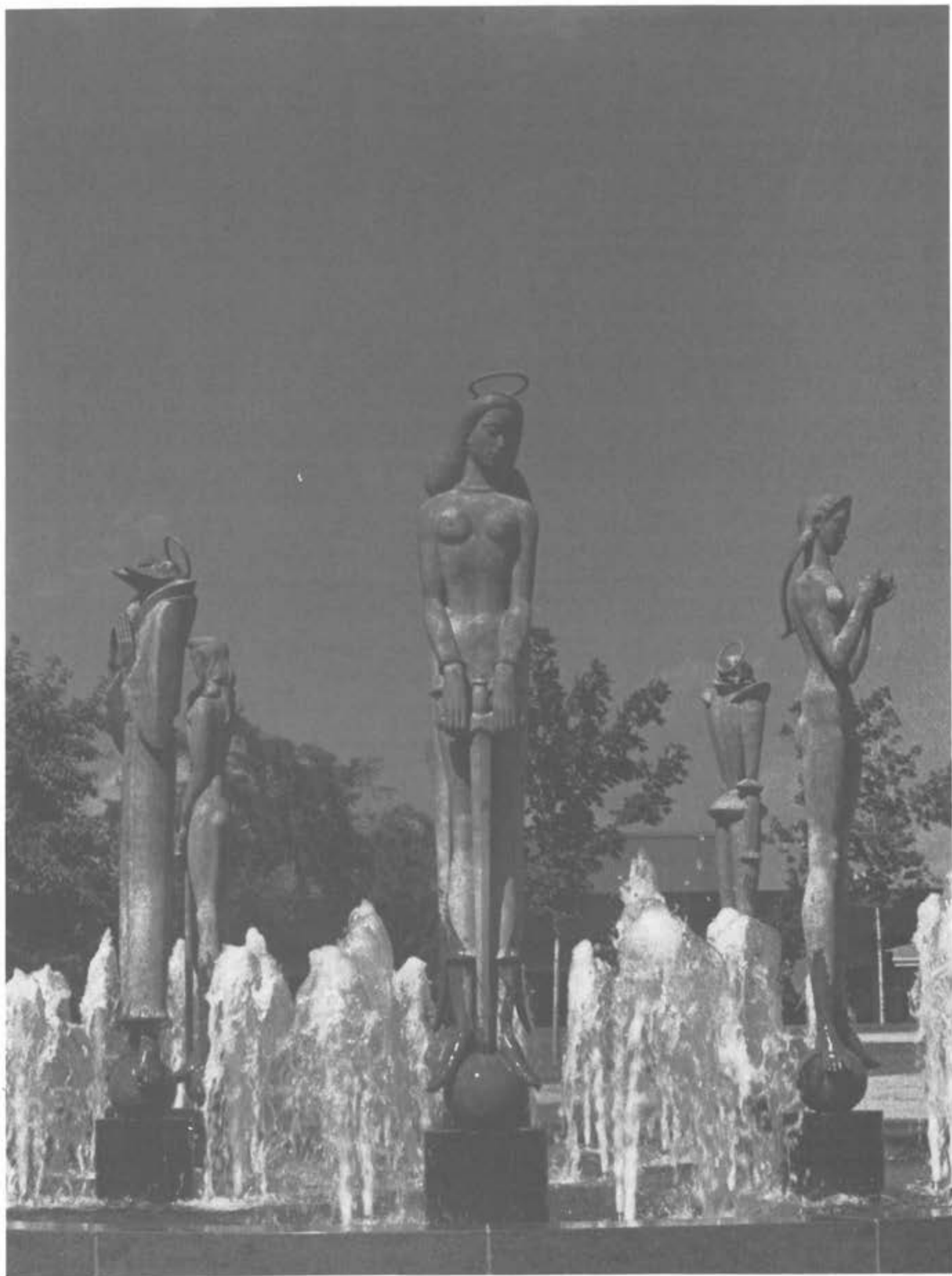
Elementary Education

English

Mathematics

Reading

Special Education



# COLLEGE OF ARTS AND SCIENCES

## OFFICE OF THE DEAN

Reuben Torch, Dean

Sheldon Appleton, Associate Dean for Advising

Melvin Chernov, Associate Dean and Director of the Honors College

Robert L. Donald, Coordinator for Secondary Education Programs

Isaac Eliezer, Associate Dean for Mathematics and Science

Robert E. Simmons, Associate Dean for Instruction

The College of Arts and Sciences offers instruction leading to the degrees of Bachelor of Arts, Bachelor of Science, Master of Arts, and Master of Science. Jointly with the School of Human and Educational Services it offers instruction leading to the degree of Master of Arts in Teaching.

## REQUIREMENTS FOR THE DEGREES OF BACHELOR OF ARTS AND BACHELOR OF SCIENCE

### I. General Requirements

A student must:

- Have completed 124 credits; the Bachelor of Science degree in environmental health requires completion of 128 credits. No more than 8 credits in physical education will count toward a degree in the College of Arts and Sciences, except for students taking a secondary teaching minor in physical education, who are allowed up to 20 credits in physical education.
- Have completed at least 32 of these credits at Oakland University, of which at least 16 credits must be in the elected major.
- Have completed at least 32 credits in courses at the 300 level or above.
- Have taken the last 8 credits needed to complete baccalaureate requirements at Oakland University.
- Have a cumulative grade point average of at least 2.00.
- Be in substantial compliance with all legal curricular requirements.

### II. Requirement of Proficiency Certificate in English Composition

The student must satisfy this requirement as described on page 12

### III. The General Education Requirement

The student must complete the total number of general education credits required by his/her degree program and distributed in all six fields as explained below. These credits must be chosen from the list of designated courses, except that courses from the student's major department, unless designated differently from the student's major field (for example, anthropology for sociology majors, Russian for Spanish majors, theatre arts for communication arts majors), will not be counted toward the general education requirement. Cross-listed courses are considered as designated by the home department, for example, LIN/SCN 207 is a linguistics course for the purpose of this ruling.

Students may obtain advice concerning the general education requirements from departmental academic advisers or from the advising office, College of Arts and Sciences.

#### A. Degree Program Requirements:

- Bachelor of Arts candidates must complete 40 credits.
- Bachelor of Science candidates must complete 36 credits.

- Bachelor of Arts or Bachelor of Science candidates with a secondary education teaching credential must complete 24 credits.

### B. Required Credits in Distribution Fields:

Distribution Fields	Credits for B.A.	Credits for B.S.	B.A. or B.S. and Teaching Credential
1. Arts	4	4	4
2. History, Philosophy, Area Studies	8*	8*	4**
3. Language and Thought	8	8	4***
4. Literature	4	4	4
5. Mathematical and Natural Sciences	8	8	4
6. Social Sciences	8	4	4

\*4 credits in Western group and 4 credits in non-Western group.

\*\*4 credits in Western group.

\*\*\* Students in the secondary education program must complete their 4-credit requirement at the second-semester (115) level.

### C. Distribution Fields and Designated Courses:

#### 1. ARTS

Our visual and auditory environment constitutes an essential component of our cultural heritage. No civilization exists which has no form of music, art, or theatre. Familiarity with and appreciation of these forms of expression broaden our understanding of society and enrich our lives.

AH 100	Introduction to Western Art I
AH 101	Introduction to Western Art II
AH 316	Art Historical Archaeology
CIN 150	Introduction to Film
MUS 100	Introduction to Music
MUS 300	Music Appreciation
THA 100	Introduction to Theatre
THA 268	Theatre History I
THA 269	Theatre History II

#### 2. HISTORY, PHILOSOPHY, AND AREA STUDIES

Knowledge of the historical developments which have shaped the modern world is essential to a general education. A comprehensive study of ancient or modern Western civilizations is offered by the disciplines of history and philosophy. This, together with the contrastive cultural study of a very different civilization, provides perspectives which enhance our understanding of our own culture.

#### Western Group

HST 150	History of Western Civilization
HST 200	European History to 1300
HST 201, 202	European History, 1300-1815; 1815-present
HST 214, 215	Introduction to American History
PHL 101	Introduction to Philosophical Thinking
PHL 103	Introduction to Ethics
PHL 204	Ancient Greek Philosophy (beginnings to Aristotle)
PHL 205	Hellenistic and Medieval Philosophy (to Renaissance)
PHL 206	Early Modern Philosophy (to Kant)

#### Non-Western Group

AS 210	Introduction to China
AS 220	Introduction to Japan
AS 230	Introduction to Africa
AS 240	Introduction to India
AS 250	Introduction to Latin America

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AS 260	Introduction to the Slavic World
AS 270	Introduction to Islamic Civilization
PHL 250	Philosophies and Religions of Asia

### 3. LANGUAGE AND THOUGHT

Language both reflects and shapes human culture. The study of language as a means of communication, and the study of the relations between language and logic, perception, and judgment increase our understanding of the influence of language on human thought and behavior. Students may fulfill the 8-credit requirement in Language and Thought in the following ways:

- Complete 8 credits in a foreign language. Students who wish credit for foreign language proficiency should take a competency credit examination in accordance with university rules (see page 13). Students in the secondary education program must complete their 4-credit foreign language requirement at the second semester (115) level. ML 114-115 (American Sign Language) does not satisfy the foreign language requirement.
- Complete 4 credits in ALS 176 and 4 credits in one of the following: LIN/SCN 207 Semantics; SCN 303 Introduction to Communication Theory; PHL 102 Introduction to Logic; PHL 170 Introduction to Formal Logic.

### 4. LITERATURE

Through great literary works, we can move beyond individual experience and empathetically share the intellectual, emotional, and spiritual experience of others. The study of that imaginative combination of form and content which is a literary work cultivates sensitivity to language and awareness of the strengths and weaknesses of human beings. The study of literature offers a way of expanding our understanding of the wonder and anguish of human experience and of ordering and evaluating our individual place in that experience.

ENG 100	Masterpieces of World Literature
ENG 105	Shakespeare
ENG 224	American Literature
ENG 241	British Literature
LIT 281	Continental European Literature I
LIT 282	Continental European Literature II
NCC 121	Images of Humanity

### 5. MATHEMATICAL AND NATURAL SCIENCES

A basic knowledge of science and the mode of scientific inquiry, which necessarily includes familiarity with the mathematical means of quantification, is more fundamental in today's society than ever before. Because advances in the technical aspects of chemistry, biology, and physics frequently carry both moral and public policy implications, knowledge about the sciences is required of an informed citizenry.

MTH 121	Linear Programming
MTH 122	Calculus for the Social Sciences
MTH 154, 155	Calculus
MTH 185	Mathematics — An Exploration into Undergraduate Topics
BIO 104, 105	Biology of the Human
BIO 190, 200	Biology
BIO 300	Biology and Society
CHM 104	Introduction to Chemical Principles
CHM 144, 145	General Chemistry
PHY 101, 102	General Physics
PHY 104, 105	Astronomy
PHY 106, 107	Earth Sciences
PHY 125	The Physics of Music
PHY 127	Human Aspects of Physical Science
ENV 308	Introduction to Environmental Studies
NCC 141	Twentieth Century Science

### 6. SOCIAL SCIENCES

Individual human behavior is influenced by other human beings and by the social institutions that have evolved as means of regulating varied behaviors. Each academic discipline in the

social sciences provides a unique perspective from which to examine the influence of social and cultural factors on individual and group attitudes, values, and behaviors.

SOC 100	Introduction to Sociology
AN 101	Evolution of Man and Culture
AN 102	Man in Culture and Society
AN 307	Cultural Anthropology and the Ethnographic Film
ECN 100	Introduction to Political Economy
ECN 200	Introduction to Macroeconomics
ECN 225	American Economic Growth and Development
PS 100	Introduction to American Politics
PS 110	Contemporary Political Issues
PS 115	U.S. Foreign Policy
PS 131	Foreign Political Systems
PS 250	Politics of Survival
PS 372, 373	Western Political Thought
PS 377	Communism
PSY 100	Foundations of Contemporary Psychology
PSY 130	Psychology and Society
NCC 131	Studies in Human Organization

### D. Special Provisions:

- The number of credits specified for each distribution field is to be regarded as a minimum for completion of that field, except that students transferring from other institutions may complete a 4-credit field requirement with a 3-credit transfer course, and an 8-credit field requirement with two 3-credit transfer courses. Such students must, however, complete the total minimum credit hours in general education (including the credit hours transferred) required for their degree program.
- Transfer students holding an associate's degree from a community college participating in the MACRAO agreement with Oakland University will be considered to have fulfilled our general education requirements with one exception: Course work in English composition is considered part of community college general education. English composition (Learning Skills) is not part of the general education requirements at Oakland. Therefore, transfer students under the MACRAO agreement must complete two additional courses at Oakland approved by a faculty adviser and chosen from those designated in the distribution fields.
- Students with double majors which fall in different fields may offer course work from one major to fulfill a distribution field requirement, if the courses are designated as acceptable in that distribution field.
- Alternately the general education requirement may be satisfied by completing 32 credits in the New Charter College Program plus 4 or 8 credits in the Language and Thought distribution field for B.S. or B.A. candidates, or by completing the general education requirements specified by the Honors College program.

## IV. Requirement of a Departmental Major or an Independent Major

The student must fulfill all requirements of his/her elected major as described in the departmental entries. The student may also satisfy this requirement by completing an independent major as described below. A cumulative grade point average of 2.00 in the major or independent major is required for graduation.

### A. The Major

The majors offered in the College of Arts and Sciences are listed below. For specific requirements, see the departmental entries.

Anthropology, page 77

Art History, page 23

Biochemistry, page 84

Biology, page 26	Mathematics, page 49
Chemistry, page 31	Music, page 60
Chinese language and civilization, page 53	Philosophy, page 65
Communication arts, page 35	Physics, page 68
Economics, page 96	Political science, page 71
English, page 40	Psychology, page 74
Environmental health, page 85	Public administration and public policy, page 71
French, page 53	Russian, page 53
German, page 53	Russian language and civilization, page 53
History, page 43	Social studies, page 86
Journalism, page 35	Sociology, page 77
Latin American languages and civilization, page 53	Sociology and anthropology, page 77
Linguistics, page 47	Spanish, page 53
	Theatre Arts, page 35

The College of Arts and Sciences offers a variety of programs for secondary teaching majors. For a list of departments offering these majors, see page 119. Requirements for these majors are found under the department entries.

There are no college regulations governing admission to major standing or retention in major standing. Each department controls its own procedures in these areas. Students should establish and maintain close contact with faculty advisers in the department in which they wish to major; students who fail to do so risk delay in graduating.

#### B. Independent Major

An independent major may be offered in lieu of a departmental major in partial fulfillment of degree requirements. The independent major permits students to receive certification for completing a set of courses constituting a clearly defined educational goal which cannot be achieved through established departmental majors. While there are many courses a student might combine in an independent major, the independent major logically might be developed from an established concentration. For example, a student might combine the concentration in archaeology with additional courses in anthropology and in art history. An independent major may be taken as part of a double-major program in conjunction with a regular departmental major providing that no course counting toward completion of the departmental major may also be counted toward completion of the independent major. The regulations for the independent major are:

1. Students may be admitted to the independent major program only after they have completed at least 32 credits.
  2. Students must submit the application for admission to the independent major program to the Committee on Instruction, College of Arts and Sciences, before completing 90 credits toward graduation.
  3. Students offering the independent major must satisfy all graduation requirements, apart from the major, exactly as listed in the undergraduate catalog.
  4. An independent major must comprise not less than 40 nor more than 60 credits, at least 32 of which must be in courses at or above the 300 level.
  5. At least 75 percent of the credits in an independent major must be in departmental courses offered in the College of Arts and Sciences.
  6. The application for admission to the program must be prepared in consultation with the advising office, College of Arts and Sciences. The student's program is valid only upon issuance of a Certificate of Admission by the Committee on Instruction of the College of Arts and Sciences.
  7. No change in the program as prescribed by the Certificate of Admission is valid unless the Committee on Instruction approves the modification in writing.
- Inquiries about the independent major program should be

addressed to Sheldon Appleton, Associate Dean for Advising, College of Arts and Sciences.

## SPECIAL INSTRUCTIONAL PROGRAMS OF THE COLLEGE

### Minors for Liberal Arts Degree Programs

Minors are not required by the College of Arts and Sciences for the baccalaureate programs, but the college offers a number of liberal arts minors which the student may pursue in addition to the required major. The college offers the following minors, described in detail under department entries:

Art history, page 23	Linguistics, page 47
Biology, page 27	Mathematics, page 49
Chemistry, page 32	Modern languages, page 54
Communication arts, page 35	Philosophy, page 65
Economics, page 100	Physics, page 68
English, page 40	Political science, page 71
History, page 43	Psychology, page 74
International economics, page 100	Studio art, page 23
Journalism, page 35	Theatre arts, page 35

In addition, the college accepts minors in computer and information science offered by the School of Engineering, in international management and in management offered by the School of Economics and Management, and in dance offered by the School of Performing Arts. These minors, and those listed above, do not count toward either an elementary or secondary teaching credential.

### Secondary Teaching Minors

Secondary teaching minors are not required by the College of Arts and Sciences for the baccalaureate programs, but they are required of prospective secondary school teachers seeking certification by the Michigan Department of Education. Only programs entitled "Secondary Teaching Minor" will be certified by the Department of Education. The college offers the following secondary teaching minors, which are described in detail under departmental entries:

Art, page 23	Music, page 60
Biology, page 27	Physics, page 68
Chemistry, page 32	Speech, page 35
English, page 40	*Political science, page 86
History, page 43	*Psychology, page 86
Mathematics, page 49	*Sociology, page 86
Modern languages, page 53	*for social studies majors only

The college accepts a secondary teaching minor in physical education offered by the School of Human and Educational Services. Students not completing this minor may count no more than 8 credits in physical education towards the total number of credits required for graduation.

### Interdepartmental Programs/Concentrations

The college offers a number of interdepartmental programs and concentrations which the student may pursue in addition to a departmental major. These concentrations are described in departmental entries, in the area studies entry, page 81, or in the interdepartmental programs entries, page 87.

## ACADEMIC ADVISING AND PROGRAM-PLANNING GUIDELINES

Every student is responsible for drawing up an appropriate academic program and for fulfilling every degree requirement. Faculty advisers and academic counselors are obligated to assist

students in doing so, but the responsibility for fulfilling requirements remains with the student. The college suggests that students should:

1. Become thoroughly familiar with all degree requirements.
2. Consult an adviser in the major department each semester to plan the semester schedule and learn of any changes in requirements.
3. Maintain their own records concerning course work, grades and credits achieved, and requirements completed.
4. Seek clarification of any ambiguities in requirements from departmental academic advisers or from the advising office, College of Arts and Sciences.

### FIELD EXPERIENCE PROGRAM

In cooperation with the Center for Community and Human Development, the college offers, by means of departmental

courses numbered 399, opportunities for students to obtain academic credit related to concurrent field work experience. Emphasis is on the academic aspect of this program, which incorporates student performance in the field, and students are required to make an intellectual analysis of the field experience based on their academic program. The 399 courses carry 4 credits each, are numerically graded, and may not be repeated for additional credit. Students wishing to participate in this program are expected to be at the junior or senior level, and must have completed at least 16 credits in the department in whose 399 course they wish to enroll. Individual departments may have specific prerequisites in addition to these. For details, consult one of the departments participating in this program.

An independent major may be taken as part of a double-major program in conjunction with a regular departmental major providing that no course counting toward completion of the departmental major may also be counted toward completion of the independent major.





# DEPARTMENT OF ART AND ART HISTORY

**CHAIRPERSON:** John B. Cameron

**PROFESSORS:** Carl F. Barnes, Jr. (*Art History and Archaeology*),  
John B. Cameron (*Art History*)

**ASSOCIATE PROFESSOR:** John L. Beardman (*Studio Art*)

**ASSISTANT PROFESSORS:** C. Franklin Sayre (*Art History*),  
Charlotte Stokes (*Art History*)

**VISITING INSTRUCTOR:** Janice G. Schimmelman (*Art History*)

**LECTURERS:** Louisa Brantigan (*Art History*), Judy Toth (*Art History*),  
Paul Webster (*Studio Art*)

Art history is an ideal curriculum for students who wish to investigate a broad range of humanistic disciplines. The visual arts are studied in their historical context in terms of the cultural, economic, philosophical, political, religious, social, and technological conditions which determine content and form. The art history program provides both majors and nonmajors with a thorough introduction to the visual arts of various cultures throughout history. The art history program is strengthened by visiting lecturers in special fields, by group visits to the Detroit Institute of Arts and to other public and private collections of art in metropolitan Detroit, and through study of special exhibits of art historical interest in Oakland's Meadow Brook Art Gallery. The department cooperates with the concentrations in American studies, archaeology, area studies, film, and women's studies.

The department offers a program of study leading to the Bachelor of Arts degree with a liberal arts major in art history. This program is intended for students who wish directed study in art history and for students who contemplate a career in one of the fields for which art history is a basis: aesthetics and criticism, archaeology, architecture, college teaching, directorship of special library collections, editorial work in art publishing firms, fine arts, conservation, museum curatorship, and urban design.

## Requirements for the Liberal Arts Major in Art History

A total of 40 credits in art history courses, distributed as follows, are required to complete the major:

1. AH 100, 101, and 102 or 104.
2. 16 credits from the following. At least one course must be selected from each category:  
Non-Western: AH 300, 301, 305, 306, 307, 308, and 320  
Ancient/Medieval: AH 312, 314, 322, 326  
Renaissance/Baroque: AH 330, 340  
American/Modern: AH 350, 363, 364, 365
3. 8 elective credits from AH courses
4. AH 490 or 491
5. One studio art course (4 credits) is required as a cognate to the major, the course to be SA 100 or any SA 200 or 300-level course.

Majors are advised that department faculty will not recommend for graduate work anyone who has not completed, in addition to the above requirements, AH 480 and at least one year of college-level German or French.

## Departmental Honors in Art History

Majors who wish to be considered for departmental honors must petition for such consideration and submit a significant research paper prepared for any 300- or 400-level art history course they successfully complete at Oakland. A faculty committee will judge this paper. There is no minimum grade point average required for honors, but consideration will normally be given only to students who have completed 20 credits of art history at Oakland with a grade point average of 3.60 or above.

## Requirements for the Modified Major in Art History with an Area Studies Concentration

Requirements for the modified major in art history with a concentration in East Asian or South Asian area studies are: 24 credits in art history courses, including AH 104, 203, and one of AH 300, 301, or AH 320. For area studies requirements, see page 81.

## Requirements for the Liberal Arts Minor in Art History

A total of 20 credits in art history courses, to be distributed as follows:

1. AH 100 and 101
2. A total of 8 credits, 4 each from any two of the following three categories:  
Ancient/Medieval: AH 312, 314, 322, 326  
Renaissance/Baroque: AH 330, 340  
American/Modern: AH 350, 363, 364, 365
3. 4 elective credits from AH courses

## Requirements for the Liberal Arts Minor in Studio Art

A total of 20 credits in studio art courses, to be distributed as follows:

1. SA 100, SA 101.
2. One course from the following: SA 200, SA 201, SA 209, SA 214.
3. Two courses from the following: SA 307, SA 309, SA 314.

## Requirements for the Secondary Teaching Minor in Art

A total of 20 credits in art history and studio art courses, distributed as follows, are required to complete the minor. For additional information, consult the School of Human and Educational Services. The North Central Accreditation Association requires 24 credits for a minor in art.

1. AH 100 and 101
2. 4 credits in studio art
3. 8 credits in art history

## ART HISTORY COURSE OFFERINGS

- AH 100 Introduction to Western Art I (4)**  
History and analysis of the visual arts of western Europe from prehistoric times until the Renaissance, ca. A.D. 1400.
- AH 101 Introduction to Western Art II (4)**  
History and analysis of the visual arts of western Europe from the Renaissance, ca. A.D. 1400 to the present.
- AH 102 Introduction to African, Oceanic, and American Indian Art (4)**  
History and analysis of the visual arts of the indigenous peoples of Africa, South Pacific Islands and Australia, and North America.
- AH 104 Introduction to Asian Art (4)**  
History and analysis of the visual arts of Asia, especially those of China, India, and Japan.
- AH 203 Buddhist Art (4)**  
Stylistic, iconographical, sectarian, and historical aspects of Buddhist architecture, sculpture, and painting in Asia from earliest examples in India through Zen painting in Japan.
- AH 208 Afro-American Art (4)**  
The arts of black Americans of African descent produced in the United States since ca. A.D. 1700.
- AH 210 Art as Advertising and Propaganda (4)**  
The use of art for economic, political, and religious propaganda in the

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western world with emphasis on the development of art as advertisement since the 19th century.

### AH 215 Great Masters of Painting (4)

The paintings and significance of selected artists in Europe and the United States from Leonardo da Vinci to Andy Warhol.

### AH 300 Chinese Art (4)

The development of architecture, sculpture, and painting in China from the Shang Dynasty, ca. 1550 B.C., until the founding of the Chinese Republic, A.D. 1912.

Prerequisite: AH 104.

### AH 301 Japanese Art (4)

The development of architecture, sculpture, and painting in Japan from the fifth to the nineteenth century A.D.

Prerequisite: AH 104.

### AH 305 African Art (4)

The arts of the indigenous peoples of West, Central, and East Africa.

Prerequisite: AH 102.

### AH 306 Oceanic Art (4)

The arts of the indigenous peoples of the South Pacific Islands and Australia.

Prerequisite: AH 102.

### AH 307 Pre-Columbian Art (4)

The arts of the Indians of Mexico, Central America, and South America prior to the Spanish Conquest.

Prerequisite: AH 102.

### AH 308 North American Indian Art (4)

The arts of the Eskimo and the Northwest Coast, United States, and Canadian Indians.

Prerequisite: AH 102.

### AH 312 Greek Art (4)

The development of architecture, sculpture, and painting in the pre-Hellenic Aegean civilizations and in Classical Greece from ca. 3000 B.C. until the period of Roman domination in the Mediterranean area, ca. 100 B.C.

Prerequisite: AH 100.

### AH 314 Roman Art (4)

The development of architecture, sculpture, and painting in Etruria and in the Roman Republic and Empire from ca. 600 B.C. until the relocation of the capital at Constantinople in A.D. 330.

Prerequisite: AH 100.

### AH 316 Art Historical Archaeology (4)

Development of art historical archaeology from the fifteenth century A.D. to the present, with emphasis on artistic documentation and interpretation of major discoveries in Mesoamerica and Europe, especially the Mediterranean area.

### AH 320 Islamic Art (4)

The development of architecture and painting in Islam from the seventh to the eighteenth century A.D. with reference to the countries of the Fertile Crescent, North Africa, Arab and Moorish Spain, Egypt, Persia, Turkey, and Muslim India.

### AH 322 Early Medieval, Byzantine, and Romanesque Art (4)

The development of architecture, sculpture, and painting in Christian Europe from A.D. 330 through the apex of monasticism, ca. A.D. 1150.

Prerequisite: AH 100.

### AH 326 Gothic Art (4)

The development of architecture, sculpture, and painting in western Europe from ca. A.D. 1150 through the period of the Crusades and medieval urbanism, ca. A.D. 1400.

Prerequisite: AH 100.

### AH 330 Renaissance Art (4)

The development of architecture, sculpture, and painting in western Europe during the Renaissance and Reformation from A.D. 1400 to 1600.

Prerequisite: AH 101.

### AH 340 Baroque Art (4)

The development of architecture, sculpture, and painting in western Europe and colonial South America during the period of absolute monarchy and the Counter-Reformation from A.D. 1600 to 1800.

Prerequisite: AH 101.

### AH 350 American Art (4)

The development of architecture, sculpture, and painting in the United States from the American Revolution, A.D. 1776, until World War I, A.D. 1914.

Prerequisite: AH 101.

### AH 351 Women in Art (4)

The traditional image of woman in art and the contribution of women artists in Europe and the United States from the Middle Ages until the present.

Prerequisite: AH 101.

### AH 355 Michigan Architecture (4)

The development of the commercial, domestic, industrial, public, and religious architecture of Michigan from the period of early settlement to the present.

### AH 360 History of Automobile Design (4)

The effects of aesthetic, social, and technological change on automobile design from the nineteenth century A.D. to the present. Identical with EGR 360.

### AH 363 Modern Architecture and Urban Design (4)

The development of architecture and urban design in Europe and the United States from the Industrial Revolution, ca. A.D. 1750, to the present. Identical with EGR 363.

Prerequisite: AH 101.

### AH 364 Modern Art I (4)

The development of sculpture, painting, and printmaking in the western world from the French Revolution to A.D. 1900.

Prerequisite: AH 101.

### AH 365 Modern Art II (4)

The development of sculpture, painting and related media in the western world from A.D. 1900 to the present.

Prerequisite: AH 101.

### AH 366 History of Photography (4)

The development of still photography as an art and its relationship to other visual arts since ca. A.D. 1830.

### AH 367 Film and the Visual Arts (4)

The relationship between films and various plastic arts such as still photography, sculpture, and painting, as they reflect some twentieth-century artistic movements (pop art, surrealism, cubism, expressionism, etc.).

### AH 390 Topics in Art History (4)

Specific topics in art history for which no regular course offerings exist. Topic, instructor, and prerequisite will be announced before each offering.

Prerequisite: Permission of instructor.

### AH 399 Field Experience in Art History (4)

Field experience in art history under faculty supervision. An academic project related to the departmental discipline which incorporates student performance in an occupational setting. Restricted to departmental majors and minors. May not be repeated for credit or taken by students who have received credit for SA 399.

Prerequisites: 16 credits in art history, of which at least 8 must be at the 300-400 level.

### AH 480 The Bibliography and Methodology of Art History (4)

The history and criticism of art as disciplines from classical antiquity to the present, with emphasis on the principal approaches to the study of art since A.D. 1500. Students will read selections from the major contributors to these disciplines.

Prerequisite: 12 credits of art history.

### AH 490 Problems in Art History (4 or 8)

Seminar in specific subject areas of, or approaches to, art history. May be taken in different semesters under different instructors for a total of 8 credits or, with permission of instructor and department chairperson, may be taken in one semester for a total of 8 credits.

Prerequisite: 12 credits of art history.

### AH 491 Directed Research in Art History (4 or 8)

Directed individual research for advanced art history.

Prerequisite: Permission of instructor.

## Studio Art

The departmental program of study leading to the Bachelor of Arts degree with a liberal arts major in studio art has been temporarily suspended, and no new candidates for this major will be accepted during the 1980-1981 academic year. The department will continue to offer courses in studio art; several studio art courses are offered as general electives for all students, or as a complement to the art history program.

### STUDIO ART COURSE OFFERINGS

**SA 100 Drawing, Painting, and Visual Thinking (4)**

Exploration of the possibilities of translating observations into visual structures, including drawing from nature. Emphasis is on process rather than product. Theory and historical background will be given.

**SA 101 Introduction to Sculpture (4)**

Exploration of means of creating three-dimensional structures.

**SA 107 Drawing Skills I (4)**

Introduction to the tools and methods of drawing as a means to observe the physical world accurately and to develop visual ideas more clearly. Emphasis is on skill development.

**SA 108 Figure Drawing Skills I (4)**

Traditional approaches to figure drawing, including anatomy, line and shading to depict the figure in illusionistic space. Emphasis is on skill development.

Prerequisite: SA 107.

**SA 109 Color Skills (4)**

Study and analysis of the properties, theory, and use of color as an expressive and structural element in painting.

Prerequisite: SA 100 or 101.

**SA 200 Basic Studio I (4)**

Continuation of SA 100 with more emphasis on conceptualization. Continues to deal with the process of creating structures, but the product will be more important than in SA 100.

Prerequisite: SA 100 or 101.

**SA 201 Basic Studio II (4)**

Continuation of SA 200.

Prerequisite: SA 200.

**SA 209 Painting I (4)**

Introduction to painting, its technique, history, and expressive possibilities. Includes the making of and experimentation with paint.

Prerequisite: SA 100

**SA 211 Printmaking I (4)**

Basic techniques and visual ideas inherent in the medium.

**SA 214 Sculpture II (4)**

Continuation of SA 101.

Prerequisite: SA 101.

**SA 307 Drawing Skills II (4)**

Continuation of SA 107. Emphasis is on translation of visual ideas from drawing into other media. May be taken in different semesters for a total of 8 credits.

Prerequisite: SA 107 and 201.

**SA 309 Painting II (4)**

Continuation of SA 209.

Prerequisite: SA 209

**SA 311 Printmaking II (4)**

Continuation of SA 211.

Prerequisite: SA 201 and 211.

**SA 314 Sculpture III (4)**

Continuation of SA 214.

Prerequisite: SA 201 and 214.

**SA 399 Field Experience in Studio Art (4)**

Field experience in studio art under faculty supervision. An academic project related to the departmental discipline which incorporates student performance in an occupational setting. Restricted to departmental majors and minors. May not be repeated for credit or taken by students who have received credit for AH 399.

Prerequisites: 16 credits in studio art, of which at least 8 must be at the 300 level.



## DEPARTMENT OF BIOLOGICAL SCIENCES

**CHAIRPERSON:** *Nalin J. Unakar*

**PROFESSORS:** *Francis M. Butterworth, William C. Forbes, John R. Reddan, V.N. Reddy, Michael V. Riley, Arun K. Roy, Reuben Torch, Nalin J. Unakar, Walter L. Wilson*

**ASSOCIATE PROFESSORS:** *John D. Cowlshaw, Esther M. Goudsmit, Egbert W. Henry, R. Douglas Hunter, Paul A. Ketchum, Moon J. Pak, Barry S. Winkler*

**ASSISTANT PROFESSORS:** *Martins Linouts, Charles B. Lindemann, Virinder K. Moudgil, Asish C. Nag, Daphna R. Oliver, James K. Reynhout, Ann K. Sakai*

**ADJUNCT PROFESSOR:** *Clifford V. Harding*

**ADJUNCT ASSOCIATE PROFESSORS:** *Nasirul Haque, James R. Wells*

**VISITING INSTRUCTOR:** *Robert L. Leopard*

The Department of Biological Sciences offers programs of study leading to the degrees of Bachelor of Arts, Bachelor of Science, and Master of Science. The undergraduate programs prepare the student for graduate studies in the life sciences, laboratory work and research in industries concerned with biological materials, professional careers in medicine, dentistry, nursing or other allied health areas, or science teaching in junior and senior high schools. This liberal arts program in biology is particularly suited to the needs of the premedical student. For further information on the graduate program in the department, see the *Oakland University Graduate Study Catalog*.

The Department of Biological Sciences offers a diversified selection of courses and research programs in cell biology, biochemistry, physiology, morphology, genetics, botany, ecology, invertebrate zoology, developmental biology, microbiology, plant physiology, and evolutionary biology. The student selects courses that suit his/her goals and interests and also has the opportunity to become involved in a research program. Since modern biology requires physicochemical insight, training in chemistry, physics, and mathematics is also required. For students interested in combining biology with applied statistics, see page 87 for a description of the concentration in applied statistics.

### Requirements for the Liberal Arts Major in Biology, B.A. Program

Forty credits in biology (from BIO 190 and above) are required, including at least seven lecture courses. These must include BIO 190, 195, 200, and three courses from the following: 1. Physiology (BIO 321, or 207, or 333); 2. Biochemistry (BIO 325); 3. Developmental Biology (BIO 323); 4. Genetics (BIO 341); 5. Ecology (BIO 301). Students must also, in consultation with their biology adviser, select at least one course in organismic biology (either a BIO course numbered 309-320 or one of BIO 303, 327, or BIO 373) and at least one 400-level course other than BIO 497. Corresponding lecture and lab courses should normally be taken simultaneously. In addition, 15 credits of chemistry (CHM 144, 145, 147, 148, 303, and 306), 10 credits of physics (two semesters of general physics and lab), and STA 320 or MTH 154 are required. The choice of chemistry, mathematics, and physics should be made with care. Students planning to enter graduate or professional school should take courses beyond the minimum requirements, such as CHM 304, 307, MTH 154, 155 and PHY 151, 152 (instead of PHY 101, 102). In addition, lack of laboratories may seriously weaken a student's chance to enter postgraduate programs.

### Requirements for the Major in Biology, B.S. Program

Forty credits in biology (from BIO 190 and above) are required, including at least seven lecture courses. These must include BIO 190, 195, 200, and three courses from the following: 1. Physiology (BIO 321, or 207, or 333); 2. Biochemistry (BIO 325); 3. Developmental Biology (BIO 323); 4. Genetics (BIO 341); 5. Ecology (BIO 301). Students must also, in consultation with their biology adviser, select at least one course in organismic biology (either a BIO course numbered 309-320 or BIO 303, 327, or 373) and at least one 400-level course other than BIO 497. Corresponding lecture and lab courses should normally be taken simultaneously. In addition, two years of chemistry (CHM 144-145, 147-148, 303-304, 306-307), mathematics through integral calculus (MTH 155), and a one-year calculus-requiring general physics course and lab (PHY 151, 152, and 158) are required. Finally, in addition to the formal course requirements, the student must complete one of the following: a senior paper based on research performed under BIO 490, a senior paper based on a literature search on a research-oriented topic taken as BIO 405, or a comprehensive exam testing knowledge of biology and ability to express oneself in clear, scientific prose.

### Requirements for Departmental Honors in Biology

Departmental honors may be granted to students who have been nominated by a faculty member on the basis of high academic achievement and excellence in either independent research or teaching assistance.

The specific requirements are:

1. 3.20 grade point average minimum overall and 3.50 grade point average minimum in BIO courses
2. at least one 400-level BIO lecture course (BIO 405, 455, 490, and 497 do not qualify)
3. excellence in one of the following two service roles:
  - a. assisting in teaching laboratory course(s) (either for pay or credit)
  - b. performing independent laboratory study or serving as a laboratory research assistant

### Biochemistry Program

In cooperation with the Department of Chemistry, the Department of Biology offers a B.S. degree program with a major in biochemistry. See page 84.

### Requirements for the Secondary Teaching Major in Biology

Thirty-five credits in biology (from BIO 190 and above) are required, including at least six lecture courses. These must include BIO 190, 195, and 200. One year of chemistry (CHM 144-145 and 147-148) and either STA 320 or MTH 154 are required in addition to ED 344, 345, 428 (offered winter only), and 455. ED 428 must be completed prior to ED 455. This means taking ED 428 in the junior year. To complete the major, selection from the following courses is recommended: Anatomy, Physiology, Introductory Biochemistry, Botany, Plant Morphology, Invertebrate Zoology, Vertebrate Zoology, Plant Physiology, Ecology, Developmental Biology, Genetics, Microbiology, Evolution and Systematics, and Laboratory Techniques in Biological Sciences. Preparation in both plant and animal science is recommended. Because high school science is largely conducted in the laboratory, candidates for this degree must

also take the labs when they are separately numbered. A minor field is required. Minors particularly useful in finding employment in secondary schools are physical education, chemistry, physics, mathematics, or a group minor in chemistry and physics (CHM 144-145, 147-148, 303, 306, PHY 101, 102, 158). Certification in more than one minor field is helpful. Apprentice college teaching (BIO 497) is recommended as a preliminary classroom experience prior to the internship (ED 455). Any student with secondary science teaching as a goal and a major in biology should seek advisement from the freshman year regarding course selection from the Secondary Education Committee of the department.

### Requirements for the Liberal Arts Minor in Biology

Students in other departments who wish to minor in biology must take a minimum of 20 credits in biology, including BIO 190, 195, and 200. At least 8 credits must be taken in courses numbered 301 or higher.

### Requirements for the Secondary Teaching Minor in Biology

Twenty credits in biology (from BIO 190 and above) are required.

#### COURSE OFFERINGS

The following courses are designed particularly for non-science majors and are not counted toward biology major or minor requirements.

**BIO 104 Biology of the Human (4)**  
The biology of man. Cells, tissues, organs, conduction, contraction, and circulation of blood and lymph and breathing. Offered fall and winter semesters.

**BIO 105 Biology of the Human (4)**  
Digestion, excretion, the endocrine system, and reproduction. Offered fall and winter semesters.

**BIO 150 Human Body (4)**  
A study of the human body and its behavior with reference to aging and disease. Emphasis will be given to important structural components of the body and their relation to functions of the various systems.

**BIO 300 Biology and Society (4)**  
A survey of the most important biological principles and their implications for life in modern society. Human function and energy, health and disease, the biologist's view of nature including the impact of evolutionary thought and the requirements for ecological balance.

The following courses are designed particularly for the biology major and minor and for other majors in the sciences.

**BIO 190 Biology (4)**  
An organismic approach to biology. Introduction to the structure and functions of plants and animals, including: nutrient acquisition, gas exchange, internal transport, excretion, chemical and nervous control, reproduction, and behavior. A section on ecology and evolution is followed by a synopsis of the major phyla of plants and animals. Offered fall and winter semesters.

**BIO 195 Biology Laboratory (1)**  
To accompany BIO 190 or 200.

**BIO 200 Biology (4)**  
Subjects covered are at the level of molecular and cell biology: cell ultrastructure, enzymology, metabolism, genetics, cell division, and chemical embryology. Emphasis is on several basic biological concepts, facts upon which these concepts are based, and directions of present research. A year of high school chemistry and/or CHM 101 are strongly recommended. May be taken before BIO 190. Offered fall and winter semesters.

**BIO 205 Human Anatomy (4)**  
The integration of organs into systems and systems into the organism. Selected aspects of developmental, comparative, and micro-

anatomy also will be discussed. Relevant to students in health sciences, biological science, and liberal arts studies.  
Prerequisite: BIO 200.

**BIO 206 Human Anatomy Laboratory (1)**  
To accompany BIO 205.

**BIO 207 Human Physiology (4)**  
A detailed study of general physiological principles and mechanisms with emphasis on systemic physiology. An introduction to the physical principles important to understanding physiological processes will be given. Normal physiology of individual organ systems will be explored, with stress on the role each plays in the human homeostatic balance.  
Prerequisite: BIO 200.

**BIO 208 Human Physiology Laboratory (1)**  
To accompany BIO 207.

**BIO 300 Biology and Society (4)**  
See description above under nonmajor courses.

**BIO 301 Ecology (5)**  
Basic ecological concepts, energy and materials flow, growth and regulation of populations, community interactions, chemical ecology, and environmental biology. Includes laboratory experience. Offered fall semester.  
Prerequisite: BIO 190, 195, 200.

**BIO 303 Field Biology (4)**  
An ecologic and taxonomic study of the flora and fauna of Oakland University's setting. Soil, climatic, and biological factors will be recognized. Aims include appreciation of a variety of habitats, competence in use of illustrated handbooks and keys, and skills in collecting, preserving, and identifying.  
Prerequisite: BIO 190, 195.

**BIO 305 Histology (4)**  
The microscopic anatomy and histochemistry of vertebrate tissues and organs in relation to tissue function.  
Prerequisite: BIO 190, 200.

**BIO 306 Histology Laboratory (2)**  
To accompany BIO 305.

**BIO 307 Introduction to Medical Microbiology (4)**  
An integrated survey of the principles of microbiology as they apply to infectious diseases and their control. Topics include bacterial, mycotic, protozoan, and viral infections; immunology; epidemiology; pathogenic mechanisms; antimicrobial agents; and chemotherapy. Required of students in the nursing program. Not open to students who have taken BIO 319.  
Prerequisite: BIO 205.

**BIO 309 Parasitology (5)**  
A survey of parasitic relationships: taxonomy and anatomy of organisms, life cycles, epidemiology, pathology and control methods. Includes laboratory experience.  
Prerequisite: BIO 190, 200.

**BIO 311 Botany (4)**  
A course in plant biology including topics on gross and microscopic structure, physiological processes, reproduction, and development. Diversity within the plant kingdom and evolutionary history are also discussed. Offered fall semester.  
Prerequisite: BIO 190, 195, 200.

**BIO 312 Botany Laboratory (1)**  
To accompany BIO 311.

**BIO 313 Plant Morphology (4)**  
Structure, reproductive mechanisms, and evolutionary relationships of the plant groups. Ultrastructure of cells and their walls. Preparation of plant materials for microscopic examination. Cytochemistry and histogenesis of selected specimens. Offered winter semester.  
Prerequisite: BIO 190, 195, 200.

**BIO 314 Plant Morphology Laboratory (1)**  
To accompany BIO 313.

**BIO 315 Invertebrate Zoology (4)**  
Invertebrates comprise a large part of the earth's population and have vast potential as research material. Lectures will stress metabolism, neural functioning, reproduction, and adaptations to environmental conditions.  
Prerequisite: BIO 190, 200. Corequisite: BIO 316.

## 28/Biological Sciences (Arts and Sciences)

### **BIO 316 Invertebrate Zoology Laboratory (1)**

A survey of the functional anatomy of the major invertebrate phyla. Living material will be observed whenever possible.  
Corequisite: BIO 315.

### **BIO 317 Vertebrate Zoology (5)**

A comparative study: gross and histological anatomy, taxonomy, unique physiological adaptations to habitats, evolution, and paleontology. Includes laboratory experience.  
Prerequisite: BIO 190, 200.

### **BIO 319 General Microbiology (4)**

Introduction to the science of studying small organisms and viruses. Topics include microbial metabolism, growth, genetics, classification, and the specialized techniques used to study microorganisms. The relationships of the pathogenic microorganisms and viruses to man and the involvement of microorganisms in the nutrient cycles of the earth are presented. Not open to students who have taken BIO 307.  
Prerequisite: BIO 200, CHM 145.

### **BIO 320 General Microbiology Laboratory (1)**

To accompany BIO 319.  
Prerequisite: Permission of instructor.

### **BIO 321 Physiology (4)**

A detailed study of general physiological principles, with emphasis on the following: characterization of the internal environment, bioenergetics, transport of material across the cell membrane, osmoregulation, respiration, conduction, contraction, and circulation.  
Prerequisite: BIO 190, 200.

### **BIO 322 Anatomy and Physiology Laboratory (1)**

A detailed study of vertebrate anatomy and physiology. To accompany BIO 321.

### **BIO 323 Developmental Biology (4)**

An examination of the patterns and process of development in a variety of organisms with emphasis on the vertebrates. Topics include: gametogenesis, fertilization, cleavage, morphogenesis, differentiation, organogenesis, regeneration, and cancer. Each topic is examined from the morphological to the molecular level with attention given to experimental approaches, mechanisms, and regulation.  
Prerequisite: BIO 190, 200. Highly recommended: BIO 324.

### **BIO 324 Developmental Biology Laboratory (1)**

A series of observations and experimental exercises on a variety of organisms designed to expose the student to basic patterns of development, embryonic structures, and techniques to analyze developmental processes.  
Corequisite: BIO 323.

### **BIO 325 Introductory Biochemistry (4)**

The principles and techniques of molecular biology which are basic to discussions in the intermediate and advanced courses. Topics include: structure and function of macromolecules, cellular organization, biological energy, molecular genetics, and related techniques. Offered fall semester.  
Prerequisite: BIO 190, 200, and one year of general chemistry.

### **BIO 326 Introductory Biochemistry Laboratory (1)**

To accompany BIO 325.

### **BIO 327 Woody Plants—Biology and Ecology (4)**

The study of woody plants (trees and shrubs), emphasizing their identification, biology, and ecology. Lecture topics include forest ecology, autecology, and the importance of woody plants to man. Laboratories stress local field experience in the ecology, natural history, and identification of woody plants.  
Prerequisite: BIO 190 or 200.

### **BIO 333 Plant Physiology (4)**

Basic principles of the major physiological processes of plants, with emphasis on hormonal relationships, inorganic nutrition, water relations, metabolism, photosynthesis, and tropisms. The importance of data obtained from the use of specialized plant research techniques: electron microscopy; spectrophotometry; ultracentrifugation, and gaseous treatments.  
Prerequisite: BIO 190, 200, and permission of instructor.

### **BIO 334 Plant Physiology Laboratory (1)**

To accompany BIO 333.

### **BIO 341 Genetics (4)**

The physical and chemical basis of inheritance. Selected topics in human genetics, microbial genetics, biochemical genetics, and cytogenetics. Two lab options are available; see BIO 342 and 345. Offered winter semester.  
Prerequisite: BIO 190, 200. BIO 325 recommended.

### **BIO 342 Genetics Laboratory (1)**

A series of short experiments to demonstrate basic genetic principles; to accompany BIO 341.

### **BIO 345 Experimental Genetics (2)**

An innovative approach to learning genetics. The student working on an individual research project not only will learn some basic principles of genetics but also will obtain preliminary experience in biological research. To be offered with BIO 341.

### **BIO 351 Neurobiology (4)**

The basis of how nerve cells transmit signals, how these signals are put together, and how integrative higher functions emerge is presented. Emphasis is placed upon recent advances. Topics include nerve excitation, synaptic transmission, spinal cord functions, cerebral cortical activity, sleep and consciousness, biochemical and pharmacological properties of nerve cells.  
Prerequisite: BIO 190, 299. CHM 145.

### **BIO 365 Medical Parasitology and Mycology (4)**

Animal and mycological parasites of man: clinical manifestations, laboratory methods for identification, life cycles, pathogenesis, epidemiology and control.  
Prerequisite: BIO 190 or equivalent.

### **BIO 371 Hematology (2)**

Overview of blood components, with emphasis on cell characteristics, clotting mechanisms, and clinical features of major ailments. Emphasis on laboratory techniques: cell counting, staining smears, sedimentation, hematocrit, osmotic fragility, coagulation time. Understanding of and adeptness with these techniques required.  
Prerequisite: BIO 190, 200.

### **BIO 373 Field Botany (4)**

A local flora course in identifying vascular plants occurring naturally in Michigan. Emphasis is on flowering plants, although ferns and coniferous species are also treated. Includes field trips to representative natural areas in southeast Michigan.  
Prerequisite: BIO 190, 200.

### **BIO 375 Limnology (2)**

An introduction to the fundamental concepts of freshwater biology. Topics include lake classification, biogeochemical cycles, lake and stream ecology, lake seasons, representative flora and fauna, plankton and benthos, lake origins, and evolution. Offered every other winter.  
Prerequisite: BIO 190, 200.

### **BIO 377 Marine Biology (2)**

An introduction to marine organisms and their ecology. Topics include characteristic flora and fauna of the shore and open ocean, ocean seasons, tides, food webs, adaptations, feeding, locomotion, community interactions, fisheries biology, and aquaculture. Offered every other winter.  
Prerequisite: BIO 190, 200.

### **BIO 381 Gross Human Anatomy (4)**

Combined lectures and laboratories primarily for upper-level health science majors. Study of human body systems with emphasis on the musculoskeletal system; morphological correlate of human physiological functions; dissection of cadaver.  
Prerequisite: BIO 321 and permission of instructor.

### **BIO 387 Evolution and Systematics (4)**

Exploration of the processes of evolution and their past and current influence on organisms of today. Topics include origin of variability, natural selection, differentiation of populations, speciation, phylogenetic concepts, evolutionary ecology, and sociobiology.  
Prerequisite: BIO 190, 200. BIO 341 recommended.

### **BIO 390 Laboratory Techniques in Biological Sciences (4)**

Laboratory techniques cover a broad spectrum of the current research assay methods normally used in the biological sciences. Stu-



dents concentrate on developing competence in areas of their own special interest.

Prerequisite: Four semesters of natural science and permission of instructor.

**BIO 393 Endocrinology (4)**

Introduction to the endocrine glands and their secretions. The interrelationship of various endocrine systems with vertebrate physiology will be emphasized including examination of control processes and the mechanism of hormone action. Special topics include the role of hormones in cancer, reproduction, differentiation, and growth.

Prerequisite: BIO 321, 325, or permission of instructor.

**BIO 394 Endocrinology Laboratory (2)**

To accompany BIO 393. Individual research projects.

Prerequisite: Permission of instructor.

**BIO 401 Advanced Human Physiology (4)**

Lectures and discussion emphasizing the human organism and the experimental basis for current concepts and techniques. Topics include: reproduction, circulation, respiration, electrophysiology, and cellular mechanisms in physiological processes.

Prerequisite: BIO 207 or 321.

**BIO 405 Special Topics (2, 3, or 4)**

Prerequisite: Permission of instructor.

**BIO 407 Cellular Biochemistry (4)**

Advanced discussion of cellular control mechanisms emphasizing recent developments in the biochemistry of proteins and nucleic acids.

Prerequisite: BIO 325, CHM 304, and PHY 102.

**BIO 408 Cellular Biochemistry Laboratory (1)**

To accompany BIO 407. Introduction to modern research techniques in biochemistry. Laboratory work includes: different chromatographic techniques (paper, column, thin layers, etc.), electrophoresis and immunoelectrophoresis, ultracentrifugation and cell fractionation, isolation and density gradient analysis of the nucleic acids, etc.

**BIO 421 Medical Microbiology (4)**

The biology of the microorganisms involved in the major infectious diseases. Topics include the etiology, epidemiology, physiology, pathogenesis, diagnosis, and control of these microorganisms.

Prerequisite: BIO 319.

**BIO 422 Medical Microbiology Laboratory (2)**

To accompany BIO 421.

**BIO 423 Immunology (3)**

Introduction to immunology with emphasis on practical applications. Topics include, but are not limited to, immunobiology, immunochemistry, serology, hypersensitivity (allergy), autoimmune disease, transplantation, and tumor immunology.

Prerequisite: BIO 321.

**BIO 425 Biophysics (4)**

The physical basis of biological phenomena, and the nature of biophysical theories. Biological structure and function are studied in the context of hierarchical, cybernetic systems theory. Offered winter semester of alternate years.

Prerequisite: BIO 325 or equivalent, calculus, and general physics.

**BIO 426 Biophysics Laboratory (1)**

Mathematical modeling of biological phenomena.

Prerequisite: To accompany BIO 425.

**BIO 427 Human Genetics (4)**

Key aspects of classical and molecular genetics of humans. Topics are: inborn errors of metabolism, cytogenetics, somatic cell genetics, biochemical genetics, immunogenetics, and the genetics of cancer.

Prerequisite: BIO 341 and permission of instructor.

**BIO 429 Cytochemistry (4)**

A survey of techniques currently used in microscopy to analyze the distribution and quantity of specific chemicals within cells and their organelles. Techniques include: specific staining reactions, enzyme digestion, metabolic inhibition, and autoradiography.

Prerequisite: BIO 305 and 306. Corequisite: BIO 430.

### 30/Biological Sciences (Arts and Sciences)

**BIO 430      Cytochemistry Laboratory (2)**

Individual research projects using cytochemical techniques to study and compare chemical compositions of several types of cells.  
Corequisite: BIO 429.

**BIO 431      Cellular Motility (4)**

A survey of the role and mechanism of cell movement in living systems, with an introduction to applicable principles of physics and chemistry. Special consideration will be given to developmental movements (cell migration), cell division (mitosis), and the movement of microorganisms.

Prerequisite: BIO 200, BIO 321, PHY 101, and CHM 144.

**BIO 433      Advanced Microbiology (4)**

A study of the classification, morphology, and physiology of microorganisms. Directly related to BIO 434, which is a corequisite.

Prerequisite: BIO 319 and CHM 303.

**BIO 434      Advanced Microbiology Laboratory (2)**

Selective enrichment, isolation, and characterization of microorganisms from natural sources.

Corequisite: BIO 433.

**BIO 435      Developmental Genetics (4)**

An integrated discussion of the concepts of modern aspects of genetics derived from molecular and microbial systems and their application to problems of development in multicellular organisms. Topics include gene structure, gene regulation, recombinant DNA, and immunogenetics. Offered fall semester.

Prerequisite: BIO 341 and 325 or equivalent.

**BIO 436      Developmental Genetics Laboratory (1)**

To accompany BIO 435.

**BIO 437      Virology (4)**

The molecular biology of viruses that governs their interactions with cells and organisms. Emphasis on bacterial and animal viruses. Offered winter semester of alternate years.

Prerequisite: BIO 325, 341, or 433.

**BIO 438      Virology Laboratory (1)**

Experiments with bacterial viruses, utilizing bioassay, genetic, and inactivation techniques.

Prerequisite: To accompany BIO 437.

**BIO 445      Ultrastructure (4)**

A consideration of the fine structure of cells and cell products as

revealed by electron microscopy and other procedures. Offered winter semester.

Prerequisite: BIO 305 and permission of instructor.

**BIO 446      Ultrastructure Laboratory (2)**

To accompany BIO 445.

**BIO 450      Visual Physiology (2)**

A course primarily on the structure and function of the vertebrate visual system. Topics include optical properties of the eye: absorption of light energy by photo-pigments, transduction processes in photoreceptor cells, transmission and encoding of visual information through the retina, lateral geniculate body, visual cortex and associative structures, dark and light adaptation, and color vision.

Prerequisite: BIO 321 and permission of instructor.

**BIO 455      Seminar (1)**

Discussion of recent publications in the biological sciences.

**BIO 460      Neuroanatomy (4)**

The brain, brain stem, spinal cord and their associated structures are considered with respect to their gross external and internal morphology, development, function, and the integration of these functions in motor activity. Certain lesions and their clinical significance will be discussed.

Prerequisite: BIO 205 or 381 or permission of instructor.

**BIO 463      Cell Biology (4)**

Prerequisite: BIO 305 and permission of instructor.

**BIO 464      Cell Biology Laboratory (1)**

To accompany BIO 463.

**BIO 480      Biochemical Pharmacology (2)**

Classification of drugs and a survey of their use, abuse, and side effects. Structure-activity relationship and biochemical basis of drug action on biological systems will be emphasized.

Prerequisite: BIO 321 and 325 or equivalents. CHM 303.

**BIO 490      Individual Laboratory Work (2, 3, or 4)**

Prerequisite: Permission of instructor.

**BIO 497      Apprentice College Teaching (2)**

Assisting in presenting a course, usually a laboratory course, to undergraduates.

Prerequisite: Permission of instructor.





# DEPARTMENT OF CHEMISTRY

**CHAIRPERSON:** *Paul Tomboulia*

**PROFESSORS:** *Gottfried Brieger, Isaac Eliezer, Kenneth M. Harmon, Frederick W. Obear, Lewis N. Pino, Paul Tomboulia*

**ASSOCIATE PROFESSORS:** *Julien Genyca, Steven R. Miller, Joel W. Russell, Peter Schmidt, Michael D. Sevilla, Robert L. Stern, R. Craig Taylor*

**ASSISTANT PROFESSOR:** *Denis Calleoert*

**VISITING ASSISTANT PROFESSOR:** *Cynthia Sevilla*

**LECTURER:** *Gerald G. Compton*

The Oakland University chemistry programs offer students the laboratories and equipment typically found in larger universities while retaining strong emphasis on undergraduate education and informal student-faculty relations characteristic of smaller liberal arts colleges. Research opportunities are available to qualified undergraduates. The department offers highly professional chemistry programs while retaining the liberal arts dedication to developing the highest intellectual and creative potential of its students. The Department of Chemistry offers programs of study leading to the degrees of Bachelor of Arts, Bachelor of Science, and Master of Science.

## Planning a Program in Chemistry

Curricula leading to a major in chemistry are quite structured, since knowledge is developed cumulatively in a four-year sequence. This leads to a fairly prescribed order of course presentation with a number of specific course prerequisites. Students interested in pursuing a program of study in chemistry should consult with a departmental adviser and file a program plan as early as possible in their college career to gain a clear picture of course interdependence and prerequisites.

## Admission to Major Standing

To be eligible for a major in chemistry the student must be admitted to major standing by the department at least three semesters before graduation. This procedure is necessary so that an appropriate and certifiable program of study may be followed. Students are to apply at the department office. A student may be admitted to major standing after filing a satisfactory curriculum plan and successful completion of 30 total credits in chemistry, physics, and mathematics, including CHM 147, 148, 225, 303 or 334, MTH 155, and PHY 151.

## Requirements for the Liberal Arts Major in Chemistry, B.A. Program

This curriculum is for students who wish to incorporate a science major in a broader liberal arts program, or who wish a foundation in chemistry as a basis for studies in chemical physics, medicine and related fields, environmental studies, and technical-legal or technical business careers. Students interested in sales or management careers in the chemical industry might consider taking the minor in management. See page 100.

Forty-one credits in chemistry and admission to major standing are required for the Bachelor of Arts degree; these consist of the core curriculum listed under the requirements for the Bachelor of Science degree in chemistry, plus CHM 428, one credit of either CHM 449 or 457, and one additional CHM lecture course above 400.

## Requirements for the Major in Chemistry, B.S. Program

The Bachelor of Science chemistry degree program consists of a core curriculum followed by one of two options. The

American Chemical Society Certification (ACS) option provides professional preparation for graduate study in chemistry or employment in the chemical industry. The biochemistry option provides training for graduate study or employment in biochemistry and related fields. Students electing this option will also be well-prepared for careers in medicine. Forty-eight credits in chemistry and admission to major standing are required for the Bachelor of Science degree, which includes the core plus one of the options.

**Core Curriculum:** The core curriculum consists of CHM 144-145, 147-148 (freshman year); CHM 225, 303-304 or 334-335, 306-307 or 338 (sophomore year); CHM 339, 441-442 (junior year). Corequisite to the core curriculum are MTH 154-155, PHY 151-152, and CIS 327.

**ACS Option:** Additional requirements for the ACS option are CHM 428, and 449 for 2 credits (junior year); CHM 462-463 (senior year); two additional credits in CHM laboratory course(s) above 400, and one additional CHM lecture course above 400. Corequisite to the ACS option are MTH 254, and one approved APM, MTH, STA, or PHY course above 200; MTH 256 is strongly recommended. CHM 540 and 541 are strongly recommended for students planning graduate study.

**Biochemistry Option:** Additional requirements for the biochemistry option are CHM 453-454, and 457 for 2 credits (junior year); CHM 553 (senior year); and two additional credits in CHM laboratory course(s) above 400. Corequisite to the biochemistry option are STA 321 and BIO 190, 321, 319. (Students may elect to take CHM 441-442 in their senior year.)

## Departmental Honors

Departmental honors may be awarded to graduating seniors in chemistry who have been recommended for honors by their research advisers and have completed all required science courses with high grades.

## Advanced Courses in Chemistry

Chemistry majors take one or more advanced courses in areas of interest. In addition to the courses listed in this catalog, the following advanced courses are open to qualified undergraduates: CHM 521, 522, Advanced Analytical; CHM 534, 535, Advanced Organic; CHM 540, Symmetry in Chemistry; CHM 541-542, Advanced Physical; CHM 553, 554, Advanced Biochemistry; CHM 563, 564, Advanced Inorganic; and CHM 570, Industrial Chemistry. Course details are listed in the *Graduate Catalog*.

## Biochemistry Program

In cooperation with the Department of Biology, the Department of Chemistry offers a B.S. degree program with a major in biochemistry. See page 84.

## Requirements for the Secondary Teaching Major in Chemistry

Thirty-two credits in chemistry and admission to major standing are required. These must include CHM 144-145, 147-148, 303-304, 306-307, 441, and 497 or their equivalents. Corequisite to this program are MTH 154-155, PHY 151-152 and 158, and ED 344, 345, 428, and 455. A minor is required. Minors particularly advantageous to job placement are biology, physics, mathematics, physical education, and a group minor in science. Admission to major standing must be attained at least one semester before registering for ED 455. The ED 344, 345, 428, 455 sequence requires careful scheduling. The student must prepare a program plan to be approved by a chemistry faculty member no later than the sophomore year.

## Requirements for the Liberal Arts Minor in Chemistry

Students in other departments who wish to minor in chemistry must take CHM 144-145, 147-148, 225, 303-304 or 334-335, and 441.

## Requirements for the Secondary Teaching Minor in Chemistry

Twenty credits in chemistry courses are required.

## Special Options and Modified Majors

Students majoring in chemistry may emphasize one or more related fields such as industrial chemistry, theoretical chemistry, or chemical physics, either by selecting appropriate courses in addition to the regular major curriculum or by developing an individual program of study through the modified major procedure. Consult departmental advisers for details.

## Premedical Studies Concentration

Students can take a concentration in premedical studies by adding the required biology courses to a regular chemistry major program. Consult a departmental adviser before planning this concentration.

## Environmental Studies Concentrations

By a suitable choice of courses in the Bachelor of Arts chemistry major and at least 20 credits in appropriate environmental studies courses, a student may complete a concentration in environmental studies or environmental health. Consult the program director or departmental advisers for details.

## American Chemical Society Certification

The Department of Chemistry faculty, facilities, and curriculum meet the criteria of the American Chemical Society. This allows the department to certify chemistry students as eligible for society membership. Certification is granted to students who have successfully completed the requirements for the ACS Bachelor of Science major in chemistry. Foreign language study is recommended.

## Placement in Introductory Chemistry Courses

The various introductory courses (CHM 104, 140, 144, and 164) are for students in different majors and with different levels of mathematical and physical science preparation. In order to assure the best choice of course, *each student must take placement tests before registering for any of these courses.* Placement is based on the test results as well as on high school science and mathematics experience. Consult the department office or the class schedule for additional details and test dates and times.

## UNDERGRADUATE COURSE OFFERINGS

Credit will not be allowed for more than one course from each of the following pairs: CHM 306-307 and 338, 303 and 334, 304 and 335. Credit will not be allowed in major and minor programs for the following courses: CHM 104, 110, 140, 201, 341, and 497 (except for secondary education).

**CHM 104 Introduction to Chemical Principles (4)**  
Molecular structure, solution chemistry, stoichiometry, nomenclature, properties of elements, acid-base and oxidation-reduction chemistry, thermochemistry, and equilibrium. CHM 104-201 constitutes a complete two-semester sequence in general, organic, and biological chemistry. Recommended preparation is two years of high school mathematics, including algebra, and one year of high school science.  
Corequisite: MTH 102, or placement in MTH 103 or higher.

**CHM 110 Chemistry in the Modern World (4)**  
Designed for students without science background who seek an understanding of the chemical nature of our world. Both historical perspectives and current applications are considered.

**CHM 140 Foundations for Chemistry (4)**  
Basic chemical facts and concepts providing background and problem-solving skills in general chemistry. Intended especially for students needing additional preparation before enrolling in CHM 144.  
Corequisite: MTH 102, or placement in MTH 103 or higher.

**CHM 144-145 General Chemistry (4 each)**  
Chemical concepts applied to problem-solving. Stoichiometry, states of matter, elementary atomic and molecular structure, thermochemistry, equilibrium, and kinetics. CHM 144-145 are prerequisite to all other chemistry courses except CHM 201. Recommended preparation is three years of high school mathematics and one year of high school chemistry.  
Prerequisite: Chemistry placement test. Corequisite: MTH 104 or higher.

**CHM 147-148 Chemistry Laboratory (1 each)**  
Introduction to the basic skills of chemistry laboratory work.  
Corequisite: CHM 144-145.

**CHM 164-165 General Chemistry (Honors) (4 each)**  
Chemical concepts and principles of quantitative problem-solving as in CHM 144-145, with detailed studies of aspects of chemistry of current interest. Recommended preparation is three years of high school mathematics, one year of high school chemistry, and one year of high school physics.  
Prerequisite: Chemistry placement test or by invitation. Corequisite: MTH 154-155.

**CHM 167-168 Chemistry Laboratory (Honors) (1 each)**  
Selected experiments emphasizing modern laboratory practice.  
Corequisite: CHM 164-165.

**CHM 201 Introduction to Organic and Biological Chemistry (4)**  
Brief study of the structure and reactivity of organic molecules, emphasizing applications to the biochemical functioning of carbohydrates, proteins, lipids, and nucleic acids. CHM 201 does not apply as chemistry credit for biology, chemistry, or physics majors; pre-medical students; or secondary teaching minors in chemistry.  
Prerequisite: CHM 104.

**CHM 225 Analytical Chemistry (4)**  
Theory and techniques of analytical chemistry, including gravimetry, titrimetry, polarography, atomic absorption, and complex equilibria. Two hours lecture and eight hours laboratory per week.  
Prerequisite: CHM 148.

**CHM 270 Chemical Literature and Writing (1)**  
Self-paced introduction to chemical literature and its usage. Includes practice in writing technical reports and proposals and preparing visual and graphic presentation materials. Graded S/N.  
Prerequisite: CHM 145, and 303 or 334.

**CHM 290 Introduction to Research (1, 2, 3, or 4)**  
Introduction to laboratory research for students with no previous research experience. May be repeated for credit. Graded S/N.  
Prerequisite: Permission of instructor.

**CHM 303-304 Organic Chemistry (4 each)**  
Study of functional groups, nomenclature, structure, and reactions. Stereochemistry, mechanisms of reactions, synthetic pathways, and applications are included.  
Prerequisite: CHM 145.

**CHM 306-307 Organic Chemistry Laboratory (1 each)**  
Basic techniques of synthesis, degradation, and identification of organic substances.  
Prerequisite: CHM 148. Corequisite: CHM 303-304.

**CHM 334-335 Organic Chemistry (Honors) (4 each)**  
A comprehensive introduction to organic chemistry, with emphasis on modern theory and synthetic methods.  
Prerequisite: CHM 145 with a grade of 3.0 or better, or permission of instructor.

**CHM 338 Organic Synthesis Laboratory (Honors) (2)**  
Synthesis and characterization of aliphatic and aromatic compounds.  
Prerequisite: CHM 225. Corequisite: CHM 335.

**CHM 339 Separations and Applied Spectroscopy (3)**  
Applications of chromatography, extraction, and spectroscopy (ir, nmr, uv, ms) to the separation and identification of organic and inorganic systems. One hour lecture and eight hours laboratory per week.

Prerequisite: CHM 225, and 307 or 338.

**CHM 341 Mathematical Techniques for Chemistry (1)**  
Study and practice in applications of calculus to chemical problems. Graded S/N.

Prerequisite: CHM 145 and MTH 155. Corequisite: CHM 441.

**CHM 372 Air Chemistry (3)**  
Identical with ENV 372.

**CHM 373 Water Resources (3)**  
Identical with ENV 373.

**CHM 428 Analog Electronics for Chemistry (2)**  
Introduction to basic circuit theory, with emphasis on practical electronic understanding of instrumentation and simple electronic techniques. Construction of modern circuitry for chemical measurement. Lecture and lab.

Prerequisite: CHM 225. Corequisite: MTH 154.

**CHM 429 Digital Electronics for Chemistry (2)**  
Laboratory course emphasizing basic understanding of logic theory, digital devices, A/D and D/A conversion, logic programming, microprocessor operation, and interfacing.

Prerequisite: CHM 428. Corequisite: CIS 377.

**CHM 441 Physical Chemistry I (4)**  
Macroscopic studies of thermodynamics, equilibria, transport phenomena, and kinetics of chemical systems. CHM 341 is strongly recommended as a corequisite for students needing additional mathematical preparation.

Prerequisite: CHM 145, MTH 155, and PHY 152.

**CHM 442 Physical Chemistry II (4)**  
Microscopic studies of chemical systems with basic principles of quantum and statistical mechanics, and properties related to molecular structure.

Prerequisite: CHM 441.

**CHM 449 Physical Chemistry Laboratory (1 or 2)**  
Experiments in thermodynamics, kinetics, phase equilibria, and advanced spectroscopy with emphasis on mathematical treatment of experimental data.

Prerequisite: CHM 428 and 441. Corequisite: CIS 377 and CHM 442.

**CHM 453-454 Biochemistry (3 each)**  
A comprehensive introduction to molecular biology and biochemistry, including the structure and function of nucleic acids, proteins, enzymes, carbohydrates and lipids, enzyme kinetics, metabolism, and metabolic controls. Identical with BCM 453-454.

Prerequisite: CHM 304 or 335.

**CHM 457 Biochemistry Laboratory (1 or 2)**  
Techniques of extraction, separation, identification, and quantification of biomolecules, including electrophoresis, chromatography, and radioisotope techniques, with emphasis on mathematical treatment of experimental data.

Prerequisite or corequisite: CHM 453.

**CHM 458 Biochemistry Projects (2)**  
Advanced project-oriented instruction in biochemical laboratory techniques.

Prerequisite: CHM 457 and permission of instructor.

**CHM 462-463 Inorganic Chemistry (2 each)**  
Overview of the chemistry of the elements, with emphasis on ionic and covalent bonding, acid-base chemistry, nonaqueous solvent systems, descriptive chemistry of the main group, transition metal, and lanthanide elements. Introduction to ligand field theory, organometallic, and bioinorganic chemistry.

Prerequisite: CHM 442.

**CHM 466 Inorganic Synthesis Laboratory (2)**  
Synthesis, analysis, and characterization of inorganic and organometallic compounds.

Prerequisite: CHM 339. Corequisite: CHM 462.

**CHM 471 Macromolecular Chemistry (3)**  
Preparation, properties, and structure of selected inorganic and



organic polymers. Both chemical theory and technological applications will be discussed.

Prerequisite: CHM 304 or 334.

**CHM 477 Macromolecular laboratory (2)**  
Introduction to the synthesis and physical characterization of synthetic polymers.

Prerequisite: CHM 339, and 307 or 338.

**CHM 480 Selected Topics (1, 2, 3, or 4)**  
Advanced study in selected areas; normally involves preparation of a term paper or presentation of a seminar. May be repeated for credit.

Prerequisite: Permission of instructor.

**CHM 486 Physical-Analytical Projects (1 or 2)**  
Advanced experimentation in physical or analytical chemistry, with at least four hours per week per credit.

Prerequisite: Permission of instructor.

**CHM 487 Synthesis Projects (1 or 2)**  
Advanced synthesis work emphasizing modern techniques, with at least four hours per week per credit.

Prerequisite: Permission of instructor.

**CHM 490 Research (1, 2, 4, or 6)**  
Laboratory practice in undergraduate research, with at least four hours per week per credit. May be repeated for credit. Graded S/N.

Prerequisite: Permission of instructor.

**CHM 497 Apprentice College Teaching (2 or 4)**  
Directed teaching of selected undergraduate chemistry courses. May be repeated for credit. Graded S/N.

Prerequisite: Permission of instructor.

## DEPARTMENT OF CLASSICAL LANGUAGES AND LITERATURES

The departmental programs of study leading to the Bachelor of Arts degree with liberal arts majors in classical languages, Latin, and classical civilization and the secondary teaching major in Latin have been temporarily suspended. No new candidates for these majors will be accepted until the program is reactivated.

Some courses in other departments which are cross-listed with classics will be offered from time to time, but instruction in classics, Latin, or Greek will not be offered on any regular basis.

### COURSE OFFERINGS

**CLS 100 Introduction to Classical Civilization (4)**  
Survey of the artistic, literary, philosophical, and institutional heritage left to the modern world by ancient Greece and Rome.

**CLS 130, 131 The Dynamics of Ancient Civilization (4 each)**  
Comparison of the major ancient societies in light of the origins, characteristics, and development of their political institutions, and responses of the various societies to foreign groups and ideas. CLS 130 covers Egypt, Mesopotamia, Israel, and Greece. CLS 131 covers Rome and the Mediterranean.

**CLS 150 Introduction to Greek and Roman Archaeology (4)**

An introduction to the literary, cultural, and historical importance of classical Greek and Roman archaeology to our modern understanding of classical antiquity.

**CLS 203 Survey of Greek Literature (4)**  
Survey of the major writers of Greece. All works in translation.

**CLS 204 Classical Greek Philosophy (4)**  
Identical with PHL 204.

**CLS 205 Survey of Roman Literature (4)**  
Survey of the major Roman writers. All works in translation.

**CLS 211 The Bible as Literature (4)**  
Study of the types of literature found in the Old and New Testaments. Identical with ENG 211 and REL 211.

**CLS 300 Topics in Classical Literature (4)**  
Examination of the origin, development, and influence of specific classical genres, including epic, lyric, tragic, and comic poetry, satire, oratory, and the ancient novel.

**CLS 310 The Structure of the Indo-European Languages (4)**  
Comprehensive investigation of the structure of the Indo-European languages with emphasis on Greek, Latin, and Sanskrit.

**CLS 312 Classical Mythology (4)**  
The principal Greek and Roman myths and their uses in classical and post-classical art and literature. Offered winter semester. Identical with ENG 312.

**CLS 314 Roman Art (4)**  
Identical with AH 314.

**CLS 317 The Classical Tradition (4)**  
Study of classical influence on Western culture. While some attention is given to the visual arts, emphasis is on classical traditions in Western literature.

**CLS 322 Greek Art (4)**  
Identical with AH 312.

**CLS 337 Hellenic Greece (4)**  
Greek history from the Bronze Age to the time of Alexander the Great.

**CLS 339 Republican Rome (4)**  
Roman history from the regal period to the end of the Republic.

**CLS 340 Imperial Rome (4)**  
Roman history from the principate of Augustus to the fall of the western empire.

**CLS 350 Problems of Translation (4)**  
Identical with ENG 300.

**CLS 401 Study of a Major Philosopher (4)**  
Identical with PHL 401.

**CLS 490 Directed Reading in Classical Civilization (4, 8, or 12)**

Independent study for senior classical civilization majors only in areas not covered in regular course offerings.

**GRK 114-115 Elementary Greek (4 each)**

Forms and grammatical structures of classical Greek, together with simple connected reading.

**GRK 214-215 Intermediate Greek (4 each)**

Review of grammar, training in translation from and into Greek, and the reading of simple literary works, including selections from Plato, Euripides, and Homer.

Prerequisite: GRK 115.

**GRK 320 Selections from Greek Literature (4)**

A reading course, offered every semester as a tutorial. May be taken for one or more semesters.

Prerequisite: GRK 215.

**GRK 480 Advanced Greek (4)**

Tutorial study of individual authors, selected themes, or problems. May be taken for one or more semesters.

Prerequisite: GRK 320.

**GRK 490 Independent Study: Greek (4)**

Individual reading and research for advanced classics majors. Taught by arrangement.

Prerequisite: Permission of instructor.

**LTN 114-115 Elementary Latin (4 each)**

Forms and grammatical structures of classical Latin, with simple connected reading. For students with no prior knowledge of Latin.

**LTN 214-215 Intermediate Latin (4 each)**

Review of grammar, training in translation from and into Latin, and the reading of single literary works, including selections from Vergil and medieval or Renaissance Latin.

Prerequisite: LTN 115.

**LTN 300 Topics in Latin Language (4)**

Areas of study, such as Latin composition or grammar, selected by the instructor. Offered winter semester.

Prerequisite: LTN 215.

**LTN 320 Selections from Latin Literature (4)**

A reading course, offered as a tutorial. May be taken for one or more semesters.

Prerequisite: LTN 215.

**LTN 480 Advanced Latin (4)**

Tutorial study of individual authors, selected themes, or problems. May be taken for one or more semesters.

Prerequisite: LTN 320.

**LTN 490 Independent Study: Latin (4)**

Individual reading and research for advanced classics majors. Taught by arrangement.

Prerequisite: Permission of instructor.

# DEPARTMENT OF COMMUNICATION ARTS

**CHAIRPERSON:** Donald C. Hildum

**PROFESSORS:** Donald C. Hildum, William White (Director, Journalism Program)

**ASSOCIATE PROFESSOR:** Adeline Hirschfeld-Medalia

**ADJUNCT ASSOCIATE PROFESSOR:** Terence E. Kilburn

**ASSISTANT PROFESSORS:** Jane Briggs-Bunting, David Stevens

**INSTRUCTOR:** James A. Hatfield

**ADJUNCT ASSISTANT PROFESSORS:** Thomas A. Aston, William W. Connellan

**LECTURERS:** Harry Atkins, Susan Brown, Jerry Dahlmann, Robert A. Dearth, R. Hugh Dundas, Berl Falbaum, Philip Fox, Joseph Grim, Robert D. Highton, Geraldine King, James Llewellyn, Jack McCarthy-Mullen, Edward Noble, Katherine Parrish, Philip Reuschle, James J. Ritz, Karen Seelhoff, Joyce Walker-Tyson, Dean Warner-Hetenyi, Mary Wells

**VISITING INSTRUCTOR:** Sharon Howell

The Department of Communication Arts offers programs of study leading to the degree of Bachelor of Arts with the opportunity to concentrate in several areas. Courses are available in communication theory, public and interpersonal communication, journalism, theatre, oral interpretation, mass media, and speech education. The Department of Communication Arts serves the nonspeech major and the general Oakland University student. Communication training can enhance almost any career and life in general. There are many specialized careers which welcome students with communication knowledge, e.g., journalism, media, theatre, public relations, advertising, and teaching.

## Requirements for the Liberal Arts Major in Communication Arts

The major consists of a minimum of 36 credits in courses labeled SCN, JRN, and THA, including SCN 201 or 202, and 303. At least 20 credits of the total must be at the 300 or 400 level, including at least 4 credits at the 400 level. No more than a total of 12 credits from SCN, THA 490, 491, and 497, and JRN 404 and 490 may be counted toward the major.

## Requirements for the Modified Major in Communication Arts with a Linguistics Concentration

Twenty-four credits in SCN, JRN, or THA, and 20 credits in linguistics. SCN 303, and SCN 201 or 202, are required. For linguistics requirements, see page 47.

## Requirements for the Liberal Arts Minor in Communication Arts

Twenty credits in SCN, JRN, or THA courses, including SCN 201 or 202, and at least 12 credits at the 300 or 400 level. No more than 4 credits in independent study, internship, or apprentice college teaching may be counted toward the minor.

## Requirements for the Secondary Teaching Minor in Speech

Twenty credits in SCN, JRN, or THA courses, including SCN 201 and 321. Any student with voice or articulation problems which would handicap his/her performance as a speech teacher must include THA 230 in his/her program.

## Requirements for the Liberal Arts Major in Journalism

- Twenty credits in journalism, including JRN 200, 300, 403, and 404; and any two of the following: JRN 310, 311, 312, 320, 321, 332, 333, 340.
- Eight credits from the following: SCN 201, 207, 285, 301, 303, 311, 371, 403, 473.
- Corequisites (36 credits) as follows (these courses, where appropriate, may also satisfy general education requirements):
  - 8 credits from HST 201, 202, 214, 215
  - 12 credits from ENG 100, 105, 111, 211, 224, 241
  - 8 credits: PS 100 and any one of PS 110, 241, 305
  - 4 credits in ECN 100 or 200
  - 4 credits from SOC 100, AN 101, 102
  - AMS 100 may be substituted for any one of the above courses in HST, ENG, or PS

## Requirements for the Liberal Arts Minor in Journalism

Twenty credits in journalism courses, including JRN 300 and 404. Communication arts majors may not count credits toward the major and this minor simultaneously.

## Requirements for the Liberal Arts Major in Theatre Arts

A total of 48 credits, divided as follows:

- Theatre Arts Core:
  - 28 credits: THA 230, 261, 267, 268, 269, 363, and 450 or 462
  - 4 credits from THA 213, 350, 368, 420
- Collateral Courses:
  - Music and Dance Performance: 4 credits from DAN 100, 101, 110, 111, 120, 200, 372, 376, or MUA 100, 200, 300, 363, 400, and MUE 305, 350
  - Dramatic Literature: 4 credits from ENG 105, 306, 307, 315, MUS 331, or THA/LIT 341, 342, 343, 346
- Major electives: 8 credits from all THA courses, collateral courses listed above, ENG 250, 308, 309, 310, or SCN 303

Only 4 credits each in THA 490 and 491 may be counted toward the major.

## Requirements for the Liberal Arts Minor in Theatre Arts

Twenty credits in theatre arts, distributed as follows:

- THA 261, 267, and 363
- THA 268 or 269
- THA 450 or 462

## COURSE OFFERINGS IN SPEECH COMMUNICATION

### SCN 114-115 Introduction to American Sign Language (4 each)

Conversational AMESLAN; the intricacies of nonverbal communication; body and facial expression integrated with a basic sign vocabulary; a survey of the various sign systems; an examination of the psychological, cultural, and linguistic aspects of the deaf community. Identical with ML 114-115.

### SCN 172 Media Hardware (4)

A working knowledge of the instruments used in mass media: operation, maintenance, and malfunctions. Recommended for education majors.

### SCN 200 Topics in Speech Communication (4)

Topics and problems selected by the instructor, often an opportunity

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for personnel in other disciplines to offer courses in specialized interest or on topics of current relevance.

### **SCN 201 Public Speaking (4)**

Theory and practice in public address: adaptations required by particular goals, audiences, and occasions; videotaped student speeches; and classroom interactions.

### **SCN 202 Group Dynamics and Communication (4)**

Group dynamics, discussion, and problem solving; influences of group structure, norms, roles, leadership, and climate on the processes of group communication and collaborative decision-making.

### **SCN 207 Semantics (4)**

Identical with LIN 207.

### **SCN 280 Broadcast Announcing (4)**

Techniques of speaking before a microphone, editing, and reading copy. Experience includes recording and critique of various styles of delivery.

Prerequisite: THA 230.

### **SCN 281 Broadcast Announcing Laboratory (1)**

Announcing or other broadcast performance on campus radio station. May be repeated for a total of 2 credits. Graded S/N.

Prerequisite: SCN 280 (may be taken concurrently).

### **SCN 285 Introduction to Broadcasting (4)**

A survey of public and commercial radio and television, including their public service, educational, and religious functions; and the history, economics, influence, and social control of broadcasting.

### **SCN 301 Persuasion (4)**

Analysis of persuasion in current society, psychological bases of persuasion, ethical considerations, and distinctions between debate and persuasive argument.

Prerequisite: SCN 201.

### **SCN 303 Communication Theory (4)**

Communication theory in its broadest sense, related to individual learning, knowledge, and group interaction.

Prerequisite: Sophomore standing.

### **SCN 304 Communication in Organizations (4)**

Communication theory and practice within organizational systems.

### **SCN 305 Interpersonal Communication (4)**

Elements, purposes, and patterns of communication and their effects; experience in interviewing, decision-making, and tutoring.

Prerequisite: SCN 202.

### **SCN 307 Debate Laboratory (2)**

Practice in formal debate. May be repeated for up to 4 credits.

Prerequisite: SCN 201.

### **SCN 308 Forensics Laboratory (2)**

Practice for forensic festival or competitive events such as public address and oral interpretation. May be repeated for up to 4 credits.

Prerequisite: SCN 201.

### **SCN 310 Philosophy of Rhetoric (4)**

Identical with PHL 310.

### **SCN 311 Rhetoric and Public Address (4)**

Advanced public speaking, emphasizing the content, arrangement, and style of public address with application in construction and delivery of public speeches.

Prerequisite: SCN 201.

### **SCN 320 Speech Communication for the Elementary Teacher (4)**

Linguistic development in children (emotional, physical, and cognitive) relating to symbol-using behavior and appropriate instructional methods.

Prerequisite: SCN 201.

### **SCN 321 Speech Communication for the Secondary Teacher (4)**

Principles and practices to improve the speech habits of the teacher, to supply special skills for classroom and professional use, and to help prospective teachers to acquire techniques for speech improvement in the classroom.

Prerequisite: SCN 201.

### **SCN 371 Forms and Effects of Mass Communication (4)**

Identical with SOC 371.

### **SCN 375 Introduction to Cinematography (4)**

The essential elements of film as a medium, its capabilities and limitations. Application in studio and/or field work.

Prerequisite: SCN 172.

### **SCN 376 Introduction to Television Production (4)**

The essential elements of television as a medium, its capabilities and limitations. Practical experience in studio and/or field work.

Prerequisite: SCN 172.

### **SCN 401 Phonic Theory (4)**

Identical with LIN 401.

### **SCN 402 Small Groups (4)**

Identical with SOC 402.

### **SCN 403 Communicative Networks (4)**

The patterns of contact and information transfer in human groups, ranging from the sociometric patterns of small groups, to the formal and informal networks of organization and the large-scale exchanges of mass societies.

Prerequisite: SCN 303.

### **SCN 471 Workshop in Contemporary Communication (4)**

A bridge between academic learning and professional applications in speech communication forms and media. Included in the practicum-seminar format of the workshop are field work, observation, and lecture-demonstrations with professionals in various job settings.

Prerequisite: Permission of instructor.

### **SCN 473 Social Control of Mass Media (4)**

Identical with SOC 473.

### **SCN 480 Special Topics Seminar (4)**

Group study of topics of special interest chosen by department faculty and students. May be repeated for credit with the instructor's permission.

Prerequisite: Three SCN courses.

### **SCN 490 Independent Study (2, 4, 6, or 8)**

Special research projects in speech communication.

Prerequisite: Permission of instructor.

### **SCN 491 Internship (4, 8, or 12)**

Experience working with professionals in various performing arts and mass communication settings.

Prerequisite: Permission of supervising faculty.

### **SCN 497 Apprentice College Teaching (2 or 4)**

Assisting in teaching an undergraduate course in speech communication, and discussions with the supervising faculty member on the principles, methods, and problems of such teaching.

Prerequisite: Junior standing and permission of instructor.

## **COURSE OFFERINGS IN JOURNALISM**

### **JRN 200 Newswriting (4)**

Training in the practical aspects of news gathering, interviewing, and basic newswriting techniques; a discussion of the various journalism media.

Prerequisite: Completion of English proficiency requirement.

### **JRN 240 Journalism Laboratory (2)**

Work in on- or off-campus publications under the direction of an instructor; may be repeated once.

Prerequisite: JRN 200.

### **JRN 300 Newspaper Editing (4)**

Principles and practices of the newspaper copydesk: copy reading, headline writing, makeup, and typography; preparing copy for the printer; some attention to new and developing devices in the print shop, such as those involving the computer.

Prerequisite: JRN 200.

### **JRN 310 Advanced Newswriting (2)**

Gathering information through wide reading and interviewing, writing objective in-depth news reports; and background on current social, political, and economic issues.

Prerequisite: JRN 200.

### **JRN 311 Public Affairs Reporting (4)**

News coverage of federal, state, and local criminal and civil court trials; legislative bodies, city, county, and other government agencies; labor and stock market news.

Prerequisite: JRN 200 and PS 100.

**JRN 312 Feature Writing (2)**

Practice in writing newspaper and magazine nonfiction features, such as human interest stories, biographical and personality sketches, how-to-do-it articles, and other forms. A study of the purposes, styles, types, and techniques of the feature story.  
Prerequisite: JRN 200.

**JRN 320 Editorial Writing (2)**

Preparing and writing newspaper opinion and commentary usually found on the editorial page; forms and techniques of editorials and the editorial page.  
Prerequisite: JRN 200.

**JRN 321 Reviewing: Books, Theatre, Movies (2)**

Writing newspaper reviews of the literary, visual, and performing arts from recent publications, live productions, films, and television.  
Prerequisite: JRN 200 and one of the following: ENG 100, 111, 224.

**JRN 330 News Photography (2)**

Fundamentals of black-and-white photographic production; practice in taking still pictures of people and events for use in newspapers and

news magazines; darkroom laboratory work in developing photos.  
Prerequisite: JRN 200.

**JRN 331 Media Management (2)**

Business, corporation, and legal problems in the front-office operation of weekly and daily newspapers; industrial and employee magazines; radio and television stations.  
Prerequisite: JRN 200.

**JRN 332 Radio-Television News (2)**

Fundamentals and techniques of preparing news for broadcasting, especially the different demands of electronic journalism from those of the print media.  
Prerequisite: JRN 200.

**JRN 333 Public Relations and the Media (2)**

A study of the function of agency, industrial, business, and institutional relations with the public through newspaper, radio, television, and other media, especially concerning press information; preparation of copy; some attention to employee publications.  
Prerequisite: JRN 200.



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**JRN 340 Advertising (4)**  
Advertising in print and electronics media from the standpoint of marketing, its social and legal environment, the behavioral sciences' contributions to advertising, and strategy decisions in the profession.  
Prerequisite: JRN 200

**JRN 403 Law of the Press (4)**  
State and federal laws dealing with libel, contempt of court, right of privacy, copyright, and other legal matters affecting newspapers, radio and television, and other media.  
Prerequisite: JRN 300.

**JRN 404 Journalism Internship (4)**  
A full- or part-time internship on a weekly or daily newspaper, radio, or television station, or with a public relations office for one semester. Open only to students in the journalism program, usually in the senior year. May be repeated once in a different medium.  
Prerequisite: JRN 200, 300, and two other JRN courses.

**JRN 480 Special Topics in Journalism (2 or 4)**  
Various specialties offered to students. Subjects change from semester to semester, with some opportunity for independent study. May be repeated under different subtitles.  
Prerequisite: JRN 200.

**JRN 490 Independent Study (2 or 4)**  
Individual research projects in journalism.  
Prerequisite: Permission of instructor.

### COURSE OFFERINGS IN THEATRE ARTS

**THA 100 Introduction to Theatre (4)**  
Theatre as an art form. Topics include acting, directing, design, dramatic literature, theatre history, theory, and criticism. Students will view selected plays.

**THA 200 Topics in Theatre Arts (4)**  
Topics and problems, selected by the instructor, as temporary or experimental additions to the curriculum.

**THA 213 Mime (4)**  
Introduction to the art of gesture and movement. Classical and traditional forms are explored, emphasizing active involvement in mime.

**THA 230 Voice and Articulation (4)**  
Theory and application in voice, articulation, and pronunciation.

**THA 261 Technical Laboratory (4)**  
Survey of techniques of scenery and costume construction and lighting, including proper use of tools and hardware in these three areas. Sixty hours of work on a major production is required. Recommended after THA 100.

**THA 267 Fundamentals of Acting (4)**  
An introduction to the basic skills and knowledge required to audition and perform a role in a stage production.

**THA 268 Theatre History I (4)**  
History of the Western theatre from its primitive origins through the Renaissance, including dramatists, stages, productions, and acting. A few representative plays will be read.

**THA 269 Theatre History II (4)**  
Continuation of THA 268 to the present. Includes a brief look at the theatre of the Orient. A few representative plays will be read.

**THA 341 Topics in World Drama (4)**  
Identical with LIT 341.

**THA 342 Continental European Drama I (4)**  
Identical with LIT 342.

**THA 343 Continental European Drama II (4)**  
Identical with LIT 343.

**THA 346 Non-Western Theatre and Dramatic Literature (4)**  
Identical with LIT 346.

**THA 350 Oral Interpretation (4)**  
Oral expression of literature — prose, poetry, and drama — based on intellectual, emotional, and aesthetic analysis.

**THA 362 Technical Design Laboratory (4)**  
Basic drafting and rendering for stage and costume will be covered as well as development of lighting plots. Twenty hours of work on a major production is required.  
Prerequisite: THA 261.

**THA 363 Practicum in Rehearsal and Performance (2 or 4)**  
Participation in a student theatre production, emphasizing development of a running log that concentrates on character development, design conception and execution, or prompt script. May be repeated for a total of 12 credits.

**THA 365 Introduction to Makeup (2)**  
Theory and practice in theatre makeup.

**THA 366 Introduction to Costuming (2)**  
Theory and practice in theatre costuming.

**THA 368 Characterization (4)**  
Continuation of work on voice, body and concentration. Scene study focusing on the requirements of realistic acting.  
Prerequisite: THA 230, THA 267.

**THA 420 Improvisations and Theatre Games (4)**  
Group interaction such as improvisation, simulation, role-playing, sociodrama, creative dramatics, story and readers theatre, and educational games. Includes application of these techniques for group leadership, teaching, and theatre performance.  
Prerequisite: THA 267.

**THA 450 Directing Mini-Theatre Forms (4)**  
Direction and performance in theatre styles requiring minimal sets and appropriate for dinner theatre, touring shows, special occasions, etc. Includes forms such as: story theatre, chamber theatre, readers theatre, documentary theatre, and media theatre.  
Prerequisite: THA 267, 350, or equivalent.

**THA 460 Theatre Management for School and Community (4)**  
Theory and practice in theatre organization and management. Includes publicity and promotion, box office procedures, production budgeting and auditing, house management, play selection, and production organization.  
Prerequisite: Junior standing and two THA courses.

**THA 462 Directing (4)**  
Theory and practice in play directing. Includes intensive work on interpretation of the playscript, casting, staging, rehearsal techniques, supervision of technical staff, and directing experience.  
Prerequisite: THA 261, 267, and 363.

**THA 464 Costume Design (4)**  
Introduction to costume history, drafting, cutting, and construction, as well as the technique of rendering.  
Prerequisite: THA 261, 363, and 366.

**THA 466 Advanced Stage Design (4)**  
The concepts of stage design, rendering, and drafting.  
Prerequisite: THA 261, 362, and 363.

**THA 467 Advanced Acting (4)**  
Continuation of work on body, voice and concentration. Focuses on the requirements of various acting and period styles.  
Prerequisite: THA 230, THA 267, THA 368 and one course in dramatic literature or THA 268 or THA 269.

**THA 480 Special Topics Seminar (4)**  
Group study of topics of special interest chosen by department faculty and students.  
Prerequisite: Three theatre arts courses.

**THA 490 Independent Study (2, 4, or 8)**  
Special research projects in theatre arts.  
Prerequisite: Three theatre arts courses and permission of instructor.

**THA 491 Internship (4, 8, or 12)**  
Experience working with professionals in a variety of performing arts settings.  
Prerequisite: Three theatre arts courses and permission of supervising faculty.

**THA 497 Apprentice College Teaching (4)**  
Assisting in teaching an undergraduate course in theatre, and discussions with the supervising faculty member on the principles, methods, and problems of such teaching.  
Prerequisite: Junior standing and permission of instructor.



## DEPARTMENT OF ECONOMICS

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**PROFESSORS:** *Eleftherios N. Botsas, Karl D. Gregory, Robbin R. Hough, Sid Mitra, Norton C. Seeber*

**ASSOCIATE PROFESSORS:** *David P. Doane, Alice C. Gorlin, An-loh Lin, Miron Stano, John E. Tower*

**ASSISTANT PROFESSOR:** *Frederic B. Shipley*

**INSTRUCTORS:** *Thomas R. McCarthy, Robert J. Gieseke, James Mallett*

**ADJUNCT PROFESSOR:** *Theodore O. Yntema*

**ADJUNCT ASSOCIATE PROFESSOR:** *Douglas D. Gregory*

**VISITING ASSISTANT PROFESSOR:** *Oded Izraeli*

**LECTURERS:** *David W. Essig, Scott Jones, Douglas R. Munro, Laura Stern*

The curriculum for the liberal arts major in economics combines emphasis on the concepts and tools of economic analysis, a broad general education, and the freedom to take several courses in other areas of interest to the student. The student learns to apply economic analysis to major problems that face the nation and the world today.

The program leading to a Bachelor of Arts degree with a major in economics is an integral part of the programs of the School of Economics and Management. The requirements for the major in economics, the requirements for a concentration in economics or international economics, and descriptions of the economics courses are found in the School of Economics and Management section of this catalog, page 95.



## DEPARTMENT OF ENGLISH

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**CHAIRPERSON:** *Joseph W. DeMent*

**PROFESSORS:** *Maurice F. Brown, John P. Cutts, Joseph W. DeMent, Peter G. Everts (English and Learning Skills), Thomas Fitzsimmons, James F. Hoyle, Donald E. Morse, Gertrude M. White*

**ASSOCIATE PROFESSORS:** *Herbert Appleman, Robert L. Donald, Jane D. Eberwein, Robert T. Eberwein, Nigel Hampton, David W. Mascitelli, Brian F. Murphy, Joan G. Rosen, Helen J. Schwartz*

**ASSISTANT PROFESSOR:** *Mark E. Workman*

**ASSOCIATED FACULTY:** *Professor William Schwab (Linguistics and English), Associate Professor Daniel H. Fullmer (Linguistics and English)*

The Department of English offers courses in British and American literature, introducing students to literary history, genre studies, critical theory, and intensive study of major authors. Courses in language, mythology, folklore, and film broaden the field of literary inquiry in ways that associate imaginative writing with the other arts, with popular culture, and with various academic disciplines. The department also provides frequent opportunities for training in writing: creative writing courses, writing tutorials, courses in advanced expository and persuasive writing, technical writing courses, and written assignments for literature courses.

By majoring in English, a student can enhance appreciation of literary masterpieces, gain critical understanding of imaginative writing, and develop sensitivity to the uses of language while developing skills in analysis, research, and communication. Such knowledge enriches all aspects of life, while such skills prepare students for careers in law, business, publishing, medical professions, library science, journalism, government, and education. The curriculum is flexible; by seeking regular departmental advice, the English major can plan a program leading to many different professional and academic goals. The department encourages its students to balance their programs with such concentrations as American studies, comparative literature, environmental studies, film aesthetics and history, and women's studies, computer science, or with minors in linguistics, journalism, theatre arts, management, modern languages, and other related fields. Majors from other university programs are welcome in English courses, many of which have no prerequisites. Evening students can complete the liberal arts English major entirely through night courses.

For description of each semester's course offerings, students should consult the *Advising Memo*, available in preregistration periods in the department office. Faculty advisers provide specific guidance or help the student develop a comprehensive educational plan; students should consult their advisers regularly.

Listed below are undergraduate programs of study leading to the degree of Bachelor of Arts with a major in English, a major in English for secondary teaching, a major with concentrations, a secondary teaching minor in English, and a liberal arts minor. The department offers programs leading to the degrees of Master of Arts in English and (in cooperation with the School of Human and Educational Services) Master of Arts in the Teaching of English. Programs and course offerings in these programs are described in the *Oakland University Graduate Study Catalog*.

### Requirements for the Liberal Arts Major in English

ENG 140 (to be taken in either semester of the first year) and 36 additional credits from offerings in English are required. Of these, at least 20 credits must be taken at the 300 level or

above, and at least 4 of these must be in a 400-level seminar. Only one course at the 100 level (in addition to ENG 140) will be accepted for credit toward the major.

### Departmental Honors

Candidates for departmental honors in English must have a 3.60 or better average in English courses at the end of their next to last semester, and must submit an honors paper to the departmental Honors Committee by the end of the eighth week of their last semester. This paper may be creative writing, or a report of a secondary education project, or a paper from a 300- or 400-level course. The honors paper, which must be rewritten for this occasion, will be reviewed orally with the candidate at a meeting of the Honors Committee.

### Requirements for the Secondary Teaching Major in English

The program requires 40 credits in English, including ENG 140, 210, 224, 241, either 376 or 377, and 498 (a list of acceptable equivalents is available in the English Department office). Of the remaining 16 credits, 12 must be taken at the 300 level or above. An additional 8 credits in cognate fields, which must include one course in the teaching of reading at the secondary level, and one course in speech, oral interpretation, or acting, are required. Students are also required to take ED 344, 345, 428, and 455. Highly recommended are an additional 4 credits in speech, reading, linguistics, or English composition. ENG 498 is offered only during winter semester and ED 428 and 455 only during fall semester. Students may enroll in ED 428 and 455 only if their grade point average in English is 3.00 or higher.

### Requirements for the Modified Major in English with a Linguistics Concentration

The modified English/linguistics major, requiring 24 credits in English and American literature, including ENG 140, and 20 credits in linguistics, is listed under linguistics offerings, page 47.

### Requirements for the Liberal Arts Minor in English

English 140, plus 16 other credits in English courses (exclusive of composition courses used to satisfy the writing proficiency requirement) are required. At least two courses must be taken at the 300 or 400 level. Only one 100-level course will be accepted, in addition to ENG 140, as part of the minor.

### Requirements for the Secondary Teaching Minor in English

Required for a minor are 20 credits from offerings in English, including ENG 140. Of these credits, 12 should be selected from the list of courses required in the teaching major (described above). The North Central Accreditation Association requires 24 credits for a minor in English.

### UNDERGRADUATE COURSE OFFERINGS

Courses in the 100s (except ENG 140) are directed to students seeking nontechnical liberally oriented courses to fulfill general education requirements or for use in minors and particular concentrations. Courses on the 200 level offer broad introductions to literary materials and approaches basic to the study of English. Reading is often extensive, and the classes are conducted primarily through lecture. 300 level courses offer more intensive investigations into particular areas of English

studies. These courses, the core of the program for majors, are open to advanced students according to their special needs and their preparation in related disciplines. Courses in the theory and methods of literary history, criticism, and research, applied to problems presented by a specific topic or writer, are offered at the 400 level. They are designed for upperclass majors. Graduate courses on the 500 level are open to senior majors by permission of the instructor and the departmental chairperson.

**ENG 100 Masterpieces of World Literature (4)**

A survey acquainting the student with some of the great books of the world. Emphasis on the Western literary tradition.

**ENG 105 Shakespeare (4)**

A general introduction to representative dramatic works of Shakespeare. For students seeking an English elective or a course to satisfy the distribution requirement in literature.

**ENG 111 Modern Literature (4)**

A general introduction to some phase of modern literature. Sample offerings might be: modern drama, modern American fiction, or continental literature. For students seeking an English elective or a course to satisfy the distribution requirement in literature.

**ENG 120 Literature of Fantasy and Science Fiction (4)**

May emphasize either fantasy or science fiction in any given term, and may present an historical view or deal with current trends in the literature.

**ENG 140 Introduction to Literary Studies (4)**

Practice in the techniques of reading literature and introduction to important basic concepts of criticism and commentary. Required of majors and minors in English.

**ENG 200 Topics in Literature and Language (4)**

Topics or problems selected by the instructor.

**ENG 210 Expository Writing (4)**

A systematic approach to writing designed to enhance the student's own writing skills and also his/her ability to teach writing.

Prerequisite: Writing proficiency certificate, LS 101, or equivalent transfer courses accepted by the university.

**ENG 211 The Bible as Literature (4)**

Identical with CLS 211 and REL 211.

**ENG 213 Writing Laboratory (2)**

Small group or individual instruction to improve writing skills and styles in ways applicable to college work as well as career goals. May be taken two semesters for credit. May be added through the seventh week of the semester. Graded S/N.

Prerequisite: Writing proficiency certificate, LS 101, or equivalent transfer courses accepted by the university.

**ENG 214 Introduction to Folklore (4)**

The major forms of traditional artistic expression (folktale, myth, legend, proverb, ballad, ritual) studied in their literary and cultural contexts.

**ENG 224 American Literature (4)**

Introduction to literary analysis and appreciation through readings in the American literary tradition. Emphasis on such authors as Hawthorne, Melville, Dickinson, and James.

**ENG 241 British Literature (4)**

Introduction to literary analysis and appreciation through readings in the American literary tradition. Emphasis on such authors as Chaucer, Shakespeare, and Dickens.

**ENG 250 Film: A Literary Approach (4)**

Exploration of the dramatic and narrative content of classic and modern films, treating such elements as theme, motif, symbol, imagery, structure, and characterization, and cultural and philosophical implications.

**ENG 300 Special Topics in Literature and Language (4)**

Special problems or topics selected by the instructor.

**ENG 301 Poetry (4)**

The major forms of poetic expression studied from generic and historical points of view.

**ENG 302 Popular Culture (4)**

The major forms of popular expression (mystery, westerns, science fiction, romance) in literature and related media (film, television, music) studied in their cultural contexts.

**ENG 303 Fiction (4)**

The major forms of narrative fiction (short story, novella, novel) studied from generic and historical points of view.

**ENG 304 Studies in Literary Mode (4)**

A major literary mode (such as tragedy, comedy, epic, romance, satire) studied from generic and historical points of view.

**ENG 306 Drama (4)**

The major forms of dramatic expression studied from generic and historical points of view.

**ENG 307 Modern Drama (4)**

Studies in English, American, and Continental drama since Ibsen.

**ENG 308 Playwriting (4)**

A study of plays from various periods and theatrical styles, and an exploration of principles and techniques of dramatic writings. The last half of the course will be devoted exclusively to student scripts. Enrollment limited to 20.

Prerequisite: Permission of instructor.

**ENG 309 Scriptwriting (4)**

A study of screen plays and films, exploring principles and techniques of dramatic writing, with emphasis on problems posed by a primarily visual medium. The last half of the course will be devoted to student scripts. Enrollment limited to 20.

Prerequisite: Permission of instructor.

**ENG 310 Workshop in Writing (4)**

Intermediate-level workshop for apprentice writers in fictive or discursive modes. Workshop may be in poetry, essay, fiction, etc., the emphasis varying from semester to semester.

Prerequisite: Permission of instructor.

**ENG 311 Chaucer (4)**

The major works, with emphasis on *The Canterbury Tales* and *Troilus and Criseyde*.

**ENG 312 Classical Mythology (4)**

Identical with CLS 312.

**ENG 313 Myth in Literature (4)**

Study of the mythic content and/or structure of literature.

**ENG 314 Folklore in Literature (4)**

Reflection of folk themes, images, and structures in British and American literature by authors such as Twain, Faulkner, Hardy, and Joyce.

**ENG 315 Shakespeare (4)**

Reading and discussion of representative plays and poetry.

**ENG 316 Milton (4)**

His major poetry, with emphasis on *Paradise Lost* and some attention to his prose.

**ENG 317 Early American Literature (4)**

Studies in colonial and early national American literature with emphasis on such writers as Bradstreet, Taylor, Edwards, and Franklin.

**ENG 320 American Poetry (4)**

Studies in American poetry from its origins with emphasis on the major writers of the nineteenth and early twentieth centuries such as Poe, Whitman, Dickinson, Frost, Eliot.

**ENG 322 Nineteenth Century American Fiction (4)**

Readings in the novel, tale, and sketch with emphasis on major writers such as Hawthorne, Melville, Twain, and James.

**ENG 324 Issues in American Literature (4)**

Study of literary works ranging across period and/or genre in their relation to a central issue, theme, or problem in American literature. Representative topics are romanticism, the puritan tradition, American humor, and the writer and American society.

**ENG 332 Modern American Fiction (4)**

Studies in American fiction since the turn of the century with emphasis on such figures as Faulkner, Hemingway, West, Dos Passos, Steinbeck, and Fitzgerald.

**ENG 333 Modern Poetry (4)**

Studies in poetry since the turn of the century. The course may emphasize American or British in any given semester or discuss international currents in modern poetry.

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### ENG 340 Writing Now: (4)

Verbal arts in contemporary contexts. Writing and related arts—any or all combinations.

### ENG 341 Selected Ethnic Literature (4)

Reading and critical analysis of representative selections from American ethnic literature. Special attention to groupings such as American-Jewish and Native American at discretion of instructor. Relation of ethnic literatures to dominant national and international literary traditions considered.

### ENG 342 Black American Writers (4)

A study of black literary figures and the black experience in literature, with emphasis on the works of Gwendolyn Brooks, Ralph Ellison, James Baldwin, and other representative writers.

### ENG 345 Varieties of Literary Experience (4)

Teaches the future elementary school teacher how to distinguish and analyze various types of literature as short stories, poems, and folktales. Attention to possible applications of materials and concepts to the teaching of language arts. (Not for English major credit.)

### ENG 350 Topics in Film (4)

Topic or problem to be selected by the instructor.

### ENG 354 British Medieval Literature (4)

Development of Old and Middle English literature to about 1500. Emphasis on the major works from *Beowulf* to Chaucer and Malory.

### ENG 355 British Literature of the Renaissance (4)

Literature from about 1500 to 1660. Emphasis on the development of the sonnet and lyric, drama, English prose, and epic.

### ENG 356 British Literature from the Restoration to Romanticism (4)

From 1660 to the Romantic revolution of the early nineteenth century. Among the major authors to be considered are Dryden, Swift, Pope, Johnson, Burns, Blake, Wordsworth.

### ENG 357 British Literature of the Victorian and Early Modern Periods (4)

From the Victorians to the 1920s. Among the major authors to be considered are Tennyson, Browning, Arnold, Carlyle, Rossetti, Hopkins, Shaw, Yeats, and Wilfred Owen.

### ENG 369 The English Novel (4)

A study of the origin and development of the English novel from its beginnings to the early twentieth century. Among the novelists to be considered are Nashe, Fielding, Richardson, Austen, Dickens, Conrad, Lawrence, and Joyce.

### ENG 375 Modern Literature (4)

Modern British, American, and/or Continental literature, with concentration on the work of a small number of writers.

### ENG 376 History of the English Language (4)

A detailed survey of the English language from its beginning to modern times.

### ENG 377 Modern English Grammar (4)

A survey of English structure, especially of syntax, with descriptions based on the work of important contemporary scholars.

### ENG 380 Analytical and Persuasive Writing (4)

A practical course in analytical writing designed for preprofessional students. Emphasis will be placed on persuasion, argumentation, organization, and style.

### ENG 382 Business and Technical Writing (4)

Instruction, practice, and critique in writing business communications (letters, memoranda, reports, and technical communications). Prerequisite: Writing proficiency certificate, LS 101, or equivalent transfer courses accepted by the university.

### ENG 385 Interdisciplinary Issues (4)

The relationship of literature and literary study to one of the following disciplines: science, philosophy, psychology, religion, music, or the visual arts. The second area will vary from semester to semester.

### ENG 390 Literary Theory and Critical Methods (4)

Studies in modern critical methods, with emphasis on formal analysis, structuralism, and myth criticism. Application of critical approaches and techniques.

### ENG 391 History of Literary Criticism (4)

The development of literary criticism, presented as a survey with

emphasis on major theorists. Significant applications of theory examined.

### ENG 392 History and Theory of Film Criticism (4)

Study of major critical approaches to film such as those of Eisenstein, Kracauer, Arnheim, Bazin, Sarris, Wollen, and Metz. Prerequisite: A course in film.

### ENG 399 Field Experience in English (4)

Field experience in an appropriate employment setting correlated with directed study assignments relating the experience to the knowledge and skills developed by the English major. This course must be planned by the student, in cooperation with the instructor and the Center for Human and Career Development, in the semester prior to enrollment. May not be repeated for credit. Prerequisite: 16 credits in English, of which at least 8 must be at the 300-400 level.

### ENG 400 Advanced Topics in Literature and Language (4)

Advanced topics and problems selected by the instructor. Prerequisite: Four courses in English.

### ENG 401 Studies in Literary Kinds (4)

The study of a single literary kind, whether genre (such as novel, lyric, or drama) or mode (such as tragedy or comedy). Prerequisite: Four courses in English.

### ENG 410 Imaginative Writing (4)

Designed for potential writers of fiction, poetry, and/or drama. The course may focus on one kind of writing, and the approach may shift from semester to semester. Prerequisite: Permission of instructor.

### ENG 451 Major American Writers (4)

Studies in one or two American writers to be selected by the instructor. Prerequisite: Four courses in English.

### ENG 452 Major British Writers (4)

Studies in one or two British writers to be selected by the instructor. Prerequisite: Four courses in English.

### ENG 453 Seminar: Studies in Major Authors (4)

Intensive study of a selected group of authors: British, American, or both.

### ENG 465 Shakespeare (4)

Analysis of four or five of the plays. Prerequisite: Four courses in English.

### ENG 490 Advanced Criticism (4)

Studies in criticism, often concentrating on a single school. Prerequisite: Four courses in English.

### ENG 498 The Theories of Teaching Literature, Language, and Composition (4)

Designed for the future teacher of English, this course focuses on materials and methods for teaching English in junior and senior high schools. Offered only during winter semester. A cadetship in a secondary school is required. Prerequisite: English and language arts secondary education majors only.

### ENG 499 Independent Study (2 or 4)

A proposed course of study must be submitted to the prospective instructor in the semester before the independent study is to be taken. Only two 499's may be credited toward the major. May be elected on an S/N basis.

Prerequisite: Four courses in English.

# DEPARTMENT OF HISTORY

**ACTING CHAIRPERSON:** *Joseph A. Klaitz*

**PROFESSORS:** *Charles W. Akers, John Barnard, Melvin Chernow, Robert C. Howes, George T. Matthews, W. Patrick Strauss, S. Bernard Thomas*

**ASSOCIATE PROFESSORS:** *De Witt S. Dykes, Jr., Leonardas V. Gerulaitis, James D. Graham, Gerald C. Heberle, Mary C. Karasch, Joseph A. Klaitz, Roy A. Kotynek, Paul M. Michaud, Lawrence D. Orton, Carl R. Osthaus, Colin A. Palmer, Anne H. Tripp, Richard P. Tucker*

The study of history at the undergraduate level has traditionally been considered one of the major paths to informed and effective citizenship. Its emphasis on broad knowledge, critical reading, careful judgment, and precise writing offers excellent preprofessional preparation for many careers in business, government service, law, the ministry, journalism, and library and museum service. The department guides the student toward these careers and provides an opportunity to support academic preparation with field experience in the community (for example, in a historical society, a museum, or a private or public agency). Oakland's teacher training program draws on history in the elementary education major and minor concentrations in history/social science, in the secondary teaching major in social studies, and in the secondary teaching minor in history. Careers in college teaching and other forms of professional historical scholarship usually require postgraduate training, toward which solid work in the undergraduate major is extremely important. Students interested in achieving a Ph.D. in history should be aware that most graduate schools require demonstrated competence in one or two modern foreign languages. Every history major should plan his/her course of study in close consultation with a faculty adviser.

The Department of History's undergraduate program leads to a Bachelor of Arts degree. The Department of History offers a Master of Arts program, which is described in the *Oakland University Graduate Study Catalog*. The department offers both undergraduate and graduate courses at night, and students can complete either the B.A. or the M.A. program entirely at night.

## Requirements for the Liberal Arts Major in History

The major in history requires 40 credits in history courses. At least 20 of these credits must be in courses numbered 300 or above, and at least 4 credits in a 400-level course are required. No more than 16 credits in independent study (HST 391, 491) may be counted toward the history major.

## Departmental Honors

Majors who wish to be considered for departmental honors must submit an application to the History Honors Committee with a paper prepared in connection with regular course work and significantly more ambitious in research and bibliographic scope than a book review. The committee will want the original of the paper, with the instructor's comments and grade. There is no statutory grade point minimum for honors, but the award is seldom made to students with less than a 3.50 average in their history courses.

## Requirements for the Liberal Arts Minor in History

The minor requires 20 credits in history courses, including 8 credits in courses numbered 300 or above.

## Requirements for the Secondary Teaching Minor in History

The secondary teaching minor requires 20 credits in history courses, including HST 214 and 215.

## Course Prerequisites

- 100-299 Introductory and survey courses with no prerequisites.
- 300-399 More advanced courses with the general prerequisite of English proficiency certification plus any special requirements listed beneath the courses.
- 400-499 Research courses on the most advanced undergraduate level with a general prerequisite of 20 credits in HST courses plus any special requirements listed beneath the courses.

## COURSE OFFERINGS

### HST 100 Topics in History (4)

An introductory course to enable students to sample various historical problems and to develop critical judgment regarding the nature and use of historical evidence. Recommended for students with little or no background in college-level history. May be repeated once for a total of 8 credits. Offered each semester.

### HST 125 War and Revolution in the Twentieth Century: Studies of History through Films (2)

An introductory course to enable students to develop critical judgment regarding the interpretation of documentary and feature films as historical sources.

### HST 150 History of Western Civilization (4)

An introduction to significant cultural, social, and political themes in Western experience from ancient times to the present. Offered each semester.

### HST 200 European History to 1300 (4)

Ancient and Medieval Europe to 1300: from classical Greece and Rome to the High Middle Ages.

### HST 201 European History, 1300 to 1815 (4)

Early Modern Europe, 1300-1815: from the Renaissance and Reformation to the Age of the French Revolution.

### HST 202 European History since 1815 (4)

Modern Europe, 1815-present: from Napoleon to the modern age of industrialism, nationalism, and global conflict.

### HST 214, 215 Introduction to American History (4 each)

HST 214 is a survey of American political, economic, and social history from the colonial period through the Reconstruction era. HST 215 is a survey of American industrial growth, agricultural protest, experiments with imperialism, domestic reform, and world leadership from 1876 to the present. Both classes offered each semester.

### HST 218 History of Michigan (4)

A survey of the political, economic, and social history of the state from the Indian and French settlement to the present. Offered in alternate years.

### HST 219 United States since 1945 (4)

A survey of American political, economic, and social history since World War II. Offered every year.

### HST 220 Modern American Culture (4)

A survey of U.S. cultural history from the 19th century to the present. Emphasizes the concurrent development of mass popular culture and avant-garde movements. Offered every year.

### HST 221 American Diplomatic History (4)

The origin, formulation, and development of American foreign policy from the Revolution to the present; topics include the Monroe Doctrine, manifest destiny and imperialism, the Civil War, World Wars I and II, the Cold War, and nuclear diplomacy.

### HST 222 American Sport History (4)

The place of sport in American society from the colonial period to the

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present. Several sports are selected to illustrate developments of major historical significance.

### **HST 223 History of American Cities (4)**

History of American cities from preindustrial America to the present emphasizing the effect of such forces as industrialization, immigration, migration, trade, economic patterns, and transportation upon city organization and life.

### **HST 224 History of American Families (4)**

History of American families as social institutions emphasizing the impact of historical events and trends upon family composition, family functions, and family life. Includes research in the student's personal family history.

### **HST 225 Introduction to Ancient History (4)**

Surveys the history of the Ancient Near East and the Mediterranean area, including the civilizations of Mesopotamia, Egypt, Persia, Greece, and Rome up to the later Roman Empire.

### **HST 228 Introduction to Environmental History (4)**

History of selected human societies' interaction with the natural environment, especially changing relations among population, food and natural resources. Includes the modern world-system and the acceleration of environmental decline.

### **HST 234, 235 Introduction to English History (4 each)**

HST 234 surveys English history from the Middle Ages to the Glorious Revolution of 1688, emphasizing constitutional development and the Common Law. HST 235 surveys English history from 1688 to the present, emphasizing political, social, economic, and legal development.

### **HST 250 History of Russia (4)**

An introduction to the political, social, and intellectual history of Russia and the Soviet Union from the Kievan State to the Brezhnev era. Offered every year.

### **HST 254 Eastern European History (4)**

The historical development of the peoples and states of East-Central Europe and the Balkans — Poland, Ukraine, Czechoslovakia, Hungary, Rumania, Yugoslavia, and Bulgaria — from the Middle Ages to the present, with emphasis on the period since World War II.

### **HST 261, 262 Introduction to Latin American History (4 each)**

HST 261 is a survey of pre-Columbian and colonial Latin America to 1825, stressing the Hispanization of the society, its socio-economic institutions, the influence of the Enlightenment, and the achievement of political independence. Offered fall semester. HST 262 surveys the national period of Latin America from 1825 to the present, emphasizing the problems of nation building and modernization, the emergence of nationalism and militarism, and the roots of social revolutionary ferment. Offered winter semester.

### **HST 270 History of Modern Japan (4)**

History of Japan from the mid-nineteenth century to the post-World War II reform, recovery, and emergence as a economic power.

### **HST 282 Introduction to the History of India (4)**

A survey of the history of India from the earliest emergence of a recognizable Indian identity during the second millenium B.C. until the establishment of the Republic of India in 1948.

### **HST 285 African History (4)**

An introduction to the entire range of African history, from human evolution and Egyptian civilization, through the development of divine kingships and international trade, to colonialism, popular movements, and the problems and prospects of modern nation-building.

### **HST 292 History of the Afro-American People (4)**

Surveys the Afro-American experience from the African background through the Civil War and post-Civil War periods to the present.

### **HST 302 History of the American Worker in the Twentieth Century (4)**

The economic, social, and political history of the American work force with emphasis on the history of organized labor.

### **HST 303 American Constitutional History (4)**

Origins and development of American constitutional doctrine and interpretation from the colonial period to the present, emphasizing constitutional controversy and change.

### **HST 306 Colonial and Revolutionary America (4)**

The transplantation of European society to continental North America; the subsequent development of political, economic, and social institutions in the colonies; the Anglo-French struggle for the continent; and the American Revolution.

### **HST 307 American Religious History (4)**

A study of American religious history, including religious elements in immigration, separation of church and state, denominationalism and sectarianism, religion and nationalism, religious leadership, and religion as a social force. Identical with REL 307.

### **HST 310 The Young Republic and the Age of Jackson, 1787-1850 (4)**

The making of the Constitution, the social, political, and economic development of the new nation and the subsequent forces affecting expansion, social protest, and sectionalism to 1850. Offered in alternate years.

### **HST 312 The Civil War and Reconstruction, 1850-1876 (4)**

The origins of secession, the wartime problems of the Union and the Confederacy, the principal military campaigns, the Reconstruction era and the creation of a new union, and the significance of the Civil War and Reconstruction in American history. Offered each year.

### **HST 313 American History, 1876-1900 (4)**

The New South, industrial consolidation, the origins of the modern labor movement, the rise of the city, immigration, agrarian protest movements, the businessman's philosophy, and the challenge to laissez faire. Offered in alternate years.

### **HST 314 American History, 1900-1928 (4)**

Social, political, and economic developments in the U.S. during the progressive era and the decade of the 1920s. Offered in alternate years.

### **HST 315 American History since 1928 (4)**

The myth of the New Era, the social and political impact of the Great Depression, New Deal programs and radical alternatives, the isolationist-internationalist debate, modern Republicanism, and the New Frontier. Offered in alternate years.

### **HST 316 The American Mind to 1860 (4)**

The history of American thought from the colonial period to the Civil War, emphasizing New England Puritanism, the transition from colonies to provinces, the era of the American Revolution, and the origins of modern America.

### **HST 317 The American Mind since 1860 (4)**

Major intellectual trends in the United States from the Civil War to the present, including ideological conflict during the Civil War and Reconstruction, the impact of evolutionary thought, and responses to industrialization and urbanization.

### **HST 318 Topics in American Social History (4)**

Selected topics in the history of popular beliefs, social structure and organization, and the process of social change, including movements of reform.

### **HST 319 History of the American South (4)**

The South from colonial times to the 1960s, emphasizing the transition from the agrarian, slave South of the antebellum period to the modern South of the 20th century.

### **HST 321 American Diplomatic History in the Twentieth Century (4)**

American foreign policy and diplomacy from the Spanish-American War to the present, including American imperialism, Caribbean and Far Eastern policies, involvement in the world wars and the Cold War, and nuclear diplomacy. Offered each year.

### **HST 323 Topics in Afro-American History (4)**

The economic, social, and political activities, status, organizations, and institutions of Afro-American people, emphasizing the 20th century.

### **HST 325 Medieval Europe (4)**

The European Middle Ages from about A.D. 400 to 1300, with special emphasis on intellectual developments. Offered in alternate years.

### **HST 326 The Italian Renaissance (4)**

The European Renaissance period, with emphasis on the Italian experience. Offered in alternate years.

### **HST 327 The Northern Renaissance (4)**

European humanism, with emphasis on the Lowlands, France, and Germany. Offered in alternate years.

**HST 329 Europe in the Seventeenth Century (4)**

A comparative analysis of European societies: the articulation of absolutism and constitutionalism, the emergence of the European states system, the origins and impact of modern science, the culture of the baroque, and the development of commercial capitalism. Offered in alternate years.

**HST 334 Victorian and Edwardian England (4)**

The political, social, economic, and intellectual life of England from 1837 to the outbreak of World War I.

**HST 335 Twentieth Century Britain (4)**

British adjustment to global wars, the loss of empire, economic weakness, and social discord.

**HST 341 Europe since 1914 (4)**

An analysis of Europe in world perspective since World War I.

**HST 343 Germany since 1848 (4)**

The history of the German nation-state, concentrating on constitutional and political developments in their social context.

**HST 345 France since 1789 (4)**

The political development of modern France as a nation-state and the cultural and economic movements connected with French public life.

**HST 346 European Witchcraft (4)**

A scholarly investigation of witch beliefs and witch trials in Europe, England, and New England. The social and intellectual foundations of witchcraft prosecutions from the Middle Ages to the end of the seventeenth century. Offered in alternate years.

**HST 347 Tools of Historical Research (4)**

To acquaint history students with the auxiliary sciences of that discipline, with emphasis on historical bibliography and use of the library.

Prerequisite: Junior standing.

**HST 348 Europe in the Eighteenth Century (4)**

A comparative analysis of European societies: the old regime in Europe, beginnings of industrial development, the Enlightenment as a political and social movement, reform under the monarchy and the emergence of democratic ideologies, and the French Revolution. Offered in alternate years.

**HST 349 France in the Age of Absolutism and Enlightenment (4)**

The *ancien régime* in France from the end of the wars of religion to the beginning of the Revolution (1589-1789). Offered in alternate years.

**HST 350 The European Mind to 1700 (4)**

Major developments in European thought from the God-oriented world views of the Middle Ages to the development of scientific concepts in the seventeenth century. Emphasis is on reading original materials. Offered in alternate years.

**HST 351 The European Mind since 1700 (4)**

European intellectual movements since the eighteenth century Enlightenment, emphasizing the impact of evolutionary, utilitarian, and existentialist theories and the criticism of traditional rationalist assumptions. Emphasis is on reading original materials. Offered in alternate years.

**HST 352 Kiev and Muscovy (4)**

Russian history from the ninth to the seventeenth century: the origins of the Kievan state and society, the struggle against the steppes, and the formation of a centralized Russia under the leadership of Moscow.

Prerequisite: HST 250.

**HST 353 Imperial Russia (4)**

Russian history from Peter the Great to the Bolshevik Revolution: the growth of Russian national power, westernization, serfdom, and revolution.

Prerequisite: HST 250.

**HST 354 Soviet Russia (4)**

Russia and the Soviet Union from 1917 to the present: revolution and civil war, collectivization and industrialization, Stalinism, World War II, de-Stalinization, the Soviet Union and the world communist movement. Offered in alternate years.

Prerequisite: HST 250.

**HST 359 Russian Intellectual History to Peter the Great (4)**

Main intellectual and cultural developments in Russia before Peter the Great. The Russian Church and religious thought, literature, and

the development of political ideology will be emphasized. Offered in alternate years.

Prerequisite: HST 250.

**HST 360 Russian Intellectual History since Peter the Great (4)**

Main intellectual and cultural developments since Peter the Great, with emphasis on the nineteenth century. Particular attention is devoted to the slavophiles, the westernizers, the populists and socialists, and several of the great realistic writers. Offered in alternate years.

Prerequisite: HST 250.

**HST 363 History of Southern South America (4)**

The social, political, and economic history of Argentina, Brazil, and Chile in the nineteenth and twentieth centuries; frontier expansion and Indian warfare; slavery and Empire in Brazil; regionalism and nationalism; industrialization and urbanization; and international relations.

**HST 365 The Response to European Colonialism (4)**

A comparative examination of the responses of the peoples of Africa and Latin America to European expansion, with emphasis on such themes as acculturation, resistance movements, nationalism, and modernization.

Prerequisite: AS 230 or 250.

**HST 366 Slavery and Race Relations in the New World (4)**

A comparative approach to the study of slavery in North America, Latin America, and the Caribbean, and to present race relations in these areas. Offered in alternate years.

**HST 367 History of Mexico (4)**

The scope and achievements of pre-Columbian civilizations, the Spanish Conquest, the emergence of a multiracial society, the achievement of political independence and nation-building in the twentieth century. Offered in alternate years.

**HST 370 China: Beginnings through Han to A.D. 220 (4)**

The history of China from most ancient times to the downfall of the Han Dynasty in 220 A.D.

**HST 371 China: From the Three Kingdoms through Ming, 220-1644 (4)**

The history of China to the eve of the Manchu conquest in 1644.

**HST 373 China: The Final (Ch'ing) Imperial Phase, 1644-1912 (4)**

China under Manchu rule, from the conquest to the collapse of the Confucian imperial order in the early twentieth century.

**HST 374 China: The Nationalist Republican Period, 1912-1949 (4)**

Revolutionary nationalism and political, social, and cultural change under the Chinese Republic from the warlord era to the establishment of the Communist-led People's Republic in 1949, and post-1949 developments in Nationalist-ruled Taiwan.

**HST 375 Topics in Chinese Intellectual History (4)**

A historical investigation of selected periods and problems in the intellectual history of China. Content will vary each semester. Offered each year.

**HST 376 History of Chinese Communism: 1921 to the Present (4)**

The revolutionary history of the Chinese Communist movement from its beginning in 1921 to its accession to power in 1949, and the major lines of development under the Chinese People's Republic since 1949.

**HST 379 The Ancient Near East and Mediterranean I (4)**

The history of the ancient peoples in Mesopotamia, Egypt, Persia, North Africa, and the areas of Greek influence to the Hellenistic period of Alexander the Great.

Prerequisite: HST 225 recommended.

**HST 380 The Ancient Near East and Mediterranean II (4)**

The history of the ancient peoples in South Western Asia, Northern Africa, and Southern Europe from the Hellenistic Period to the age of Justinian (sixth century A.D.).

Prerequisite: HST 225 recommended.

**HST 381 History of Early India (4)**

The history of India from the most ancient times to the coming of the Mughals in the early 16th century. Offered winter semester in alternate years.

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### **HST 386 Contemporary African History (4)**

Colonial and postcolonial economic development, political ideologies, and social problems of contemporary Africa. Topics include resistance and revolutionary movements, styles of leadership, and building of nations.

Prerequisite: AS 230 or HST 287.

### **HST 391 Directed Readings in History (2, 4, or 8)**

Independent but directed readings for junior and senior majors in fields of history in which advanced courses are not available. Offered each semester.

Prerequisite: Permission of instructor.

### **HST 399 Field Experience in History (4)**

Field experience in history, with faculty supervision which incorporates student performance in an occupational setting. May not be repeated for credit.

Prerequisite: 24 credits in history, of which at least 8 must be at the 300-400 level.

### **HST 400 Seminar: Advanced Topics in History (4)**

Reading, research, and discussion on a selected historical topic or period. Since topics will vary from semester to semester, students should consult the schedule of classes every semester. Offered each year. May be repeated for credit.

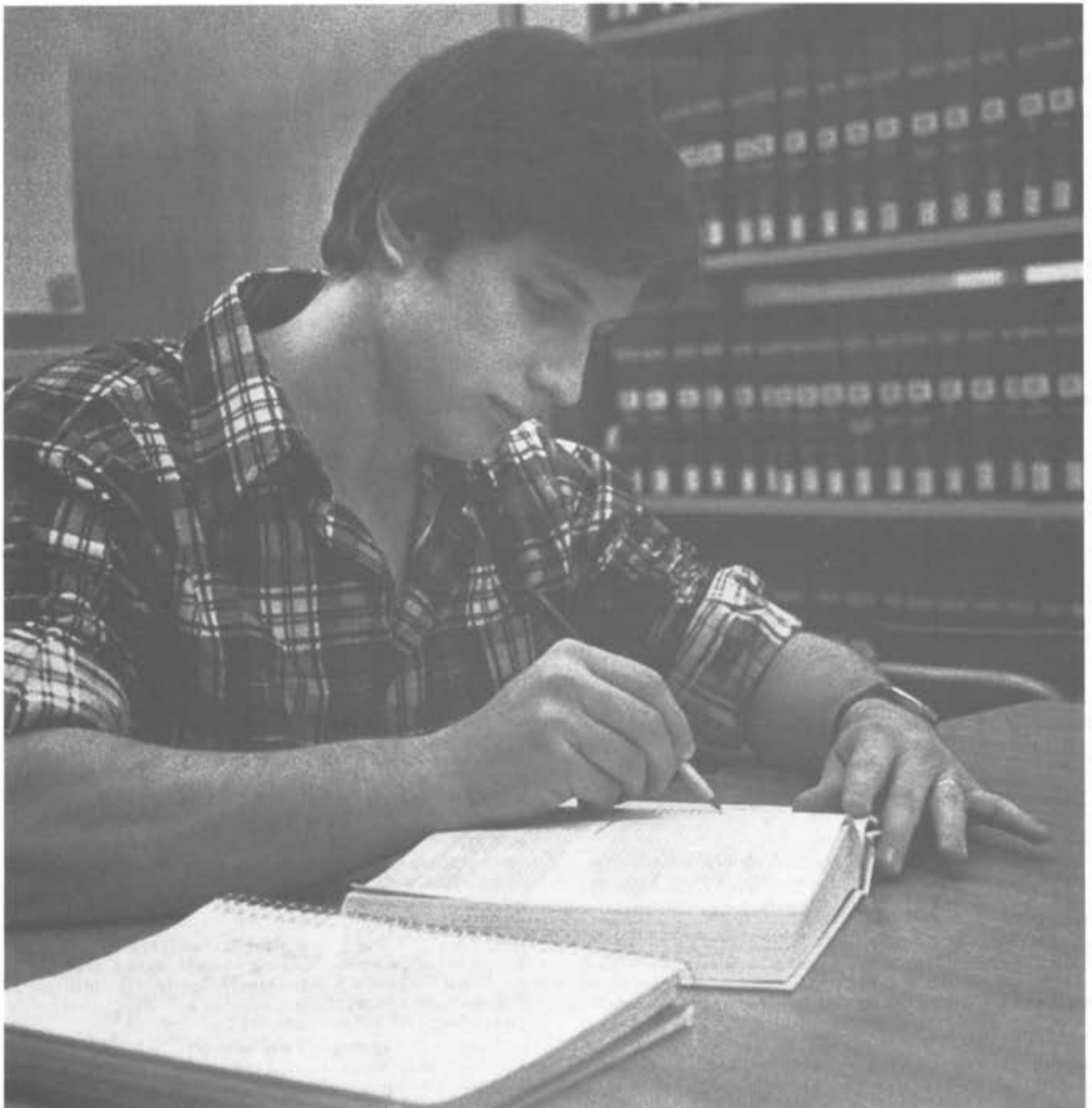
### **HST 481 Seminar in Historiography (4)**

Reading and research in topics analyzing the literature of historical inquiry and writing. Offered irregularly.

### **HST 491 Directed Research in History (4, 8, or 12)**

Directed individual research for advanced history majors. Offered each semester.

Prerequisite: Permission of instructor.





# DEPARTMENT OF LINGUISTICS

**CHAIRPERSON:** *William Schwab*

**PROFESSOR:** *William Schwab (Linguistics and English)*

**ASSOCIATE PROFESSORS:** *Peter J. Binkert (Linguistics and Classics), Daniel H. Fullmer (Linguistics and English)*

**ASSISTANT PROFESSOR:** *Gayle H. Partmann (Linguistics and Sociology and Anthropology)*

**ASSOCIATED FACULTY:** *Professor, Donald C. Hildum (Communication Arts and Linguistics); Associate Professors, John W. Barthel (German and Linguistics), Carlo Coppola (Hindi-Urdu and Linguistics), Don Iodice (French and Linguistics)*

Linguistics is concerned with the objective study of language, language history, comparison of languages, and with theories about human languages and their implications in language acquisition and learning theory. As recent research has indicated, linguistics plays a pivotal role in studies dealing with the nature of the mind. Rapid expansion of knowledge in linguistics has involved such fields as anthropology, computer and information science, language teaching, speech pathology, sociology, and dialectology, and has produced the new disciplines of biolinguistics, mathematical linguistics, psycholinguistics, and sociolinguistics as exciting and viable fields.

The Department of Linguistics offers a cross-disciplinary liberal arts major in linguistics leading to the Bachelor of Arts degree, a modified liberal arts major in linguistics with a concentration in computer and information science, concentrations in linguistics with a modified major in departments in the College of Arts and Sciences, and a minor in linguistics.

The department also offers a secondary teaching major in language arts with a specialization in teaching English to native speakers (12 credits) or to speakers of other languages (14 to 16 credits). The first specialization includes the study of social and geographical dialects in the U.S. and the relationship of language to culture and subcultures. The second specialization includes the study of bilingualism and the sociological aspects of cross-cultural interaction. Both programs include the study of literature (16 credits), which provides an introduction to the methods of literary analysis, the foundation for the critical reading of literature and exposition, and a survey of important American and English authors.

The department offers a graduate program with several specializations in linguistics. For further information, see the *Oakland University Graduate Study Catalog*.

## Requirements for the Liberal Arts Major in Linguistics

1. 28 credits in linguistics courses to include LIN 301, 403, and 404. Only 12 of these credits may be in ALS courses.
2. 12 credits in a cognate area — anthropology, computer and information science, English, modern languages, philosophy, psychology, sociology, or communication arts.
3. Fourth-semester proficiency in a modern or classical foreign language. If the cognate area is in a foreign language, the language proficiency requirement must be met in a different language.

## Requirements for Modified Major in Linguistics with a Minor in Computer and Information Science

1. 24 credits in linguistics courses to include LIN 301, 403, and 404. Only 8 of these credits may be in ALS courses.
2. 16 credits in CIS, including CIS 120, 121, 220, and 385, and one elective.
3. PHL 370.

## Requirements for Secondary Teaching Major in Language Arts with a Minor in English

1. Core Program: 28 credits in the language arts core program to include ALS 176 or LIN 207, ENG 210, LIN 301, ED 338, LIN 404, ENG 498, and one SCN elective.
2. Specializations:
  - a. Teaching English to native speakers of English: 12 credits in ALS or LIN courses to include ALS 375 or 376, LIN 303, and ALS 420, or
  - b. Teaching English to speakers of other languages: 12 to 14 credits in ALS or LIN courses to include ALS 328 or 376, LIN 401, and ALS 428 (ALS 429 optional).
3. Literature: 16 credits in literature to include ENG 140, 224, 241, and one ENG elective in literature.
4. 24 credits in education to include: ED 344, 345, 428, and 455.
5. The above English courses provide a 24-credit minor in English in accordance with the North Central Accreditation Association. It includes ENG 140, 210, 224, 241, 498, 498, and one ENG elective in literature.

## Requirements for the Liberal Arts Minor in Linguistics

Twenty credits in linguistics courses to include:

1. ALS 176 or one 200-level LIN course.
2. LIN 301.
3. At least 12 credits at the 300 or 400 levels.
4. At least 4 credits at the 400 level.

## Requirements for Concentrations in Linguistics with Modified Majors in Other Departments

Students may elect a modified major in anthropology, communication arts, English, philosophy, psychology, or sociology, and may concentrate in linguistics at the same time.

Requirements:

1. 20 credits in LIN or ALS courses to include:
  - a. LIN 301
  - b. For a major in:
 

Anthropology	ALS 375
Communication arts	LIN 401
English	LIN 303
Philosophy	LIN 207
Psychology	ALS 335
Sociology	ALS 376
  - c. 8 credits of electives chosen so that at least two of the five ALS or LIN courses are at the 300 or 400 levels.
2. For requirements in the modified majors, consult the appropriate department.

## COURSE OFFERINGS IN APPLIED LANGUAGE STUDIES

### ALS 102 Studies in Vocabulary and Etymology (4)

A basic course in vocabulary building. The origin of scientific and literary terms; foreign phrases in current use; borrowing of words into English from other languages, particularly Latin and Greek; the relationship between meaning and culture; and meaning and context. Course not applicable to LIN programs.

### ALS 176 The Humanity of Language (4)

An introduction to the interrelationships of language and other cultural subsystems. Linguistic knowledge, the child's acquisition of language, sound and writing systems, meaning and communication, language and social groups are among the topics discussed.

### ALS 200 Techniques of Effective Reading (2)

A practical approach to techniques of critical reading for better

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comprehension through study of linguistic and other patterns, as well as meaning, in college-level assignments. Frequent exercises supplement the examination of reading techniques. Course not applicable to LIN programs.

### **ALS 220 Practical Uses of Language (4)**

A linguistic approach to the control of language: modern concepts of grammar, variation of sentence form and meaning, social variants, orthography, and punctuation from a linguistic perspective. Frequent exercises to improve the student's sensitivities to his/her use of language.

### **ALS 320 Applied Linguistics (4)**

A series of sections in French, German, Russian, and Spanish are offered in this course. Identical with FRH, GRM, RUS, and SPN 320.

### **ALS 328 Bilingualism (4)**

A survey of cultural and psycholinguistic aspects of bilingualism. Topics include bilingualism and intelligence, bilingual-bicultural education, maintenance of individual and communal bilingualism. The course will examine world-wide examples, but will be of special relevance to minority language groups in the U.S.

### **ALS 334 Language Development in Children (4)**

Language acquisition in normal and abnormal children: stages of the acquisition process, the role of the environment, the relationship between language and the development of other skills, language acquisition in children with sensory and psychological disorders, and the relationship between language, reading, and writing. Prerequisite: ALS 176 or one course in LIN.

### **ALS 335 Psycholinguistics (4)**

The psychology of language, the accommodation between the cognitive and physical structure of humans and the structure of language, the nature of the language learning process, and the consequences of language use. Identical with PSY 335.

Prerequisite: One course in ALS or LIN and one course in PSY.

### **ALS 340 The Biology of Language (4)**

Animal communication and the evolution of man's capacity for language; development of language in normal and abnormal children, disorders of speech, hearing and language, language and the brain, and genetic aspects of language.

Prerequisite: ALS 176 or one course in LIN.

### **ALS 360 Neurolinguistics (4)**

The neurology of language: essentials of neuroanatomy; neurological mechanisms underlying language; aphasia and kindred disorders of speech; the relationship of language to memory, intelligence, and cognition; language and mental retardation and psychological disorders.

Prerequisite: ALS 176 or one course in LIN.

### **ALS 375 Language and Culture (4)**

Language viewed as cultural behavior, its system, acquisition, and use; its relation to history, attitudes, and behavior; standard languages; social dialects; pidgins; and creoles. Identical with AN 375.

Prerequisite: One course in ALS, LIN, or AN 102.

### **ALS 376 Sociolinguistics (4)**

Language in its social context: intrasocietal variation; social evaluation of language varieties (style, dialect) as an influence in language change; and the choice of a language variety as an index of group solidarity, social ideology, and individual attitudes. Identical with SOC 376.

Prerequisite: One course in ALS or LIN or SOC.

### **ALS 420 Linguistics and Reading (4)**

A study of the English writing system: a close examination of spelling and morphology, ambiguity, dialect interference, and derivational vocabulary.

Prerequisite: LIN 301.

### **ALS 428 The Teaching of English as a Second Language (4)**

Approaches, methods, and techniques of teaching pronunciation, grammar, and vocabulary. The use of language tests and laboratory techniques.

Prerequisite: LIN 301.

### **ALS 429 Practicum (2 or 4)**

Supervised experience in some area of applied linguistics, such as working with nonnative speakers of English, tutoring, or other

appropriate field work or internship, to be approved by the Department of Linguistics.

Prerequisite: By permission only.

## **COURSE OFFERINGS IN LINGUISTICS**

### **LIN 204 Syntax (4)**

An introduction to the basic principles of morphological and syntactic structure with emphasis on modern American English.

### **LIN 207 Semantics (4)**

The study of meaning, which involves the relation between speaker, the language, and the real, or imagined, world. Attention is given to modern theories about the organization of thought. Identical with SCN 207.

### **LIN 300 Topics in Linguistics (4)**

Topics and problems selected by the instructor.

### **LIN 301 Linguistic Structures (4)**

An introduction to synchronic linguistic analysis, with structural problems in natural languages.

Prerequisite: ALS 176 or one 200-level LIN course.

### **LIN 302 Historical Linguistics (4)**

Diachronic linguistic analysis: language change, dialect geography, establishment of genealogical relationships, the reconstruction of earlier stages of languages and the relationship of language change to synchronic analysis.

Prerequisite: LIN 301.

### **LIN 303 Sound Patterns of American English (4)**

The fundamentals of articulatory phonetics with studies in American social and geographic dialects.

Prerequisite: ALS 176.

### **LIN 401 Phonetic Theory (4)**

An introduction to articulatory and acoustic descriptions of spoken language, and training in the recognition and production of sounds found in languages other than English. Identical with SCN 401.

Prerequisite: LIN 301.

### **LIN 403 Phonological Theory (4)**

A presentation of theory and application of phonological analysis with emphasis on original work.

Prerequisite: LIN 301.

### **LIN 404 Syntactic Theory (4)**

A presentation of theory and application of morphological and syntactic analysis, with emphasis on original work.

Prerequisite: LIN 301.

### **LIN 407 Semantic Theory (4)**

An inquiry into contemporary efforts to formulate and articulate a theory of meaning adequate for the analysis of natural language, with emphasis on the relation between syntactic and semantic analysis.

Prerequisite: LIN 301.

### **LIN 410 Studies in the Structure of a Language (4)**

A study of the structural aspects of an individual language to be determined by the instructor. Among the languages for study are French, German, Hindi-Urdu, and Sanskrit.

Prerequisite: LIN 301.

### **LIN 480 Seminar in Linguistics (4)**

Topics and problems selected by the instructor.

Prerequisite: LIN 301.

### **LIN 490 Independent Study (2 or 4)**

Special research projects in linguistics.

Prerequisite: Permission of Department of Linguistics.

# DEPARTMENT OF MATHEMATICAL SCIENCES

**CHAIRPERSON:** *George F. Feeman*

**PROFESSORS:** *Harvey J. Arnold, Louis R. Bragg, John W. Dettman, George F. Feeman, William C. Hoffman, G. Philip Johnson, Donald G. Malm, James H. McKay*

**ASSOCIATE PROFESSORS:** *J. Curtis Chipman, Jon Froemke, Louis J. Nachman, Irwin Schochetman, Yel-Chiang Wu*

**ASSISTANT PROFESSORS:** *Charles C. Cheng, David J. Downing, Jerrold W. Grossman, Subbaiah Perla, Bradley R. Sands, Darrell Schmidt, Nancy Shoemaker, Sze-kai J. Tsui, J. Barry Turett, Stuart S. Wang, Stephen J. Wright*

**ADJUNCT PROFESSORS:** *Joseph Assenzo, Birk P. Binnard, David M. Dahm, Gary C. McDonald, Edward F. Moyland*

**ADJUNCT ASSISTANT PROFESSOR:** *Wanda J. Mourant*

**VISITING ASSISTANT PROFESSOR:** *Baruch Cahlon*

**VISITING INSTRUCTORS:** *Rita MacBain, Phyllis Nicholson*

The Department of Mathematical Sciences offers programs of study leading to the degrees of Bachelor of Arts with a major in mathematics, Bachelor of Science with a major in mathematical sciences, Master of Arts in mathematics, and Master of Arts in Teaching in mathematics. Students preparing for secondary teaching can be certified in either the B.A. or B.S. program. In addition, the department offers courses which are required or are recommended as electives in other programs of the university. For further information on graduate programs of the department, see the *Oakland University Graduate Study Catalog*.

Whether in the B.A. or B.S. program, students are encouraged to elect a variety of applied courses both inside and outside the department. The greater the familiarity with applications of mathematics, the greater will be the possibilities of employment in a world which is becoming more mathematics-oriented each year. Concentrations or minors, or possibly even second majors, are available in computer science, the life sciences, the physical sciences, engineering, economics and management, the social sciences, and linguistics. Mathematics majors are advised to consult departmental faculty before planning their programs.

The department recommends that all mathematics majors and minors, in either the B.A. or B.S. programs, acquire in their first or second years a programming ability at the level of CIS 130. Note the additional programming requirement for the B.S. program.

## Placement Examinations

Well-prepared freshmen who intend to major in mathematics should plan to take MTH 154 as early as possible. The department offers a placement exam during orientation, registration, and the first week of classes to place students in the appropriate MTH courses. MTH 101 through 105 are sequentially arranged so that each is a prerequisite for the next in the sequence. These courses are open only to students who place into them via the placement exam. These courses also form prerequisites for regular courses as follows:

COURSE	PREREQUISITE
MTH 123 or 185	MTH 102
MTH 121	MTH 103
MTH 122	MTH 121
MTH 154	MTH 104 with 105 as a corequisite

## Requirements for the Liberal Arts Major in Mathematics, B.A. Program

1. A minimum of 40 or 41 credits is required. These must include MTH 154, 155, 254, 256, 305, 351, 475; one of STA

321, APM 257, or APM 363; and three additional courses labeled APM, MOR, MTH, or STA (excluding STA 320) and numbered above 300, including at least one course numbered above 400 other than MTH 414 or MTH 497. MTH 414, however, can count toward the major.

2. Five courses outside the Department of Mathematical Sciences in areas related to mathematics. It is recommended that at least two of these be in science.
3. A minimum grade of 2.0 is required in each mathematics course used to satisfy the major requirements in mathematical sciences.

## Requirements for the Major in Mathematical Sciences, B.S. Program

1. A minimum of 44 credits labeled MTH, APM, MOR, or STA.
  - a. These must include MTH 154, 155, 254, 256, 305, and APM 331-332.
  - b. One of the following applied options at the upper level must be chosen:
    1. Applicable Analysis and Mathematical Modeling: APM 257, 335, 431 or 435, 455, and one elective.
    2. Operations Research: STA 321, MOR 342, 442, 443, and one elective.
    3. Statistics: STA 321, 322, 427, STA 323 or 324 or 425 or 428, and one elective.
 The elective in the applied option must be chosen from STA 321, APM 257, APM 363, or courses numbered above 300 and labeled APM, MOR, MTH, or STA (excluding STA 320), but MTH 414 and MTH 497 may not be counted toward the major.
2. 16 credits in an area related to the student's option outside the Department of Mathematical Sciences.
3. A minimum grade of 2.0 is required in each mathematics course used to satisfy the major requirements in mathematical sciences.
4. Students must complete CIS 130-131 with an average grade of at least 2.0 (or equivalent).

## Requirements for the Liberal Arts Minor in Mathematics

To qualify for the liberal arts minor in mathematics, a student must take 20 credits of course work beyond MTH 154 in the department. These credits must include MTH 155, MTH 254, and MTH 305. Two additional courses must be chosen from among STA 321, MTH 351, APM 331, APM 363, or any 400-level course from the STA, APM, MOR, or MTH listings except MTH 414 and MTH 497.

## Requirements for the Secondary Teaching Minor in Mathematics

To qualify for the secondary teaching minor in mathematics, a student must take 20 credits of course work in the department. Only MTH 154, 155, and courses with at least MTH 155 as a prerequisite may be used to satisfy this requirement. It is recommended that the student select his/her courses from among MTH 154, 155, 254, 305, 361; APM 257, 331, 332, 363; STA 321 and 322; and MOR 322 and 342.

In addition to the field experiences required for secondary education certification (tutoring in ED 428 and student teaching in ED 455), other field experiences are available in several areas of community service. Interested students should consult the department chairperson for detailed information.

## Requirements for Secondary Teaching Certification in Mathematics

Students interested in secondary education certification must either complete the B.A. or B.S. program in mathematics and include MTH 361 as an elective and must satisfy all of the education course requirements (ED 344, 345, 428, and 455). Students must take ED 428 before ED 455. In addition, they must expand the corequirement into a certifiable teaching minor.

## Minor in Computer and Information Science for Mathematics Majors

Students interested in a minor in computer and information science with a mathematics major must take four 4-credit courses labeled CIS, including one 300-level CIS course. CIS 490 may not be used.

### COURSE OFFERINGS

#### MATHEMATICS

##### MTH 100 Topics in Elementary Mathematics (4)

A selection of topics on numeration, deductive reasoning, inductive reasoning, measurement, probability, statistics, and geometry. Designed to develop the students' awareness and appreciation of mathematics with an emphasis on problem solving. Includes individualized reinforcement of basic arithmetic skills, as well as a laboratory and reading component.

Prerequisite: Placement in Summer Support Program.

##### MTH 101 College Arithmetic (2)

A half-semester study of whole numbers, fractions and decimals, signed numbers, powers and exponents, roots and radicals, simple equations, and problem solving.

##### MTH 102 College Algebra I (2)

A half-semester study of sets, real numbers, absolute value, order relations, inequalities,  $\mathbb{R}^2$  and the plane, graphs, and linear and quadratic functions.

##### MTH 103 College Algebra II (2)

A half-semester study of monomials, binomials, polynomials, factoring, roots of polynomial equations, quadratic equations, and complex numbers.

##### MTH 104 Elementary Functions (2)

A half-semester study of functions, graphs of functions, polynomial functions, rational functions, inverse functions, and exponential and log functions.

##### MTH 105 Trigonometry (2)

A half-semester study of angles and angular measures, trig functions, graphs, trig identities, inverse trig functions, and trigonometric equations.

##### MTH 121 Linear Programming, Elementary Functions (4)

Systems of equations, matrices, linear programming (simplex method), exponential, and logarithmic functions.

Prerequisite: MTH 103

##### MTH 122 Calculus for the Social Sciences (4)

The basic concepts, theorems, and applications to the social sciences of the differential calculus of one and several variables.

Prerequisite: MTH 121

##### MTH 123 Introductory Mathematics for the Life Sciences (4)

Emphasis on topics from algebra, trigonometry, and the theory of functions with applications to problems in biology.

##### MTH 154-155 Calculus (4 each)

A comprehensive study of analytic geometry, limits, differentiation, and integration of functions of one real variable. Each is offered fall and winter semester.

##### MTH 185 Mathematics — An Exploration into Undergraduate Topics (4)

Topics selected from probability, calculus, linear algebra, group theory, number theory, abstract algebra, topology, projective geometry, logic, and foundations. The student will be expected to acquire

familiarity and experience with abstract reasoning as it is applied in various areas of mathematics.

##### MTH 190-191 Topics in Mathematics (1 or 2)

A study of some topic in mathematics intended to be appropriate for students enrolled in MTH 154-155 respectively. MTH 190 is offered fall semester, MTH 191 offered winter semester.

Prerequisite: Permission of department.

##### MTH 254 Multivariable Calculus (4)

A study of vectors, polar coordinates, three-dimensional geometry, differential calculus of functions of several variables, exact differential equations, multiple integrals, line and surface integrals, and vector fields. Offered fall and winter semesters.

Prerequisite: MTH 155.

##### MTH 256 Introduction to Linear Algebra (3)

An introduction to systems of linear equations, vectors, and matrices with emphasis on their applications and on computational techniques. Gaussian elimination, matrix algebra, determinants, eigenvalues and eigenvectors, Jordan form, linear transformations, vector spaces.

Prerequisite: MTH 155.

##### MTH 290 Independent Study (2 or 4)

Reading or research on some mathematical topic. Open only to sophomores.

Prerequisite: Written permission of department.

##### MTH 305 Modern Mathematics (2)

Core material needed for advanced level mathematics courses. Also a survey of the nature, historic development, modes of thought, dichotomy, and unity of mathematics today. May be repeated for credit.

Prerequisite: MTH 155.

##### MTH 351 Introduction to Analysis (4)

A rigorous introduction to sets, sequences, series, topology of the real line, functions, continuity, uniform convergence, differentiation, Riemann integration, and Fundamental Theorem of Calculus.

Prerequisite: MTH 256 and MTH 305.

##### MTH 352 Complex Variables (4)

A study of analytic functions of a complex variable including differentiation and integration, series representations, the theory of residues, and applications.

Prerequisite: MTH 254.

##### MTH 361 Geometric Structures (4)

A study of topics from Euclidean geometry, projective geometry, non-Euclidean geometry, and transformation geometry.

Prerequisite: MTH 256 and MTH 305.

##### MTH 372 Number Theory (4)

Number-Theoretic functions, diophantine equations, congruences, and quadratic residues.

Prerequisite: MTH 254.

##### MTH 405 Special Topics (2 or 4)

Advanced study of some topic in mathematics. May be taken more than once.

Prerequisite: Permission of department.

##### MTH 414 History of Mathematics (4)

Mathematics from ancient to modern times, its growth, development, and place in human culture.

Prerequisite: MTH 351.

##### MTH 415 Foundations of Mathematics (4)

An examination of the logical foundations of mathematics including analysis of the axiomatic method, basic set theory, cardinal and ordinal numbers, and the axiom of choice.

Prerequisite: MTH 351.

##### MTH 416 Concepts of Geometry (4)

A development of geometry from an algebraic and metric viewpoint, concentrating on Euclidean geometry.

Prerequisite: MTH 256 and MTH 305.

##### MTH 453 Multivariable Analysis (4)

The topology of  $\mathbb{R}^n$ , curves in  $\mathbb{R}^n$ , derivatives and differentials, Lagrange multipliers, Taylor's formula, inverse and implicit function theorems, manifolds, multiple integrals, multilinear forms, differential forms, and closed and exact forms.

Prerequisite: MTH 351.

**MTH 461 General Topology (4)**

A study of topological spaces and continuous functions. Separation and countability properties, connectedness, compactness, and local properties.

Prerequisite: MTH 351.

**MTH 465 Differential Geometry (4)**

Theory of curves and surfaces in Euclidean space with an introduction to the theory of matrix Lie groups.

Prerequisite: MTH 351.

**MTH 475-476 Abstract Algebra (4 each)**

Algebra of sets and mappings, groups, and homomorphisms, rings and ideals, factorization and divisibility, vector spaces, linear transformations, fields, and field extensions.

Prerequisite: MTH 256 and MTH 305.

**MTH 490 Independent Study (2 or 4)**

Research on some mathematical topic.

Prerequisite: Permission of department.

**MTH 497 Apprentice College Teaching (2 or 4)**

Open to any well-qualified upperclassperson who obtains consent of a faculty member to assist in presenting a regular college course. The apprentice should be capable of assuming limited classroom teaching duties.

Prerequisite: Permission of department.

**APPLICABLE ANALYSIS AND MATHEMATICAL MODELING****APM 257 Introduction to Differential Equations (3)**

An introduction to the basic methods of solving ordinary differential equations, including the methods of undetermined coefficients, variation of parameters, series, Laplace transforms, and numerical methods. Separable, exact, and linear equations. Some time will be spent discussing applications.

Prerequisite: MTH 155.

**APM 331-332 Applied Analysis and Matrix Theory (4 each)**

The limit concept, differential calculus of  $\mathbb{R}^n$ , integration in  $\mathbb{R}^n$ , advanced topics in infinite series, matrix algebra, linear equations, determinants, eigenvalues and eigenvectors, computational techniques, Jordan forms, special matrices, quadratic forms.

Prerequisite: MTH 254, MTH 256, and MTH 305.

**APM 335-336 Introduction to Numerical Analysis (4 each)**

An introduction to mathematical methods appropriate to computer work. Topics include interpolation, approximation, quadrature, solution of differential equations, and matrix computation.

Prerequisite: MTH 254, and MTH 256.

**APM 363 Discrete Mathematics (4)**

An introduction to discrete mathematical structures with emphasis on their application to computer and information science. Topics will be drawn from the areas of set theory and relations, Boolean algebras, strings, and graphs. Some programming experience is recommended.

Prerequisite: MTH 155.

**APM 405 Special Topics (2 or 4)**

Advanced study of a selected topic in applied mathematics. May be taken more than once.

Prerequisite: Permission of department.

**APM 431 Elements of Partial Differential Equations (4)**

Derivation of partial differential equations of physics, characteristic surfaces and classification, Fourier methods, Laplace transforms, orthogonal functions, initial and boundary value problems, the Riemann method, and numerical methods.

Prerequisite: APM 257 and APM 331 or MTH 351.

**APM 435 Introduction to Mathematical Science (4)**

The algebraic structures of scientific phenomena. Differential equations and dynamical systems. Partial differential equations of the physical and life sciences. Introduction to mathematical modeling.

Prerequisite: APM 257 and MTH 256.

**APM 455 Intermediate Ordinary Differential Equations (4)**

Review of elementary techniques, existence and uniqueness theory, series methods, systems of equations, oscillation and comparison theorems, Sturm-Liouville Theory, stability theory, and applications.

Prerequisite: APM 257 and APM 331 or MTH 351.

**APM 463 Graph Theory and Combinatorial Mathematics (4)**

Introduction to combinatorics. Topics include techniques of enumeration, fundamental concepts of graph theory, applications to transport networks, matching theory, and block design.

Prerequisite: MTH 254.

**STATISTICS****STA 320 Probability and Statistics (4)**

Elementary set theory, sample spaces, combinatorics, random variables, Chebyshev's inequality, Bernoulli trials, binomial distribution, joint distributions, and introduction to statistics.

Prerequisite: MTH 123.

**STA 321 Applied Statistics (4)**

Introduction to statistics as applied to the physical, biological, and social sciences and to engineering. Applications of special distributions and nonparametric techniques. Regression analysis and analysis of variance.

Prerequisite: MTH 122 or 154.

**STA 322 Regression Analysis (4)**

Basic results from probability and statistics, linear regression, model testing and transformations, matrix methods in multiple regression, polynomial regression, indicator variables, stepwise and other search procedures.

Prerequisite: STA 321 or permission of instructor.

**STA 323 Design of Experiments (4)**

Planning of experiments, completely randomized, randomized block and Latin Square designs, incomplete blocks, factorial and fractional factorial designs, confounding, response surface methodology.

Prerequisite: STA 321 or permission of instructor.

**STA 324 Data Analysis (4)**

Selected topics in statistical methodology with major emphasis on analysis of categorical data and nonparametric methods for location and scale.

Prerequisite: STA 321 or permission of instructor.

**STA 425 Elements of Stochastic Processes (4)**

Random walk models, Markov chains and processes, birth and death processes, queueing processes, diffusion processes, and non-Markov processes.

Prerequisite: STA 321 and APM 331.

**STA 427-428 Introduction to Mathematical Statistics (4 each)**

The distribution of random variables, conditional probability and stochastic independence, special distributions, functions of random variables, interval estimation, sufficient statistics and completeness, point estimation, tests of hypothesis, and analysis of variance.

Prerequisite: APM 331 or MTH 351.

**OPERATIONS RESEARCH****MOR 322 Mathematical Models in the Social Sciences (4)**

Formulation in mathematical terms of phenomena from the social sciences, solution of the resulting mathematical problems, and interpretation of results. Models will be drawn from economic theory, ecology, theoretical sociology, and management science.

Prerequisite: MTH 122 or 154.

**MOR 342 Introduction to Operations Research (4)**

Topics will be drawn from areas such as inventory control, dynamic programming, Markov decision problems, waiting-line phenomena, transport networks and assignment problems, game theory, Boolean analysis, and scheduling problems.

Prerequisite: MTH 254 and STA 321, or MTH 122 and ECN 304 with 3.0 or better.

**MOR 442-443 Mathematical Methods of Operations Research (4 each)**

Decision problems in operations research, classical optimization techniques, mathematical programming, queueing theory, game theory and decision making, and graphs and networks.

Prerequisite: APM 331-332.

**MATHEMATICS FOR ELEMENTARY EDUCATION MAJORS****MTE 310 The Integers (2)**

Ordinary and exotic algorithms for addition, subtraction, multiplication, and division. Radix Theory, historical numeration systems. Mathematics laboratory project. Enrollment is limited to elementary

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education majors.

Prerequisite: MTH 102.

### **MTE 311 The Rationals (2)**

The divisibility properties of the integers, primes, composites, units, and the division algorithm. Rational numbers, equivalence of rational numbers, and operations on rational numbers. Various representations, including decimals, for rational numbers and algorithms for operating with these representations. Mathematics laboratory project. Enrollment is limited to elementary education majors.

Prerequisite: MTE 310.

### **MTE 312 Intuitive Euclidean Geometry (2)**

Basic notions: points, lines, planes, angles, parallelism and perpendicularity, elementary geometry of the triangle, similarity, circles and regular polygons, and figures in three-space. Mathematics laboratory project. Enrollment is limited to elementary education majors.

Prerequisite: MTE 311.

### **MTE 313 Geometry, Statistics, Probability (2)**

Length, area, and volume. Measures of central tendency and dispersion, graphical representation, addition and multiplication principles of counting, and probabilities of simple events. Mathematics labora-

tory project. Enrollment is limited to elementary education majors. Prerequisite: MTE 311.

### **MTE 317 Vector Geometry (4)**

Geometry of the plane and space studied by means of vectorial ideas, independence of a set of vectors, and linear transformations. Mathematics laboratory project. Enrollment limited to elementary education majors.

Prerequisite: MTE 312.

### **MTE 410 Elementary School Mathematics and the Computer (4)**

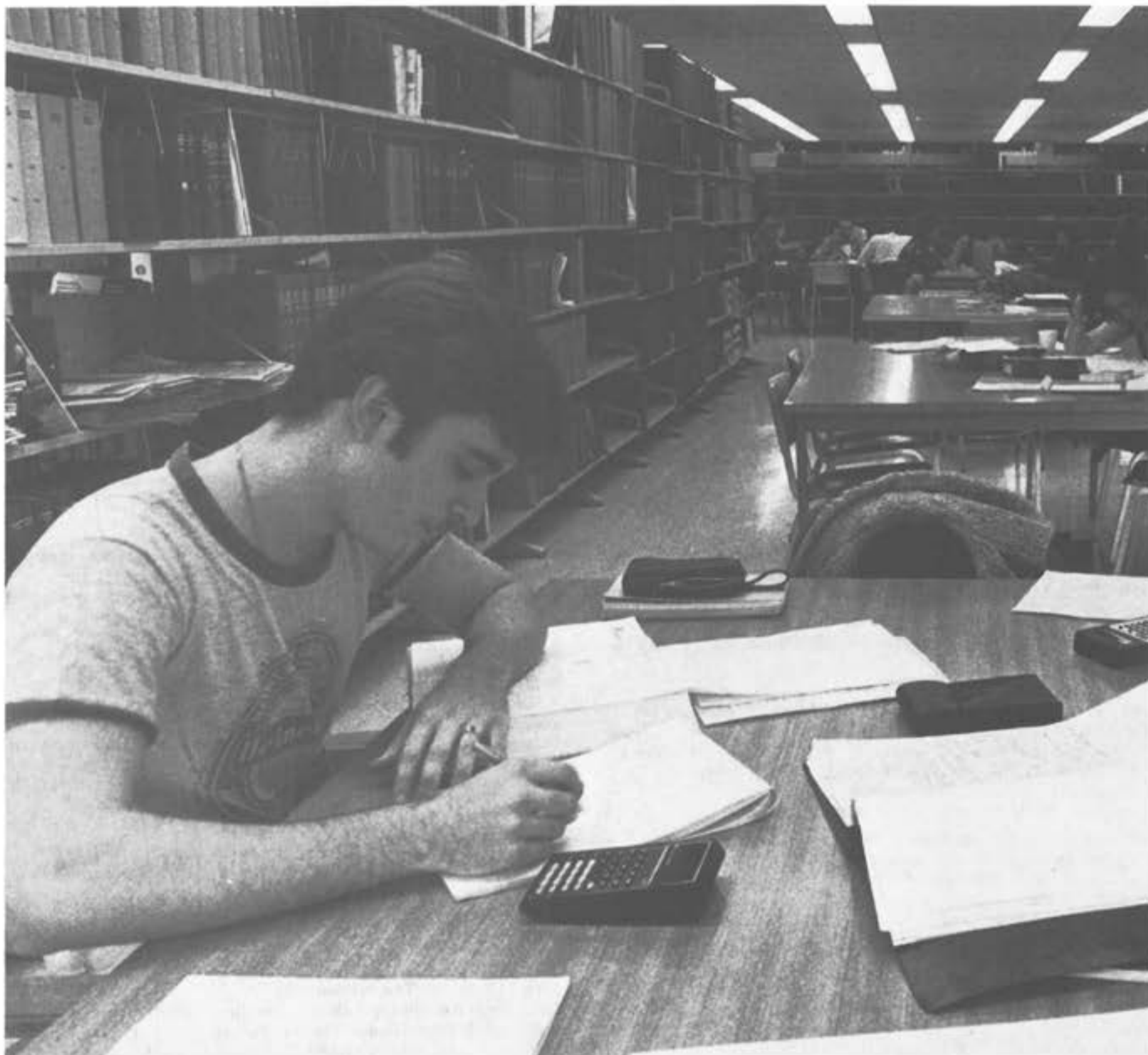
Selected topics in mathematics useful to elementary school teachers in line with current curriculum developments. Computer-assisted programs will be emphasized. Enrollment is limited to elementary education majors.

Prerequisite: MTE 311.

### **MTE 418 Theory of Equations (4)**

Solution of equations in one unknown. Descartes' rule of signs, intermediate value theorem, Euclidean algorithm for polynomials, basic numerical methods for finding roots, and systems of equations. The student must have a calculator. Enrollment is limited to elementary education majors.

Prerequisite: MTE 313.



# DEPARTMENT OF MODERN LANGUAGES AND LITERATURES

**CHAIRPERSON:** Jack R. Moeller

**PROFESSORS:** Alfred J. DuBruck (French), Helen Kovach-Tarakanov (Russian), Carmine R. Linsalata (Spanish and Italian), Richard A. Mazzara (French), Jack R. Moeller (German), Robert E. Simmons (German), Norman Susskind (French), Amitendranath Tagore (Chinese)

**ASSOCIATE PROFESSORS:** John W. Barthel (German), William C. Bryant (Spanish), Dolores M. Burdick (French), Carlo Coppola (Hindi-Urdu), Renate Gerulaitis (German), Don R. Iodice (French), William D. Jaymes (French), John Marney (Chinese), Kathryn McArdle-Pigott (Spanish), Munibur Rahman (Hindi-Urdu), Carmen Urla (Spanish)

The Department of Modern Languages and Literatures offers programs leading to the Bachelor of Arts degree.

The aim of the modern language curriculum is to help students acquire competence in the language of a given country or countries and, through the study of literature and civilization, to acquaint them with the cultural background of the country or countries. It also prepares students for graduate work, teaching at the secondary and elementary levels, and careers in business or government service.

Students may wish to investigate the advantages of combining a knowledge of foreign languages and cultures with competence in other fields. There are standard concentrations, for example, in linguistics. Other majors such as political science, English, art, and music are enriched by the knowledge of a foreign language and culture. Students interested in study or work abroad, graduate study, or nonacademic careers should obtain assistance from special advisers in the department familiar with the possibilities in these areas.

The selection of a foreign language to study should be a reasoned one. It is usually best to continue with a language begun in high school. However, if students wish to learn one not widely taught at the secondary level, they should not hesitate to change. Those who need advice about these choices are asked to consult with a member of the department.

## Placement Examinations

A placement test is administered by the Undergraduate Advisement and Counseling Office. Students who enter Oakland with previous work in French, German, Russian, or Spanish and who wish to continue the study of one of these languages should take the appropriate placement test during summer orientation. Students are urged to consult with the department's advising office about the results of the examination and placement in the proper course at the proper level.

## Admission to Major Standing

In order to be considered for graduation with a Bachelor of Arts degree with a major in a foreign language, the student must be admitted to major standing by the department. Normally a student should apply for major standing after having attained 56 credits and no later than three semesters before graduation. Admission to major standing is granted after successful completion of 314 and 370. A student should apply at the department office.

## Requirements for the Liberal Arts Major in a Modern Language

The requirement is 32 credits beyond course number 216 in the chosen language, culture, and literature, including the courses numbered 314, 316, 318, 370, 380, 408, and two

in literature at the 400 level. Courses in the translation program, except 491, may apply toward the major. Two collateral courses are required: one in history or civilization and one numbered LIT 281 or 282. Students planning graduate work are strongly urged to study a second foreign language recommended by the department.

## Requirements for the Liberal Arts Major in a Modern Language with Minors in Economics or Management

Modified majors are available in French, German, Russian, Spanish, and Chinese with the above minors. The requirement in French, German, Russian, and Spanish is 24 credits beyond 216. In Chinese the requirement is 16 credits beyond CHE 216, plus 12 credits in Chinese area studies including AS 210 and 490. For minor requirements, see Economics or Management, page 100.

## Departmental Honors

Departmental honors in a foreign language may be awarded to graduating seniors who maintain a minimum grade point average set by the department and complete projects of high quality. Students wishing to work for departmental honors should see their adviser for details no later than three semesters before they intend to graduate.

## Requirements for the Liberal Arts Major in Chinese Language and Civilization

The requirement in Chinese for this major is 16 credits beyond CHE 216, selected from departmental offerings in consultation with an adviser. Twenty credits in East Asian area studies, including AS 490, are also required. See East Asian area studies program, page 81.

## Requirements for the Liberal Arts Major in Latin American Language and Civilization

Requirements in Spanish are 24 credits beyond SPN 216. An alternative language requirement for this major is 16 credits in Spanish beyond SPN 216 plus course work in French through FRH 214. Twenty credits are required in Latin American area studies courses including AS 490. See Latin American area studies program, page 82.

## Requirements for the Liberal Arts Major in Russian Language and Civilization

Requirements are 16 credits in Russian language and civilization beyond RUS 216, and 20 credits in Slavic area studies courses, including AS 490. See Slavic area studies, page 82.

## Requirements for the Secondary Teaching Major in a Modern Language

Teaching majors are available in French, German, Russian, and Spanish. The requirement is 30 credits beyond 216 in the chosen language, culture, and literature, including the courses numbered 314, 316, 318, 370, 380, 408, and two in literature at the 400 level. The course numbered 320 is highly recommended. Two collateral courses are required: one in history or civilization and one numbered LIT 281 or 282. In addition, 24 credits in education are required: ED 344, 345, 428, and 455.

## Translation Program

Students may qualify for a translation certificate by completing language courses numbered 355, 455, and 491, and may then become candidates for the American Translators Association Accreditation Test. The 491 course does not apply toward the major.

## Requirements for the Liberal Arts Minor in a Modern Language

The requirement is 20 credits in one language beyond the 115 level, including 370 and 380.

## Requirements for the Secondary Teaching Minor in a Modern Language

The requirement is 20 credits in one language. Of these, 16 must be beyond the 216 level, including 314, 316, and 370.

## Requirements for an Elementary Teaching Concentration in a Modern Language

For students who wish to teach a foreign language at the elementary or junior high school level, the requirement is 36 credits in one language, including elementary and intermediate courses. For complete details on other requirements, including courses in education, see page 122.

### COURSE OFFERINGS

#### CHINESE LANGUAGE AND LITERATURE

##### CHE 111, 112 Supplementary Oral Practice in Chinese (1 each)

A two-semester sequence of practice in listening to and speaking Chinese, including supervised laboratory work and drill sessions. To be taken in conjunction with CHE 114-115.

##### CHE 114-115 Introduction to Chinese (4 each)

A two-semester sequence in the fundamentals of modern Mandarin Chinese (kuo-yu). A beginning course for students who have had no more than one year of secondary-school-level preparation. CHE 114 must be taken first.

##### CHE 201 Introduction to Chinese Calligraphy (2)

Beginning instruction in basic Chinese brush writing in the regular style ("Kai-shu"). For students of Chinese and Japanese languages, but also of value to students of Oriental art.

Prerequisite: CHE 114 or JPN 114.

##### CHE 211, 212 Second Year Oral Chinese (1 each)

A two-semester sequence of practice in listening to and speaking Chinese, including supervised laboratory work and drill sessions. To be taken in conjunction with 214-215 only.

##### CHE 214-215 Second Year Chinese (4 each)

A two-semester sequence continuing the work of CHE 114-115, with the addition of cultural and literary readings. CHE 214 must be taken first.

Prerequisite: One year of college Chinese or equivalent.

##### CHE 216 Basic Chinese Conversation (2)

Designed to develop the student's ability to organize and express ideas in Chinese with a minimum of inhibition.

Prerequisite: CHE 115.

##### CHE 310 Literary Chinese (4)

Studies based upon literary texts of Confucius, Mo Tzu, etc.

Prerequisite: CHE 215.

##### CHE 312 Pal-hua (4)

An intensive course in spoken colloquial Chinese, with emphasis on grammatical constructions and sentence patterns.

Prerequisite: CHE 215.

##### CHE 316 Intermediate Chinese Conversation (2)

The course provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language.

Prerequisite: CHE 215.

##### CHE 320 Readings in Chinese Newspapers (4)

Selections from newspapers of mainland China, Taiwan, and Southeast Asia.

Prerequisite: CHE 215.

##### CHE 330 Readings in Chinese Political Essays (4)

Studies in the documentary style of Chinese, selected mainly from writings of twentieth century political leaders of China.

Prerequisite: CHE 215.

##### CHE 340 Twentieth Century Chinese Literature (4)

Studies in modern pai-hua literature, including short stories, poems, essays, and pamphlets.

Prerequisite: CHE 215.

##### CHE 410 Chinese Fiction and Drama (4)

Studies in texts and criticism of fiction and drama, modern or classical.

Prerequisite: CHE 310 or 312.

##### CHE 421 Selected Classical Texts (4)

Studies of texts in advanced literary Chinese.

Prerequisite: CHE 310.

##### CHE 431 Classical Chinese Stories (4)

Studies of selected stories from different classical Chinese sources.

Prerequisite: CHE 310.

##### CHE 440 Chinese Poetry (4)

Selections from either classical T'ang and Sung Dynasty poems or from the post-May-fourth movement of poetry.

Prerequisite: CHE 310.

##### CHE 490 Directed Readings and Research in Chinese (2, 4, or 8)

For students with a high degree of competence in the language. May be conducted either in literary or modern Chinese. May be repeated for a total of 8 credits.

Prerequisite: Permission of instructor.

#### FRENCH LANGUAGE AND LITERATURE

##### FRH 111, 112 Supplementary Oral Practice in French (1 each)

A two-semester sequence of practice in listening to and speaking French, including supervised laboratory work and drill sessions. To be taken only in conjunction with FRH 114-115.

##### FRH 114-115 Introduction to French (4 each)

A two-semester sequence in the fundamentals of French. A beginning course for students who have had no more than one year of secondary-school-level preparation. FRH 114 must be taken first.

##### FRH 211, 212 Second Year Oral French (1 each)

A two-semester sequence of practice in listening to and speaking French, including supervised laboratory work and drill sessions. To be taken in conjunction with 214-215 only.

##### FRH 214-215 Second Year French (4 each)

A two-semester sequence continuing the work of FRH 114-115, with the addition of cultural and literary readings. FRH 214 must be taken first.

Prerequisite: FRH 114-115.

##### FRH 216 Basic French Conversation (2)

Designed to develop the student's ability to organize and express ideas in French with a minimum of inhibition.

Prerequisite: FRH 115.

##### FRH 290 Directed Readings in French (2 or 4)

A reading course for nonmajors interested in research in a particular area. Approximately 50 hours of reading per credit; one conference weekly with the instructor.

Prerequisite: FRH 215.

##### FRH 313 French Phonetics (2)

Group and individual practice in the sound system of French, with specific reference to interference from English. Both written and laboratory work required.

Prerequisite: FRH 215.

##### FRH 314 French Grammar Review (4)

Review of French grammar. May include some sustained translation of materials from English to French. Offered fall semester.

Prerequisite: FRH 215.



**FRH 316 Intermediate French Conversation (2)**  
Provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language. Offered winter semester.  
Prerequisite: FRH 215.

**FRH 318 French Composition (2)**  
Practice in written composition. Techniques of textual analysis and exposition are introduced. Offered winter semester.  
Prerequisite: FRH 314.

**FRH 320 Applied Linguistics of French (4)**  
Treats the essential linguistic principles which affect foreign language learning: phonological, morphological, and syntactic interference; sound/spelling correspondences and language learning, error analysis, and remediation. Language-specific drills and exercises included. Identical with ALS 320. Offered in alternate years.  
Prerequisite: FRH 215.

**FRH 350 French Theatre (4)**  
The study of French plays from various periods, with production of a play as a continuing class project. Lectures and discussions in French.  
Prerequisite: FRH 215.

**FRH 351 French Civilization (4)**  
An overview of contemporary life, education, and socio-economic conditions in France and other French-speaking countries. Conducted in French. Offered in alternate years.  
Prerequisite: FRH 215.

**FRH 355 Translation: French (4)**  
May include translation from French to English and from English to French. Materials range from commercial and technical to literary. Individual students may choose the areas they wish to emphasize. Study of both languages will facilitate the conversion of French into accurate, idiomatic English. Offered winter semester.  
Prerequisite: FRH 314.

**FRH 369 Field Experience in Teaching French in the Lower Grades (2 or 4)**  
Supervised experience in teaching French in the elementary school. Graded S/N. May be repeated for credit once. Does not carry credit toward department major.  
Prerequisite: FRH 214.

**FRH 370 Introduction to French Literature (4)**  
A sampling of critical approaches to the study of selected masterpieces of French literature. Conducted in French. Offered fall semester.  
Prerequisite: FRH 215.

**FRH 380 Survey of French Literature (4)**  
A survey of the highlights of French literature. Intended to supplement the work of FRH 370. Conducted in French. Offered winter semester.  
Prerequisite: FRH 370.

**FRH 404 French Films (4)**  
Introduction to French culture and thought via the cinematic medium. Lecture, film viewing, and discussion.  
Prerequisite: Permission of instructor.

**FRH 408 Advanced Oral Practice in French (2)**  
Practice in speaking at an advanced level, which may include style and delivery appropriate to formal and informal speaking situations. May include oral presentations, self-recording, and critique.  
Prerequisite: FRH 316.

**FRH 413 From the Middle Ages through the Sixteenth Century (4)**  
A study of works in various genres of the several periods. Works and authors may include epics, bawdy tales, courtly romances, Villon, Rabelais, and Montaigne. Conducted in French.  
Prerequisite: FRH 370 and 380.

**FRH 415 The Seventeenth and Eighteenth Centuries (4)**  
A study of works in various genres by leading French authors such as Pascal, Corneille, Racine, Moliere, La Fontaine, Montesquieu, Diderot, Rousseau, and Voltaire. Conducted in French.  
Prerequisite: FRH 370 and 380.

**FRH 417 The Nineteenth Century (4)**  
A study of works in various genres by leading French authors such as

Stendahl, Balzac, Hugo, Nerval, Flaubert, Zola, Baudelaire, and Mallarmé. Conducted in French.  
Prerequisite: FRH 370 and 380.

**FRH 418 The Twentieth Century (4)**  
A study of works in various genres by leading French authors such as Camus, Sartre, Anouilh, Malraux, and Gide. Conducted in French.  
Prerequisite: FRH 370 and 380.

**FRH 455 Translation into French (4)**  
Translation from English into French of a wide variety of materials ranging from commercial and technical to literary. Individual students may emphasize areas of interest. Offered fall semester in alternate years.  
Prerequisite: FRH 314, 318, and 355.

**FRH 480 Undergraduate Seminar (2 or 4)**  
Study of individual authors, selected themes, or critical problems.  
Prerequisite: Permission of department.

**FRH 490 Independent Reading and Research (2, 4, or 8)**  
Directed individual research and reading for advanced French majors. May be repeated for a total of 8 credits.  
Prerequisite: Two 400-level French literature courses and permission of department.

**FRH 491 Independent Translation Project (4 or 8)**  
Directed annotated translation from French into English of a major work in the student's field. May not be counted toward the major.  
Prerequisite: FRH 355 and 455 and permission of department.

#### GERMAN LANGUAGE AND LITERATURE

**GRM 111, 112 Supplementary Oral Practice in German (1 each)**

A two-semester sequence of practice in listening to and speaking German, including supervised laboratory work and drill sessions. To be taken only in conjunction with GRM 114-115.

**GRM 114-115 Introduction to German (4 each)**  
A two-semester sequence in the fundamentals of German. A beginning course for students who have had no more than one year of secondary-school-level preparation. GRM 114 must be taken first.

**GRM 211, 212 Second Year Oral German (1 each)**  
A two-semester sequence of practice in listening to and speaking German, including supervised laboratory work and drill sessions. To be taken in conjunction with 214-215 only.

**GRM 214-215 Second Year German (4 each)**  
A two-semester sequence continuing the work of GRM 114-115, with the addition of cultural and literary readings. GRM 214 must be taken first.  
Prerequisite: GRM 114-115.

**GRM 216 Basic German Conversation (2)**  
Designed to develop the student's ability to organize and express ideas in German with a minimum of inhibition.  
Prerequisite: GRM 115.

**GRM 290 Directed Readings in German (2 or 4)**  
A reading course for nonmajors interested in research in a particular area. Approximately 50 hours of reading per credit; one conference weekly with the instructor.  
Prerequisite: GRM 215.

**GRM 314 German Grammar Review (4)**  
Review of German grammar. May include some sustained translation of materials from English to German. Offered fall semester.  
Prerequisite: GRM 215.

**GRM 316 Intermediate German Conversation (2)**  
Provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language. Offered winter semester.  
Prerequisite: GRM 215.

**GRM 318 German Composition (2)**  
Practice in written composition. Techniques of textual analysis and exposition are introduced. Offered winter semester.  
Prerequisite: GRM 314.

**GRM 320 Applied Linguistics of German (4)**  
Treats the essential linguistic principles which affect foreign language learning: phonological, morphological, and syntactic interference; sound/spelling correspondences and language learning, error

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analysis, and remediation. Language-specific drills and exercises included. Identical with ALS 320. Offered in alternate years.

Prerequisite: GRM 215.

### **GRM 351 German Civilization (4)**

An overview of contemporary life, education, and socio-economic conditions in Germany and other German-speaking countries. Conducted in English. Offered in alternate years.

Prerequisite: GRM 215.

### **GRM 355 Translation: German (4)**

May include translation from German to English and from English to German of a wide variety of materials, ranging from commercial and technical to literary. Study of both languages will facilitate the conversion of German into accurate, idiomatic English. Offered winter semester.

Prerequisite: GRM 314.

### **GRM 369 Field Experience in Teaching German in the Lower Grades (2 or 4)**

Supervised experiences in teaching German in the elementary school. Graded S/N. May be repeated for credit once. Does not carry credit toward department major.

Prerequisite: GRM 215.

### **GRM 370 Introduction to German Literature (4)**

A sampling of critical approaches to the study of some masterpieces of German literature. Conducted in German. Offered fall semester.

Prerequisite: GRM 215.

### **GRM 380 Survey of German Literature (4)**

A survey of the highlights of German literature. Intended to supplement the work of GRM 370. Conducted in German. Offered winter semester.

Prerequisite: GRM 370.

### **GRM 408 Advanced Oral Practice in German (2)**

Practice in speaking at an advanced level, which may include style and delivery appropriate to formal and informal speaking situations. May include oral presentations, self-recording, and critique.

Prerequisite: GRM 316.

### **GRM 413 From the Middle Ages Through the Seventeenth Century (4)**

A study of works in all genres by leading authors of the period including Walther von der Vogelweide, Wolfram von Eschenbach, Gottfried von Strassburg, and Grimmelshausen. Conducted in German.

Prerequisite: GRM 370 and 380.

### **GRM 415 The Eighteenth Century (4)**

A study of representative works of Lessing, Goethe, and Schiller which exemplify the intellectual and artistic currents of this period. Conducted in German.

Prerequisite: GRM 370 and 380.

### **GRM 417 The Nineteenth Century (4)**

A study of works in all genres by leading authors of the period with emphasis on the lyric poetry of Romanticism, the dramas of Kleist, Grillparzer, and Hebbel, and the Novelle of Poetic Realism. Conducted in German.

Prerequisite: GRM 370 and 380.

### **GRM 418 The Twentieth Century (4)**

A survey of modern German drama, poetry, and prose. Conducted in German.

Prerequisite: GRM 370 and 380.

### **GRM 455 Translation into German (4)**

Translation from English into German of a wide variety of materials ranging from commercial and technical to literary. Individual students may emphasize areas of interest. Offered fall semester in alternate years.

Prerequisite: GRM 314, 318, and 355.

### **GRM 480 Undergraduate Seminar (2 or 4)**

Study of individual authors, selected themes, or critical problems.

Prerequisite: Permission of department.

### **GRM 490 Independent Reading and Research (2, 4, or 8)**

Directed individual research and reading for advanced German majors. May be repeated for a total of 8 credits.

Prerequisite: Two 400-level German literature courses and permission of department.

### **GRM 491 Independent Translation Project (4 or 8)**

Directed annotated translation from German into English of a major work in the student's field. May not be counted toward the major.

Prerequisite: GRM 355 and 455 and permission of department.

## HINDI-URDU LANGUAGE

### **HIUR 114-115 Introduction to Hindi and Urdu (4 each)**

A two-semester sequence of the fundamentals of both Hindi and Urdu. HIUR 114 must be taken first.

### **HIN 214-215 Second Year Hindi (4 each)**

A two-semester sequence continuing the work of HIUR 114-115, with the addition of cultural and literary readings in Hindi. HIN 214 must be taken first.

Prerequisite: HIUR 114-115.

### **URD 214-215 Second Year Urdu (4 each)**

A two-semester sequence continuing the work of HIUR 114-115, with the addition of cultural and literary readings in Urdu. URD 214 must be taken first.

Prerequisite: HIUR 114-115.

### **HIUR 390 Directed Readings in Hindi-Urdu (2 or 4)**

Directed readings for individual Hindi-Urdu students. May be repeated for a total of 8 credits.

Prerequisite: Permission of department.

### **HIUR 490 Independent Reading and Research (2, 4, or 8)**

Directed individual research and reading for advanced Hindi-Urdu students. May be repeated for a total of 8 credits.

Prerequisite: Permission of department.

## ITALIAN LANGUAGE AND LITERATURE

### **IT 114-115 Introduction to Italian (4 each)**

A two-semester sequence of the fundamentals of Italian. A beginning course for students who have had no more than one year of secondary-school-level preparation. IT 114 must be taken first.

### **IT 214-215 Second Year Italian (4 each)**

A two-semester sequence continuing the work of IT 114-115 with the addition of cultural and literary readings. IT 214 must be taken first.

Prerequisite: IT 114-115.

### **IT 390 Directed Readings in Italian (2 or 4)**

Directed individual readings in Italian. May be repeated for a total of 8 credits.

Prerequisite: Permission of instructor.

## JAPANESE LANGUAGE

### **JPN 114-115 Introduction to Japanese (4 each)**

A two-semester sequence in the fundamentals of Japanese. A beginning course, intended for students who have had no more than one year of secondary-school preparation. JPN 114 must be taken first.

### **JPN 214-215 Second Year Japanese (4 each)**

A two-semester sequence continuing the work of JPN 114-115, with the addition of cultural and literary readings. JPN 214 must be taken first.

Prerequisite: JPN 114-115.

### **JPN 390 Directed Readings in Japanese (2 or 4)**

Directed individual readings in Japanese. May be repeated for a total of 8 credits.

Prerequisite: Permission of instructor.

## RUSSIAN LANGUAGE AND LITERATURE

### **RUS 111, 112 Supplemental Oral Practice in Russian (1 each)**

A two-semester sequence of practice in listening to and speaking Russian, including supervised laboratory work and drill sessions. To be taken only in conjunction with RUS 114-115.

### **RUS 114-115 Introduction to Russian (4 each)**

A two-semester sequence in the fundamentals of Russian. A beginning course for students who have had no more than one year of secondary-school preparation. RUS 114 must be taken first.

### **RUS 211, 212 Second Year Oral Russian (1 each)**

A two-semester sequence of practice in listening to and speaking Russian, including supervised laboratory work and drill sessions. To be taken in conjunction with 214-215 only.

**RUS 214-215 Second Year Russian (4 each)**

A two-semester sequence continuing the work of RUS 114-115, with the addition of cultural and literary readings. RUS 214 must be taken first.

Prerequisite: RUS 114-115.

**RUS 216 Basic Russian Conversation (2)**

Designed to develop the student's ability to organize and express ideas in Russian with a minimum of inhibition.

Prerequisite: RUS 115.

**RUS 290 Directed Readings in Russian (2 or 4)**

A reading course for nonmajors interested in research in a particular area. Approximately 50 hours of reading per credit; one conference weekly with the instructor.

Prerequisite: RUS 215.

**RUS 314 Russian Grammar Review (4)**

Review of Russian grammar. May include some sustained translation of materials from English to Russian. Offered fall semester.

Prerequisite: RUS 215.

**RUS 316 Intermediate Russian Conversation (2)**

Provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language. Offered winter semester.

Prerequisite: RUS 215.

**RUS 318 Russian Composition (2)**

Practice in written composition. Techniques of textual analysis and exposition are introduced. Offered winter semester.

Prerequisite: RUS 314.

**RUS 320 Applied Linguistics of Russian (4)**

Treats the essential linguistic principles which affect foreign language learning: phonological, morphological, and syntactic interference; sound/spelling correspondences and language learning, error analysis, and remediation. Language-specific drills and exercises included. Identical with ALS 320. Offered in alternate years.

Prerequisite: RUS 215.

**RUS 355 Translation: Russian (4)**

Work may include translation from Russian to English and from English to Russian of a wide variety of materials, ranging from commercial and technical to literary. Individual students may choose the areas they wish to emphasize. Study of both languages will facilitate the conversion of Russian into accurate, idiomatic English. Offered winter semester.

Prerequisite: RUS 314.

**RUS 370 Introduction to Russian Literature (4)**

A sampling of critical approaches to the study of some masterpieces of Russian literature. Conducted in Russian. Offered fall semester.

Prerequisite: RUS 215.

**RUS 380 Survey of Russian Literature (4)**

A survey of the highlights of Russian literature. Intended to supplement the work of RUS 370. Conducted in Russian. Offered winter semester.

Prerequisite: RUS 370.

**RUS 400 Special Topics in Language (4)**

Special problems or topics selected by the instructor. May be repeated for credit.

Prerequisite: RUS 318, or 370 and 380.

**RUS 408 Advanced Oral Practice in Russian (2)**

Practice in speaking at an advanced level, which may include style and delivery appropriate to formal and informal speaking situations. May include oral presentations, self-recording, and critique.

Prerequisite: RUS 316.

**RUS 416 The Nineteenth Century: First Half (4)**

A study of works in all genres by leading Russian authors of the period, including Pushkin, Lermontov, and Gogol. Conducted in Russian.

Prerequisite: RUS 370 and 380.

**RUS 417 The Nineteenth Century: Second Half (4)**

A study of works in all genres by leading Russian authors of the period, including Tolstoi, Dostoevsky, and Chekhov. Conducted in Russian.

Prerequisite: RUS 370 and 380.

**RUS 418 The Twentieth Century (4)**

A study of works in all genres by Russian authors of the period, including Bunin, Lamiatin, and Solzhenitsin. Conducted in Russian.

Prerequisite: RUS 370 and 380.

**RUS 455 Translation into Russian (4)**

Translation from English into Russian of a wide variety of materials ranging from commercial and technical to literary. Individual students may emphasize area of interest. Offered fall semester in alternate years.

Prerequisite: RUS 314, 318, and 355.

**RUS 480 Undergraduate Seminar (2 or 4)**

Study of individual authors, selected themes, or critical problems.

Prerequisite: Permission of department.

**RUS 490 Independent Reading and Research (2, 4, or 8)**

Directed individual research and reading for advanced Russian majors. May be repeated for a total of 8 credits.

Prerequisite: Two 400-level Russian literature courses and permission of department.

**RUS 491 Independent Translation Project (4 or 8)**

Directed annotated translation from Russian into English of a major work in the student's field. May not be counted toward the major.

Prerequisite: RUS 355 and 455 and permission of department.

**SPANISH LANGUAGE AND LITERATURE****SPN 111, 112 Supplementary Oral Practice in Spanish (1 each)**

A two-semester sequence of practice in listening to and speaking Spanish, including supervised laboratory work and drill sessions. To be taken only in conjunction with SPN 114-115.

**SPN 114-115 Introduction to Spanish (4 each)**

A two-semester sequence in the fundamentals of Spanish. A beginning course for students who have had no more than one year of secondary-school preparation. SPN 114 must be taken first.

**SPN 211, 212 Second Year Oral Spanish (1 each)**

A two-semester sequence of practice in listening to and speaking Spanish, including supervised laboratory work and drill sessions. To be taken in conjunction with 214-215 only.

**SPN 214-215 Second Year Spanish (4 each)**

A two-semester sequence continuing the work of SPN 114-115, with the addition of cultural and literary readings. SPN 214 must be taken first.

Prerequisite: SPN 114-115.

**SPN 216 Basic Spanish Conversation (2)**

Designed to develop the student's ability to organize and express ideas in Spanish with a minimum of inhibition.

Prerequisite: SPN 115.

**SPN 290 Directed Readings in Spanish (2 or 4)**

A reading course for nonmajors interested in research in a particular area. Approximately 50 hours of reading per credit; one conference weekly with the instructor.

Prerequisite: SPN 215.

**SPN 300 Composition and Conversation (4)**

Part of overseas study program only. Third- or fourth-year level, depending on student preparation.

Prerequisite: SPN 215.

**SPN 313 Spanish Phonetics (2)**

Group and individual practice in the sound system of Spanish, with specific reference to interference from English. Both written and laboratory work required.

Prerequisite: SPN 215.

**SPN 314 Spanish Grammar Review (4)**

A detailed study of Spanish grammar, with emphasis on syntax. May include some sustained translation of materials from English to Spanish. Offered fall semester.

Prerequisite: SPN 215.

**SPN 316 Intermediate Spanish Conversation (2)**

Provides a transition between the carefully structured drills of other intermediate courses and free manipulation of the spoken language. Offered winter semester.

Prerequisite: SPN 215.

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### **SPN 318 Spanish Composition (2)**

Practice in written composition. Techniques of textual analysis and exposition are introduced. Offered winter semester.  
Prerequisite: SPN 314.

### **SPN 350 Spanish Theatre (2 or 4)**

The study and presentation of Spanish plays with intensive drill in pronunciation and intonation.  
Prerequisite: Permission of instructor.

### **SPN 351 Spanish Civilization (4)**

Historical approach to Spanish culture and civilization, with emphasis on geography, social structure, philosophical thought, music, art, and architecture. Part of overseas study program only.  
Prerequisite: Sophomore standing.

### **SPN 355 Translation: Spanish (4)**

Work may include translation from Spanish to English and from English to Spanish of a wide variety of materials in fiction and nonfiction. Offered winter semester.  
Prerequisite: SPN 314.

### **SPN 370 Introduction to Spanish Literature (4)**

A sampling of critical approaches to the study of some masterpieces of Spanish literature. Conducted in Spanish. Offered fall semester.  
Prerequisite: SPN 215.

### **SPN 380 Survey of Spanish Literature (4)**

A survey of the highlights of Spanish literature. Intended to supplement the work of SPN 370. Conducted in Spanish. Offered winter semester.  
Prerequisite: SPN 370.

### **SPN 408 Advanced Oral Practice in Spanish (2)**

Practice in speaking at an advanced level, which may include style and delivery appropriate to formal and informal speaking situations. May include oral presentations, self-recording, and critique.  
Prerequisite: SPN 316.

### **SPN 411 Golden Age Drama (4)**

Reading and critical consideration of selected dramatic works of Lope, Tirso, Calderón, and Alarcón. Conducted in Spanish.  
Prerequisite: SPN 370 and 380.

### **SPN 412 The Quixote (4)**

Detailed study of Cervantes' masterpiece. Conducted in Spanish.  
Prerequisite: SPN 370 and 380.

### **SPN 417 The Nineteenth Century (4)**

A study of works in all genres by leading Spanish authors, including Galdós, Zorrilla, Bécquer. Conducted in Spanish.  
Prerequisite: SPN 370 and 380.

### **SPN 418 The Twentieth Century (4)**

A study of works in all genres by leading Spanish authors, including Unamuno, Machado, Lorca, Cela. Conducted in Spanish.  
Prerequisite: SPN 370 and 380.

### **SPN 421 Spanish-American Literature (4)**

Masterworks of twentieth century Spanish-American literature, including Fuentes, Asturias, Neruda, Borges. Conducted in Spanish.  
Prerequisite: SPN 370 and 380.

### **SPN 455 Translation into Spanish (4)**

Translation from English into Spanish of a wide variety of materials ranging from commercial and technical to literary. Individual students may emphasize areas of interest. Offered fall semester in alternate years.  
Prerequisite: SPN 314, 318, and 355.

### **SPN 480 Undergraduate Seminar (2 or 4)**

Study of individual authors, selected themes, or critical problems.  
Prerequisite: Permission of department.

### **SPN 490 Independent Reading and Research (2 or 4)**

Directed individual research and reading for advanced Spanish majors. May be repeated for a total of 8 credits.  
Prerequisite: Two 400-level Spanish literature courses and permission of department.

### **SPN 491 Independent Translation Project (4 or 8)**

Directed annotated translation from Spanish into English of a major work in the student's field. May not be counted toward the major.  
Prerequisite: SPN 355 and 455 and permission of department.

## MODERN LITERATURES IN TRANSLATION

### **LIT 170 Introduction to Comparative Literature (4)**

Introduction to the purposes and methods of comparative literature. Systematic study of literary masterpieces according to form, content, and historical period.

### **LIT 251 Studies in the Foreign Film (4)**

A study of film as a mirror of the cultures and aesthetics of various societies. Topics to be selected by the instructor.

### **LIT 281 Continental European Literature in Translation I (4)**

A study of the main literary currents as reflected in European masterpieces up to 1850. All works read in English translations.

### **LIT 282 Continental European Literature in Translation II (4)**

A study of the main literary currents as reflected in European masterpieces from 1850 to the present. All works read in English translations.

### **LIT 319 "Third World" Literature of European Expression (4)**

A survey of literature in a European language (in translation) of a non-European area from colonial to modern times. Areas treated, e.g., Francophone Africa, French Canada, Brazil, Hispanic America, Anglophone India, will vary on a regular basis. May be repeated once for credit with permission of the department. See also SPN 421.

### **LIT 341 Topics in World Drama (4)**

Studies in world drama in English translation. Topics to be selected by the instructor. May be repeated for credit with permission of the department. Identical with THA 341.

### **LIT 342 Continental European Drama I (4)**

A study of dramatic literature from the Middle Ages through the 18th century. Topics include morality play, Renaissance drama of Italy, Spanish baroque theatre, French classical drama, the theatre of the Enlightenment, and Romantic drama. Identical with THA 342.

### **LIT 343 Continental European Drama II (4)**

A study of dramatic literature in the 19th and 20th centuries. Topics include drama in the periods of Realism, Naturalism, Symbolism, and Expressionism, as well as recent trends in dramatic literature from Existentialism and the Theatre of the Absurd to the present. Identical with THA 343.

### **LIT 346 Non-Western Theatre and Dramatic Literature (4)**

A study of classical and modern theatre and dramatic literature from one or more areas: China, India, Japan. Identical with THA 346.

### **LIT 385 Topics in World Literature (4)**

A theme of humanistic interest as it has been treated in different literary forms throughout the world and throughout the ages.

### **LIT 480 Seminar in Comparative Literature (4)**

Analysis of theories of comparative literature; application of theory to specific literary problems.  
Prerequisite: Permission of instructor.

## MODERN LANGUAGE

### **ML 114-115 Introduction to American Sign Language (4 each)**

Identical with SCN 114-115.

### **ML 191-192 Tutorial in Foreign Language (4 each)**

Instruction in the elements of a spoken or written foreign language such as Arabic, Bengali, Czech, Sanskrit, Catalan, etc. for which no regular course sequence exists here. May be repeated for credit in a different language each time.  
Prerequisite: Permission of instructor.

### **ML 211 Diction for Singers, First Semester (4)**

A basic course to instruct voice students in the techniques of pronouncing foreign languages. Extensive work with the International Phonetic Alphabet, tapes, and native speakers. Italian and Latin will be stressed. Offered fall semester in alternate years.

### **ML 212 Diction for Singers, Second Semester (4)**

A continuation of ML 211 with emphasis on German and French. Extensive work with transcription techniques, tapes, and native speakers. Offered winter semester in alternate years.  
Prerequisite: ML 211.

**ML 290 Topics Related to Foreign Language Study (2 or 4)**

Topics explored in areas not normally a part of regular offerings in language or literature. May be repeated for a total of 8 credits. Prerequisite: Permission of instructor.

**ML 291-292 Intermediate Tutorial in Foreign Language (4 each)**

Intermediate work in a language and literature not normally taught at Oakland University. May be repeated for credit. Prerequisite: Permission of instructor.

**ML 391-392 Advanced Tutorial in Foreign Language (4 each)**

Advanced work in a language not normally taught at Oakland University. May be repeated for credit.

**ML 497 Apprentice College Teaching (2 or 4)**

Supervised participation in teaching an undergraduate course in language or literature, together with discussion of teaching objectives and methods. Does not carry credit toward departmental major. Prerequisite: Permission of department.



## DEPARTMENT OF MUSIC

**CHAIRPERSON:** *Raynold Allvin*

**ASSOCIATE PROFESSORS:** *Raynold Allvin, David Daniels, James Dawson, Robert Facko, Lyle Nordstrom, Stanley Hollingsworth*

**ASSISTANT PROFESSOR:** *Flavio Varani*

**ADJUNCT PROFESSOR:** *David DiChiera*

**VISITING ASSISTANT PROFESSOR:** *Trude Hauff*

**SPECIAL INSTRUCTORS:** *John Dovanus, Alice Engram, Marvin Holladay*

**LECTURERS:** *Joyce Adelson, Janice Albright, John Allen, Chris Birg, Charles Boles, Douglas Bushong, Steven Carryer, Ronald English, Mark Flint, Arlene Koenig, Beverly Labuta, Nancy LeValley, Samuel Sanders, John Smith, Carolyn Tower*

**APPLIED MUSIC INSTRUCTORS:** *Joyce Adelson (piano), Janice Albright (voice), Donald Baker (oboe), Mary Bartlett (harp), Joan Berndt (oboe), Chris Birg (classical guitar), Charles Boles (jazz piano), Steven Carryer (jazz guitar), Douglas Cornelsen (clarinet), James Dawson (saxophone), Ronald English (jazz guitar), Alice Engram (voice), Ray Ferguson (harpsichord), Derek Francis (violin), Robert Gladstone (string bass), Constance Grubaugh (voice), Elizabeth Ilku (harp), Wes Jacobs (tuba), Ronald Johnson (jazz drums), Edward Kingins (voice), Arlene Koenig, (voice), Lyell Lindsey (bassoon), Kent McDonald (piano/organ), Myron McDonald (percussion), Erv Monroe (flute), Diann Moskal (voice), Lyle Nordstrom (recorder/lute), Robert Pangborn (percussion), Robert Patrick (flute), Edward Pickens (jazz string bass), Sam Sanders (jazz saxophone), Joseph Skrzynski (trombone/tuba), Enid Sutherland (viola da gamba), John Smith (trumpet), Flavio Varani (piano), Charles Weaver (French horn), Herbert Williams (jazz trumpet), Ara Zerounian (viola)*

**VISITING INSTRUCTOR:** *Sally Albrecht*

The Department of Music offers major programs leading to a Bachelor of Arts, Bachelor of Music, Bachelor of Science with a major in music education, and a Master of Music.

Prospective music majors must read the *Music Handbook* (available from the music office), and consult with a departmental adviser before beginning a music degree program. In addition, new students are expected to audition during the first week of classes in order to qualify for their chosen performing medium.

### Core Requirements for All Degree Programs in Music

1. MUT 211-212, plus 8 credits from MUT 311, 312, 314, 410, 412, and 414.
2. Successful completion of the departmental ear training examination.
3. MUS 320 and two of the following: MUS 330, 332, 333, 334, 345, and 347.
4. Concert attendance requirement as described in the *Music Handbook*.

### Requirements for the Liberal Arts Major in Music, B.A. Program

Forty-eight credits in music, with corequisites in art, theatre, and/or dance. This degree is for students who wish a broad general education without a high degree of specialization in music. For specific course requirements see *Music Handbook*.

### Bachelor of Science in Music Education

For students who wish to teach in the public schools; the degree carries Michigan teaching certification. Specializations are possible in instrumental music education (72 credits of

music, plus 24 in education) or choral music education (63 credits of music, plus 24 in education). Each specialization also requires a secondary teaching minor, and the choral specialization requires 8 credits of Singers' Diction (ML 211-212). For specific requirements, see the *Music Handbook*.

### Bachelor of Music

The degree Bachelor of Music is offered in the School of Performing Arts for students who wish preprofessional preparation in performance, early music, theory, composition, jazz, and commercial music. See page 131 for specific requirements.

### Requirements for the Secondary Teaching Minor in Music

The student must complete 28 credits in the Department of Music distributed as follows: 8 credits in music theory (MUT); 8 credits in applied music (MUA); four semesters (at least 4 credits) in music ensembles (MUE); a planned program of 8 credits (to be approved by a music adviser) selected from the following: MUS 149, 250, 295, 320, 350, 395, 401, 402, 441, 494, 495, 496. At least 14 of the 28 credits must be in courses numbered 300 or above.

### Foreign Language Requirement

Most music degrees require a foreign language. For requirements for each degree, see the *Music Handbook*.

### Major Standing

Prospective music majors must apply to the department after completing 48 total college credits, at Oakland or elsewhere. Normally, transfer students should apply during the first semester at Oakland University. For details, consult the *Music Handbook*.

### COURSE OFFERINGS ENSEMBLES

Ensembles are open to all students by audition. May be repeated for credit.

**MUE 301 University Chorus (1 or 2)**  
Performance of the large choral masterpieces from all music periods.

**MUE 302 University Community Chorus (1 or 2)**  
Festival-type mixed chorus for citizens of the surrounding communities who possess vocal experience. Performances of varied choral literature. Meets in the evening.

**MUE 303 "Treble" Chorus (1 or 2)**  
A choral ensemble of "treble" voices performing literature of all periods including contemporary.  
Prerequisite: Permission of instructor.

**MUE 304 Oakland University Singers (2)**  
Performance of a wide range of choral chamber repertoire from Renaissance to the present.  
Prerequisite: Permission of instructor.

**MUE 305 Opera Chorus (1 or 2)**  
An ensemble which performs with the Michigan Opera Theatre.  
Prerequisite: Permission of instructor.

**MUE 306 Jazz and Show Choir (1, 2, or 3)**  
A performing ensemble emphasizing commercial, jazz, show, and swing choir repertoire.  
Prerequisite: Permission of instructor.

**MUE 309 Meadow Brook Festival Chorus (1)**  
Performance of major choral masterpieces from all music periods under world-famous conductors at Meadow Brook Music Festival. May be repeated for a total of 8 credits.  
Prerequisite: Permission of instructor.

**MUE 310 Vocal Improvisation Workshop (2)**

A laboratory in vocal improvisation designed to increase skills in performing commercial and popular music.  
Prerequisite: Permission of instructor.

**MUE 320 University Orchestra (1 or 2)**

Orchestral performance of repertoire from the eighteenth, nineteenth and twentieth centuries. Several concerts per year, on and off campus. Accompaniments for solo concertos and university choral groups. Membership by audition. Graded S/N.

**MUE 330 Wind Ensemble (1 or 2)**

An exploration of the literature written for wind ensembles of various instrumentation. Membership by audition.

**MUE 331 Concert Band (1 or 2)**

An ensemble of wind instruments performing standard concert band literature.  
Prerequisite: Permission of instructor.

**MUE 340 Jazz Band (1 or 2)**

A study of traditional and contemporary literature for large jazz ensembles within the Afro-American cultural context. Both conceptualization of the material and improvisational techniques will be explored and defined.

**MUE 341 Jazz Improvisation Workshop (2)**

A performance practice laboratory designed to increase improvisational skills indigenous to jazz performance and to identify systematically and use stylistic characteristics of various jazz subcategories.

**MUE 350 Opera Workshop (1, 2, or 3)**

Study and experience in various forms of musical theatre.  
Prerequisite: Permission of instructor.

**MUE 351 Musical Theatre Workshop (2)**

Performance and study of repertoire of the musical theatre.  
Prerequisite: Permission of instructor.

**MUE 360 Collegium Musicum (1 or 2)**

Performance of Medieval, Renaissance, and Baroque music. Present groups include the Renaissance Band, Collegium Singers, Renaissance Ensemble, and Baroque Ensemble. Graded S/N.  
Prerequisite: Permission of instructor.

**MUE 370 Guitar Ensemble (1 or 2)**

Performance practice and techniques of classical guitar literature involving two or more players.

**MUE 371 Saxophone Ensemble (1 or 2)**

Ensembles of three or more saxophones performing appropriate literature.  
Prerequisite: Permission of instructor.

**MUE 372 Trombone Ensemble (1 or 2)**

An ensemble which performs the wide variety of trombone choir literature.  
Prerequisite: Permission of instructor.

**MUE 380 Chamber Music (2)**

Performing ensemble of various instrumentations. A spectrum of appropriate music literature, Medieval through contemporary.

**MUE 390 Accompaniment Practicum (1 or 2)**

Experience in piano accompaniment of solo and/or ensembles, vocal and instrumental. May be repeated once for credit.  
Prerequisite: MUA 370.

**APPLIED MUSIC**

The following courses each have four course number designations. Music majors are to enroll using the number which corresponds to the year in school—freshmen, 100 level; sophomores, 200 level; juniors, 300 level; seniors, 400 level.

Music faculty may adjust course numbers at the time of the entering audition, or after the first lesson.

Beginners must use the 100-level designation regardless of year in school. Students who have previously studied, either privately or in a college or university, should consult the *Music Handbook* to determine the appropriate course number. May be repeated for credit except where indicated.

The following courses are individual lessons and involve an applied music fee (see page 7).

MUA 100, 200, 300, 400	Voice (2 or 4)
MUA 101, 201, 301, 401	Piano (2 or 4)
MUA 102, 202, 302, 402	Organ (2 or 4)
MUA 103, 203, 303, 403	Harpsichord (2 or 4)
MUA 104, 204, 304, 404	Violin (2 or 4)
MUA 105, 205, 305, 405	Viola (2 or 4)
MUA 106, 206, 306, 406	Violoncello (2 or 4)
MUA 107, 207, 307, 407	String Bass (2 or 4)
MUA 108, 208, 308, 408	Flute (2 or 4)
MUA 109, 209, 309, 409	Oboe (2 or 4)
MUA 110, 210, 310, 410	Clarinet (2 or 4)
MUA 111, 211, 311, 411	Bassoon (2 or 4)
MUA 112, 212, 312, 412	French Horn (2 or 4)
MUA 113, 213, 313, 413	Trumpet (2 or 4)
MUA 114, 214, 314, 414	Trombone (2 or 4)
MUA 115, 215, 315, 415	Tuba (2 or 4)
MUA 116, 216, 316, 416	Timpani (2 or 4)
MUA 117, 217, 317, 417	Percussion (2 or 4)
MUA 118, 218, 318, 418	Harp (2 or 4)
MUA 119, 219, 319, 419	Guitar (classical) (2 or 4)
MUA 120, 220, 320, 420	Renaissance Winds (2 or 4)
MUA 121, 221, 321, 421	Viola da Gamba (2 or 4)
MUA 122, 222, 322, 422	Lute (2 or 4)
MUA 123, 223, 323, 423	Recorder (2 or 4)
MUA 124, 224, 324, 424	Saxophone (2 or 4)
MUA 130, 230, 330, 430	Piano (jazz) (2 or 4)
MUA 131, 231, 331, 431	Guitar (jazz) (2 or 4)
MUA 132, 232, 332, 432	Trumpet (jazz) (2 or 4)
MUA 133, 233, 333, 433	Saxophone (jazz) (2 or 4)
MUA 134, 234, 334, 434	Percussion (jazz) (2 or 4)
MUA 135, 235, 335, 435	Double Bass (jazz) (2 or 4)
MUA 149, 249, 349, 449	Applied Music (2 or 4)

May be used to increase the number of private lessons in the student's major or minor performing medium. Must be taken with one of the applied music courses.

**MUA 150, 250, 350, 450 Performance Honors (2 or 4)**

Intensive study on student's major instrument. Must be taken concurrently with one of the individually taught applied music courses.  
Prerequisite: Permission of department.

The following music courses are group lessons and involve an applied music fee (see page 7).

**MUA 171, 271, 371, 471 Keyboard Technique (2 each)**

Designed to develop the basic keyboard facility essential to the equipment of any musician and to acquaint him/her with keyboard literature. Music majors planning to register for this course should notify the Department of Music when they first register at the university. May not be repeated for credit.  
Prerequisite: Permission of instructor.

MUA 251	Beginning Violin Class (1)
MUA 252	Beginning Violoncello Class (1)
MUA 253	Beginning Flute Class (1)
MUA 254	Beginning Clarinet Class (1)
MUA 255	Beginning Double Reed Class (1)
MUA 256	Beginning Trumpet Class (1)
MUA 257	Beginning Trombone Class (1)
MUA 258	Beginning Percussion Class (1)
MUA 259	Beginning Guitar Class (1)

MUA 251 through 259 may be repeated for a total of 2 credits.

**MUA 260 Class Voice (2)**

Elementary aspects of singing, including diction, breath control, projection, and repertoire.

**MUA 265 Class Recorder (2)**

**MUA 266 Class Viola da Gamba (2)**

**MUA 267 Class Lute (2)**

**MUA 268 Class Renaissance Winds (2)**

**MUA 361-362 Vocal Literature I and II (2 each)**

A survey of literature for the voice with emphasis on historical style. MUA 361 covers the Middle Ages through the nineteenth century, with emphasis on German song. MUA 362 continues through the nineteenth and twentieth centuries, emphasizing French, British,

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and American.

Prerequisite: ML 212 (may be taken concurrently) and permission of instructor.

### **MUA 363 American Musical Theatre (2)**

A practical approach to the problems and performance practices of American musical theatre beginning with a historical survey and culminating in public performances of selections from musical comedy.

Prerequisite: Permission of instructor.

### **MUA 370 Accompanying (1 or 2)**

To help the pianist acquire knowledge of the basic skills required in the ensemble. Representative vocal and instrumental compositions are studied; emphasis is on rehearsal techniques and performance.

### **MUA 375 Keyboard Ensemble Technique (2)**

Class instruction in performance and repertory of multiple keyboard literature.

Prerequisite: Permission of instructor.

### **MUA 376, 377, 476, 477 Jazz Keyboard Practices (2)**

Development of basic jazz keyboard techniques and skill including jazz chord and rhythm reading, melodic development, and voice leading. May not be repeated for credit.

Prerequisite: Keyboard proficiency demonstrated by audition.

### **MUA 390 Beginning String Class (1 or 2)**

Beginning class instruction for all string instruments.

### **MUA 391 Beginning Woodwinds Class (1 or 2)**

Beginning class instruction for all woodwind instruments.

### **MUA 392 Beginning Brass Instrument Class (1 or 2)**

Beginning class instruction for all brass and percussion instruments.

### **MUA 395 Chamber Music Techniques (2)**

Group instruction and coaching of performance of chamber music.

Prerequisite: Permission of instructor.

## **THEORY AND COMPOSITION**

### **MUT 111 Beginning Musicianship (4)**

Introduction to the techniques of reading and writing music, notation, pitch, and rhythmic organization, elementary sight singing, dictation, and keyboard familiarity. An elective for nonmusic majors.

### **MUT 205 Ear Training Preparation (1)**

A required course for all full-time music majors who have not satisfied the ear training preparation. Course includes a series of ear training tests. See *Music Handbook*. May be repeated for a maximum of 4 credits. Graded S/N.

Prerequisite: MUT 211.

### **MUT 211 Harmony I (4)**

Beginning ear training and rudiments of tonal harmony. The harmonic practice of late eighteenth and early nineteenth centuries; composition and analysis in this style.

### **MUT 212 Harmony II (4)**

Harmonic practice of the late nineteenth and early twentieth centuries; composition and analysis in this style.

### **MUT 311 Techniques of Musical Analysis (4)**

Techniques of analyzing works of various styles and periods, with emphasis on tonal music.

Prerequisite: MUT 212.

### **MUT 312 Tonal Counterpoint (4)**

The contrapuntal style of the eighteenth century; composition and analysis. Prerequisite: MUT 212.

### **MUT 314 Jazz Theory (4)**

Techniques of reading and writing music notation-pitch and rhythmic organization in the jazz idiom. Basic compositional and arranging procedures are studied.

Prerequisite: MUT 212.

### **MUT 315 Composition (4)**

Private lessons in composition and composition laboratory. Studies, exercises, and projects concerning creativity and craft in music composition. For freshmen and sophomores. May be repeated for credit.

Prerequisite: Permission of instructor.

### **MUT 410 Twentieth Century Techniques (4)**

Compositional practices in the 20th century; composition and analysis. Prerequisite: MUT 212.

### **MUT 411 Orchestration (4)**

A study of the orchestral instruments and their use in various combinations, including full orchestra and band. MUS 380, 383, 404, and MUT 410 are related courses.

Prerequisite: MUT 212.

### **MUT 412 Modal Counterpoint (4)**

The contrapuntal style of the sixteenth century. Analysis and composition in this style. Offered in alternate years.

Prerequisite: MUT 212.

### **MUT 414 Jazz Composition and Arranging (4)**

Composition and arranging technique for jazz ensembles. Includes study of jazz notational systems, idiomatic jazz practice, standard jazz forms, and orchestration for instruments and voice as used in jazz ensembles.

Prerequisite: Permission of instructor.

### **MUT 415 Advanced Theory/Composition (4)**

Private lessons in composition and composition laboratory: studies, exercises, and projects concerning creativity and craft in composing music. For juniors and seniors. May be repeated for credit.

Prerequisite: Permission of instructor.

## **MUSIC HISTORY, LITERATURE, AND APPRECIATION**

### **MUS 100 An Introduction to Music (4)**

An introduction to the techniques of listening to great music, and a study of its elements, forms, and styles. Begins at the level of the student lacking previous musical experience. An elective for non-music majors.

### **MUS 250 World Music Survey I (4)**

Introduction to selected music cultures to acquaint the student with a variety of musical functions and styles at various places and times. Emphasis is on demonstrations via live performances by visiting lecturers and guest artists. May be taken twice for a total of 8 credits.

### **MUS 251 African through Afro-Caribbean Music (4)**

A study of African music and its transmutation into Afro-Caribbean music. The concentration in African traditions will be predominantly those of the West African cultures directly related to the transplantation into the Western Hemisphere through slavery.

### **MUS 252 Afro-American Music (4)**

Study of the evolution and development of the music culture of Afro-American people in the U.S. Investigation of the origins and cultural roots of music of Afro-Americans and other American music.

### **MUS 300 Music Appreciation: Musical Styles (4)**

The class will investigate the various large musical forms: the symphony, the sonata, the concerto, the string quartet, the opera, the oratorio or other sacred choral work, and solo song. Each area will be presented by three or four select works which will span corresponding historical periods.

### **MUS 320 Survey of Music History and Literature (4)**

A survey of music from Medieval through modern contemporary, primarily for music majors.

Prerequisite: MUT 212.

### **MUS 328 Music of the Baroque Period (2)**

Music history and literature of the Baroque period.

Prerequisite: MUS 320.

### **MUS 329 Music of the Classical Period (2)**

Music history and literature of the Classical period.

Prerequisite: MUS 320.

### **MUS 330 Music of the Renaissance (2)**

Music history and literature of the Renaissance period.

Prerequisite: MUS 320.

### **MUS 331 Opera and Music Drama (4)**

A study of music drama from the lyric drama of the ancient Greeks to the present. Suggested as an elective for nonmusic majors.

Prerequisite: MUT 211.

### **MUS 334 Music of the Romantic Period (2)**

Music history and literature of the Romantic period.

Prerequisite: MUS 320.

### **MUS 345 Twentieth Century Music (2)**

A study of significant styles and composers from Debussy to the present. Suggested as an elective for nonmusic majors.

Prerequisite: MUT 212.



**MUS 346 The Music of Black Americans (4)**  
Contributions of the black race to the development of music in the U.S. Investigation of the elements of African musical style in Afro-American music. What is black musical idiom? Folksong—secular and sacred. Formal composition. Popular forms of music. Recommended as an elective for nonmusic majors as well as music majors.

**MUS 347 History of Jazz (2)**  
A survey and historical study of the development of jazz, including significant periods and trends, stylistic analysis, and aesthetic foundations.

**MUS 348 Advanced Jazz History (2)**  
An intensive study and stylistic analysis of the more recent trends of jazz and commercial music.  
Prerequisite: MUS 347.

**MUS 350 World Music Survey II (4)**  
Continuation of MUS 250. A study of selected cultures designed to find relationships between musical styles and functions in the society. Emphasis is on demonstrations through live performances of visiting lecturers and guest artists.

**MUS 421 Advanced Studies in Music History and Literature to 1750 (4)**  
Advanced study of history and literature through the Baroque period of music. The aesthetic values of music of each period will be studied to determine related social and technical concepts.  
Prerequisite: MUT 211.

**MUS 423 Performance Practices of Music before 1600 (2)**  
Investigation of source materials and basic performance practice problems of music from the Middle Ages and the Renaissance. The course will deal with cantus firmus and related composition techniques, improvisation, ornamentation, dances and dance forms, musica ficta, musical symbolism, and editorial problems. A different stylistic period will be covered each semester. May be repeated a total of three times for credit with permission of instructor.  
Prerequisite: Permission of instructor.

**MUS 440 Piano Master Class (2)**  
Class study of piano literature for stylistic characteristics and technical considerations for proper performance.  
Prerequisite: Permission of instructor.

**MUS 490 Introduction to Music Bibliography (2 or 4)**  
An introduction to basic research materials and methods in musicology primarily for the music history and literature major.  
Prerequisite: MUS 320 and a 400-level theory course.

**MUS 491 Directed Research in Music History (4)**  
Directed individual reading and research for advanced music history majors.  
Prerequisite: MUS 321, 322, and a 400-level theory course.

## MUSIC EDUCATION

**MUS 149 Music as an Art and as an Elementary School Subject (5)**  
Introduction to the techniques of listening to music and of teaching music in the elementary school. Begins at a level for the student lacking previous musical experience.

**MUS 230 Studies in Choral Music (1, 2, or 3)**  
Seminar, independent study, and performance of choral music including vocal production techniques, performance practices, and historical foundations. Offered summer session.

**MUS 231 Studies in Orchestral Music (1 or 2)**  
Seminars, independent study, and performance of orchestral music, including study of performance practices, theory, history, and chamber music of various periods. Offered summer session.

**MUS 232 Studies in Piano Performance and Literature (2 or 3)**  
Master class in performance of selected piano works including historical performance practices, and technical considerations. Offered summer session.

**MUS 233 Studies in Musical Expression through Movement (2 or 3)**  
Seminars in music theory and composition and in various forms of movement which express sound. Eurythmics and chironomy are studied as well as standard dance forms. Offered summer session.

**MUS 245 Field Studies in Music Teaching and Learning (4)**  
The pedagogical foundations of teaching and learning music via lectures, discussions, simulations, games, and observations. Application of pedagogical theory to develop learning/teaching strategies appropriate to group and individual music instruction.

**MUS 380 Instrumental Methods (Strings) (2)**  
Provides the teacher with basic facilities and pedagogical techniques for the string family.

**MUS 383 Instrumental Wind Methods (2)**  
Provides the teacher with basic facilities and pedagogical techniques for the woodwind, brass, and percussion families.

**MUS 395 Conducting (4)**  
Basic techniques of conducting, including instrumental and choral. Participants elect to emphasize either instrumental or choral technique and will be assigned at least one hour per week as assistants in university performing groups or public school ensembles.  
Prerequisite: MUT 211 and a 300-level theory course.

**MUS 401 Teaching Music in Elementary Schools (4)**  
Organization and content of the general vocal music class in kindergarten through sixth grade. The development of musicality in the child through singing, playing instruments, listening to music, and participating in rhythmic activities. Emphasis on teaching music reading and ear training to young children.  
Prerequisite: MUT 211 and a 300-level theory course.

**MUS 402 Teaching Music in Secondary Schools (2)**  
The content and organization of the complete secondary school curriculum and the role music assumes in it, including place and function of performing groups, general music, music appreciation, music theory, and musical production. Coordination of the music program with other subject areas such as English, social studies, and drama. Selection of appropriate repertoire and development of the school music library.  
Prerequisite: MUT 211 and a 300-level theory course.

**MUS 403 Conducting Choral Music in Secondary Schools (2)**  
The organization and conducting of choral music in junior and senior high schools. The development of the adolescent and young adult voice. Problems of repertoire selection. The selected choir, mixed chorus, glee club, madrigal group, and other small vocal ensembles. Historical style in choral singing, choral festivals, and contests.  
Prerequisite: MUT 211 and a 300-level theory course.

**MUS 404 Conducting Instrumental Music in Secondary Schools (2)**  
The organization and conducting of instrumental music in junior and senior high schools. Repertoire, materials, and techniques of secondary school orchestras, bands, stage bands, and ensembles. Pedagogical principles appropriate to individual or group instruction.  
Prerequisite: MUT 211 and a 300-level theory course.

**MUS 441-442 Music Pedagogy (4 each)**  
Principles of music instruction for the studio teacher. The first semester will be devoted to a survey of the field and to observation. The second semester will be devoted to supervised teaching.

**MUS 445 Music Criticism (4)**  
A study of the techniques of evaluating musical performances and making appropriate verbal and written comments. Includes techniques of writing program notes.

**MUS 480 Advanced Studies in Choral Conducting and Literature (1, 2, 3, or 4)**  
Independent and seminar work in advanced choral conducting. Emphasis is on interpretation of choral literature through research. Opportunities are provided for conducting experience in choral lab groups. Offered summer session.  
Prerequisite: Choral conducting experience and one music history class.

**MUS 481 Advanced Studies in Orchestral Conducting and Literature (1, 2, or 3)**  
Independent and seminar work in advanced orchestral conducting. Emphasis is on interpretation of orchestral literature through research. Opportunities are provided for conducting experience in a laboratory orchestra. Offered summer session.  
Prerequisite: Conducting experience, music history.

## 64/Music (Arts and Sciences)

### **MUS 494 Directed Research in Music Education (2 or 4)**

Directed individual reading and research in technology of, innovation in, and psychology of music instruction.  
Prerequisite: Two courses from MUS 401, 402, 403, and 404.

### **MUS 496 Innovations in Music Instruction (2, 3, or 4)**

Innovative patterns of music instruction. Materials, methods, and curricula appropriate to changing demands made on the public school music teachers. Offered summer session.  
Prerequisite: Permission of instructor.

### **MUS 499 Special Topics in Music (1, 2, 3, or 4)**

Current topics and issues in music performance and literature.  
Prerequisite: Permission of instructor.

### **INDEPENDENT STUDY**

#### **MUS 295 Independent Study (1, 2, or 4)**

Normally for freshmen and sophomores. Graded S/N.  
Prerequisite: Permission of department.

### **MUS 296 Problems in Applied Music (2)**

Independent study in technique and literature of the student's major performing area. Graded S/N.  
Prerequisite: Permission of department chairperson.

### **MUS 495 Independent Study (1, 2, or 4)**

Normally for juniors and seniors. Graded S/N.  
Prerequisite: Permission of department.

### **MUS 497 Apprentice College Teaching (2)**

Supervised participation in teaching an undergraduate course in music, together with discussion of teaching methods and objectives. Graded S/N.  
Prerequisite: Permission of department.



## DEPARTMENT OF PHILOSOPHY

**CHAIRPERSON:** *Richard J. Burke*

**PROFESSOR:** *Richard J. Burke*

**ASSOCIATE PROFESSORS:** *Richard W. Brooks,*  
*Robert J.J. Wargo*

**ASSISTANT PROFESSORS:** *J. Clark Heston, Christopher Holliday, J. Christopher Maloney*

**ADJUNCT PROFESSOR AND LECTURER:** *Charles E. Morton*

Philosophy is one of the oldest, often one of the least understood of the liberal arts. The philosopher is interested in all aspects of human life, searching for the greatest possible clarity concerning the most fundamental questions. There is no one kind of philosophy; there are many kinds, each with its own value. Philosophy has always served two functions: the first is speculative, the attempt to formulate illuminating generalizations about science, art, religion, nature, society, and any other important topic; the second is critical, the unsparing examination of its own generalizations and those of others to uncover unfounded assumptions, faulty thinking, hidden implications, and inconsistencies. The study of philosophy is designed to encourage a spirit of curiosity, a sensitivity toward the uses of words, a sense of objective assessment toward oneself as well as others. Competence in philosophy is solid training for advanced study in such fields as law, government, and public administration, as well as the ministry and teaching.

The Department of Philosophy offers programs of study leading to the degree of Bachelor of Arts with a major in philosophy, modified major in philosophy with concentration in linguistics, area studies, or religious studies, and minor in philosophy.

### Requirements for the Liberal Arts Major in Philosophy

The major requires 40 credits in philosophy, including:

1. One semester of logic (PHL 102, 170, or 370).
2. One semester of ethics (PHL 103, 316, 317, or 318).
3. Two semesters in history of Western philosophy (PHL 204-6; PHL 307-8; PHL 204 and 206 are recommended).
4. One semester of Eastern philosophy (PHL 250, 351, 352, or 353).
5. At least 20 credits in PHL courses numbered 300 or above.

A student may substitute other courses for any of the above with permission of the department chairperson. Students planning to apply for graduate work in philosophy should discuss with faculty which courses to take in addition to the above.

### Departmental Honors

Students who think they might qualify for departmental honors should submit an example of their philosophical writing to the chairperson early in the semester before they expect to graduate. This should normally be a substantial paper written in PHL 395, but two or three papers written in other courses will be acceptable. If this work is judged to be of sufficiently high quality, it will be read by the rest of the department, and a conference to discuss it with the student will be arranged. Departmental honors are thus based upon written and oral achievement in philosophy, as well as general performance in courses.

### Requirements for a Modified Major in Philosophy with an Area Studies, Linguistics or Religious Studies Concentration

Modified majors in philosophy must meet the same requirements as a liberal arts minor in philosophy (see below), except 24 credits in philosophy (instead of 20) and 12 credits (instead of 8) in courses numbered 300 or above. In addition, they must meet one of the following sets of requirements:

1. **Requirements for the major in philosophy with a concentration in East Asian studies or South Asian studies:** 24 credits in philosophy, including PHL 351 or 353 (for East Asian studies) or 352 (for South Asian studies). For requirements in area studies, see page 81 and 82.
2. **Requirements for the major in philosophy with a concentration in linguistics:** 24 credits in philosophy, including PHL 370 and 475. For requirements in linguistics, see page 47.
3. **Requirements for the major in philosophy with a concentration in religious studies:** 24 credits in philosophy, including PHL 225. For requirements in religious studies, see page 90.

### Requirements for the Liberal Arts Minor in Philosophy

Twenty credits in philosophy, including:

1. One semester of logic (PHL 102, 170, or 370).
2. One semester of ethics (PHL 103, 316, 317, or 318).
3. One semester of metaphysics/epistemology (PHL 204, 205, 206, 308, 329, 333, or 340).
4. At least 8 credits in courses numbered 300 or above.

### Departmental Course Prerequisites

In general, 100-level courses presuppose no prior college experience, 200-level courses presuppose some, 300-level courses require some prior philosophy courses or related courses in other fields, and 400-level courses are primarily for philosophy majors. However, strict prerequisites have been kept to a minimum to encourage nonmajors to take philosophy courses as electives.

#### COURSE OFFERINGS

##### PHL 100 Topics in Philosophy (4)

A study of one philosophic topic or problem, to be announced in the schedule of classes each semester.

##### PHL 101 Introduction to Philosophical Thinking (4)

Fundamental skills and questions in philosophy, including: how to read and write philosophy; what an argument is, and how to assess one; practice in clarifying concepts, such as absolute and relative, subjective and objective; similarities or differences between philosophy and other activities, such as science, religion, psychology, debating, and bull sessions. Offered every semester.

##### PHL 102 Introduction to Logic (4)

The relationship between conclusions and statements given in support of them; emphasizes inductive logic. Topics may include analysis of ordinary arguments (such as might occur in a newspaper), hypothesis formulation and testing, elementary probability and statistical concepts, argument by analogy, and informal fallacies. Offered every year.

##### PHL 103 Introduction to Ethics (4)

Systematic reading and discussion of major ethical analyses of the distinction between right and wrong, good and evil. Appeals to custom, theology, happiness, reason, and human nature will be examined as offering viable criteria for judgments on contemporary issues of moral concern. Offered every year.

## 66/Philosophy (Arts and Sciences)

### **PHL 170 Introduction to Formal Logic (4)**

Formal or symbolic logic is a study of what makes deductive arguments valid, employing symbols to represent sentences, words, phrases, etc. in order to reveal the formal structure of the arguments. Offered every year.

### **PHL 204, 205, 206 History of Western Philosophy (4 each)**

The development of systematic philosophical thought in the Western world from its beginning in the Mediterranean region to 1800 A.D., with extensive readings in the works of major philosophers. The three courses are: PHL 204, Classical Greek Philosophy (beginnings to Aristotle); PHL 205, Hellenistic and Medieval Philosophy (Stoics to the Renaissance); and PHL 206, Early Modern Philosophy (Galileo to Kant). Each course may be taken separately, although together they present a continuous development. Offered in sequence, so that each course is offered every other year.

### **PHL 221 Political Philosophy (4)**

The meanings of central concepts in political philosophy, together with several closely related concepts such as those of law, authority, and the like, are examined and analyzed through intensive readings in classic writings of political philosophers and through study of especially crucial problems. Offered every other year.

### **PHL 225 Philosophy of Religion (4)**

Examination of arguments for and against the existence of God, the nature of religious language, and the relations between religion and philosophy. Offered every other year. Identical with REL 225.

### **PHL 250 Philosophies and Religions of Asia (4)**

A study of the major religions of India, China, and Japan with emphasis on their philosophical significance. The course will cover Hinduism, Jainism, Confucianism, Taoism, and Buddhism (with special reference to Ch'an or Zen), and will deal with both the ancient traditions and some modern developments. Offered every year. Identical with REL 250.

### **PHL 260 American Philosophy (4)**

An historical survey of American philosophy, from its beginnings in New England puritanism to the present day. Emphasis on Peirce, James, and Dewey. Offered every other year.

### **PHL 300 Topics in Philosophy (4)**

A study of one philosophical topic or problem at an intermediate level of difficulty. Topic to be announced in the schedule of classes for each semester.

Prerequisite: One philosophy course.

### **PHL 307 European Philosophy since Kant (4)**

Among the major philosophers included are Hegel, Marx, Kierkegaard, Nietzsche, and Sartre. Several types of Marxism and existentialism will be distinguished, and their influence in this country will be discussed. Offered every two years.

Prerequisite: One philosophy course.

### **PHL 308 Twentieth Century British and American Philosophy (4)**

A study of the issues that have dominated Anglo-American philosophy in the twentieth century. The course will trace the history that has led Americans and Britons to look at philosophy in a new way, appropriate to our scientific world-view; it will conclude by investigating some unresolved contemporary problems.

Prerequisite: One philosophy course; PHL 206 recommended.

### **PHL 310 Philosophy of Rhetoric (4)**

The problem of "objectivity," philosophical justifications for distinction between persuasion and proof, between propaganda and information, etc., and the consequences of denying such a distinction. Readings include Plato's *Gorgias*, Aristotle's *Rhetoric*, and recent documents on reasoning and communication. Offered every other year. Identical with SCN 310.

Prerequisite: One philosophy course, or SCN 201 or 301.

### **PHL 312 Aesthetics (4)**

Systematic examination of the nature of aesthetic experience and aesthetic judgment in the appreciation of nature and art. Critical analysis of major theories, of the creation and structure of works of art, the psychology of aesthetic perception, and the logic and semantics of aesthetic judgment. Offered every other year.

Prerequisite: One philosophy course, or a course in art, music, or literature.

### **PHL 316 Ethics, Economics, and Business (4)**

Examination of ethical problems in business practices and institutions, and critical analysis of the concepts, presuppositions, and theories used in the description and explanation of economic phenomena.

Prerequisite: One course in philosophy or economics.

### **PHL 317 Recent Theories of Ethics (4)**

Theories of ethics and meta-ethics of the twentieth century, with emphasis on the analysis of ethical statements. Typical problems considered include the possibility of supporting ethical claims; the place of reason, emotion, and persuasion in ethics; and ethical relativism. Offered every other year. PHL 103 is strongly recommended as preparation.

### **PHL 318 Ethics and the Health Sciences (4)**

Examination of central ethical issues in modern health care and research. Included are the distribution and allocation of health resources, the right to life and death, human experimentation, "informed consent," eugenics, and the ethics of behavioral control. Offered every year. Recommended preparation: PHL 103.

### **PHL 319 Philosophy of Law (4)**

The nature of law and legal obligation, with emphasis on the relation of law, coercion, and morality. Attention is also given to such issues as the nature of legal reasoning, the legal enforcement of morality, the justifiability of civil disobedience and conscientious refusal, and the justification of punishment. Offered every other year. PHL 103 or PS 241 recommended as preparation.

### **PHL 329 Philosophy of Science (4)**

The philosophical problems arising from critical reflection on the sciences. Typical topics: the structure of scientific explanation, the nature of scientific laws and theories, causality, and confirmation. Offered every other year.

Prerequisite: At least one course in philosophy and one in physical science, either in high school or college. PHL 170 is strongly recommended.

### **PHL 333 Theories of Knowledge (4)**

Critical examination of knowledge claims and of the types of justification given in their support. Typical topics: skepticism; empiricism; rationalism; the relations between sensations, images, and concepts; meaning and truth; believing and knowing; intuition; and limits of knowledge. Offered every other year.

Prerequisite: One philosophy course; PHL 206 or 308 recommended.

### **PHL 340 Metaphysics (4)**

Study of selected influential attempts to characterize the basic features of the world. Emphasis on reformulations of metaphysical problems, such as the relation between nature and mind, in the light of modern advances in scientific knowledge and sophistication. Offered every other year.

Prerequisite: One philosophy course.

### **PHL 351 Chinese Philosophy (4)**

Systematic study of the rise and development of Chinese philosophy with emphasis on the classical (Chou) period, especially Confucianism and Taoism. The impact of Buddhism on Chinese philosophical thinking will be examined. Reference to modern developments as time permits. Offered every other year.

Prerequisite: PHL 250 or AS 210.

### **PHL 352 Indian Philosophy (4)**

An examination of the presuppositions and doctrines of India's major philosophic systems. Both Indian logic and metaphysical speculation will be covered. Realistic, idealistic, pluralistic, dualistic, and monistic systems will be considered, with some reference to contemporary developments. Offered every other year.

Prerequisite: PHL 250 or AS 240.

### **PHL 353 Japanese Philosophy (4)**

An examination of Japan's major philosophical and religious systems including Shinto, Pure Land and Zen Buddhism, and Confucianism in the premodern era. The latter half of the course will study the impact of European philosophical thought on the tradition and the emergence of a creative synthesis in the philosophy of Nishida Kitaro. Offered every other year.

Prerequisite: PHL 250 or AS 220.

**PHL 370 Symbolic Logic (4)**

Study of standard first-order symbolic logic, emphasizing quantification theory and including identity theory and logical semantics, and possibly including an introduction to set theory and formal meta-theory. The logical system is approached both as a formal system and as a theoretical analysis of human reasoning. Offered every year. Prerequisite: PHL 170, CIS 130, or MTH 103 or equivalent.

**PHL 395 Independent Study in Philosophy (2 or 4)**

Tutorial on a topic not included in regular courses, primarily (but not exclusively) for majors. Students should consult with the department chairperson before approaching a faculty member with a topic. Two credits graded S/N; 4 credits graded numerically. For 4 credits, in addition to reading and consultation, the student will write a substantial term paper. Prerequisite: One philosophy course at Oakland and permission of instructor.

**PHL 399 Field Experience in Philosophy (4)**

Students will serve in a variety of work settings, arranged by themselves with departmental approval or by the Center for Community and Human Development. The work experience will be integrated with readings in the philosophy of work, and the course grade will be based on a substantial term paper applying philosophical ideas to the particular work situation. May not be repeated for credit. Prerequisite: 16 credits in philosophy, of which at least 8 must be at the 300-400 level.

**PHL 401 Study of a Major Philosopher (4)**

A study of the works of one major philosopher. The specific philosopher will vary, but courses on Plato, Aristotle, Kant, and Wittgenstein will be offered every few years. May be repeated for credit. Prerequisite: One philosophy course; PHL 204, 205, 206, 307, or 308 recommended, whichever is relevant.

**PHL 437 Philosophy of Mind (4)**

An examination of selected topics or works in the philosophical literature about mind. Some topics are: the nature of psychological explanation, the relation of mind and body, thinking, emotions, concepts, consciousness, and remembering. Offered every other year. Prerequisite: PSY 100 and one philosophy course; PHL 308 is recommended.

**PHL 440 Contemporary Issues in Metaphysics (4)**

A study of one or more current issues in metaphysics. The analytic tools of contemporary thinkers will be used in trying to resolve these perennial issues. Prerequisite: PHL 102 or 170. PHL 308 or 340 recommended.

**PHL 465 Seminar on a Philosophical Topic (4)**

A study of one philosophical topic or problem at an advanced level of difficulty, normally requiring considerable background in one field of philosophy. Topic and prerequisites to be announced in the schedule of classes for each semester.

**PHL 475 Philosophy of Language (4)**

An inquiry into problems concerning the philosophical theories of natural language structure. Emphasis on views about what meaning is and how we are to explain our ability to communicate with one another. Offered every other year. Prerequisite: PHL 102 or 170, or LIN 207. PHL 308 is recommended.

**PHL 497 Apprentice College Teaching (4)**

Open to any well-qualified philosophy student who obtains consent of a faculty member to assist in a regular college course. The apprentice should be capable of assuming limited teaching duties. Prerequisite: Permission of instructor.



## DEPARTMENT OF PHYSICS

**CHAIRPERSON:** *Abraham R. Liboff*

**PROFESSORS:** *Abraham R. Liboff, John M. McKinley, Ralph C. Mobley, Norman Tepley, Paul A. Tipler, Robert M. Williamson*

**ASSOCIATE PROFESSOR:** *W. D. Wallace*

**ASSISTANT PROFESSORS:** *Beverly Berger, Michael Chopp, Paul M. Doherty*

**ADJUNCT PROFESSORS:** *Adrian Kantrowitz, Gifford G. Scott*

**ADJUNCT ASSOCIATE PROFESSOR:** *Norman H. Horwitz (William Beaumont Hospital)*

Courses are grouped into two categories—preprofessional career programs and experiences in science for students with broad interests in contemporary human culture. The latter are strongly recommended for students planning any of a wide range of careers, including law, business, criminology, art history, music, government, education, and journalism.

Programs of study lead to the degrees of Bachelor of Science, Bachelor of Arts, and Master of Science.

The Bachelor of Science degree in physics is for students who plan to become professional scientists. It qualifies them for graduate studies in physical sciences or research positions in government and industry. Students pursuing this degree may discuss with faculty different specialties. Advisers in these fields are professors Berger (astronomy), Doherty (geophysics), Chopp (medical physics), Liboff (physics and public policy), and Mobley (industrial physics-electronics). Independent research projects are available in each area.

A limited number of upper-level internships are available both in medical physics and in physics and public policy. Majors wishing to take a hospital internship (medical physics) or an internship in Washington or Lansing (physics and public policy) are urged to declare their intentions as early as possible.

The Bachelor of Arts degree in physics is primarily for students who desire a broader, less professionally specialized background in physics. The minor in physics is available for students who want to supplement their work in other fields with an introduction to physics.

### Requirements for the Liberal Arts Major in Physics, B.A. Program

1. 32 credits in physics, with at least 22 in courses numbered above 200.
2. 20 additional credits in chemistry, mathematics, and physics.

### Requirements for the Major in Physics, B.S. Program

1. 20 required credits in physics: PHY 151, 152, 158 or 159, 317, 351, 371.
2. 22 elective credits in physics, at or above the 200 level, including at least 2 credits of laboratory course work. PHY 361 and 381 are strongly recommended for students planning graduate work in physics.
3. MTH 154, 155, 254 and either MTH 256 or APM 257.
4. 10 credits of chemistry at a level not below CHM 144.

### Requirements for the Secondary Teaching Major in Physics

1. Fulfillment of B.A. or B.S. degree requirements in physics. Each program must have the approval of Professor Williamson by the end of the sophomore year.
2. ED 344, 345, 428, 455. ED 428 *must* be taken in the winter semester before the internship, which is normally in fall or

winter of the senior year. PSY 130 is strongly recommended.

3. Completion of secondary teaching minor. Mathematics, chemistry, biology, science, and physical education are recommended.

### Medical Physics Programs

Students interested in medical physics may earn either the B.S. in medical physics or the B.S. major in physics with a specialty in medical physics. Requirements are described on page 143.

### Requirements for the Liberal Arts Minor in Physics

Twenty credits in physics are required including PHY 101-102 or PHY 151-152, PHY 158 or 159, and at least 8 credits in physics numbered 300/400.

### Requirements for the Secondary Teaching Minor in Physics

PHY 101 and 102, or PHY 151 and 152, and PHY 158 or PHY 159, and 10 credits in physics approved by Professor Williamson by the end of the sophomore year.

### COURSE OFFERINGS

**PHY 101 General Physics I (4)**  
Mechanics, fluids, thermodynamics. Calculus is not required. Offered fall and winter.

Prerequisite: High school algebra and trigonometry or equivalent.

**PHY 102 General Physics II (4)**  
Sound, light, electricity and magnetism, atomic and nuclear physics. Offered fall and winter.

Prerequisite: PHY 101.

Each of the following courses is designed for nonscience majors.

**PHY 104 Astronomy: The Solar System (4)**  
The sun, planets, space travel, the search for extraterrestrial life.

**PHY 105 Astronomy: Stars and Galaxies (4)**  
Nature and evolution of stars, the Milky Way and other galaxies, cosmology.

**PHY 106 Earth Sciences I (4)**  
The earth as a planet. Topics include: origin, history, orbit, gravity, rocks and minerals, earthquakes, the interior, and the theory of continental drift. Offered fall only.

**PHY 107 Earth Sciences II (4)**  
The surface of the earth, including the atmosphere and oceans. Topics include: climate, meteorology, continental evolution, weathering, glaciers, wind, and the energy resources of the earth. Offered winter only.

**PHY 115 Energy (4)**  
Basic physical principles of energy, sources, transmission, and distribution. Political, economic, and ecological considerations.

**PHY 121 Introduction to the Physics of Sensory Systems (4)**  
The senses as systems which allow us to respond to external stimuli. The senses as detectors or transducers. Emphasis on visual and auditory systems. Speech production and its acoustic characteristic and recognition.

**PHY 125 The Physics of Music (4)**  
Lectures and experiments on the nature of vibrations, waves, and sound as applied to musical instruments and scales, voice, hearing, room acoustics, and electronic music. Offered fall only.

**PHY 127 Human Aspects of Physical Science (4)**  
Primarily for the student wishing to explore the interaction of the

physical and social sciences. Format varies to reflect the impact of physics on contemporary life, particularly on politics, economics, and behavior, as well as environment and well-being. Offered winter only.

**PHY 141 The Physics of Health Care (4)**

Introduction to the physical principles of health-care delivery. Scientific systems and method. Data-collecting measurements, problem-solving, applications, physical hazards, radiation dosimetry, and electrical safety. Offered winter.  
Prerequisite: High school algebra.

**PHY 169 Physics in Science Fiction (4)**

Physical principles as revealed by the extent to which science fiction authors observe or violate them. Selected readings, discussions, and written papers. No mathematics required beyond algebra. Graded S/N.

**PHY 217 Health Physics Laboratory (2)**

Experiments in mechanics, including force, acceleration, momentum and energy; properties of materials; elasticity; heat transfer; vibration and sound. Intended for industrial health and safety and other health science students.  
Corequisite: PHY 102.

The following courses are designed primarily for the physics major and for majors in the other sciences and engineering.

**PHY 150 Perspective and Method in Contemporary Physics (4)**

A survey of contemporary physics; e.g., black holes, quarks, nuclear energy, and fusion. Methods in physics and techniques of problem solving. Offered fall only.  
Prerequisite: High school algebra.

**PHY 151 Introductory Physics I (4)**

Classical mechanics and thermodynamics. For science, mathematics, and engineering students. Offered fall and winter.  
Prerequisite: MTH 154 or PHY 150.

**PHY 152 Introductory Physics II (4)**

Sound, light, electricity, and magnetism. Offered fall and winter.  
Prerequisite: PHY 151. Corequisite: MTH 155.

**PHY 158 General Physics Laboratory (2)**

Elementary experiments in mechanics, heat, sound, electricity, and optics for students with little high school physics laboratory experience. Offered fall and winter.  
Prerequisite: PHY 101 or 151. Corequisite: PHY 102 or 152.

**PHY 159 Introductory Physics Laboratory (2)**

Extended experiments and projects in introductory physics. Students with high school physics laboratory experience (or PHY 158) are encouraged to do open-ended experiments chosen in consultation with the instructor. Offered fall and winter.  
Prerequisite: PHY 101 or 151 and one year high school physics laboratory. Corequisite: PHY 102 or 152.

**PHY 241 Introductory Electronics for Scientists I (2)**

D.C. circuits, voltage and current generation and measurement.

**PHY 242 Introductory Electronics for Scientists II (2)**

Digital circuits. (PHY 241 is not a prerequisite.)

**PHY 243 Introductory Electronics for Scientists III (2)**

A.C. circuits.

Prerequisite: PHY 241 or equivalent.

**PHY 247 Introduction to Scientific Instrumentation (4)**

Lecture and laboratory in the use of various devices and techniques used in scientific research. Oscilloscopes, integrated circuits, operational amplifiers, recorders, scintillation detectors, counters, and scalars. Laboratory experiments relate to health sciences: EKG, EEG, nerve transmission, blood pressure, and radioisotope labeling.  
Prerequisite: PHY 101-102 or 151-152 and one laboratory course in any science.

**PHY 290 Introduction to Research (2 or 4)**

Independent study and/or research in physics for students with no research experience.  
Prerequisite: Written agreement of a physics faculty supervisor.

**PHY 304 Astrophysics I (4)**

Application of elementary physics to the study of planets, stars,

galaxies, and cosmology.

Prerequisite: PHY 152 or PHY 102 and MTH 155.

**PHY 305 Astrophysics II (4)**

Continuation of PHY 304.

Prerequisite: PHY 304.

**PHY 306 Observational Astronomy (2)**

A lecture/laboratory course using the Oakland Observatory and providing basic training in astronomical techniques.

Prerequisite: PHY 158 or 159.

**PHY 307 Geophysics (4)**

The application of physics concepts to the study of the earth, gravity and its anomalies, geomagnetism, earth-sun energy, geochronology, and seismic wave propagation. Offered every other year in fall only.

Prerequisite: PHY 151-152. PHY 106 highly recommended.

**PHY 308 Physical Oceanography (4)**

Physical oceanography and meteorology; composition and structure of the atmosphere and oceans. Interactions of sea water with the atmosphere, the continents, and man. Offered every other year in winter only.

Prerequisite: PHY 151-152. PHY 107 highly recommended.

**PHY 317 Modern Physics Laboratory (2)**

Optics and atomic physics experiments. Offered fall only.

Prerequisite: PHY 158 or 159. Corequisite: PHY 371.

**PHY 318 Nuclear Physics Laboratory (2)**

Nuclear physics experiments. Offered winter only.

Prerequisite: PHY 158 or 159. Corequisite: PHY 372.

**PHY 325 Biophysical Science I (4)**

Lecture course emphasizing the physics of living systems: thermodynamics in biology, information theory, theories of aging, biomolecular structure, nerve conduction, radiation biology. Offered fall only.

Prerequisite: PHY 102 or 152, and MTH 155.

**PHY 326 Biophysical Science II (4)**

Lecture course presenting application of the physical laws to operation of modern biophysical instruments; the electron microprobe, ultracentrifuge, spectrometer, laser light scattering, optical and X-ray diffraction, and acoustic probe. Offered winter only.

Prerequisite: PHY 102 or 152, and MTH 155.

**PHY 331 Optics (4)**

Geometrical optics, optical instruments, wave theory of reflection, refraction, interference, diffraction, and polarization of light. Offered winter only.

Prerequisite: PHY 152 and MTH 155.

**PHY 341 Electronics (4)**

Electronics for scientists, circuit theory, transistors, power supplies, linear amplifiers, oscillators. Offered winter only.

Prerequisite: PHY 152 and PHY 158 or 159; concurrent enrollment in PHY 347 is recommended.

**PHY 347 Electronics Laboratory (2)**

Circuits and electronics experiments. Offered winter only.

Corequisite: PHY 341.

**PHY 351 Intermediate Theoretical Physics (4)**

Topics and techniques common to intermediate physics courses. Includes analytical and numerical (computer) solution techniques, DIV, GRAD, CURL, and Fourier analysis. Offered fall only.

Prerequisite: PHY 152.

**PHY 361 Mechanics I (4)**

Applications of Newton's laws to particles, systems of particles, harmonic oscillators, central forces, accelerated reference frames, and rigid bodies. Offered winter only.

Prerequisite: PHY 152. Corequisite: MTH 254.

**PHY 371 Modern Physics (4)**

Introduction to relativity, kinetic theory, quantization, and atomic physics. Additional topics chosen from physics of molecules, solids, nuclei, and elementary particles. Offered fall only.

Prerequisite: PHY 152 and MTH 155; concurrent enrollment in PHY 317 is recommended.

**PHY 372 Nuclear Physics (4)**

Radioactivity, interaction of radiations with matter, accelerators,

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nuclear reactions, fission, and fusion. Offered winter only.  
Prerequisite: PHY 102 or 152, and MTH 155; concurrent enrollment in PHY 318 is recommended.

### PHY 373 Physics In Medicine (4)

For students, especially premedical students, wishing to explore the physical basis of medicine, including signal analysis, feedback and control, biomechanics, body fluid dynamics, dielectricity, nuclear physics and nuclear medicine, x-rays, electrical properties of nerves, and transport through membranes.  
Prerequisite: MTH 155 and PHY 152.

### PHY 381 Electricity and Magnetism I (4)

Maxwell's equations and the experimental laws of electricity and magnetism. Potential theory, boundary conditions on the electromagnetic field vectors, field energy. Dielectrics, conductors, and magnetic materials. Offered fall only.  
Prerequisite: PHY 351 and MTH 254. APM 257 desirable.

### PHY 400 Undergraduate Seminar (1)

### PHY 405 Special Topics (2, 4, or 6)

Prerequisite: Permission of department.

### PHY 417 Advanced Laboratory (2)

Methods of experimental physics. Experiments and projects in all areas of classical and modern physics, with emphasis on research techniques and detailed analysis of experimental data.  
Prerequisite: PHY 317, 318, 341, and 347.

### PHY 418 Modern Optics Laboratory (2)

Laboratory studies employing modern, sophisticated laser, spectrometer, and photon counting techniques and equipment including atomic absorption spectroscopy, intensity fluctuation spectroscopy, atomic and molecular fluorescence, and Brillouin scattering. Offered winter only.

Prerequisite: PHY 371, PHY 158 or 159.

### PHY 421 Thermodynamics (4)

The zeroth, first, and second laws of thermodynamics with applications to pure substances. Introduction to the kinetic theory of gases and to statistical mechanics. Offered fall only.  
Prerequisite: PHY 361 and APM 257.

### PHY 441 Physics of Radiology I (2)

Physical principles underlying the practice of radiology. Offered fall only.  
Prerequisite: Departmental approval and PHY 371, 381, and either PHY 247 or 347.

### PHY 442 Physics of Radiology II (2)

A continuation of PHY 441. Offered winter only.  
Prerequisite: PHY 441.

### PHY 443 Physics of Nuclear Medicine I (2)

Physical principles of diagnostic and therapeutic applications of radio-nuclides. Offered fall only.  
Prerequisite: Approval of department, PHY 371, 381, and either PHY 247 or 347.

### PHY 444 Physics of Nuclear Medicine II (2)

A continuation of PHY 443. Offered winter only.  
Prerequisite: PHY 443.

### PHY 445 Medical Instrumentation (2)

Detailed examination of the scientific instrumentation used in modern medical diagnostic and therapeutic practice. Offered winter only.  
Prerequisite: Approval of department, PHY 371, 381, and either PHY 247 or 347.

### PHY 470 Relativity (4)

Special relativity in mechanics and electromagnetism. Introduction to general relativity and gravitation. Offered winter only.  
Prerequisite: PHY 361 or 371 or 381.

### PHY 472 Quantum Mechanics I (4)

Principles of nonrelativistic quantum mechanics, Schrodinger wave equation, expectation values of energy, position, momentum and angular-momentum operators, spin, perturbation theory, identical particles. With applications to atomic systems. Offered fall only.  
Prerequisite: PHY 351, 361, 371, and APM 257.

### PHY 482 Electricity and Magnetism II (4)

Multipole fields, solutions of Laplace and Poisson equations, electromagnetic waves in insulators and conductors, radiation, and the derivation of the laws of optics from Maxwell's equations. Offered winter only.  
Prerequisite: PHY 381, APM 257, and MTH 256.

### PHY 490 Independent Study and Research (2, 4, or 6)

Prerequisite: 18 credits in physics and written agreement of a physics faculty supervisor.

### PHY 497 Apprentice College Teaching (2)

Directed participation in teaching selected undergraduate physics courses. May be repeated for a maximum of 4 credits. Graded S/N.  
Prerequisite: Permission of instructor.





# DEPARTMENT OF POLITICAL SCIENCE

**CHAIRPERSON:** *Thomas W. Casstevens*

**PROFESSORS:** *Sheldon Appleton, Thomas W. Casstevens, Edward J. Heubel, Roger H. Marz, Carl R. Vann (Political Science and Behavioral Sciences)*

**ASSOCIATE PROFESSORS:** *James R. Ozinga, Thomas W. Church*

**ASSISTANT PROFESSORS:** *Brian Coyer, Robert J. Goldstein, Vincent Khapoya, William A. Macauley, Claude Rowland, Don Schwerin*

Political science offers a concentrated and systematic study of politics at all levels of government and in many different cultural and national settings. Policy-making, law, political behavior, administration, international politics, foreign governments, and theories and philosophies of government are among the many topics explicated by these courses. The general educational aim is to increase the student's awareness and understanding of the broad realm of politics and government. Many students electing this major wish to prepare for careers in public service, law, practical politics, or the teaching of government and social studies.

The Bachelor of Arts degree with a major in political science is the department's broadest degree program and is appropriate for the student with interest in public affairs or who intends to enter law school or graduate school. The department also offers a major in public administration leading to the Bachelor of Science degree. The program provides appropriate analytical skills for professionals and attempts to prepare students either for direct entry into public service or for specialized graduate programs in public administration and public policy. A Master of Public Administration is also available. For details, see the *Oakland University Graduate Study Catalog*.

## Requirements for the Liberal Arts Major in Political Science

The major requires 40 credits in political science including PS 100, 131, and 222. No more than 4 credits of PS 110 and no more than 12 credits of independent study and internships (PS 390, 458, and 490) may be offered toward satisfaction of the major requirements.

## Requirements for the Major in Public Administration and Public Policy, B.S. Program

In addition to the general requirements for a Bachelor of Science degree, described on page 19, students must maintain a 2.50 average in required major and cognate courses.

The following major courses are required: PS 100, 131, 222, 350, 353, 453, and 454. Students are advised to enroll in PS 458, Public Affairs Internship (8 credits), in the spring session of the senior year. For students who complete the internship, 4 credits must be chosen from the following list to complete the major: PS 305, 307, 450, 451, 452, 455, 456. For students who do not take the internship, an additional 12 credits from the preceding are required.

The following corequisite courses are required:

1. MTH 121 and 122 (or 8 credits of mathematics at a higher level)
2. ECN 200 and 201 (8 credits)
3. ACC 200 (5 credits)
4. CIS 120 (2 credits)

Political science majors may be advised by anyone in the department. For entry into the public administration program, consult any of the following: Edward J. Heubel, director; Brian W. Coyer; Roger H. Marz.

## Departmental Honors

Departmental honors are conferred upon graduates who successfully complete a PS 490 project and paper at the honors level during the senior year. The student seeking honors should obtain departmental permission before registering for a 490 project. There are opportunities for advanced students to undertake independent readings and research under the PS 390 and PS 490 numbers; these also require pre-enrollment in the departmental office.

## Requirements for a Modified Major in Political Science with an Area Studies Concentration

Students in political science may pursue a regular major in political science with a number of interdepartmental concentrations described on page 87.

Students may elect a modified major in political science which requires 24 credits in PS courses in combination with area studies concentrations in East Asian studies, South Asian studies, Slavic studies, and Latin American studies. See area studies program, page 81.

For students who wish to emphasize political science and pursue a secondary education career in social studies, see program information on page 86.

## Requirements for the Liberal Arts Minor in Political Science

Twenty credits in political science including either PS 100 or PS 131 and at least 8 credits at the 300/400 level.

### COURSE OFFERINGS

#### PS 100 Introduction to American Politics (4)

The decision-making process in the American national government and the ways in which parties, groups, and individuals work to produce public policy in Congress, the Presidency, and the courts.

#### PS 103 Black Politics (4)

Analysis of Afro-Americans and their relationship to the American political system. Emphasis is on black political ideologies and thought, political organizations and strategies, and forms of political participation, both electoral and nonelectoral.

#### PS 110 Contemporary Political Issues (4)

Selected topics dealing with current political issues or public policy problems. The particular topic will be announced at the time of offering. Designed for the general student. May be repeated for credit with different topics.

#### PS 115 U.S. Foreign Policy (4)

Foreign policy issues and challenges confronting the U.S. in the nuclear age in light of the historical evolution of American diplomacy and in light of the limitations imposed upon foreign policy makers by public opinion and the exigencies of domestic politics.

#### PS 131 Foreign Political Systems (4)

Analysis of contemporary politics and governmental systems of selected countries; types chosen range from established constitutional democracies and totalitarian systems to movements and regimes of new developing nations. Offered fall and winter.

#### PS 213 International Politics (4)

Interdisciplinary study of concepts and hypotheses basic to understanding and analysis of relations among nations. The class may engage in a simulation exercise in international conflict and in analysis of a number of actual cases to gain experience in the application of the hypotheses studied. Offered fall or winter.

#### PS 222 Measurement and Methodology (4)

A study of research design, measurement of political variables, and data analysis.

Prerequisite: One course in political science.

## 72/Political Science (Arts and Sciences)

### **PS 241 Law and Politics (4)**

A broad survey of the function of law and legal systems in the political order. The student will be exposed to the classic jurisprudential, historical, anthropological, and comparative treatments of the subject.

### **PS 250 Politics of Survival (4)**

An examination of environmental, regulatory, and energy related political issues that challenge human survival both nationally and globally.

### **PS 301 American Presidency and the Executive Process (4)**

A study of presidential politics, decision-making, and leadership in the American political system.

Prerequisite: PS 100.

### **PS 302 Legislative Process and Public Policy (4)**

A study of legislative behavior and decision-making, emphasizing the problems of public policy development in the American political system.

Prerequisite: PS 100.

### **PS 305 Politics of the Local Community (4)**

Study of local governments, political forces, trends in metropolitan and suburban politics, and problems of planning in an age of urbanization.

Prerequisite: PS 100.

### **PS 307 State Politics (4)**

Comparative analysis of the variations and similarities of the political systems of the 50 states; the policy-making structures; political participation; and contemporary public policy issues.

Prerequisite: PS 100.

### **PS 313 International Law (4)**

An examination of the principles and organization of modern international law. Attention is given to the growing field of ocean resource, outer space, environmental protection, and information law.

Prerequisite: PS 213.

### **PS 318 Foreign Policies of Communist Systems (4)**

Relations since 1945 between communist states, such as Russia and China; relations between those states and the communist parties of other countries.

Prerequisite: PS 131.

### **PS 320 Laboratory in Empirical Methods (4)**

An examination of and training in empirical methodology. Topics include social science data management, two or three batch and conversational statistical packages, some computer programming, some statistics not covered in PS 222, and different modes of empirical political science research.

Prerequisite: PS 222.

### **PS 321 Systematic Political Analysis (4)**

A study of formal models in political science.

### **PS 323 The American People and Their Presidents (4)**

Study of the relationships among public attitudes toward the Presidency and the political system, voting behavior in Presidential elections, and Presidential policies and leadership.

Prerequisite: PS 100.

### **PS 324 Electoral Processes (4)**

The study of electoral systems, political parties, and the voting behavior of individuals and groups, with special attention to U.S. political experience.

Prerequisite: PS 100.

### **PS 329 European Political Systems (4)**

An analysis of politics within and between nations in Europe. Selected institutions and processes are examined in detail. A comparative point of view is emphasized.

Prerequisite: PS 131.

### **PS 330 Political Development (4)**

An examination of the various approaches and theories used in comparative political research, including theories of development and modernization.

Prerequisite: PS 131 and 222.

### **PS 331 Politics in Canada and the Commonwealth (4)**

An analysis and comparison of politics, parties, parliament, politick-

ing, and public policy in Canada and selected countries of the Commonwealth.

### **PS 332 Politics of the Middle East and North Africa (4)**

Examination of the politics of the Middle East and North Africa. The cultural and historical factors that influence contemporary politics of the area will be emphasized. Topics include religion, social structures, economic problems, the impact of the West, and the Arab-Israeli conflict.

Prerequisite: PS 131.

### **PS 333 African Politics (4)**

Examination of politics of selected African states. Primary focus is on political development. Attention is given to traditional and colonial politics as well as to individuals, groups, and institutions that make up the present political process.

Prerequisite: PS 131.

### **PS 334 Political Systems of Southern Asia (4)**

Examination of the elements of political life in India, Bangladesh, and Pakistan. The cultural, historical, social, and economic factors that influence contemporary political institutions; and the issues and processes by which political conflicts are resolved will be studied. Politics in Ceylon, Nepal, and Himalayan border kingdoms also may be considered.

Prerequisite: PS 131.

### **PS 335 Politics of Latin America (4)**

Analysis of Latin American political systems and the historical, social, and economic factors underlying them. The major countries are studied intensively, and a comparative approach is used to examine the variations from democracy to dictatorship and the political instability that characterizes the area.

Prerequisite: PS 131.

### **PS 337 The Soviet Political System (4)**

A descriptive analysis of the Soviet society as a political system: its origins, institutions, and political behavior. Trends and developments in the system will be assessed, and comparisons with other political systems will be undertaken.

Prerequisite: PS 131.

### **PS 338 Modern Chinese Politics (4)**

An analysis of the rise of social movements in China after the breakdown of the traditional order; the emergence of the Nationalist and Communist regimes and the triumph of the Communists; and the political processes of the People's Republic of China, emphasizing the role of elites in policy formation, ideology, mass support, and the exercise of central power.

Prerequisite: PS 131.

### **PS 342 American Legal System I: Principles and Processes (4)**

A study of the various institutions of the American legal system with emphasis on the specific policy-making tools of the judicial process.

Prerequisite: PS 100.

### **PS 343 American Legal System II: Constitutional Law and Civil Liberties (4)**

A broad survey of American constitutional law with emphasis on civil rights and liberties in America as defined and protected by the judiciary. Primary emphasis on U. S. Supreme Court decisions dealing with freedoms of speech, religion, and privacy; rights of the accused; racial, ethnic, and sexual discrimination.

Prerequisite: PS 241 or 342.

### **PS 350 Public Administration (4)**

Study of government in action, with special attention to policy formulation, organization, personnel administration, supervision, coordination, administrative control, and accountability.

Prerequisite: PS 100.

### **PS 353 Public Policy Analysis (4)**

Examines the political, economic, and social factors in development, implementation, and impact of public policies; the roles of interest groups, political parties, bureaucratic institutions, and legislative bodies in the policy process at federal, state, and local governmental levels; and policy issues such as health, transportation, land-use, education, and welfare.

Prerequisite: PS 100.

### **PS 371 American Political Thought (4)**

The writings of prominent American thinkers and statesmen whose

ideas have influenced the development of the American polity will be considered. Selected texts by European thinkers may also be examined with a view to their influence on America.  
Prerequisite: PS 100.

**PS 372, 373 Western Political Thought (4 each)**

A two-semester survey of Western political philosophy. Each major philosopher, from Plato to Marx, is placed in his/her political setting to show the interrelationships between a philosopher's environment and his/her ideas.

**PS 377 Communism (4)**

The development of revolutionary socialism from early Marxism to the present. The course analyzes the relevance of Marxism to a variety of contemporary revolutionary situations.

**PS 390\* Independent Study (2 or 4)**

Readings not normally covered in existing course offerings. Directed on an individual basis.  
Prerequisite: Permission of department and instructor.

**PS 452 Comparative Politics and Administration (4)**

The role of public administrative systems in the context of diverse national environments, various levels of political development, and different stages of modernization.  
Prerequisite: PS 131 and 350.

**PS 453 Public Budgeting (4)**

The budgeting process in complex institutions, with special reference to various modern budgetary systems. Stresses use of control over flow of funds as an instrument in policy control.  
Prerequisite: PS 350.

**PS 454 Public Personnel Administration (4)**

Study of the procedures, techniques, and problems of personnel administration in public agencies; evolution of the modern civil service system, merit principle, and responses to collective bargaining and equal opportunity programs.  
Prerequisite: PS 350.

**PS 455 Public Policy Evaluation (4)**

Analysis of public policy-making, evaluation techniques, uses of relevant information, and ethical implications of such studies.  
Prerequisite: PS 222 or a statistics course and PS 353.

**PS 456 Public Administration Strategies and Policies (4)**

The application of the management tools of economics, political science, statistics, accounting, and organizational behavior to the systematic analysis of case studies drawn from experience in the governmental sector or other not-for-profit enterprises.  
Prerequisite: Senior standing and permission of department.

**PS 457 Public Administration Career Orientation (2)**

Prospects, problems, and ethics of public administration as a profession. Examples and practical problems from agency work, jointly presented by professional administrators and department faculty.  
Prerequisite: PS 350 and permission of department.

**PS 458\* Public Affairs Internship (4 or 8)**

Supervised student internships with governmental, political, and other public agencies; reports and analyses relating to agency required. Applicants must seek departmental approval at the beginning of the semester prior to that of the internship. Graded S/N.  
Prerequisite: Permission of department.

From time to time, the department offers advanced seminars in which a topic or problem is studied in depth, and in which significant individual student research is presented for analysis and criticism. The seminar titles refer to the broad fields of political science within which the problem falls; the precise problems to be studied will be announced by the department when the seminars are offered. All seminars require permission of the department before registration. Offered every semester.

- PS 402, 403 Seminar in American Politics (4 each)
- PS 410, 411 Seminar in International Relations (4 each)
- PS 420, 421 Seminar in Political Behavior (4 each)
- PS 430, 431 Seminar in the Comparative Study of Political Systems (4 each)
- PS 440, 441 Seminar in Public Law (4 each)
- PS 450, 451 Seminar in Public Policy (4 each)
- PS 480, 481 Seminar in Political Theory (4 each)
- PS 490\* Special Topics or Directed Research (2, 4, or 8)

\*Students are limited to 8 credits of independent study (PS 390, 458, or 490) in any one semester, and may offer no more than 12 credits toward fulfillment of major requirements.



## DEPARTMENT OF PSYCHOLOGY

**CHAIRPERSON:** *David W. Shantz*

**PROFESSORS:** *Edward A. Bantel, David C. Beardslee, Jean S. Braun, Daniel N. Braunstein, Harvey Burdick, Donald C. Hildum, Boaz Kahana*

**ASSOCIATE PROFESSORS:** *Max Brill, Algea O. Harrison, Lawrence G. Lilliston, David G. Lowy, Virginia E. O'Leary, Dean G. Purcell, Ralph Schillace, David W. Shantz, Irving Torgoff, Harold Zepelin*

**ASSISTANT PROFESSORS:** *Ronald D. Hansen, I. Theodore Landau, Keith E. Stanovich, Robert Stewart, David M. Stonner*

**ADJUNCT ASSOCIATE PROFESSOR:** *F. Edward Rice*

**VISITING ASSISTANT PROFESSORS:** *Pamela Roberts, David L. Ronis, Dena H. Scher, Sandra K. Webster*

The Department of Psychology offers undergraduate programs leading to the Bachelor of Arts degree. The Department of Psychology curriculum is structured to meet the needs of four types of students interested in majoring in psychology: the student who plans to find employment after obtaining his/her bachelor's degree, rather than continuing formal education; the student who plans to go to graduate school in psychology; the student who plans to enter a field other than psychology that requires further formal training; and the student who has a general interest in psychology. A pamphlet, *Majoring in Psychology at Oakland University*, is available in the department office. The student planning to major in psychology should obtain a copy of this pamphlet, which offers suggested programs of study.

### Requirements for the Liberal Arts Major in Psychology

For students entering fall semester 1978 and after, the requirement is 36 credits in psychology, including PSY 100, 250, and four courses at the 350 level or above. Students who plan to attend graduate school should take statistics (PSY 357) and one of the experimental courses (PSY 400, 410, or 411).

The department currently offers practicum courses in areas of specialization such as gerontology and community psychology.

### Departmental Honors

Departmental honors are conferred upon graduates who have taken at least six psychology courses at Oakland University, including PSY 357 and a 400-level experimental course, and achieved a grade point average of 3.50 or higher in psychology courses. The student must also do honors-level work in PSY 494.

### Requirements for a Modified Major in Psychology with a Linguistics Concentration

A modified major in psychology with a concentration in linguistics is available. The linguistics concentration requires 24 credits in psychology, including PSY 100, 250, and at least two 300-level courses.

The department also offers Master of Arts degrees in clinical psychology and developmental psychology. For details, see the *Oakland University Graduate Study Catalog*.

### Requirements for the Liberal Arts Minor in Psychology

The requirement for a minor in psychology is 20 credits in psychology, including one introductory course (PSY 100 or

130), a methods course (PSY 250), and three other psychology courses, two of which must be at the 300 level or above.

### COURSE OFFERINGS

Courses at the 500 level are generally available to qualified upper-level undergraduates. Consult the *Graduate Study Catalog* for further information.

#### PSY 100 Foundations of Contemporary Psychology (4)

An introduction both to basic principles and recent formulations in psychology. Topics include the central psychological processes of attending, perceiving, learning, thinking, remembering, and study of social behavior and the development and organization of personality. Required of psychology majors.

#### PSY 130 Psychology and Society (4)

Examination of relationships among people and the effects of these relationships upon them. Analysis of social functions and roles; development and change of attitudes, beliefs, and values; and development of personality in relation to the social milieu.

#### PSY 200 through 209 Topics in Psychology (4 each)

Offered occasionally on special topics of current interest that are not listed among regular offerings.

#### PSY 220 Abnormal Psychology (4)

The psychodynamics of abnormal behavior, clinical types, methods of investigation, and principles of psychotherapy.

Prerequisite: PSY 100 or 130.

#### PSY 235 Social Psychology (4)

Overview of traditional and current trends in social psychology. Attention is given to developing theoretical approaches to attitudes, interpersonal processes, and social perception.

Prerequisite: PSY 100 or 130.

#### PSY 250 Introduction to Research Design (4)

General introduction to design, function, and interpretation of research in the social sciences. Aimed at providing necessary preparation to evaluate the empirically based content of psychology. Required of psychology majors.

Prerequisite: PSY 100 or 130.

#### PSY 271 Child Development (4)

Theory and principles of child development from birth to puberty. Selected topics include: maturational processes, learning and motivation, intelligence, self concept, and child-rearing practices.

Prerequisite: PSY 100 or 130.

#### PSY 300 through 309 Topics in Psychology (2 or 4 each)

Offered occasionally by faculty wishing to explore topics of current interest not listed among regular offerings, either on their own initiative or at the request of a group of students.

Prerequisite: Permission of instructor.

#### PSY 310 Coping Strategies in the Normal Personality (4)

Characteristics of healthy personality in the following dimensions: need gratification, reality contact, interpersonal relationships, and growth.

Prerequisite: PSY 100 or 130.

#### PSY 311 Tests and Measurement (4)

Theories of measurement and evaluation. Examination of construction and interpretation of tests of ability, achievement, interests, and special attitudes. Objective tests of personality.

Prerequisite: PSY 100 or 130.

#### PSY 312 Psychopathology of Childhood (4)

The psychopathology of children and adolescents, emphasizing dynamic and cognitive-perceptual-motor variables.

Prerequisite: PSY 100 or 130.

#### PSY 315 Individual Differences (4)

Intellectual, motivational, and personality differences associated with age, social roles, sex, ethnic and racial groups, and social class.

Prerequisite: PSY 100 or 130.

#### PSY 316 Applied Psychology (4)

The areas in which psychology has been used, such as child-rearing, teaching and training methods, personality and aptitude testing,

sensitivity training, human engineering, environmental design, and animal behavior.

Prerequisite: PSY 100 or 130.

**PSY 322 The Psychology of Crime and Delinquency (4)**

The nature of criminal behavior. Various psychological theories about the origins of delinquency and alternative approaches to dealing constructively with criminal behavior.

Prerequisite: PSY 100 or 130, and 220.

**PSY 323 Community Psychology (4)**

Historical antecedents, contemporary roots, and basic concepts of the community psychology movement. Community approach to problems of emotional disorder, suicide, poverty, community organization, and community education will be examined.

Prerequisite: PSY 100 or 130, and 220.

**PSY 324 Dehumanization (4)**

Survey of research and literature on the effects of removing an individual's responsibility for the outcome of personal behavior. Topics include bystander apathy, over-obedience, conformity, etc.

Prerequisite: PSY 100 or 130.

**PSY 325 Psychology of Women (4)**

Psychological variables that repeatedly differentiate women from men; topics include sex differences in personality and learning ability, dependence, passivity, identification, role conflict, and achievement motivation.

Prerequisite: PSY 100 or 130.

**PSY 326 The Psychology of Social Issues (4)**

Psychology's contribution to understanding selected issues of current social concern such as urban areas, jury selection, effects of television on violence, etc.

Prerequisite: PSY 100 or 130.

**PSY 331 Psychology of Adulthood and Aging (4)**

Psychological change, from young adulthood to death; topics include potentials for psychological growth and sources of crisis, changes in intellectual processes, attitudes toward aging, retirement, and the needs of the aged.

Prerequisite: PSY 100 or 130.

**PSY 335 Psycholinguistics (4)**

Identical with ALS 335.

**PSY 336 Psychology of Adolescence and Youth (4)**

The adolescent experience and the transition to adulthood, as influenced by physiological change, intellectual growth, and social attitudes. Topics include the quest for identity, juvenile delinquency, drug use, the youth culture, relationships between generations, and vocational choice.

Prerequisite: PSY 100 or 130.

**PSY 337 Group Behavior (4)**

Group structure, function, and process. Focus on how individuals affect the behavior of people in groups; how the group, in turn, affects the behavior of the individual. Topics include leadership, cohesion, group therapy, crowds, and mobs.

Prerequisite: PSY 100 or 130, and 235.

**PSY 350 Motivation (4)**

The nature of physiological and behavioral mechanisms that control an organism's reaction to the demands of its environment.

Prerequisite: PSY 100.

**PSY 351 Learning, Memory, and Thinking (4)**

Approaches to learning, memory, and thinking processes. Includes conditioning, problem solving, verbal behavior, storage systems, and organization.

Prerequisite: PSY 100.

**PSY 352 Sensation and Perception (4)**

Approaches to the basic sensory systems and perceptual processes.

Prerequisite: PSY 100 and PSY 250 or equivalent or permission of instructor.

**PSY 353 Cognitive Psychology (4)**

The information processing approach to problems in pattern recognition, selective attention, mental operations, short- and long-term memory, the psychology of reading, problem-solving, and probabilistic reasoning.

Prerequisite: PSY 100.

**PSY 354 Animal Behavior (4)**

Comparative psychological, ethological, and sociobiological viewpoints on the behavior of animals and humans. Descriptions of reproductive, aggressive and social behaviors, communication, learning-innate interactions, etc. Stresses an evolutionary viewpoint.

Prerequisite: PSY 100.

**PSY 355 Physiological Psychology (4)**

Biological bases of behavior with emphasis on humans and related mammalian species: basic neuroanatomy and neurophysiology, motivation, emotion, learning and memory, sleep and dreams, sensory-motor mechanisms, brain stimulation, and psychopharmacology, hormones, and behavior.

Prerequisite: PSY 100.

**PSY 357 Statistics and Research Design (4)**

The principal statistical procedures commonly employed in social science research. Emphasis is on design of experimental studies, problems of sampling and control of variables, and psychological measurement. Two years of high school mathematics are recommended.

Prerequisite: PSY 100 and 250.

**PSY 358 History and Systems of Psychology (4)**

How psychology came to be as it is. The beginning to the great experiments and the schools of psychology; the schools to World War II; World War II to the present. Men, experiments, theories.

Prerequisite: PSY 100 and two psychology courses other than PSY 357.

**PSY 360 Attitudes and Opinions (4)**

Nature and function of attitudes, relations between attitudes and personality, and attitudes and behavior. Attitude measurement, formation, and change processes.

Prerequisite: PSY 357.

**PSY 371 Work with the Elderly I (2 or 4)**

Introduction to community and institutional work with the elderly. Field placement is combined with readings and lectures on psychosocial services for the elderly.

Prerequisite: PSY 331 (may be taken concurrently with instructor's consent).

**PSY 372 Work with the Elderly II (2 or 4)**

Field work is combined with independent readings in gerontology.

Prerequisite: PSY 371 and 250 or its equivalent, and instructor's consent.

**PSY 376 Socialization in the Family (4)**

Some areas of research and theory on socialization processes. Areas of focus: attachment and separation, conscience development, sex-role identity, ego-identity, etc. Role of principal agents, e.g., family, peers, school.

Prerequisite: PSY 271, 331, or 336.

**PSY 380 Theories of Personality (4)**

Major theories of human personality development and principles of personality theory building.

Prerequisite: PSY 100 and two other psychology courses.

**PSY 391 through 398 Advanced Topics in Psychology (2 or 4)**

These courses will be offered occasionally by faculty wishing to explore special topics of current interest not listed among regular offerings, either on their own initiative or at the request of a group of students. Especially for majors, but qualified nonmajors will be admitted.

Prerequisite: PSY 100, 250, and permission of instructor.

**PSY 399 Field Experience in Psychology (4)**

The application of psychological concepts and methods in a work setting. Includes a minimum of 10 hours/week in job placement with a classroom component, readings, and discussion of relevant literature. Does not count towards the major. May not be repeated for credit.

Prerequisite: PSY 250 and 16 additional credits in psychology, of which at least 8 must be at the 300-400 level.

**PSY 400 Experimental Psychopathology (4)**

Basic philosophy of science; issues in design and methodology of psychological research with application to abnormal behavior. Experience in data collection.

Prerequisite: PSY 220 and 357.

## 76/Psychology (Arts and Sciences)

### **PSY 410 Experimental Social Psychology (4)**

Theory and techniques of survey research, field experiments, laboratory experiments, and field studies. Experience in data collection; independent project required.

Prerequisite: PSY 235 and 357.

### **PSY 411 Experiments in the Basic Processes (4)**

Issues in learning, perception, thinking, physiological psychology, and animal behavior with independent research project.

Prerequisite: PSY 357, and 351, 352, or 353.

### **PSY 430 Advanced Social Psychology (4)**

Critical study of selected areas in social psychology such as attribution theory.

Prerequisite: Permission of instructor.

### **PSY 441 Advanced General Psychology (4)**

Current frontiers of knowledge and new methodology in the range of psychology. For senior majors who plan to attend graduate school.

Prerequisite: Permission of instructor.

### **PSY 470 Apprentice College Teaching (4)**

Supervised participation in teaching undergraduate psychology courses. Discussion of teaching objectives and methods. May be

repeated for a total of 8 credits. Only 4 credits may be offered to fulfill major requirements.

Prerequisite: Permission of instructor.

### **PSY 480 through 485 Readings and Research Projects (2 or 4 each)**

Individual readings or laboratory research on a topic agreed upon by a student and a member of the psychology faculty. (Course numbers will be rotated from one semester to another.)

Prerequisite: Permission of instructor.

### **PSY 494 Honors Independent Studies (4)**

Independent honors research projects in clinical, developmental, experimental, and social psychology, respectively.

Prerequisite: Permission of instructor.

### **PSY 496 Senior Honors Seminar (4)**

Basic concepts and issues in the field of psychology, with representative topics such as mind-body, heredity-environment, learning-instinct, theories, models and paradigms, the nature of verification and measurement, and the politics of psychology.

Prerequisite: PSY 357 and two 300-level psychology courses and a grade point average of 3.50 in psychology.



# DEPARTMENT OF SOCIOLOGY AND ANTHROPOLOGY

**CHAIRPERSON:** Peter J. Bertocci

**PROFESSORS:** Nahum Z. Medalia, Jesse R. Pitts, Philip Singer

**ASSOCIATE PROFESSORS:** Peter J. Bertocci, William Bezdek, Judith K. Bronson, James W. Dow, Harry Gold, Jacqueline R. Scherer, Donald I. Warren

**ASSISTANT PROFESSORS:** Edward J. McCabe, A. Gary Shepherd, Richard B. Stamps

**ASSOCIATED FACULTY:** Assistant Professor Gayle H. Partmann (Linguistics)

The Department of Sociology and Anthropology participates in several degree programs, each designed to provide a maximum of flexibility to serve the student's interest while also providing the substantive background required to prepare the student for a career in his/her chosen field. These programs lead to the Bachelor of Arts degree.

## Requirements for Liberal Arts Majors in Sociology and Anthropology

1. **Major in sociology:** SOC 100 and 36 other credits in sociology. Of these, 8 may be taken in anthropology.
2. **Major in anthropology:** AN 101, 102, and 32 other credits in anthropology. Of these, 8 may be taken in sociology. LIN 301 may be substituted for one departmental course.
3. **Major in sociology and anthropology:** SOC 100, AN 101, AN 102, 16 additional credits in sociology, and 12 additional credits in anthropology.

Note: Not more than 8 credits may be taken in SOC or AN 190, 480, or 490.

## Requirements for Modified Majors in Sociology and/or Anthropology with Area Studies and/or Linguistics Concentrations

1. **Modified major in anthropology with concentration in area studies:** 24 credits in anthropology, including AN 101 and 102, and 20 credits in an area studies concentration.
2. **Modified major in anthropology with concentration in linguistics:** AN 101 and 102, 12 additional credits in anthropology, and 20 credits in linguistics. For linguistics requirements, see page 47.
3. **Modified major in sociology with concentration in linguistics:** 24 credits in sociology, including SOC 100 and 412, and 20 credits in linguistics. AN 204 may be substituted for one course in sociology. For linguistics requirements, see page 47.

## COURSE OFFERINGS IN ANTHROPOLOGY

### AN 101 Evolution of Man and Culture (4)

Introduction to physical anthropology and archaeology as applied to the evolution of man and culture. Stress placed on man's development in adaptation to the environment.

### AN 102 Man in Culture and Society (4)

Introduction to cultural and social anthropology with emphasis on the continuing adaptation of man to the environment and especially the interactions among culture, society, and natural environment.

### AN 190 Current Issues in Anthropology (4)

Designed for the general student, this course examines issues of current interest in anthropology. Topic will be announced at the time of offering.

### AN 222 Introduction to Anthropological Archaeology (4)

Introduces the field of anthropological archaeology through examination of theory, data collection methods and techniques, and interpretive strategies used to understand human histories, life-ways, and cultural processes.

### AN 251 Peasant Society and Culture (4)

The peasant as a social type; the peasant's role in the making of great civilizations; and forces for change in peasant societies, especially in the non-Western world.

Prerequisite: AN 102.

### AN 271 Magic, Witchcraft, and Religion (4)

Anthropological theories of magic, witchcraft, and religion: human interaction with beings, creatures, and forces that manifest extraordinary powers; folk beliefs of nonliterate people; and transformation of social systems by religious movements. Identical with REL 271.

Prerequisite: AN 102 or sophomore standing.

### AN 282 The Prehistoric Origins of Civilization (4)

The development and spread of culture in the period before written history, using archaeological evidence from Neolithic Old World and New World sites. Cultural evolution from early farming and settlement to the rise of complex civilization.

Prerequisite: AN 101.

### AN 305 Child Rearing and Human Development in Cross-Cultural Perspective (4)

Child-rearing practices and their educational role, the rearing of nonhuman primate young, and socialization practices of certain Western subcultures and non-Western societies.

Prerequisite: AN 102.

### AN 307 Cultural Anthropology and the Ethnographic Film (4)

The systematic study of selected peoples from different cultures through the ethnographic film and appropriate readings, lectures, and discussions. Students learn to evaluate cultural data according to various anthropological concepts and methodologies.

Prerequisite: Junior standing or permission of instructor.

### AN 310 Culture and Personality (4)

Theories of psychological anthropology on culture and personality and psychological phenomena viewed in relationship to culture and from a cross-cultural perspective.

Prerequisite: AN 102.

### AN 322 Subsistence and Technology in Nonindustrial Society (4)

Technologies of different cultures and their implications for the individual, society, and general cultural survival; the ecology of tribal, peasant, and industrial cultures with emphasis on the subsistence technology of non-Western cultures or on a comparative study of cultural adaptation. Identical with ENV 322.

Prerequisite: AN 102.

### AN 333 Medical Anthropology (4)

Focuses on the interaction between biological, ethnopsychiatric, and sociocultural environments as related to cultural behavior in health, illness, and treatment. The range of academic and applied problems includes historical, organizational, demographic, ecological and other problems encountered in health care delivery.

Prerequisite: Three courses in anthropology, or two courses in anthropology and one in sociology.

### AN 337 Women's Lives in Cross-Cultural Perspective (4)

Anthropological literature will be used to examine cultural variation in rituals and customs affecting women's lives. Female life-cycle events and the division of labor by sex will be studied in relation to the position of women in different societies.

Prerequisite: AN 102.

### AN 340 Culture and Personality in Indian Society (4)

Personality in Indian culture; the persistence of basic Hindu personality and cultural communities.

Prerequisite: AN 310.

### AN 352 Survey of African Peoples and Cultures (4)

A general survey of the geography, history, economy, society, religions, and political systems of selected indigenous peoples of Africa. Part of the course will cover the events of the period of European contact.

Prerequisite: AN 102.

## 78/Sociology and Anthropology (Arts and Sciences)

### **AN 361 Peoples and Cultures of India (4)**

A survey of contemporary society and culture on the Indian sub-continent, with focus on India, Pakistan, and Bangladesh; emphasis on social structure, folk religion, and the problems of socio-cultural change.

Prerequisite: AN 102 or AS 240.

### **AN 362 Peoples and Cultures of China (4)**

An anthropological study of China, stressing the variety of cultural and ecological adaptations characteristic of that complex society.

Prerequisite: AN 102 or AS 210.

### **AN 370 Archaeology of Mesoamerica (4)**

The pre-Hispanic culture of Mexico and Guatemala, the Aztecs and Mayas, and their neighboring and derivative cultures. Detailed discussion of the major archaeological sites.

Prerequisite: AN 101 and 102.

### **AN 371 Cultures of Mesoamerica (4)**

Anthropological studies of Indian and Mestizo societies in Mexico and Guatemala, including their separate socio-economic patterns and their integration into a dualistic social system.

Prerequisite: AN 102.

### **AN 372 Indians of South America (4)**

A survey of the native South Americans. Includes warriors of the jungles, peasants and herders of the mountains, nomads of the plains and forests, and subsistence fishermen of the southern coasts.

Prerequisite: AN 102.

### **AN 375 Language and Culture (4)**

Identical with ALS 375.

### **AN 380 Archaeology of North America (4)**

The evolution of native North American cultures (including Mesoamerica) from 50,000 B.C. to 1500 A.D., with emphasis on the ecological factors in the development of culture areas.

Prerequisite: AN 101.

### **AN 381 Peoples of North America: Indians and Eskimos (4)**

The culture of certain North American Indian societies and Eskimo societies and their adaptation to Western contact.

Prerequisite: AN 102.

### **AN 382 Advanced Physical Anthropology (4)**

The emergence and diversification of the human species in relation to the morphology and ecology of both modern and fossil man, including physical and physiological variation (sex, race, and age), climatic adaptation, and population genetics.

Prerequisite: AN 101.

### **AN 383 Methods in Anthropological Archaeology (4)**

Instruction and field research, including site location, excavation and artifact analysis, and conservation. May be repeated once for credit.

Prerequisite: AN 101.

### **AN 384 Research Methods in Cultural Anthropology (4)**

Methods for the collection of data, the formation of theory, and the testing of hypotheses in cultural anthropology, including field work methods and other techniques.

Prerequisite: AN 102.

### **AN 391 Primate Behavior (4)**

Various bio-social factors which aid the nonhuman primates in their adaptation to the environment, implications for human behavior, classroom discussions, and field studies.

Prerequisite: AN 101.

### **AN 400 History of Anthropological Theory (4)**

The historical development of theory in anthropology; emphasis on recurring problems of theoretical and empirical import to the growth of the discipline as a whole.

Prerequisite: AN 102.

### **AN 401 Social Anthropology (4)**

Examines social structure and social organization in anthropological perspective. Entails the study of economic, political, religious, and kinship systems in the social life of man.

Prerequisite: AN 102.

### **AN 410 Cultural Ecology (4)**

Examines current theory and data on cultural responses to environment and the processes that lead to human survival or extinction as

groups and societies interact with their natural environments. Identical with ENV 410.

Prerequisite: AN 322, ENV 322, ENV 333, or ENV 362.

### **AN 411 Communication, Ethology, and Man (4)**

The course will cover such topics as verbal and nonverbal communication, culture or tradition, spatial relationships, sexuality, ritual, group structure, and the definition of social situations.

Prerequisite: AN/ALS 375 or SOC/ALS 376.

### **AN 415 Cognitive Anthropology (4)**

Study of culture as perceived by the people who live it, rather than by an outside observer. Includes ethnoscience, ethnographic semantics, and systematic ethnography. Involves work with symbolic systems.

Prerequisite: AN 102.

### **AN 420 Ethnopsychiatry (4)**

The socio-cultural context of mental illness and the forms of its institutional and medical care; relation between family relationships, child-rearing practices, and mental illness; and the physician-patient and indigenous healer-patient relationship.

Prerequisite: Three sociology or anthropology courses.

### **AN 430 Systems of Wealth and Power in Anthropological Perspective (4)**

Concepts and methods of political and economic anthropology, emphasizing the interrelated state of political and economic phenomena, with particular reference to preindustrial, non-Western societies.

Prerequisite: AN 102.

### **AN 440 Anthropology of Law (4)**

The mechanisms of social control and legal institutions in non-Western, preliterate societies. Topics include the varying types of moral order and the problem of legal enforcement in stateless societies.

Prerequisite: AN 102 or 200.

### **AN 460 Problems of Social and Economic Change in Developing Societies (4)**

The role of anthropology in programs of socio-economic development in non-Western areas. Review of U.N. activities and national governments.

Prerequisite: AN 102.

### **AN 480 Independent Study and Research (2 or 4)**

A tutorial in which the student will pursue a course of reading and research with the instructor. May be repeated only once for credit.

Prerequisite: Permission of instructor.

### **AN 490 Current Problems in Anthropology (2 or 4)**

An advanced seminar in which a topic or problem is studied in depth. Each seminar requires independent readings and writing.

Prerequisite: Permission of instructor.

### **AN 497 Apprentice College Teaching (2 or 4)**

Supervised participation in teaching an undergraduate course in anthropology, combined with readings and discussion of teaching objectives and methods appropriate for anthropological presentation. May be taken only once for credit toward a major.

Prerequisite: Senior anthropology major and permission of instructor.

## **COURSE OFFERINGS IN SOCIOLOGY**

### **SOC 100 Introduction to Sociology (4)**

Introduction to the basic principles, concepts, and theories of sociology relating to the study of man as a participant in group life. Particular attention is given to social structure, cultural processes and patterns, socialization and personality development, and social stratification.

### **SOC 190 Current Issues in Sociology (4)**

Designed for the general student, this course will examine issues of current interest in sociology. The topic will be announced at the time of the offering.

### **SOC 200 Introduction to Sociology of Education (4)**

The public school system in contemporary life, emphasizing unionization, bureaucratic structure and informal organizations within the school, and special problems of minority groups. Primarily for secondary teaching majors.

### **SOC 202 Introduction to Methods of Social Research (4)**

The collection, organization, analysis, and interpretation of social data; elementary techniques of understanding and using quantitative



evidence in sociological research.

Prerequisite: SOC 100.

**SOC 203 Social Statistics (4)**

Interpretation of social data by quantification and statistical reasoning. Considers basic descriptive techniques such as percentages, correlations, and measures of dispersion; basic ideas of statistical inference; basic properties of the binomial and normal distributions; and the more common nonparametric statistics used in analyzing survey data.

Prerequisite: Two years of high school mathematics.

**SOC 205 Sociology of Social Problems (4)**

An introductory survey of social problems in areas such as race relations, poverty, delinquency, and crime. Comparison of sociological with journalistic, theological, and political-legal approaches to social problems.

Prerequisite: SOC 100.

**SOC 300 Social Stratification in Cross-Cultural Perspective (4)**

The concepts of class, caste, and race in relation to social conflict and social integration. Students will study these problems in a cross-cultural perspective, emphasizing comparative materials.

Prerequisite: SOC 100.

**SOC 305 Sociology of Religion (4)**

An analysis of changing relationship between social structure and religion in preindustrial societies, Europe during the Protestant Reformation, and the contemporary U.S. Identical with REL 305.

Prerequisite: SOC 100.

**SOC 306 Sociology of Science (4)**

A sociological view of the natural and life sciences. Topics include: training and socializing young scientists; organizations in scientific fields, such as industrial laboratories, university departments, and "invisible colleges"; and inequalities in science.

Prerequisite: SOC 100 or major standing in a physical or life science.

**SOC 307 Advanced Methods of Social Research (4)**

Problems and techniques of measurement in contemporary sociological research; the diversity of research methods; and the relationship between social research and social theory.

Prerequisite: SOC 100 and 202.

**SOC 311 Classical Sociological Theories (4)**

Study of classical sociological theory stressing the works of Comte, Marx, Durkheim, Pareto, Weber, Simmel, and Freud.

Prerequisite: SOC 100 or a 300- or 400-level course in any social science.

**SOC 320 Sociology of Crime and Punishment (4)**

Study of the various forms of criminal deviance, the sociological theories developed to explain the phenomenon of crime, and modes of control from hospitals to penitentiaries.

Prerequisite: SOC 100.

**SOC 323 Juvenile Delinquency and Its Social Control (4)**

Nature and types of juvenile delinquency; the relation of juvenile delinquency to the stress of adolescence and the specific social situation; methods of preventing delinquency or its recurrence.

Prerequisite: SOC 320.

**SOC 331 Racial and Ethnic Relations (4)**

A study of racial, ethnic, and religious groups, particularly those of the U.S., emphasizing their historical development, problems of adjustment and assimilation, and contemporary problems and trends.

Prerequisite: SOC 100.

**SOC 335 The Family (4)**

A comparative and historical study of the family.

Prerequisite: SOC 100.

**SOC 336 Sex Roles in Modern Society (4)**

The impact of ideological and technological change on the statuses, occupations, and relationships of males and females.

Prerequisite: SOC 100.

**SOC 337 Character and Social Structure (4)**

A study of the impact of society upon the individual.

Prerequisite: SOC 100.

**SOC 338 Moral Socialization (4)**

The cultural, social, and social-psychological dimensions of "morality": how moral agreements are reached in group settings, and how

these are communicated to group members, and how individual members acquire and incorporate these agreements into their personal values and behaviors.

Prerequisite: SOC 100.

**SOC 357 Industrial Sociology (4)**

The relationship between industrial and business organizations and the community, the history of industrial sociology, the study of occupations, the social structure of business and industrial organizations, labor unions, informal work groups, and the character of American occupational life.

Prerequisite: SOC 100.

**SOC 371 Forms and Effects of Mass Communication (4)**

Analysis of objectives and techniques of disseminating ideas and information through the mass media; evaluation of the influence of the media on values and policy preferences of individuals, social groups, and institutions; design and application of research methods and models for the study of mass communication. Identical with SCN 371.

Prerequisite: SOC 100 or sophomore standing.

**SOC 376 Sociolinguistics (4)**

Identical with ALS 376.

**SOC 381 Sociology of Modern Organizations (4)**

A study of organizations, especially nonindustrial organizations such as labor unions, ethnic associations, religious congregations, and social service agencies. Topics include: analysis of bureaucracies, features of organizations such as goal-setting and communication and effects of organizations on American culture.

Prerequisite: SOC 100.

**SOC 400 Higher Education as a Socializing Institution (4)**

Discussion of concepts and research methods developed in the study of socializing institutions with particular reference to higher education.

Prerequisite: SOC 100 and 200.

**SOC 402 Small Groups (4)**

The study of small group relations and the informal understandings, codes, and conventions which they generate. Considers dynamics of individuality, leadership, conformity, and esprit de corps in a group setting. Identical with SCN 402.

Prerequisite: SOC 100.

**SOC 403 Computer Packages in Social Science (4)**

Principles of packaged programs, with practice in data editing and analysis with SPSS (Statistical Package for the Social Sciences) and other packages as available. Comparative merits of different packages; special techniques and languages for computer analysis of social problems.

Prerequisite: SOC 203 or equivalent.

**SOC 404 Sociology of Poverty and Social Welfare (4)**

Survey of the development of social welfare programs in the U.S. Procedures developed to deal with problems of poverty, such as case work, community organization, and agency programming; analysis and evaluation of current policy debates on welfare programs.

Prerequisite: SOC 100 or 405.

**SOC 405 The Social Context of Social Work (4)**

A study of the social work profession and the social context of welfare policies; the relationships between social structure and the development of social work practice, and public and private welfare organizations.

Prerequisite: SOC 100 or two courses in psychology or human resources development.

**SOC 408 Population Theory and Problems (4)**

Historical analysis of world population growth, focusing on relationships among population size, population policy, and social and economic development.

Prerequisite: SOC 100.

**SOC 412 Contemporary Sociological Theory (4)**

Contemporary sociological theory from Veblen, Mead, and Thomas to the present, including Merton, Parsons, Lipset, Goode, and Eisenstadt.

Prerequisite: SOC 311.

**SOC 422 Sociology of Law (4)**

An investigation of law and legal institutions from a comparative-perspective, including the uses of law, the development of legal

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institutions, the role and organization of legal professionals, social influences on law, and the capacity of law to affect social behavior. Prerequisite: SOC 100.

### **SOC 423 Police and Society (4)**

A study of police techniques and problems, of deviant citizen-police relations, and of social control in a field where power is high and visibility is relatively low. Topics include the defenses against corruption and the containment concept of police. Prerequisite: SOC 320.

### **SOC 425 Corrective and Rehabilitative Institutions (4)**

Correctional institutions according to levels of security, and levels and types of resocialization pressures; problems of interaction within the institution are analyzed, e.g., between inmate, guard, supervisor, and rehabilitation specialist; development of inmate subcultures; dynamics of crisis (e.g., riots); and equilibrium. Prerequisite: SOC 320.

### **SOC 428 Sociology of Medical Practice (4)**

The structure of the medical profession from "black-bag" practice to group and hospital-centered practice; medical training, induction into practice and collegueship; related professionals such as chiropractors, optometrists, nurses, and paramedics. Prerequisite: SOC 100.

### **SOC 430 Internship in Social Justice and Corrections (4 or 8)**

Field placement and supervision of students in police, prison, and parole organizations and agencies. Prerequisite: Enrollment in social justice and corrections concentration and written permission of instructor.

### **SOC 437 Sociology of the Courts (4)**

The roles of judges, court officers, jury, and attorneys are described and analyzed in the context of their professional matrix. Prerequisite: SOC 100 and 320.

### **SOC 440 The Sociology of Youth (4)**

A cross-cultural analysis of the emerging youth culture in industrial societies: the economic, social, and political consequences. Prerequisite: SOC 100 and junior standing or above.

### **SOC 441 Social Change (4)**

The prediction and explanation of social change; change mechanisms such as crowds, publics, mass or social movements, and revolutions; and implications for social action. Prerequisite: SOC 100 and junior standing or above.

### **SOC 443 Communities (4)**

Community is examined in both empirical and theoretical contexts, with emphasis on contemporary experiments, recent political and social interpretations of community development, and changing patterns of communal interaction. Prerequisite: SOC 100.

### **SOC 444 The Neighborhood (4)**

Social patterns of neighborhood life and the individual, the basis of ecological and cultural differentiation in central city, suburban and rural fringe areas. Investigation methods include observation, theoretical, and applied aspects of research. Prerequisite: SOC 100 or AN 101, and SOC 443 or 445.

### **SOC 445 Urban Sociology (4)**

The social structure, culture, and ecology of early and contemporary urban communities; institutional responses to the problems of modern urban life. Prerequisite: SOC 100.

### **SOC 455 Sociology of Occupations and Professions (4)**

The structure of major occupations and professions in terms of their publics, mandates, clients, and the career lines they offer, with comparisons between "incomplete professions," such as nursing and undertaking, and full-fledged professions. Prerequisite: SOC 100.

### **SOC 460 Political Sociology (4)**

Sociological factors which influence distribution of power within a society: political communication, maintenance of consensus, the revolution process, the structure of political parties, and the emergence of new states. Prerequisite: SOC 100.

### **SOC 465 Sociological Perspectives on Aging (4)**

The most significant recent sociological perspectives on aging: theories of aging and modernization; societal disengagement; age stratification. Topics include comparative status of the aged in developing and industrial societies; status of persons approaching and past retirement age in the U.S.; family and community roles and relations; and occupational and political participation. Prerequisite: SOC 100 and junior standing or above.

### **SOC 470 Field Studies in Sociology: Urban Workshop (4)**

Emphasis on sociological analysis and interpretation as participant-observers in Detroit metropolitan social service organizations. Four to eight hours per week of field activity and written reports of the field study are required. Field placements and class meetings to be arranged by instructor. Prerequisite: SOC 100 or 405.

### **SOC 473 Social Control of Mass Media (4)**

The major sociological factors which control the informational content of the mass media; differences between the structures and processes or control in the print and electronic sectors of the media. Identical with SCN 473. Prerequisite: SOC 371.

### **SOC 477 Survey Research (4)**

Theory and procedures of research surveys; research design, types of questions, and sampling techniques; includes field interviewing. Prerequisite: SOC 100 and 203.

### **SOC 480 Independent Study and Research (2 or 4)**

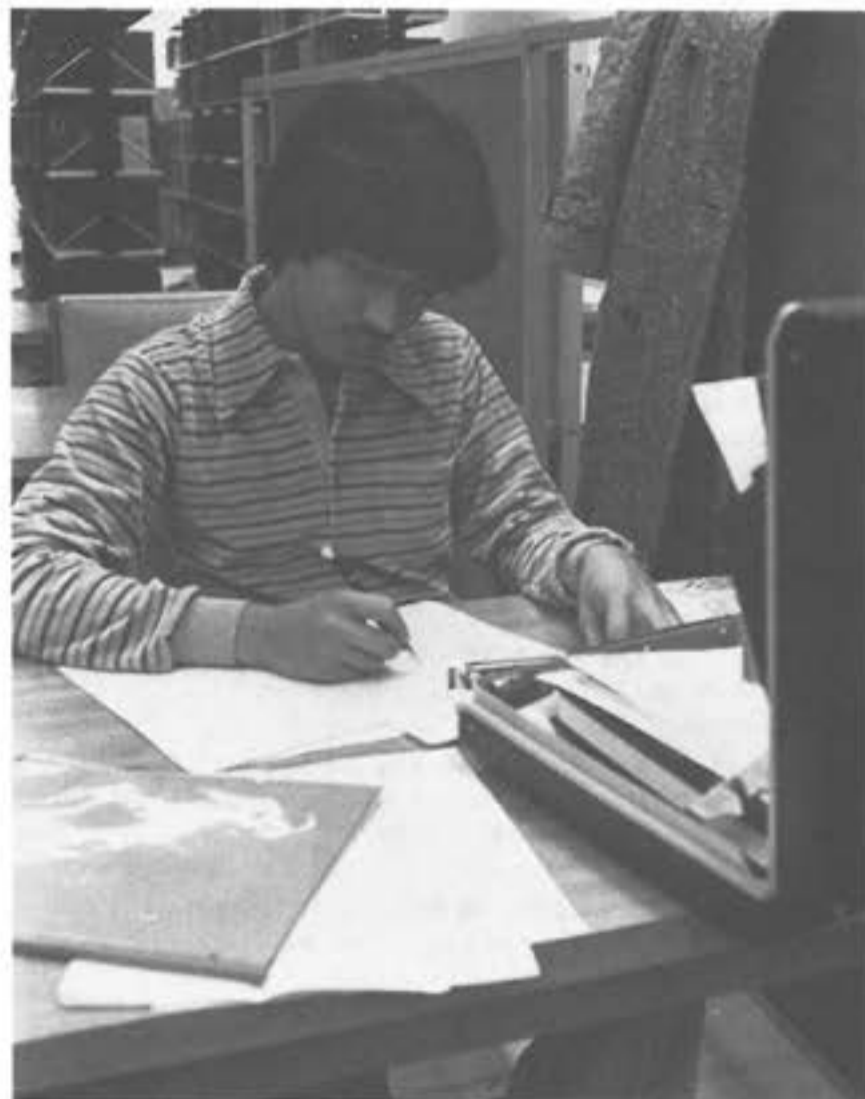
Directed individual reading and research. Prerequisite: Permission of instructor.

### **SOC 490 Special Topics in Sociology (2 or 4)**

Seminar on a special topic or problem requiring independent reading and writing. Prerequisite: Permission of instructor.

### **SOC 497 Apprentice College Teaching (2 or 4)**

Supervised participation in teaching an undergraduate course in sociology, combined with readings and discussion of teaching objectives and methods appropriate for sociological presentation. May be taken only once for credit toward a major. Prerequisite: Senior sociology major and permission of instructor.



# AREA STUDIES PROGRAMS

**CHAIRPERSON:** Carlo Coppola (*Modern Languages-Linguistics — South Asia*)

**AREA STUDIES COMMITTEE:** Carlo Coppola (*Modern Languages—Graduate Coordinator*), Brian W. Coyer (*Political Science—South Asia*), DeWitt S. Dykes (*History—Afro-America*), Robert C. Howes (*History—Slavic*), Kathryn M. McCardle-Pigott (*Modern Languages—Latin America*), Gayle H. Partmann (*Linguistics-Sociology and Anthropology—Africa*), C. Franklin Sayre (*Art and Art History—East Asia*), Richard P. Tucker (*History—South Asia*)

Drawing on faculty from its various disciplines, the College of Arts and Sciences sponsors a distinctive offering of area studies programs. The programs are dedicated to the understanding of living civilizations whose various aspects — art, government, history, language, literature, music, and social organization — are studied in the traditional departments of the university. A concentration in one of the areas offered might be considered by a student who, from intellectual curiosity, seeks an integrated view of a civilization as well as by a student who looks forward to a career in government service, journalism, teaching, residence or work abroad, or to graduate study with an area emphasis.

Oakland offers area programs in African studies, Afro-American studies, East Asian studies (China and Japan), Latin American studies, Slavic studies (Russia and Eastern Europe), and South Asian studies (India, Pakistan, and Bangladesh). Courses labeled "AS" are described at the end of this section. All other courses applicable to area studies programs are offered by college departments, and descriptions of those courses are found in the respective departmental listing.

## Requirements

An area studies concentration is offered in combination with a modified departmental major in anthropology, art history, philosophy, and political science. The requirements for these modified majors are found in the appropriate departmental listings.

Except for African and Afro-American studies described below, the area studies concentration requires 24 credits in the major department, the introduction course in the selected area, AS 490, 16 additional credits from the course offerings of the specific area, and 16 credits of university-level work in an appropriate foreign language or its equivalent (see specific areas for details).

A major in area studies has been approved. For details please inquire in the area studies programs office.

## African Studies Program

**COORDINATOR:** Gayle H. Partmann (*Linguistics-Sociology and Anthropology*)

**FACULTY:** William C. Forbes (*Biological Sciences*), James D. Graham (*History*), Karl D. Gregory (*Economics and Management*), Marvin D. Holladay (*Music*), James W. Hughes (*Education*), David Jaymes (*Modern Languages*), Mary Karasch (*History*), Vincent B. Khapoya (*Political Science*), Charlotte Stokes (*Art History*)

The language requirement may be met by any language currently in use in Africa (except English) and approved by the program chairperson. Some anthropological linguistics may be allowed to partially fulfill this requirement.

### COURSE OFFERINGS

AH 102	Introduction to African, Oceanic, and American Indian Art
AH 305	African Art
AN 352	Survey of African Peoples and Cultures

BIO 309  
BIO 365  
ECN 327  
HST 285  
HST 365  
LIN 410

MUS 251  
NCC 215  
PS 332  
PS 333  
AS 230  
AS 300  
AS 384  
AS 390  
AS 490

Parasitology  
Medical Parasitology and Mycology  
African Economic Development  
African History  
The Response to European Colonialism  
Studies in the Structure of a Language:  
African Languages  
African through Afro-Caribbean Music  
African Music as Oral Culture  
Politics of the Middle East and North Africa  
African Politics  
Introduction to Africa  
Special Topics in Area Studies  
Seminar in African Studies  
Directed Readings in Area Studies  
Directed Research in Area Studies

## Afro-American Studies Program

**COORDINATOR:** De Witt S. Dykes (*History*)

**FACULTY:** Johnetta Brazzell (*Urban Affairs*), Robert L. Donald (*English*), James D. Graham (*History*), Karl D. Gregory (*Economics and Management*), Marvin D. Holladay (*Music*), Mary Karasch (*History*), Vincent B. Khapoya (*Political Science*), Nahum Medalia (*Sociology and Anthropology*), Carl Osthaus (*History*), Colin A. Palmer (*History*)

The concentration in Afro-American studies, which consists of 28 credits, is offered in conjunction with a major in any department. Required courses are AS 230, AS 380, HST 292, and one course from each of the following groups:

1. ENG 342, MUS 346, or AH 208.
2. PS 103, ECN 221, or SOC 331.
3. AS 300, AS 390, HST 319, HST 323, HST 366, MUS 347, or NCC 327.

### COURSE OFFERINGS

AH 208	Afro-American Art
ECN 221	Economics of the Afro-American Experience
ENG 342	Black American Writers
HST 292	History of the Afro-American People
HST 319	History of the American South
HST 323	Topics in Afro-American History
HST 366	Slavery and Race Relations in the New World
MUS 346	The Music of Black Americans
MUS 347	History of Jazz
NCC 327	The Afro-American Experience in Michigan
PS 103	Black Politics
SOC 331	Black and Ethnic Relations
AS 230	Introduction to Africa
AS 300	Special Topics in Area Studies
AS 380	Seminar in Afro-American Studies
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

## East Asian Studies Program

**COORDINATOR:** Paul M. Michaud (*History*)

**FACULTY:** Sheldon L. Appleton (*Political Science*), Robert C. Howes (*History*), Janet Krompart (*East Asian librarian*), John Marney (*Modern Languages*), C. Franklin Sayre (*Art and Art History*), Richard B. Stamps (*Anthropology*), Amitendranath Tagore (*Modern Languages*), S. Bernard Thomas (*History*), Robert J.J. Wargo (*Philosophy*)

The language requirement is Chinese or Japanese.

Students interested in East Asian studies may also major in Chinese language and civilization. The major, sponsored by the Department of Modern Languages, requires 16 credits in Chinese beyond CHE 216 and 20 credits from the courses listed below, including AS 490.

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Students wishing to study in Japan may do so through an exchange program between Oakland University and Nanzan University, Nagoya, Japan.

### COURSE OFFERINGS

AH 104	Introduction to Asian Art
AH 300	Chinese Art
AH 301	Japanese Art
AN 362	Peoples and Cultures of China
HST 270	History of Modern Japan
HST 370	China: Beginnings through Han to A.D. 220.
HST 371	China: From the Three Kingdoms through Ming, 220-1644
HST 373	China: The Final (Ch'ing) Imperial Phase, 1644-1912
HST 374	China: The Nationalist Republican Period, 1912-1949
HST 375	Topics in Chinese Intellectual History
HST 376	History of Chinese Communism, 1921-Present
PHL 250	Philosophies and Religions of Asia
PHL 351	Chinese Philosophy
PHL 353	Japanese Philosophy
PS 318	Foreign Policies of Communist Systems
PS 338	Modern Chinese Politics
AS 210	Introduction to China
AS 220	Introduction to Japan
AS 300	Special Topics in Area Studies
AS 361-362	Japan Exchange Program
AS 381	Seminar in East Asian Studies
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

### South Asian Studies Program

**COORDINATOR:** Richard P. Tucker (History)

**FACULTY:** Peter J. Bertocci (Sociology and Anthropology), Richard W. Brooks (Philosophy), Thomas W. Casstevens (Political Science), Carlo Coppola (Modern Languages), Brian W. Coyer (Political Science), Paul M. Michaud (History), Munibur Rahman (Modern Languages), Amitendranath Tagore (Modern Languages)

The language requirement is an Indian language, chosen with approval of program chairperson.

### COURSE OFFERINGS

AH 104	Introduction to Asian Art
AN 361	The Peoples and Cultures of India
HST 381	History of Early India
PHL 250	Philosophies and Religions of Asia
PHL 352	Indian Philosophy
PS 334	Political Systems of Southern Asia
SOC 300	Social Stratification in Cross-Cultural Perspective
AS 240	Introduction to India
AS 300	Special Topics in Area Studies
AS 382	Seminar in South Asian Studies
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

### Slavic Studies Program

**COORDINATOR:** Robert C. Howes (History)

**FACULTY:** Alice C. Gorlin (Economics), Helen Kovach-Tarakanov (Modern Languages), Lawrence D. Orton (History), James R. Ozinga (Political Science)

The language requirement is any Slavic language with approval of program chairperson.

Students interested in Slavic studies may also major in Russian language and civilization. The major, sponsored by the Department of Modern Languages, requires 16 credits in Russian beyond RUS 216 and 20 credits selected from the list of Slavic studies courses, including AS 490.

### COURSE OFFERINGS

ECN 251	The Soviet Economy
HST 250	History of Russia
HST 254	Eastern European History
HST 352	Kiev and Muscovy
HST 353	Imperial Russia
HST 354	Soviet Russia
HST 359	Russian Intellectual History to Peter the Great
HST 360	Russian Intellectual History since Peter the Great
PS 318	Foreign Policies of Communist Systems
PS 337	The Soviet Political System
PS 377	Communism
AS 260	Introduction to the Slavic World
AS 300	Special Topics in Area Studies
AS 383	Seminar in Slavic Studies
AS 386	Slavic Folk Studies
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

### Latin American Studies Program

**COORDINATOR:** Kathryn McArdle-Pigott (Modern Languages)

**FACULTY:** William C. Bryant (Modern Languages), James W. Dow (Sociology and Anthropology), Edward J. Heubel (Political Science), Mary C. Karasch (History), Richard Mazzara (Modern Languages), Colin A. Palmer (History), Charlotte Stokes (Art History)

The language requirement is Spanish or Portuguese.

Students interested in Latin American studies may also major in Latin American languages and civilization. The major, sponsored by the Department of Modern Languages, requires 24 credits in Spanish beyond SPN 216 and 20 credits selected from the courses listed below, including AS 490. For alternative language requirements, see the modern languages entry.

Students may study in Mexico through the Oakland program sponsored in conjunction with the Instituto Cultural Tenochtitlán in Morelia.

### COURSE OFFERINGS

AH 307	Pre-Columbian Art
AN 370	Archaeology of Mesoamerica
AN 371	Cultures of Mesoamerica
AN 372	Indians of South America
HST 261, 262	Introduction to Latin American History
HST 363	History of Southern South America
HST 365	The Response to European Colonialism
HST 366	Slavery and Race Relations in the New World
HST 367	History of Mexico
PS 335	Politics of Latin America
SPN 421	Spanish-American Literature
AS 250	Introduction to Latin America
AS 300	Special Topics in Area Studies
AS 368	Summer Program in Mexican Studies
AS 385	Seminar in Latin American Studies
AS 390	Directed Readings in Area Studies
AS 490	Directed Research in Area Studies

### AREA STUDIES COURSE OFFERINGS

#### AS 210-270 Introductory Courses (4 each)

An interdisciplinary study of the peoples of a specific area and their traditional and modern civilizations. Students should enroll in the course number corresponding to a specific area:

AS 210	Introduction to China
AS 220	Introduction to Japan
AS 230	Introduction to Africa
AS 240	Introduction to India
AS 250	Introduction to Latin America
AS 260	Introduction to the Slavic World
AS 270	Introduction to Islamic Civilization

Interdisciplinary study of a foreign area for which no regular course offerings exist. May be repeated once for a total of 8 credits. Prerequisite: Appropriate AS Introductory Course.

**AS 361-362 Japan Exchange Program (16-18)**  
 Course work is taken at Nanzan University in Nagoya; includes Japanese language study and additional appropriate courses with English as the language of instruction.

**AS 368 Summer Program in Mexican Studies (8)**  
 Oakland faculty cooperate with Mexican faculty to present a set of summer courses focusing on Mexican culture: history, art, political and social problems, folk arts, archaeology, Chicano studies, intensive language, and Mexican literature. Emphasizes comparisons with U.S. culture and field work. Courses conducted in both Spanish and English. May be repeated once for additional credits with consent of the Latin American studies coordinator.

**AS 380-385 Seminars (4)**  
 Selected topics dealing with a specified area, to supplement departmental area courses. Students enroll under the number corresponding to a specific area. May be repeated once for a total of 8 credits. Prerequisite: Senior standing and permission of instructor.

**AS 380 Seminar in Afro-American Studies**

**AS 381 Seminar in East Asian Studies**

**AS 382 Seminar in South Asian Studies**

**AS 383 Seminar in Slavic Studies**

**AS 384 Seminar in African Studies**

**AS 385 Seminar in Latin American Studies**

**AS 386 Slavic Folk Studies (2)**

An intensive survey of the traditional music, songs, dances, and costumes of selected Slavic cultures. Includes participation in the Slavic Folk Ensemble. May be repeated once for a total of 4 credits. Graded S/N.

**AS 390 Directed Readings in Area Studies (2, 4, 6, or 8)**  
 Readings from diverse disciplines with focus on a student's area of specialization. Conducted as a tutorial by an instructor chosen by the student.

Prerequisite: Appropriate AS introductory course and permission of program chairperson and instructor.

**AS 490 Directed Research in Area Studies (2, 4, 6, or 8)**  
 Research relating to the student's area of specialization including a senior essay or research paper. Supervised by an area studies instructor.

Prerequisite: Senior standing and permission of program chairperson and instructor.



## BIOCHEMISTRY PROGRAM

**BIOCHEMISTRY COMMITTEE:** *Denis M. Callewaert (Chemistry), John D. Cowlshaw (Biological Sciences), Arun K. Roy (Biological Sciences), Michael D. Sevilla (Chemistry)*

This interdepartmental program offers a B.S. degree with a major in biochemistry. The program is based on faculty resources and research facilities in the departments of biological sciences and chemistry. The curriculum is designed to prepare students for professional schools in health sciences, graduate school in biochemistry and in biochemical research. The specialized research facilities for cellular and analytical biochemistry at Oakland include: tissue culture facilities, ultracentrifugation laboratory, isotope laboratories with beta and gamma counters, gas chromatographs, equipment for high pressure liquid chromatography, equipment for NMR, EPR, laser Raman and atomic absorption spectroscopy, and various other computerized biochemical equipment. The undergraduate students in the biochemistry program have access to faculty research laboratories and are encouraged to participate in various ongoing research programs such as studies on gene expression, hormone action, immunochemistry, biochemistry of viruses and nucleic acids, and radiation damage to macromolecules. The minimum requirement for a Bachelor of Science in Biochemistry is 124 credits which include 32 credits in chemistry, 16 credits in biological sciences, and 12 credits in biochemistry.

### Admission Requirements

Students may apply for admission to the biochemistry program after completing 16 credits of the core program with a

grade point average of 2.5 or better in these courses. Courses which carry no numerical grade and letter grades are excluded from the calculation of the grade point average.

### Requirements for the Bachelor of Science Degree

Students wishing to select this major should prepare a detailed plan of study in consultation with a member of the biochemistry committee.

1. A core program of 58 credits, including BIO 190; CHM 144, 145, 147, 148, 225, 303, 304, 306, 307, 442; BCM 453, 454; PHY 151, 152; MTH 154, 155 (STA 321 is a recommended elective).
2. An additional 12 credits in biology from the following courses: BIO 200, 319, 320, 321, 322, 323, 324, 341, 342, 345, 393, 394.
3. At least 6 credits of advanced study in biochemistry from the following courses: BIO 407, 408, 490; CHM 457, 458, 490, 553.
4. Admission to major standing and approval by the biochemistry committee of a detailed program of study at least three semesters before graduation.

### COURSE OFFERINGS

**BCM 453-454 Biochemistry (3 each)**  
Identical with CHM 453-454.



# ENVIRONMENTAL HEALTH PROGRAM

**DIRECTOR:** *Paul Tomboulis (Chemistry)*

This curriculum, leading to the Bachelor of Science degree and requiring 128 credits, prepares students for a variety of professional opportunities in government and the private sector. Graduates of the program should be able to identify and evaluate a broad range of environmental problems. In addition they should be able to offer solutions, as well as to anticipate hazards and prevent future problems. Studies include such areas as health and safety in the work place, toxic substances, air resources, water resources, land resources, and planning.

## Requirements for the Bachelor of Science Degree

1. An introductory core of 38 credits, completed early in the student's program, including BIO 190, 200; CHM 144, 145, 147, 148, 225; PHY 151, 152 (or for students not considering graduate education, PHY 101 and 102); STA 320; MTH 154 strongly recommended (MTH 155 recommended for those considering graduate education). Proficiency at MTH 104 level is expected.
2. An intermediate core of 30 credits, including ENV 308 plus courses required by one of the three options. At least 22 credits must be in courses at the 300 level or above.
3. At least 20 credits of advanced courses, (300 level or above).
4. Completion of one of the options described below.
5. Admission to major standing and filing an approved program of study must occur at least three semesters before graduating. Only approved courses may be included in the degree program. See page 88 for environmental studies (ENV) courses.

## Option in Occupational Health and Safety

The curriculum is a combination of course work and laboratories designed as preprofessional training for careers relating human health and safety factors to working conditions, with emphasis on toxic substances. Students learn to recognize, evaluate, and control actual and potential environmental haz-

ards, especially undesirable occupational health and safety conditions and practices.

Required course work includes the core plus BIO 207 or 321; CHM 303-304; ENV 350, 355, 358, 386, 387, 452, 470, 481.

Recommended electives include CHM 303-304; BIO 207 or BIO 325, BIO 301, PS 250, PS 353, ECN 200, ENV 372, 373, 484.

## Option in Environmental and Resource Management

This option emphasizes the wise use of resources, especially as they affect human health and well-being. Opportunities for study include air pollution, water pollution, demography, land resource management, control applications, and planning functions. Program electives offer training for a variety of field and laboratory opportunities in industry and government, including planning, natural resource management, environmental protection, and public health.

Required course work includes the core, plus the following: BIO 301, 303, PHY 106 or 107, PHY 158.

Recommended electives include CHM 303-304; BIO 207 or 321, 311, 312, 307 or 319, 327, 333, 373, 375, 377, 443; ENV 312, 350, 355, 369, 452, 481, 484; PS 250, 302, 305, 350, 353; EGR 407; HST 228; ENG 300.

## Option in Toxic Substance Control

This option is designed to provide training for professional opportunities in toxic substance management. The major focus is on toxicological principles and their applications to the production distribution, and release of toxic substances, especially as they may cause environmental problems. Risk assessment, problem-solving, and legislative compliance are emphasized.

Required course work includes the core plus BIO 301, 303; CHM 303-304; ENV 350, 355, 452, 481, 484.

Recommended electives include MTH 155; CHM 453 or BIO 325; BIO 375, 443; CHM 441; PHY 106, 107; PS 353; ENV 386.



## SECONDARY TEACHING SOCIAL STUDIES PROGRAM

The secondary teaching social studies program offers either a baccalaureate program with a major in social studies or a separate social studies minor. Students seeking the Bachelor of Arts degree with a major in social studies will take a minor in sociology, psychology, history, or political science to achieve secondary teacher certification. The Michigan secondary provisional certificate is valid for teaching all subjects in grades 7 and 8, and in subject matter areas in grades 9 to 12 in which the student has completed a major or minor. (See page 000 for a listing of teacher certification requirements.) In general education, a social science distribution field is satisfied by the major; students must fulfill the history, philosophy, and area studies field with one course (4 credits) in area studies selected from AS 210, 220, 230, 240, 250, or 260.

### Bachelor of Arts with Teaching Major in Social Studies

To complete the degree program the student must fulfill all requirements set by the College of Arts and Sciences for B.A. candidates (see page 19).

The social studies program requires a core of social science courses with concentrated study in three social science content areas. The student must:

1. Complete a total of 40 credits in social studies and the social sciences, including:
  - a. SS 100 and 200 (prerequisite for ED 455, Internship).
  - b. 16 credits in political science, evenly distributed between American politics and non-American/comparative politics.
  - c. 16 credits in history, evenly distributed between American history and world history.
2. Complete a minor of at least 20 credits in one of the following social sciences: sociology, psychology, history, or political science. If a student minors in either political science or history, 16 credits in another social science or from an interdisciplinary social science group must be substituted in the major.
3. Complete a professional component of 36 credits:
  - a. ED 100 and 200 must be taken concurrently.
  - b. ED 100 and 200, 370, and 428 must be taken sequentially in three semesters and are each prerequisites to ED 454 and 455.

- c. ED 454 must be taken concurrently with ED 455.
- d. ED 344 and 345 may be taken any time in the student's program before ED 455.

Students may enroll in ED 455 (Internship) only if their grade point average in professional courses (ED 100, 200, 370, 428) is 2.50 or higher, with no grades below 2.0; and if their grade point average in the courses in their major is 2.50 or higher, with no grades below 2.0.

Failure to complete certification requirements in the secondary social studies teaching major may result in the need for additional course work in order to complete an alternative College of Arts and Sciences major. Majors approved by the College of Arts and Sciences are listed on page 20.

### Secondary Teaching Minor in Social Studies

A teaching minor in social studies requires completion of SS 100 and 20 additional credits in the social sciences. At least three courses must be taken at the 200 level or higher. Students should concentrate in two of the social sciences, earning at least 8 credits in each. Students intending to minor in social studies must see their secondary social studies academic adviser upon entry into a teacher certification program to agree upon the social sciences concentration and distribution. This minor may not be taken by students majoring in secondary social studies; it is open to any other student with a secondary teaching major.

#### COURSE OFFERINGS

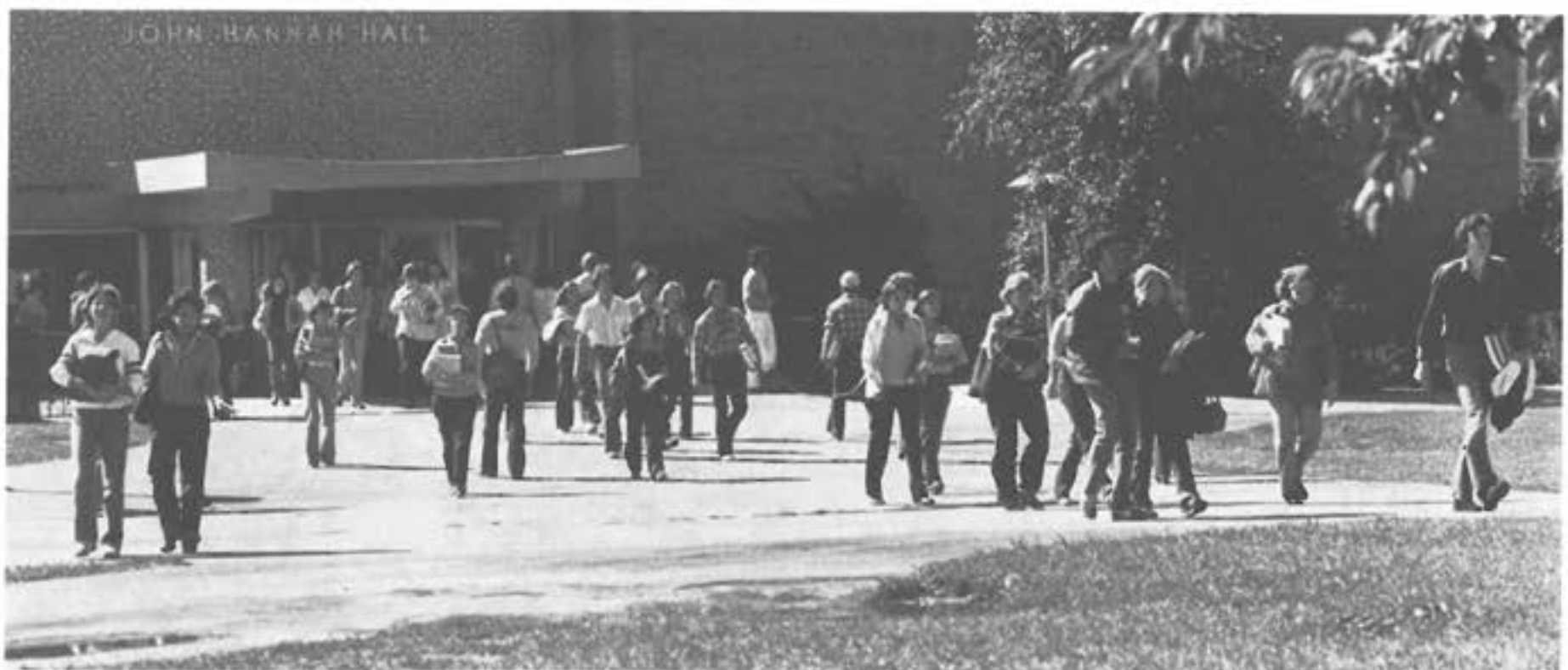
##### SS 100 Introduction to Social Studies (4)

This introduction to an interdisciplinary social science program provides an overview of the philosophical and historical development of individual social science disciplines (psychology, sociology, anthropology, political science, history, economics, and geography). Students may examine key concepts, methods, and scholarly literature in these fields and apply their work to selected current issues through interdisciplinary models. Required of all social studies majors and minors.

##### SS 200 Inquiry Skills for the Social Scientist (4)

Continues the interdisciplinary focus begun in SS 100. Current issues form its content. Students are expected to apply interdisciplinary investigative models to these issues to solve problems. Required of all social studies majors before student teaching. Prerequisite: SS 100.

For social studies course offerings in elementary education, see page 128.





## OTHER CONCENTRATIONS AND OPTIONS

In addition to the programs listed above and the concentrations detailed in departmental listings, the College of Arts and Sciences sponsors a number of other interdepartmental offerings. The college and other academic units sponsor some of these programs jointly.

### CONCENTRATION IN AMERICAN STUDIES

**COORDINATOR:** *William White (Communication Arts/Journalism)*

**COMMITTEE:** *Sheldon Appleton (Political Science), Maurice Brown (English), Jane Eberwein (English), Robert Goldstein (Political Science), Roy Kotynek (History), Richard Stamps (Sociology-Anthropology), Patrick Strauss, (History),*

The American studies concentration provides both a broad understanding of the American experience and an introduction to the practice of focused interdisciplinary study. The concentration is taken in addition to a departmental major. By electing departmental courses with an American focus in two or three areas outside the major and framing the concentration with two interdisciplinary American studies courses, the student may expect to gain a coherent sense of the national experience and to appreciate the various contributions of different academic disciplines to understanding this complex topic. Although not a vocationally directed program, the American studies concentration should be of particular interest to students preparing for careers in law, government, or journalism and to those planning graduate work in American studies or any of its contributing disciplines.

Concentration requirements include AMS 100, AMS 400, and four electives representing at least two fields of study outside the student's major. Recommended electives appear on the list below; other courses emphasizing American materials may also be counted toward the concentration upon approval of a committee adviser.

#### AMERICAN STUDIES COURSE OFFERINGS

##### AMS 100 Introduction to American Studies (4)

A multi-disciplinary examination of important topics in the American experience, such as myths and images of power in America, the South in history and literature, and American values and urban experience.

##### AMS 400 American Studies Colloquium (4)

Examination of one topic in American studies. Should be taken in the junior or senior year. Offered every fall.

Prerequisite: AMS 100.

### Departmental Electives

Art and Art History: AH 350, 355.

English: ENG 224, 302, 317, 320, 322, 324, 332, 341, 342.

History: HST 214, 215, 218, 220, 221, 292, 302, 306, 307, 310, 312, 313, 314, 315, 316, 317, 318, 319, 321, 323.

Linguistics: LIN 303.

Music: MUS 347.

Philosophy: PHL 260.

Political Science: PS 100, 103, 115, 301, 302, 305, 307, 323, 324, 342, 343, 371, 402, 403.

Sociology-Anthropology: SOC 100, 205, 300, 331, 357, 404, 455; AN 380, 381.

### CONCENTRATION IN APPLIED STATISTICS

**COORDINATOR:** *Harvey Arnold (Mathematical Sciences)*

**COMMITTEE:** *William Bezdek (Sociology/Anthropology), William Macauley (Political Science), David Doane (Economics and Management), Ronald Mourant (Engineering), Richard Pettengill*

*(Library), Ann Sakai (Biological Sciences), Robert Schwartz (Education), Keith Stanovich (Psychology)*

The University Committee on Applied Statistics sponsors this concentration, available to all undergraduates in the university. In order to be certified by the committee as having fulfilled the requirements of this concentration, the student must:

1. complete at least 16 credits in statistics as approved by the committee, including one course at the introductory level, STA 322, STA 323 or 324, and one 400-level course;
2. complete other requirements as may be added by departments that have accepted this concentration as part of a modified major.

Students who wish to take this concentration must apply for admission and must develop a program in consultation with a concentration committee member.

### CONCENTRATION IN ARCHAEOLOGY

**COORDINATOR:** *Richard Stamps (Sociology and Anthropology)*

**COMMITTEE:** *Carl Barnes, Jr. (Art and Art History), Gottfried Brieger (Chemistry), James Dow (Sociology and Anthropology), Richard Stamps (Sociology and Anthropology)*

This concentration prepares students for graduate study in archaeology. It is also useful for students interested in an interdisciplinary approach to human cultural development viewed from historical, aesthetic, and scientific perspectives.

There are 28 credits required for this program:

1. Core: AH 100, AN 101, AH 316, AN 222.
2. One of the following: AH 312, AH 314, AN 282, AN 370, AN 371, AN 380.
3. 8 credits in methods and field term: AN 383.

In addition to the required courses, a number of other courses are recommended for those who wish to expand their background. These include: AH 322, AH 326, HST 261, HST 306, HST 367, PHY 107. Students are reminded that professional conservation work requires a knowledge of botany and chemistry.

### CONCENTRATION IN COMPARATIVE LITERATURE

**COORDINATOR:** *Richard Mazzara (Modern Languages and Literatures)*

**COMMITTEE:** *Helen Schwartz (English)*

The concentration in comparative literature may be taken in conjunction with any major. Comparative literature is concerned with the systematic principles and methods by which the masterworks of world literature may be analyzed in relation to each other, using such organizing concepts as theme, genre, historical period, or the relationship between Eastern and Western literature.

Students who wish to take the concentration must apply for admission and must develop a program in consultation with a concentration committee member.

The concentration requires 24 credits in literature courses and foreign language competence. Requirements are:

1. LIT 170 and 480 (see Modern Languages and Literatures course offerings, page 58).
2. 16 credits in departmental courses, distributed among the fields of theme, genre, period, and East-West under the following conditions:
  - a. at least one period course,
  - b. two courses in one field,
  - c. and no more than two courses in one literature (English, French, etc.).

## 88/Other Concentrations and Options (Arts and Sciences)

- Foreign language competence through third-year level, including a foreign language course numbered 355 (Translation into English).

### MINOR IN COMPUTER AND INFORMATION SCIENCE

**COORDINATOR:** *Glenn A. Jackson (Engineering)*

The minor in computer science is offered by the School of Engineering and is available to students within the College of Arts and Sciences. Many combinations are feasible.

With a major in mathematics, physics, chemistry, biology, or economics, a student may wish to emphasize numerical and scientific computing aspects of computer science. With a major in English, modern languages, history, philosophy, psychology, sociology, or anthropology, a student may wish to take courses in the computer science minor that emphasize nonnumerical and symbolic data processing, language translation, and list processing. With a major in economics, a student may wish to take courses oriented toward application of computers in management data processing. For specific requirements, see page 111.

### CONCENTRATION IN ENERGY STUDIES

**Coordinator:** *Gottfried Brieger (Chemistry)*

This concentration provides students with an interdisciplinary approach to energy issues, examined from the perspective of biology, anthropology, biology, chemistry, economics, engineering, physics, and political science. It serves as a foundation for additional specialized study in any of these fields.

This concentration requires 28 credits distributed as follows:

- Core courses: four of the following: AN 322, ECN 306, ENV 312, PHY 127, PS 250;
- Advanced option: one of the following: AN 410, ME 454, EGY 350
- Practicum: all of the following: EGR 108, EGR 106, and EGY 390 (4 or 8 credits).

#### COURSE OFFERINGS

##### **EGY 350 Energy Efficient Food Production (4)**

Man's opportunities for production of food nutrients through efficient field agriculture, horticulture, and aquaculture, and the energy relationships involved.

Prerequisite: one year of college-level science or permission of the instructor.

##### **EGY 390 Energy Projects (4 or 8)**

Laboratory or field work under the direction of a faculty supervisor approved by the concentration coordinator on a current energy-related issue resulting in a comprehensive project and report.

Prerequisite: Concentration core courses EGR 108 and EGR 106 are recommended prior to enrollment.

### CONCENTRATION IN ENVIRONMENTAL STUDIES

**COORDINATOR:** *Paul Tomboulion (Chemistry)*

Environmental studies courses introduce students to modes of thought and action relative to environmental issues. Students learn to identify and evaluate alternative solutions to environmental problems. Short- and long-range implications of human activities are analyzed, especially as they affect resources and public policy.

Four broad areas of inquiry are included in these studies: systematic analyses of environmental quality issues; effects of human settlements on ecosystems; implications of human life support activities; and use, reuse, and depletion of physical and biological resources.

Concentrations are available in conjunction with cooperating departments. Requirements for the concentration

are 28 credits in environmental studies and related courses, to be planned and selected in consultation with the program coordinator.

Related courses in many departments are often suitable for an environmental studies concentration. These include, but are not limited to: AN 102, AH 363, BIO 301, BIO 311, BIO 375, BIO 377, ECN 225, ECN 306, ECN 309, ECN 310, EGR 407, HST 228, HST 316, HST 317, HST 350, HST 351, PHL 318, PHY 106, PHY 115, PS 250 and PS 353. Consult the program coordinator for details.

#### COURSE OFFERINGS

##### **ENV 308 Introduction to Environmental Studies (4)**

Survey of a broad range of environmental issues from a scientific viewpoint. Basic ecological and thermodynamic principles with applications to air, water, and land pollution; human demography and food supplies; alternative futures.

Prerequisite: Sophomore standing.

##### **ENV 312 Energy and the Environment (4)**

Basic facts of energy: sources, forms, the roles it plays, and its ultimate sinks. Includes study of laws limiting energy utilization, energy flow patterns, effects of energy use on the environment, and analyses of current energy-related problems.

Prerequisite: Sophomore standing; mathematics proficiency at the MTH 103 level.

##### **ENV 322 Subsistence and Technology in Nonindustrial Society (4)**

Identical with AN 322.

##### **ENV 333 Food and Nutrition (4)**

Introduction to the science of nutrition, with applications to the human diet. Includes study of foods, nutritional requirements, and the relationships of agriculture and geography to nutrition.

Prerequisite: Sophomore standing.

##### **ENV 343 Tropical Habitats (2)**

Biological analysis of the interactions with tropical environments. Includes history, geology, climatology, agriculture, public health and epidemiology involved with human living in tropical settings.

Prerequisite: sophomore standing.

##### **ENV 346 Life in the Oceans (4)**

Physiographic history, habitats, community groups, interrelationships among organisms, the oceans as a food source, human impacts on oceans.

Prerequisite: Sophomore standing.

##### **ENV 350 Selected Topics (1, 2, 3, or 4)**

Technical studies in special areas; topics vary with semester.

Prerequisite: Junior standing and permission of instructor.

##### **ENV 355 Environmental Health Practice (3)**

Survey of environmental health activities from public health perspective: vector control and prevention, sanitation practice, solid waste management, air pollution control, environmentally related diseases and their prevention.

Prerequisite: Junior standing in environmental health.

##### **ENV 358 Occupational Safety (3)**

Systematic study of occupational safety concerns, including accident prevention, loss control, safety management, behavioral factors, hazard reduction, risk management, safety engineering, safety education, and safety laws and regulations.

Prerequisite: Junior standing in environmental health.

##### **ENV 362 Impact of Urbanization (3)**

A scientifically based environmental impact analysis of urbanization. Includes consideration of climate, hydrology, soils, physiography, and ecological relationships in suburban, urban, and metropolitan areas.

Prerequisite: Junior standing. Experience in metropolitan studies desirable.

##### **ENV 372 Air Chemistry (3)**

Technical evaluation of the nature and composition of the earth's atmosphere, both in its natural state and as it has been affected by man. Some discussion of air pollution control will be included. Identical with CHM 372.

Prerequisite: CHM 145.

**ENV 373 Water Resources (3)**

Analysis of natural water systems, introductory hydrology, the chemistry of eutrophication, and wastewater systems. Emphasis is on applications, including water pollution abatement and management strategies. Identical with CHM 373.

Prerequisite: CHM 145 and junior standing.

**ENV 386-387 Principles of Occupational Health I and II (3 each)**

Recognition, evaluation, and control of environmental factors affecting human health, especially in the work place (industrial hygiene); anticipation and prevention of future hazards.

Prerequisite: Junior standing in environmental health; BIO 190, CHM 225, CHM 303; physics is desirable.

**ENV 390 Directed Studies (1, 2, 3, 4 or 6)**

Studies in special areas, often individually arranged. May be repeated for credit. Preparation of study plan and instructor's approval are required before registration. Graded S/N.

**ENV 410 Cultural Ecology (4)**

Identical with AN 410.

**ENV 452 Industrial Environmental Control (3)**

Problems of air and water pollution, solid waste management, hazardous material handling, and emergencies examined from an industrial viewpoint. Chemical engineering solutions to environmental problems, practical aspects, and compliance with regulations.

Prerequisite: Junior standing in environmental health, CHM 145, MTH 154.

**ENV 470 Occupational Health Internship (2)**

Supervised practical experiences in a variety of occupational health settings.

Prerequisite: Senior standing in environmental health and permission of instructor.

**ENV 481 Principles of Toxicology (3)**

General principles of toxicology: exposure, toxokinetic, and toxicodynamic phases; dose-effect relationships; toxicological testing methods; factors influencing toxicity. Emphasis is on systemic mammalian toxicology.

Prerequisite: BIO 190, 200; CHM 303 or 334; BIO 207 or 321 desirable; biochemistry desirable.

## CONCENTRATION IN FILM AESTHETICS AND HISTORY

**COORDINATOR:** Robert T. Eberwein (English)

**COMMITTEE:** Dolores Burdick (Modern Languages); Alfred J. DuBruck (Modern Languages); Donald Hildum (Communication Arts); Brian Murphy (English); Charlotte Stokes (Art and Art History)

The interdisciplinary concentration in film aesthetics and history, sponsored by the departments of English, modern languages and literature, art and art history, and communication arts, offers multiple perspectives for examining theoretical and critical issues of film as art and communication. The three introductory courses explore the operation, function, and construction of film. The history courses examine narrative and technical developments with emphasis on major directors, genres, and trends. The theoretical courses are concerned with the uniqueness of film, its relation to other forms of verbal and plastic arts, and special approaches needed for analysis and enjoyment. The range of viewing experiences and the variety of approaches to the medium provide an excellent preparation for students seeking employment in advertising, publishing, journalism, visual media, or teaching, as well as for those who wish to pursue film studies on the graduate level.

Thirty-two credits are required, distributed as follows:

1. Introduction: CIN 150, ENG 250, and LIT 251.
2. History: Any two of CIN 300, 301, 302.
3. Theory: SCN 303, AH 367, ENG 392.

### COURSE OFFERINGS

**CIN 150 Introduction to Film (4)**

Introduction to the art of film by examination of the filmmaking process, study of narrative and non-narrative film, and exploration of film's relation to society.

**CIN 300 History of Film: The Silent Era (4)**

Survey of directors and films important in shaping film history: Griffith, Eisenstein, Chaplin, Murnau, Pabst, Lang, and others.

**CIN 301 History of Film: The Sound Era to 1958 (4)**

Examination of significant directors, genres and movements: Welles, Hitchcock, Renoir, DeSica and others; the western, gangster film, musical; neorealism, film noir.

**CIN 302 History of Film: The New Wave and Beyond (4)**

Study of film since 1959: New Wave directors such as Truffaut, Godard, Resnais; major artists such as Fellini, Bergman, Kubrick; experimental films and new developments.

**CIN 450 Topics in Film (4)**

Examination of specialized subjects in film such as: The War Film, Alfred Hitchcock's Films, The New Wave, The Japanese Cinema. Topic to be selected by instructor.

Prerequisite: A course in film or permission of instructor.

**CIN 499 Independent Study (4)**

Study on an independent basis for students with demonstrated interest in film. A proposed course of study must be submitted to the prospective instructor in the semester before the independent study is to be taken.

Prerequisite: One course in film.

## CONCENTRATION IN FOLKLORE AND POPULAR CULTURE

**COORDINATOR:** Mark E. Workman (English)

**COMMITTEE:** Jane Bingham (Education), Marc Briod (New Charter College), Judith Brown (Anthropology), Roy Kotynek (History), Gayle Partmann (Linguistics), David Stevens (Communication Arts), Amitendranath Tagore (Modern Languages)

Folklore is traditional, artistic behavior; it is engaged in by even the most intellectually and technologically sophisticated amongst us, and it encompasses all modes of expression. Popular culture borrows from folklore its formulas of production as well as much of its content. This concentration provides an introduction to the materials and methods of inquiry into these subjects, and encourages students to pursue further the extensive social and cultural ramifications of folklore and popular culture into related areas of study.

The program is of potential relevance to students in all areas of the humanities, social sciences, and education. It will be of benefit to them both in their studies at Oakland and as preparation for careers in media, human services, teaching, or graduate work in any of the fields related to the concentration.

The program requires 28 credits, including ENG 214 and either ENG 302 or HST 220. A minimum of 8 credits must be taken at the 300 or 400 level, and no more than 8 credits from the student's major will count towards the concentration. The current list of approved electives follows. The selection of electives must be made in consultation with the coordinator of the concentration.

AN 251, 271, 310, 333, 400. AS 386. AH 360. SCN 371, THA 346. ED 332. ENG 120, 211, 302, 304, 312, 313, 314. CIN 150. HST 220, 222, 291, 292, 346. ALS 375. MUS 346, 347. REL 295.

## CONCENTRATION IN GERONTOLOGY

**COORDINATOR:** Harold Zepelin (Psychology)

This multidisciplinary concentration provides students an opportunity to study and to gain an understanding of aging as a process in personal, cultural, and social contexts. It adds another dimension to career preparation for students who plan to obtain graduate degrees in the helping professions such as nursing, clinical psychology, and social work. And it provides essential background and introductory experience for students holding bachelor's degrees and who wish to seek employment in agencies providing services for the elderly.

The concentration requires 28 credits, 20 in required core courses and 8 in elective courses. One of the required core

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courses, a multidisciplinary seminar on aging will deal with topics in gerontology and will bring students into contact with faculty from diverse disciplines that have an interest in aging.

### Core Courses

- (a) Courses without prerequisites: AN 102 or SOC 100 and PSY 100 or PSY 130.
- (b) Courses with prerequisites: PSY 331, SOC 465, multidisciplinary Seminar on Aging which has PSY 331 and SOC 465 as prerequisites; During 1980/81 these prerequisites may be taken as corequisites.

### Elective courses

PSY 371, PSY 372, SOC 405.

## CONCENTRATION IN MICHIGAN STUDIES

Approval and implementation of this concentration is expected during the 1980-1981 academic year. Interested students should consult with Professor W. Patrick Strauss (history) for detailed information.

## CONCENTRATION IN PREPROFESSIONAL STUDIES IN MEDICINE, DENTISTRY, AND OPTOMETRY

**COORDINATOR:** Moon J. Pak (*Health Science*)

**COMMITTEE:** Gottfried Brieger (*Chemistry*), Egbert W. Henry (*Biological Sciences*), John R. Reddan (*Biological Sciences*), Robert L. Stern (*Chemistry*), Nalin J. Unakar (*Biological Sciences*), Robert M. Williamson (*Physics*), Barry S. Winkler (*Biological Sciences*)

Students intending to pursue careers in the medical, osteopathic, or dental professions are expected to complete a concentration consisting of the following:

1. Biology, 20 credits, including laboratories
2. Chemistry, 20 credits, including laboratories
3. Mathematics, 8 credits
4. Physics, 10 credits, including laboratories

In chemistry, mathematics, and physics courses, students should opt for the sequences that are more rigorous in academic context.

These are the minimum requirements for admission to the various medical, osteopathic, and dental schools in Michigan and elsewhere. The committee strongly recommends the following additional courses for better preparation for the Medical College Aptitude Test (MCAT) as well as the medical school curriculum:

1. Science: genetics (BIO 341, 342), developmental biology (BIO 323, 324), biochemistry (BIO 407, 408, or CHM 453, 454, 457, 458)
2. Humanities: vocabulary and etymology (ALS 102), Latin (LTN 114-115)

Students intending to pursue a career in the optometric profession are advised to take the following courses:

1. Biology, 20 credits, including laboratory
2. Chemistry, 20 credits, including laboratory
3. Mathematics, 12 credits, including calculus (MTH 154, 155)
4. Physics, 10 credits, including laboratory
5. Introductory psychology (4 credits), English (8 credits), social science (8 credits)

This concentration does not constitute a major. Students must elect a major from those offered by the university. Interested students must consult the advisory committee for counseling and assistance in planning their academic programs (Health Science Advising Office, 169 Dodge Hall).

## CONCENTRATION IN RELIGIOUS STUDIES

**COORDINATOR:** Leonardas V. Gerulaitis (*History*)

The religious studies program offers a series of courses on religion, both Western and Eastern, traditional and contempo-

rary. These courses do not seek to confirm or attack any particular religious point of view; they are taught in the same scholarly and objective spirit as other university courses and aim at understanding a pervasive human phenomenon. They are grouped into two types: historical studies and systematic studies.

At present, the program offers a concentration in religious studies consisting of at least 20 credits in religion, which may be taken jointly with a modified major (24 credits) in philosophy, or with a full major in any other department of the College of Arts and Sciences.

Students wishing to make religion the focus of an independent major will receive the support of the Committee on Religious Studies. Interested students should see the concentration chairperson for further information.

In addition to the religion courses, several collateral courses are suggested: CLS/ENG 312, HST 325, and PHL 205.

Courses with REL 200 numbers require only sophomore standing; courses with REL 300 numbers require one previous course in religious studies at Oakland, unless identical with departmental courses having different prerequisites.

### COURSE OFFERINGS

#### HISTORICAL STUDIES

##### REL 200 Topics in the Historical Study of Religion (4)

The topic varies. Samples include: the New Testament, medieval mysticism, early Buddhism, the Protestant Reformation, Christ and Caesar, eighteenth and nineteenth century attacks on religion. May be repeated for credit.

##### REL 202 The Jewish Tradition (4)

Selected ideas and institutions in the development of Judaism from its pre-exilic roots to the present.

##### REL 203 The Christian Tradition (4)

Study of the most important Christian ideas and institutions from Jesus to the present.

##### REL 211 The Bible as Literature (4)

Identical with CLS/ENG 211.

##### REL 250 Philosophies and Religions of Asia (4)

Identical with PHL 250.

##### REL 295 Contemporary Religious Movements (4)

Begins with a review of institutional religion in America, then surveys underground church movements, Zen, Yoga, TM, and others. Field work possible.

##### REL 304 The Islamic Tradition (4)

Selected ideas and institutions in the history of Islam.

##### REL 307 American Religious History (4)

Identical with HST 307.

#### SYSTEMATIC STUDIES

##### REL 220 Topics in the Systematic Study of Religion (4)

The topic varies. Samples include: mythology, psychoanalysis and religion, religion and education, types of religious communities, shamanism, the hero. May be repeated for credit.

##### REL 225 Philosophy of Religion (4)

Identical with PHL 225.

##### REL 227 Psychology of Religion (4)

Basic data of religious experience in relation to motivation, cognitive structure, and personality; problems of religious symbolism, verbal and nonverbal; dynamics of religious movements; growth, propagation, and preservation of orthodoxy; varieties of reform. Offered every two years.

##### REL 229 Religion and Literature (4)

Study of a few masterpieces of world religious literature, such as Greek tragedy, Hindu epic, Dante and Milton, with an attempt to generalize about the use of religious themes in literature and about literature as an expression of religious belief. Offered every two years.

##### REL 271 Magic, Witchcraft, and Religion (4)

Identical with AN 271.

**REL 291 Religion and Contemporary Moral Problems (4)**  
Investigation of the theological and ethical reasons for the emergence of a new attitude toward moral questions. Protestant, Catholic, Jewish, and secular viewpoints on some of these: love, sex, civil disobedience, criminal punishment, violence, war, suicide, and death. Offered every two years.

**REL 305 Sociology of Religion (4)**  
Identical with SOC 305.

**REL 390 Directed Readings in the Study of Religion (4)**  
Individual study of a topic not covered by regular courses, with guidance of a faculty tutor. May be repeated for credit.  
Prerequisite: Permission of concentration coordinator.

## CONCENTRATION IN SOCIAL JUSTICE AND CORRECTIONS

**COORDINATOR:** *Jesse R. Pitts (Sociology and Anthropology)*

This concentration requires at least 28 credits and is to be taken in conjunction with a full major in any department of the college. It provides career-oriented education for students interested in the social forces producing delinquency and crime in the evaluation of social planning for crime prevention and control, and in the operation of police organizations and correctional institutions.

A student must be admitted formally to the program and meet the following requirements:

1. 12 credits chosen from SOC 320, 323, 422, 423, 425, 440; PS 241 and 343.
2. 12 credits from HI 361, HI 461, ORG 331, PHL 103, PHL 221, PS 241, PS 342, PS 343, PS 220, PSY 273.
3. 4 or 8 credits of SOC 430.

## CONCENTRATION IN SOCIAL SERVICES

**COORDINATOR** *Jacqueline R. Scherer (Sociology and Anthropology)*

This concentration requires 28 credits and is available to students throughout the university regardless of major. It is primarily for students who intend to pursue graduate studies in social services or who are interested in the analysis of social programs and social welfare policies. The social and psychological dimensions of service delivery are explored as these relate to professional development and the integration of theoretical and applied approaches to problem solving.

The following are required, distributed as follows:

1. Sociological conceptual orientation: SOC 404 and 405
2. Psychological foundations (two of the following): PSY 220, 271, 311, and 331
3. Field experience: PSY 399
4. Statistics: SOC 203 or equivalent course
5. Elective (one from the following): HI 361, SOC 331, SOC 428, PSY 323, PSY 336, HRD 331

Students are requested to formally enroll in the program by completing an application at the Office of Sociology and Anthropology.

## CONCENTRATION IN WOMEN'S STUDIES

**COORDINATORS:** *Beverly K. Berger (Physics), Margaret Pigott (Learning Skills)*

**COMMITTEE:** *Nancy Barry (Economics and Management), Jane Bingham (Education), Judith Brown (Anthropology), Dolores Burdick (Modern Languages), Billie DeMont (General and Career Studies), Wilma Garcia (Learning Skills), Linda Hildebrand (Library), Diane Stricker (Economics and Management), Irving Torgoff (Psychology)*

The women's studies concentration explores the contributions of women, through their work and lives, to the arts, the sciences, and society. The concentration was created to open areas of study and research related to women which arise from the various academic disciplines and to draw these areas to-

gether coherently. The concentration offers a wide variety of courses on women. Participants discover information and generate questions that lead to understanding of the present position of women in society and to formulation of theories that may improve that position. This interdisciplinary concentration is a humanistic complement to any conventional academic major.

Twenty-eight credits are required, distributed as follows:

1. Core courses: WS 200, 300, and 400.
2. 2 credits of independent study (within the department of the cooperating instructor) taken concurrently with WS 300.
3. Remaining credits to be drawn from approved women's studies electives.

A list of women's studies electives for the current semester may be obtained from the coordinator or committee members.

### COURSE OFFERINGS

#### **WS 200 Introduction to Women's Studies (4)**

This interdisciplinary survey course introduces students to a broad spectrum of issues concerning women, and acquaints them with some of the methodologies evolved by different disciplines. Students who have completed NCC 152 receive credit for WS 200 in the concentration.

#### **WS 300 Women's Studies: Women in Transition (4)**

This interdisciplinary, team-taught course focuses in depth on specific issues relating to the female experience, such as achievement, sexuality, or power. A 2-credit independent study, under the direction of one of the course instructors, is a required supplement.

#### **WS 400 Final Project in Women's Studies (4)**

Each student, with the help of a faculty adviser of his/her choice, independently prepares a final project drawing upon knowledge from previous women's studies courses and from the methodology of some other discipline, preferably that of a student's major. May center on library or field research.

## TEACHING MINOR IN SCIENCE

The teaching minor in science requires at least 24 credits, selected from courses offered in biological sciences, chemistry, and physics. Course selections must cover two of the three disciplines and must include 12 credits in each discipline applied to the minor. All courses must be at the levels of BIO 190, CHM 144, PHY 101, or above, and they may not include courses in the student's major discipline.

## PRELAW STUDIES

**ADVISER:** *Claude K. Rowland (Political Science)*

There is no formal prelaw curriculum at Oakland because no set of specific courses is necessary for admission to or success in American law schools. Students planning to attend law school after graduation should major in a field in which they have both interest and aptitude; the actual field is considerably less important for admission than the overall success of the student in college training as measured by cumulative grade point average and scores on the Law School Aptitude Test.

Rather than mastery of any particular subject matter, law schools require of the incoming student certain basic skills, particularly the ability to think logically and to express oneself orally and in writing in a coherent and precise manner. No one academic discipline possesses a monopoly on development of these abilities. The best advice to students planning legal careers is to choose courses such as logic and mathematics that emphasize analytical thinking and critical writing and to do well in them.

If there are any specific courses that might be recommended to prelaw students because of subject matter, they would be courses which deal with the operation of American institutions; particularly the basic courses in American politics, history, and economics. For students interested in general questions about law or legal techniques—from a liberal arts

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perspective and not as a technical discipline as taught in law school—the following courses should be of some interest: PHL 319 and PS 241, 342, 343. It must be emphasized, however, that none of these courses is required for or restricted to prelaw students.

The library, the Department of Political Science, and the Career Advising and Placement Office maintain a collection of law school catalogs; a member of the Department of Political Science serves as the prelaw adviser for students with questions or problems. Booklets containing application forms for the Law School Aptitude Test should be obtained early in the senior year from the Career Advising and Placement Office or the Political Science Department.

### OFF-CAMPUS STUDIES PROGRAMS

The College of Arts and Sciences administers an off-campus independent study program which allows a student to propose his/her own course of study for the semester off campus. The following standards and procedures apply:

1. Any undergraduate student in good standing is eligible to participate in the program after completion of two semesters in residence.
2. A written proposal describing a course of activity will be prepared by a student applicant before beginning the program.
3. This proposal and the off-campus work it describes must receive support and involvement of at least three faculty members and approval of the dean.

4. All arrangements for off-campus work must be completed and filed by the end of the advising period in the semester preceding the semester of off-campus study.
5. Part of the preparatory work must include the designation of course equivalents totaling at least 8 credits for the independent study to be accomplished. This is to be negotiated with supporting faculty members.
6. Whenever credit is sought toward completion of a major, the department, through its chairperson, must agree to the value of the independent work.
7. The dean of the college will require a release from parents absolving the university of responsibility for the well-being of students under 18 years of age while they are participating in off-campus independent study.
8. The initial approval of a program for a student will be for one semester with the provision that the student may request an extension of the program for additional semesters.
9. The student must be registered at Oakland University and pay the required fees during the independent study period.

Students interested in overseas study programs sponsored by other universities and organizations, both domestic and foreign, should contact the Overseas Study Information Center located in the Department of Modern Languages. Information on work-study opportunities sponsored by institutions other than Oakland University can be obtained from the Career Advising and Placement Office and from the Department of Modern Languages and Literatures.



# HONORS COLLEGE

**DIRECTOR:** *Melvin Chernov (History)*

**COUNCIL:** *Sheldon Appleton (Political Science), Charles B. Lindemann (Biological Sciences), Lewis N. Pino (Chemistry), Norman Susskind (Modern Languages and Literatures), one freshman, one sophomore, and one senior Honors College student*

The Honors College has been established by the faculty of Arts and Sciences for highly motivated students who wish an unusually challenging undergraduate education. It provides a specially designed general education and additional requirements in conjunction with a departmental major in the College of Arts and Sciences or in one of the professional schools. Students currently admitted to or enrolled at Oakland may apply directly to the Honors College for admission; others must apply for admission to Oakland University as well. Application forms are available at the Honors College office. Courses with the HC prefix are open only to students who have been accepted into the Honors College.

## REQUIREMENTS AND PROCEDURES

### The Departmental Major

1. The student must complete a departmental major in the College of Arts and Sciences or a prescribed course of study in the School of Economics and Management, School of Human and Educational Services, School of Engineering, School of Nursing, or the Center for Health Sciences.
2. Honors college students must follow specially designated honors tracks in departments where they exist.
3. The Honors College Council will accept a student who is not pursuing a standard major (for example, a student with an independent major) if it deems that student's program to be of sufficient breadth, depth, and coherence.

### The Honors College General Education Requirements

1. The student must successfully complete the four Honors College core courses (HC 201, 202, 203, 204).
2. The student must successfully complete at least one 300-level 4-credit course in each of three broad areas outside of his/her major. The four areas are: I. literature and the arts (art, communication arts, English, linguistics, modern languages and literatures, music); II. history, philosophy, and area studies; III. social sciences; IV. natural sciences and mathematics. In area IV, the course may be any introductory course normally taken by departmental majors. Nursing students must satisfy this requirement only in areas I and III.
3. The student must successfully complete a senior colloquium (HC 401).
4. The student must attain second-year foreign language proficiency.

### Advanced Standing

1. The student (normally at the end of the sophomore year) will apply for advanced standing in the Honors College and will either be admitted (after approval of his/her independent project) or asked to transfer to the university at large.
2. No student with a grade point average below 3.30 will be considered for advanced standing.

### The Independent Project

1. The student must successfully complete a major creative or scholarly work, under the supervision of a faculty member in the College of Arts and Sciences (or one of the profes-

sional schools when appropriate), after approval of the project by the Honors College Council. The request for approval normally takes place at the end of the student's sophomore year.

2. The student may receive departmental or Honors College independent study credit for all or part of this work.
3. This is to be an independently designed and completed project.

### The Oral Examination

Soon after beginning the senior year, the student must pass an oral examination arranged by the Honors College Council. The examination will cover the student's independent project, knowledge of his/her major field, and general knowledge. The student's project supervisor will be present, as well as other members of the major department, instructors of Honors College core courses, and members of the Honors College Council, as appropriate.

### Graduation Grade Point Average and Graduation Honors

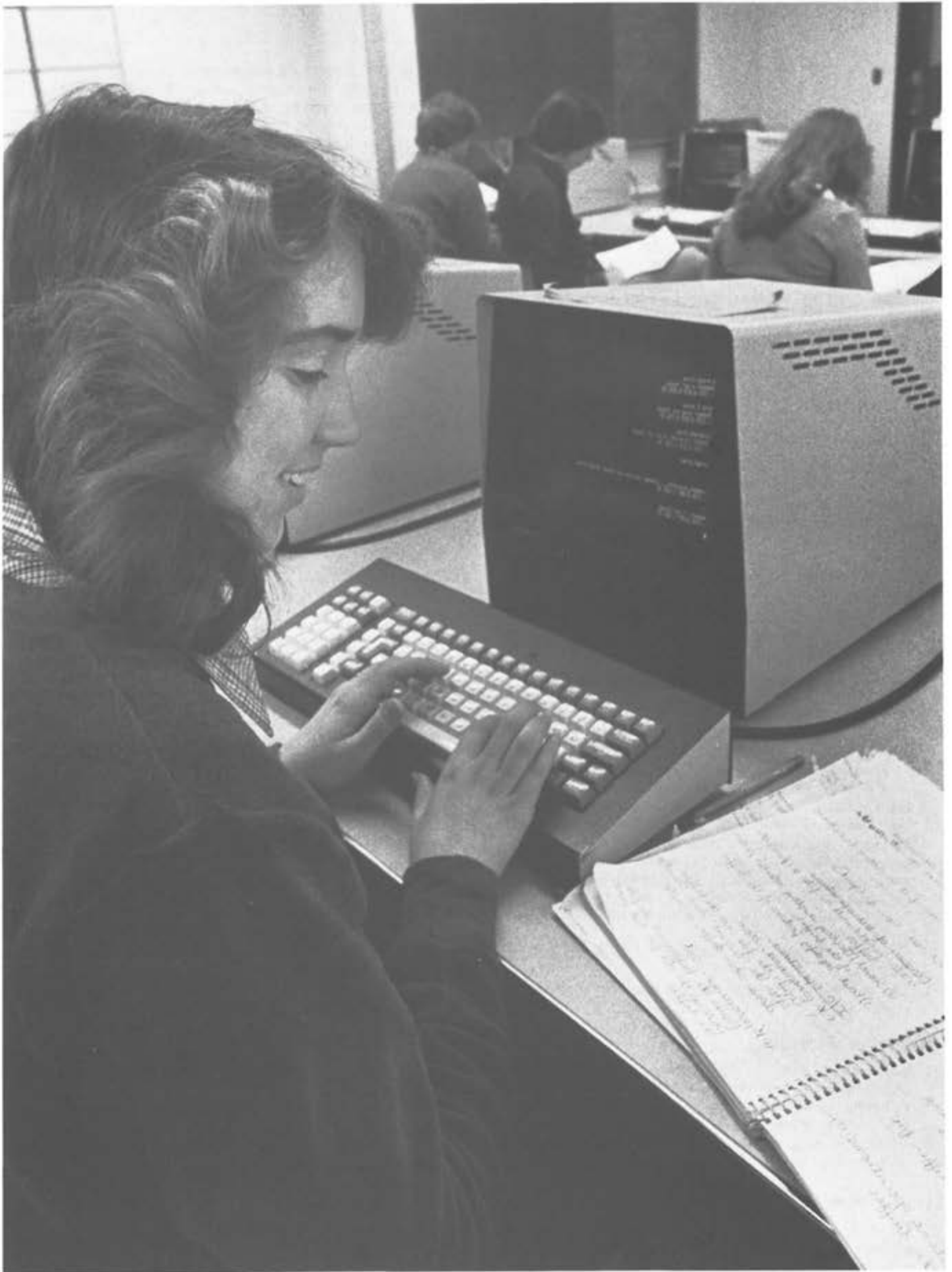
1. A grade point average of at least 3.30 is required for graduation.
2. The Honors College student may receive departmental and university graduation honors.

### HONORS COLLEGE COURSE OFFERINGS

**HC 201, 202, 203, 204 Honors College Core Courses (4 each)**  
Introductions to a range of ways of thinking characteristic of a modern university. Instructors for HC 201 will be drawn from art, communication arts, English, linguistics, modern languages and literatures, or music. Instructors for HC 202 will be drawn from the history or philosophy departments or from the area studies program. Instructors for HC 203 will be drawn from the departments of economics, political science, psychology, or sociology/anthropology. Instructors for HC 204 will be drawn from the departments of biological sciences, chemistry, mathematical sciences, or physics. Offered annually. HC 201, 202, 203, and 204 may be repeated for credit as elective courses, provided that the discipline within the area is not repeated.

**HC 401 Honors College Senior Colloquium (4)**  
Discussion of a broad topic of traditional concern or an issue of particular current significance. Offered annually.

**HC 490 Independent Study (4)**  
Supervised instruction in the Honors College independent project. May be repeated for credit. Offered each semester.





# SCHOOL OF ECONOMICS AND MANAGEMENT

## OFFICE OF THE DEAN

Ronald M. Horwitz, Dean

**PROFESSORS:** Eleftherios N. Botsas, Daniel N. Braunstein, Karl D. Gregory, Ronald M. Horwitz, Robbin R. Hough, Sid Mittra, Norton C. Seeber

**ASSOCIATE PROFESSORS:** David P. Doane, Alice C. Gorlin, An-loh Lin, Miron Stano, John E. Tower, Robert J. Zolad

**ASSISTANT PROFESSORS:** George Applewhite, Alphonso R. Bellamy, Augustine Fosu, Paul O. Kingstrom, Howard S. Schwartz, Frederic B. Shipley, David D. Sidaway

**INSTRUCTORS:** Robert J. Gieseke, James E. Mallett, Thomas R. McCarthy

**SPECIAL INSTRUCTOR:** Diane B. Stricker

**ADJUNCT PROFESSORS:** Paul F. Lorenz, Theodore O. Yntema

**ADJUNCT ASSOCIATE PROFESSOR:** Douglas D. Gregory

**VISITING PROFESSOR:** Jacobo Varela

**VISITING ASSISTANT PROFESSORS:** Badie Farah, Oded Izraeli, Larry Mainstone, Le Thuong

**LECTURERS:** Paul Banas, Marilyn Cooper, David W. Essig, Maryrose Hart, Scott Jones, K.S. Krishnan, Gary Lorenz, Douglas R. Munro, Francis J. St. Onge, Robert H. Schappe, Laura Stern, John N. Turner, Thomas Williams

## BOARD OF VISITORS

Recognizing the need for a direct link between the industrial community and the School of Economics and Management, the school established a Board of Visitors in the fall of 1979. The board is comprised of outstanding corporate and professional leaders from the greater Detroit metropolitan area. Board members have been assisting the faculty of the school on several projects and providing consultation on curricula designs, goals and objectives, and research programs.

The members of the board are:

Mr. F. James McDonald, Executive Vice-President, General Motors Corporation (Chairman, Board of Visitors)

Mr. James A. Aliber, Chairman of the Board, First Federal Savings and Loan Association of Detroit

Mr. Edward E. Barker, Jr., Chairman and Chief Executive Officer, Pontiac State Bank

Mr. William E. Giles, Editor and Vice-President, The Detroit News

Mr. William R. James, Vice-President and General Manager, WJR Radio

Mr. Walter J. McCarthy, Jr., President, The Detroit Edison Company

Mr. Kenneth E. Myers, President, Trinity Loss Prevention Systems

Mr. Alan E. Schwartz, Partner, Honigman, Miller, Schwartz and Cohn

## PROGRAMS

The School of Economics and Management offers programs for persons interested in obtaining the skills and information necessary for the management of profit-making businesses, nonprofit enterprises (e.g., health care institutions, educational institutions, cooperative societies), and governmental units. The programs include:

Bachelor of Arts with a major in economics

Bachelor of Science with a major in economics

Bachelor of Science with a major in management

Management majors may obtain concentrations in:

Accounting	International management
Economics	Marketing
Finance	Management Information Systems
Health care management	
Human resources management	

Minors for students earning degrees in other schools and colleges of the university:

Economics  
International economics  
Management  
International management

Master of Business Administration (formerly the Master of Science in Management) for students with an undergraduate degree other than management (consult the *Oakland University Graduate Study Catalog*).

Students in economics or management may also earn concentrations and minors offered by other units in the university, including concentrations in Afro-American studies, American studies, archaeology, area studies, computer and information science, environmental studies, social justice and corrections, and statistics, and minors in journalism.

Economics or management majors who are interested in combining a relevant work experience with their college education are encouraged to participate in the university's cooperative education program. The student in the cooperative education program alternates a four-month period of paid, full-time work experience with a four-month period of full-time classwork from the sophomore year until graduation. Work placements provided are jobs that are similar to those which college graduates hold in business, nonprofit, and governmental organizations.

The curriculum described below is effective for students entering the university in 1980-81 or later. Students enrolled prior to the fall 1980 semester may opt to satisfy either the present or the older graduation requirements.

## REQUIREMENTS FOR THE DEGREES OF BACHELOR OF ARTS AND BACHELOR OF SCIENCE

### I. General Requirements

- Have completed at least 124 credits for the Bachelor of Arts degree and completed at least 128 credits for the Bachelor of Science degree.
- Have completed 32 credits at Oakland University of which at least 16 credits must be in the elected major.
- Have completed 32 credits in courses at the 300 level or above.
- Have taken at Oakland University the last 8 credits needed to complete baccalaureate requirements.
- Have a cumulative grade point average of at least 2.00 in courses taken at Oakland University and in courses in the major.
- Have completed at least 8 credits in electives.
- Have obtained a certification of English composition proficiency as described on page 12 of this catalog.
- Have been admitted to major standing in the elected program.
- Be in substantial compliance with all legal curricular requirements.

## II. The General Education Requirement

A. A student seeking the Bachelor of Arts degree may satisfy the general education requirement by completing the general education program of the College of Arts Sciences as described on page 19 of this catalog or by fulfilling the general education requirement of the Honors College as described on page 93.

B. A student seeking the Bachelor of Science degree may satisfy the general education requirement by fulfilling the general education requirement of the Honors College as described on page 93 or by meeting the requirements of the School of Economics and Management described as follows:

Each economics major must take 36 credits and each management major must take 28 credits in general education courses distributed accordingly:

1. One course from each of the following distribution fields: arts, literature, history/philosophy (Western group), area studies (non-Western group), and natural sciences. (The distribution fields are detailed on pages 19-20, but any courses in the departments listed will meet the requirements.)
2. Two courses in *one* of the social sciences other than economics: anthropology, political science, psychology, sociology, or speech communication.
3. For economics majors only—two courses in the language and thought field.

## THE BACHELOR OF ARTS AND BACHELOR OF SCIENCE WITH A MAJOR IN ECONOMICS

If a student elects the major in economics, he/she will have the opportunity to combine emphasis on the concepts and tools of economic analysis, a broad general education, and the freedom to take several courses in other areas of interest. The student will begin to learn to apply economic analysis to major problems that face the nation and the world today.

An education in economics is excellent background for professional education in law schools and in graduate schools of business administration, public administration, or management. For students who plan to enter the work force directly after graduation, the economics degree provides entrance to management training programs in larger companies, to civil service jobs in government, and to employment in other not-for-profit institutions. To be employed as a professional economist or to teach economics, a student normally will have to proceed to graduate school and obtain at least a master's degree in economics and preferably a doctorate.

### Requirements for Major Standing

Admission to major standing in economics requires: certification of English proficiency; completion of ECN 200-201, ECN 301, ECN 302, ECN 304, MTH 121-122 (or equivalent); completion of 56 credits or more; at least a 2.00 cumulative grade point average overall; and a grade of at least 2.0 in each of the required economics and mathematics courses. Admission to major standing in economics is required before a student may take 400-level courses and graduate.

### Major Requirements for a B.A. in Economics

1. To obtain a background in mathematics, computers, and another social science discipline the student must take the following cognate courses:

MTH 121 and	Linear Programming, Elementary Functions
MTH 122 or MTH 154-155	Calculus for the Social Sciences Calculus

CIS 120-121	Introduction to Computer Programming or any other course in computer programming
Social Science	Two courses in one of the social sciences other than economics
2. The required core program courses are:	
ECN 200	Introduction to Macroeconomics
ECN 201	Introduction to Microeconomics
ECN 301	Intermediate Microeconomic Analysis
ECN 302	Intermediate Macroeconomic Analysis
ECN 304	Statistical Methods for the Social Sciences
ECN 418 or ECN 480	Selected Topics in Economic Policy Advanced Economic Theory
3. The economics elective requirement is 16 additional credits in courses numbered ECN 300 or higher. Eight of these economics elective credits must be in courses numbered ECN 400 or higher. No more than 4 credits in ECN 392, 490, 494, or 497 may be a required economics elective.	

### Standard Program for the B.A. with a Major in Economics

First Semester	Second Semester
<b>Freshman Year:</b>	
LS 100	LS 101
MTH 121 (or MTH 102-103 if necessary)	MTH 122 (or MTH 121)
Social science course	Arts course
Elective	Natural science course
<b>Sophomore Year:</b>	
ECN 200	ECN 201
CIS 120-121	ECN 304
Language/thought course	Language/thought course
Elective (or MTH 122)	Elective
<b>Junior Year:</b>	
ECN 301	ECN elective (300- or 400-level)
ECN 302	ECN elective (300- or 400-level)
Area studies course (non-Western group)	Literature course
Social science course	History/philosophy course (Western group)
<b>Senior Year:</b>	
ECN elective (400-level)	ECN 418 or 480
ECN elective (400-level)	Elective
Elective	Elective
Elective	

### Major Requirements for a B.S. in Economics

1. To obtain a further background in mathematics, computers, accounting, and writing the student must take the following cognate courses:

MTH 102-103	College Algebra (if required by the math placement test)
MTH 121 and	Linear Programming, Elementary Functions
MTH 122 or MTH 154-155	Calculus for the Social Sciences Calculus
CIS 120-121 or CIS 180	Introduction to Computer Programming Introduction to Computer Science
ACC 200	Introductory Financial Accounting
ENG 210, 380, or 382	Advanced Composition

2. The required economics core program courses are:

ECN 200	Introduction to Macroeconomics
ECN 201	Introduction to Microeconomics
ECN 301	Intermediate Microeconomic Analysis
ECN 302	Intermediate Macroeconomic Analysis
ECN 304	Statistical Methods for the Social Sciences
ECN 405	Econometrics
ECN 418 or ECN 480	Selected Topics in Economic Policy Advanced Economic Theory

3. The economics elective requirement is 16 additional credits in courses numbered ECN 300 or higher. Eight of these economics elective credits must be in courses numbered ECN 400 or higher. No more than 4 credits in ECN 392, 490, 494, or 497 may be a required economics elective.

## Standard Program for the B.S. with a Major in Economics

The following list should be viewed as an example only.

First Semester	Second Semester
<b>Freshman Year:</b>	
LS 100	LS 101
MTH 121 (or MTH 102-103 if necessary)	MTH 122 (or MTH 121)
Social science course	CIS 120-121
Elective	Natural science course
<b>Sophomore Year:</b>	
ECN 200	ECN 201
ACC 200	ECN 304
Language/thought course	CIS 120-121
Elective (or MTH 122)	Language/thought course
<b>Junior Year:</b>	
ECN 301	ECN elective (300- or 400-level)
ECN 302	ECN elective (300- or 400-level)
Area studies course (non-Western group)	ECN 405
ENG 380 or 382	History/philosophy course (Western group)
<b>Senior Year:</b>	
ECN elective (400-level)	ECN 418 or 480
ECN elective (400-level)	Social science course
Literature course	Elective
Elective	Elective

## THE BACHELOR OF SCIENCE WITH A MAJOR IN MANAGEMENT

The management program provides an education for management (i.e., the effective use of resources for defined objectives), rather than an education which describes the practices and institutions of business. The program aims to develop the transferable skills which make adaptive and innovative learners, and it enables graduates to understand and manage changing situations, whether in profit-oriented enterprises or in not-for-profit enterprises, public or private. In this program, a general education is combined with the development of analytical approaches which will enable the student to find new answers to the increasingly complex and changing problems faced by managers and technical personnel in both private business and public organizations. Because education for management is a continuing process throughout a management career, the program seeks to give students the kind of experience that will provide the foundation for adaptability within our rapidly changing modern environment.

The management major obtains the background necessary for entering many positions in business, government, and administration; industry training programs; or graduate schools of management. The emphasis on analysis and analytical tools, such as the computer, opens the way to positions in many areas of rapidly developing technology and expanding employment opportunities.

To aid in obtaining initial entry into various positions in business, government, and other institutions, the management program offers the opportunity to concentrate elective work either in a functional area of management or in some area of academic interest outside of management.

## The Premanagement Major

A premanagement major is not a management student. During the premanagement period, a potential management major must complete a minimum of 56 credits of learning skills, general education, mathematics, computer science, economics courses, and the basic accounting and statistics courses. These courses serve to introduce students to the knowledge, skills, and academic principles which they will need to incorporate into their future work as managers.

## The Premanagement Program

To obtain a firm base for the management major, the premanagement student must take the following courses in his/her first 64 credits:

- Learning Skills:**  
LS 100-101 or complete the Writing Proficiency requirement in another manner. (See page 15.)
- Mathematics:**  
MTH 101/102/103 (if required)  
MTH 121 Linear Programming, Elementary Functions  
and  
MTH 122 Calculus for the Social Sciences  
or MTH 154-155 Calculus
- Computer Science:**  
CIS 120-121 Introduction to Computer Programming (CIS 120 is BASIC and CIS 121 is FORTRAN)  
or CIS 180 Introduction to Computer Science (FORTRAN)
- Economics:**  
ECN 200 Introduction to Macroeconomics  
ECN 201 Introduction to Microeconomics
- Accounting:**  
ACC 200 Introductory Financial Accounting
- Statistics:**  
QMM 304 Statistical Methods for Management

## Standard Program for the Premanagement Major

The following should be viewed as an example only.

First Semester	Second Semester
<b>Freshman Year:</b>	
LS 100	LS 101
MTH 102/103 (MTH 121 if these are not necessary)	MTH 121 (or MTH 122)
Social science course	CIS 120/121 (or CIS 180)
History/philosophy course	Natural science course
<b>Sophomore Year:</b>	
ECN 200	ECN 201
ACC 200	QMM 304
Arts course	ACC 210
MTH 122 (or elective)	Area studies course

## Admission to the Management Major

Admission to the management major is selective. The *minimum* criteria for consideration for admission to the management major program are as follows:

- Applicant's admissibility to and retention in the university.
- Completion of the writing proficiency requirement (see page 12).
- A minimum cumulative grade point average of 2.20 or above in the courses taken in the premanagement period at Oakland or at the previous schools is required for consideration for entrance into the management major.
- A minimum grade of 2.0 at Oakland or a previous school is required in each of the mathematics, computer and information science, economics, accounting, and statistics courses required in the premanagement period. These required courses would be: MTH 101, 102, and 103 (if they are required of the student), MTH 121-122 (or MTH 154-155), CIS 120-121 (or CIS 180), ECN 200-201, ACC 200, and QMM 304.
- Submission of an "Application for Admission to Major Standing in Management" and a completed "Plan-of-Work" in the semester prior to the expected admission to major standing in management.

A student must be admitted to major standing to take any 300- and 400-level courses in management except for QMM

304, ACC 210, and ORG 330. A student who is denied admission to major standing in management may try to remedy the deficiencies in his/her record and reapply, but he/she cannot take any 300- and 400-level courses until he/she is admitted.

### The Management Major Requirements

The student admitted to the management major completes his/her undergraduate management program by completing the following courses:

- Advanced Composition (ENG 382 or 380)
- Required management core courses:
 

ECN 301	Intermediate Microeconomic Analysis
MKT 302	Marketing
ACC 210	Managerial and Cost Accounting I
FIN 322	Managerial Finance I
ORG 330	Organizational Behavior I
ORG 331	Organizational Behavior II
MGT 435	Management Strategies and Policies
- Choice of one quantitative Methods (QMM or MOR) course:
 

QMM 305	Computer Systems for Problem Solving
QMM 306	Management Systems Analysis
QMM 340	Quantitative Methods of Management Science
QMM 400	Advanced Systems Analysis
QMM 405	Econometrics
QMM 443	Operations Management
QMM 444	Simulation in Management
MOR 322	Mathematical Models in the Social Sciences
MOR 342	Introduction to Operations Research
- The student completes his/her work in management by electing 16 additional credits offered by the School of Economics and Management (i.e., ACC, ECN, FIN, MGT, MKT, ORG, or QMM courses). These must be chosen from courses numbered 300 or higher. At least 8 credits must be at the 400 level. At least one of the four electives must be either an ECN or a cross-listed course. No more than 4 credits in MGT 390, 392, 490, or 494 may be used as a required elective. To guide the student in the selection of these electives and to allow him/her to indicate his/her area of interest, concentrations in accounting, finance, economics, management information systems marketing, health care management, human resources management, and international management have been developed.

### Standard Program for the Major in Management

The following list should be viewed as an example only.

First Semester	Second Semester
<b>Junior Year:</b>	
ECN 301	Quantitative methods course
FIN 322	QMM 305, 306, 405, 443
ORG 330	444, or MOR 322, 342)
ENG 380 or 382	ORG 331
	MKT 302
	ECN elective (300- or 400-level)
<b>Senior Year:</b>	
SEM elective (300- or 400-level)	MGT 435
SEM elective (400-level)	SEM elective (400-level)
Social science course	Literature course
Elective	Elective

Note: SEM elective is any 300- or 400-level ACC, ECN, FIN, MGT, MKT, ORG, or QMM course not in the core requirements.

### INTERNAL CONCENTRATIONS FOR MANAGEMENT MAJORS

For a student who desires to specialize in a functional area of management, the School of Economics and Management has developed the following concentrations consisting of a suggest-

ed set of 16-32 credits in courses which will provide the student with more extensive training in a specific field of management.

### Concentration in Accounting

COORDINATOR: *David D. Sidaway*

The concentration in accounting prepares the student for an accounting or auditing career in a profit-making business, a not-for-profit enterprise, the government, or a public accounting firm. To obtain the accounting concentration, the management major must complete the 28 credits specified below with an average grade of 2.00 or better.

ACC 200	Introductory Financial Accounting
ACC 210	Managerial and Cost Accounting I
ACC 311	Intermediate Financial Accounting
ACC 312	Advanced Financial Accounting
Twelve hours of 400-level accounting (ACC) courses. The 400-level accounting courses are:	
ACC 410	Managerial and Cost Accounting II
ACC 411	Auditing
ACC 412	Government and Not-For-Profit Accounting
ACC 413	Regulatory Agencies and the Accounting Profession
ACC 414	Accounting Theory
ACC 415	Tax Accounting
ACC 416	Contemporary Issues in Accounting
ACC 418	Computer-Based Accounting and Systems

Because of the specific requirements of the exams, a student who plans to take a professional accounting examination (CPA, CMA, CIA) should discuss his/her course selection with an accounting faculty member before enrolling in a 300-level accounting course.

### Concentration in Finance

COORDINATOR: *Karl D. Gregory*

The concentration in finance develops the specific skills, modes of analysis, and institutional information useful in working in the accounting and finance areas of a profit-making business or not-for-profit enterprise. The program includes advanced work in accounting and basic and advanced work in finance.

To obtain the concentration in finance, the management major must complete the 32 credits specified below with an average grade of 2.00 or better:

ACC 200	Introductory Financial Accounting
ACC 311	Intermediate Financial Accounting
FIN 321	Money, Credit and Capital Markets
FIN 322	Managerial Finance I
FIN 422	Managerial Finance II
Three courses from the following electives:	
ACC 312	Advanced Financial Accounting
ACC 410	Managerial and Cost Accounting II
ACC 415	Tax Accounting
ACC 416	Contemporary Accounting Issues
ECN 307	Economic Growth, Fluctuations, and Forecasting
ECN 323	International Economic Relations
ECN 420	International Trade and Finance
FIN 421	Investment Analysis
MGT 423	The Multinational Firm

### Concentration in Human Resources Management

COORDINATOR: *Daniel N. Braunstein*

The concentration in human resources management develops the requisite skills to administer the various personnel functions in organizations. It is primarily for students who intend to pursue careers where management of people at work is a central concern (e.g., personnel management, labor relations, and first-line supervision). Emphasis is on acquiring an in-

depth understanding of the tools and techniques used in the acquisition, development, and utilization of an organization's human resources. The program includes broad coverage of such topics as personnel psychology, personnel administration, and labor-management relations, in addition to a basic knowledge of organizational behavior.

To obtain the concentration in human resources management, the management major must complete the 24 credits specified below with an average grade of 2.50 or better and with not less than 2.0 in any course:

ORG 330-331	Organizational Behavior I-II
ORG 433	Labor-Management Relations
ORG 434	Management of Human Resources

Two courses from among the following:

ORG 430	Assessment of Organizational Behavior
ORG 431	Leadership and Group Performance
ORG 432	Motivation and Work Behavior
ORG 437	Job Design
ECN 368	Economics of Human Resources

## Concentration in Health Care Management

COORDINATOR: *Miron Stano*

The concentration in health care management provides the management student with additional information about the particular institutions, issues, and analysis of the organizations involved in health care delivery. This concentration provides additional background for management majors interested in careers in hospitals, long-term care facilities, insurance firms, governmental health care agencies, and other institutions involved with health care.

To obtain the concentration in health care management, the management major must complete the 24 credits specified below with an average grade of 2.00 or better:

Two courses from the following:

HBS 200	Health Care Dimensions
HBS 250 and/or 251	Health Behavioral Sciences
SOC 428	Sociology of Medical Practice
SOC 465	Sociological Perspectives on Aging
PHL 318	Ethics and the Health Sciences
PSY 331	Psychology of Adulthood and Aging

Two courses from the following:

QMM 306	Systems Analysis
ECN 336	Economics of the Public Sector
ECN 368	Economics of Human Resources
MGT 433	Labor-Management Relations

and both

ECN 467	Economics of Health Care
MGT 468	Health Care Management

## Concentration in Management Information Systems

COORDINATOR: *John E. Tower*

The concentration in management information systems specifies a set of courses that will provide more facility with computer programming languages and applications of this knowledge to management problems.

To obtain the concentration in management information systems, the management major must complete the 20 credits specified below with an average grade of 2.00 or better:

CIS 120-121 or CIS 180 and CIS 220	Introduction to Computer Programming Introduction to Computer Science I Computer-Based Information Systems
QMM 305	Computer Systems for Problem-Solving
QMM 306	Management Systems Analysis
QMM 307	Management Information Systems

For a stronger emphasis on computer programming the student should obtain the Minor in Computer and Information Science (see page 111).

## Concentration in Marketing

COORDINATOR: *Le Thuong*

The concentration in marketing develops the specific skills, modes of analysis, and institutional information useful in working in the marketing area of a profit-making business or not-for-profit enterprise.

To obtain the concentration in marketing, the management major must complete the 28 credits specified below with an average grade of 2.00 or better:

Two courses from the following:

AH 210	Art as Advertising and Propaganda
SCN 301	Persuasion
JRN 331	Media Management
JRN 333	Public Relations and the Media
PSY 360	Attitudes and Opinions
SOC 371	Forms and Effects of Mass Communication
SOC 473	Social Control of Mass Media

Each of the following five courses:

MKT 302	Marketing
MGT 325	Industrial Organization
MKT 403	Marketing Management
MKT 404	Consumer Behavior
MKT 480	Seminar in Marketing

## Concentration in Economics (for Management Majors)

COORDINATOR: *Sid Mitra*

For management majors who would like to combine their management education with an emphasis on economics, the Department of Economics offers a concentration in economics for management majors.

To obtain the concentration in economics, management majors must complete the 24 credits specified below with an average grade of 2.00 or better:

ECN 200	Introduction to Macroeconomics
ECN 201	Introduction to Microeconomics
ECN 301	Intermediate Microeconomic Analysis

Choice of either:

ECN 302	Intermediate Macroeconomic Analysis
ECN 307	Economic Growth, Fluctuations, and Forecasting
or ECN 321	Money, Credit and Capital Markets

Two courses from the following:

ECN 309	Urban Economics
ECN 310	Economics of the Environment
ECN 323	International Economic Relations
ECN 325	Industrial Organization
ECN 326	Economic Development
ECN 327	African Economic Development
ECN 328	American Economic History
ECN 336	Economics of the Public Sector
ECN 350	Comparative Economic Systems
ECN 368	Economics of Human Resources
ECN 405	Econometrics
ECN 418	Selected Topics in Economic Policy
ECN 420	International Trade and Finance
ECN 423	The Multinational Firm
ECN 433	Labor-Management Relations
ECN 467	Economics of Health Care
ECN 480	Advanced Economic Theory

## Concentration in International Management

COORDINATOR: *Eleftherios N. Botsas*

The concentration in international management provides the management student with additional information about international trade, international finance, the role of the multinational firm, and the cultures and languages of other countries.

To obtain the concentration in international management, the management major must complete the 16-32 credits speci-

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fied below with an average grade of 2.00 or better:

Second-year proficiency in a foreign language	
ECN 326	Economic Development
ECN 350	Comparative Economic Systems
or ECN 251	The Soviet Economy
ECN 420	International Trade and Finance
or ECN 323	International Economic Relations
MGT 423	The Multinational Firm

### MINORS IN MANAGEMENT OR ECONOMICS FOR OTHER MAJORS

#### Minor in Management

COORDINATOR: *John Tower*

For students in other majors who wish to combine their major with an introduction to the skills, analytical techniques, and institutional material in management courses, the School of Economics and Management offers a minor in management.

To obtain the minor in management, the student must complete the 26 credits specified below with an average grade of 2.00 or better:

CIS 120	Introduction to Computer Programming
ECN 200	Introduction to Macroeconomics
ECN 201	Introduction to Microeconomics
ACC 200	Introductory Financial Accounting
ORG 330	Organizational Behavior I
2 SEM electives (300-400 level ACC, FIN, MGT, MKT, ORG, or QMM courses)	

#### Minor in International Management

COORDINATOR: *Eleftherios N. Botsas*

For students in other majors, particularly modern languages and area studies, who wish to combine their major with an introduction to the skills, analytical techniques, and institutional material related to international management and the multinational firm, the School of Economics and Management offers the minor in international management.

To obtain the minor in international management, the student must complete the 26 credits specified below with an average grade of 2.00 or better:

CIS 120	Introduction to Computer Programming
ECN 200	Introduction to Macroeconomics
ECN 201	Introduction to Microeconomics
ECN 323	International Economic Relations
ACC 200	Introductory Financial Accounting
ORG 330	Organizational Behavior I
MGT 423	The Multinational Firm

#### Minor in Economics

COORDINATOR: *David P. Doane*

For students in other majors who wish to combine their major with an introduction to economic theory and its application to world problems, the Department of Economics offers a minor in economics.

To obtain the minor in economics, the student must complete the 22 credits specified below with an average grade of 2.00 or better:

CIS 120	Introduction to Computer Programming
ECN 200	Introduction to Macroeconomics
ECN 201	Introduction to Microeconomics
Statistics	(ECN 304, PS 222, PSY 250, SOC 203, or STA 320-321)

Two ECN electives (300- or 400-level)

#### Minor in International Economics

COORDINATOR: *Eleftherios N. Botsas*

For students in other majors who wish to combine knowledge of international economics with their major, the Department of Economics offers a minor in international economics.

To obtain the minor in international economics, the student must complete the 22 credits specified below with an average grade of 2.00 or better:

CIS 120	Introduction to Computer Programming
ECN 200	Introduction to Macroeconomics
ECN 201	Introduction to Microeconomics
Statistics	(ECN 304, PS 222, PSY 250, SOC 203, or STA 320-321)
ECN 323	International Economic Relations
ECN 423	The Multinational Firm

#### COURSE OFFERINGS IN ECONOMICS

Following are economics courses which have been offered in the past three years. Any new course offering, change in a course description, or change in a prerequisite will be announced in a supplementary bulletin published during the advising period for a given semester.

The following courses are part of the basic economics major program and will be offered in fall, winter, and either spring or summer each year: ECN 200, 201, 301, 302, and 304.

The 100- or 200-level economics electives are designed for students not majoring in economics or management. They may be taken by economics or management majors, but they cannot be used as one of the required electives in the major.

The 300-level economics electives are designed for economics and management majors. Major standing is not required to take these courses, but some of them have specific prerequisites or corequisites. Nonmajors may take these courses if they meet the requirements.

The 400-level economics electives are designed for economics and management students who have major standing.

#### ECONOMICS (ECN)

##### ECN 100 Introduction to Political Economy (4)

Introduction to the traditional and radical economic analysis of the capitalist economy. Topics include: microeconomics—the development of the market system, monopoly, discrimination, pollution, and poverty; macroeconomics—economic activity, unemployment, inflation, defense spending, growth and underdevelopment, and imperialism; and alternative economic systems. Not open to economics and management majors.

##### ECN 200 Introduction to Macroeconomics (4)

Introduction to the tools and analysis of economics. Analysis of determination of national income, money and banking, control of unemployment and inflation, economic growth, and international economics.

Prerequisite: High school algebra and sophomore standing.

##### ECN 201 Introduction to Microeconomics (4)

Analysis of consumer behavior, decision-making in the firm, market structure and performance, labor and other factor markets, government expenditures, and taxes. Application of microeconomic analysis to urban, environmental, energy, income maintenance, health, education, food, and fertility markets.

Prerequisite: ECN 200.

##### ECN 221 Economics of the Afro-American Experience (4)

Application of the tools of economic analysis to: the current economic status of Afro-Americans, the economic history of Afro-Americans, the market consequences of discrimination, the evaluation of alternative strategies for economic development, and the critical review of recent public economic policies.

##### ECN 222 The Economic Status of Women (4)

Application of economic analysis to the role and status of women in the modern industrial economy. Topics include the relationship between women and consumption, women in the labor market, and the relationship between the family structure and economic activity.

Prerequisite: ECN 100 or 201.

##### ECN 225 American Economic Growth and Development (4)

People, institutions, events, and overall trends in the American economy since colonial times. Emphasizes qualitative and quantitative patterns of change in resource organization for social and private goals.

Prerequisite: Sophomore standing.

**ECN 251 The Soviet Economy (4)**

The history of Soviet economic development; analysis of the principles of operation of the Soviet economy; the relationship between administrative structure and decision-making; problems of resource allocation; evaluation of Soviet economic performance and Soviet economic reforms.

Prerequisite: ECN 100 or 201.

**ECN 268 Introduction to Labor Economics (4)**

Introduction to the economics of labor, including composition of the labor force; unions and their economic effects; problems of unemployment; discrimination; and wage determination.

Prerequisite: ECN 100.

**ECN 301 Intermediate Microeconomic Analysis (4)**

Analysis of pricing, resource allocation, and income distribution at the level of the individual firm, industry, and household consuming unit.

Prerequisite: ECN 201 and MTH 122.

**ECN 302 Intermediate Macroeconomic Analysis (4)**

Construction, analysis, and interpretation of models of aggregate economic behavior, including the policy implications of alternative models.

Prerequisite: ECN 201 and MTH 121.

**ECN 304 Statistical Methods for the Social Sciences (5)**

Statistical techniques useful in management and economic analysis. Emphasis on statistical description for inference, including hypothesis testing, estimation, and regression techniques. Includes computer exercises. Identical with QMM 304.

Prerequisite: MTH 122 or 154.

**ECN 306 Systems Analysis (4)**

Emphasizes identification of goals and use of resources for achieving goals through application of analytical and quantitative tools developed in earlier courses to problems from a variety of experiences, e.g., financial management, marketing, production, and capital budgeting. Identical with QMM 306. Offered fall and winter semesters.

Prerequisite: ECN 301.

**ECN 307 Economic Growth, Fluctuations, and Forecasting (4)**

Analysis and modeling of the forces underlying economic growth in advanced nations. Study of business conditions and various factors affecting business fluctuations. Introduction to dynamic models and to economic forecasting techniques for the individual firm and for the national economy.

Prerequisite: ECN 201 and 304.

**ECN 309 Urban Economics (4)**

A survey of selected contemporary urban economic problems; local public services and public finance in politically fragmented metropolitan areas; urban poverty and crime; urban housing, blight, and renewal; urban sprawl and traffic problems. Discussion of employment planning and area development in national urban policy.

**ECN 310 Economics of the Environment (4)**

Application of the tools of economic analysis to the problems of energy, ecology, and the environment. Topics include: the economics of externalities and public goods; environmental improvement and optimum use of fixed national resources, the limits to economic growth and ecological aspects of principal pollution problems; current environmental policy.

Prerequisite: ECN 201.

**ECN 321 Money, Credit and Capital Markets (4)**

The course has three objectives: an introduction to commercial banking; an introduction to the role of financial institutions; and an in-depth study of the U.S. money and capital markets. Identical with FIN 321.

Prerequisite: ECN 201.

**ECN 322 Managerial Finance I (4)**

The basic elements of managerial finance. Topics include: capital budgeting techniques, financial structure and analysis, the cost of capital, and working capital management. Offered fall, winter, and spring semesters. Identical with FIN 322.

Prerequisite: ECN 201 and ACC 200.

**ECN 323 International Economic Relations (4)**

Introduction to elementary international trade theory, the international monetary mechanism, exchange-rate regimes, the balance

of payments, and economic interdependence.

Prerequisite: ECN 201.

**ECN 325 Industrial Organization (4)**

The structure of American industry and the factors affecting it, with emphasis on economies of scale; barriers to entry; structure-behavior relationships, including pricing, product differentiation, and technical change; evaluation of performance and implications for public policy in the areas of antitrust and regulation. Identical with MGT 325.

Prerequisite: ECN 301.

**ECN 326 Economic Development (4)**

Application of the tools of economic analysis to the problems of economic development and growth.

Prerequisite: ECN 201.

**ECN 327 African Economic Development (4)**

Application of the tools of economic analysis to: the historical development of African economies, the evaluation of current strategies for their economic development, and the role of the developed countries.

Prerequisite: ECN 201.

**ECN 328 American Economic History (4)**

Models and case studies of selected events in the growth and development of the American economy from colonial times to the present. Emphasizes the evolution of historical thought under the impact of economic analysis.

Prerequisite: ECN 201 and 304.

**ECN 336 Economics of the Public Sector (4)**

The role and impact of the public sector in a market economy. Includes expenditure determination, revenue source analysis, and discussion of current problems.

Prerequisite: ECN 301.

**ECN 350 Comparative Economic Systems (4)**

Comparative analysis of alternative forms of economic organization. The relationships between the economic system and resource allocation, pricing, income distribution, and growth. Capitalism, market socialism, and central planning are emphasized.

Prerequisite: ECN 301.

**ECN 368 Economics of Human Resources (4)**

Economic analysis of the functioning of labor markets, with emphasis on investment in human capital; the role of education; unemployment; labor market differentiation by race, sex, and age; the geographic and occupational mobility of labor; and the inflation-unemployment trade-off.

Prerequisite: ECN 301.

**ECN 392 Directed Readings in Economics (2)**

Independent but directed readings for junior and senior majors in fields of economics in which advanced courses are not available. Offered every semester.

Prerequisite: An approved contract.

**ECN 405 Econometrics (4)**

Introduction to the testing of economic models, expressed mathematically, by statistical methods and including real world problems. Identical with QMM 405.

Prerequisite: Major standing and permission of instructor.

**ECN 414 Engineering Economics (4)**

Financial accounting models, relevant costs; capital budgeting, present value, rate of return, pay back, taxes, depreciation.

Prerequisite: MTH 256 or APM 257

**ECN 418 Selected Topics in Economic Policy (4)**

Selected topics in the application of economic theory to the analysis of economic policy. Economic policy areas may include resource allocation, macroeconomic stability, economic growth, energy, and the environment. Topics change from time to time.

Prerequisite: Major and senior standing.

**ECN 420 International Trade and Finance (4)**

The theory of international specialization and exchange, commercial policy, national income and balance of payments, monetary relations, foreign investment, and current issues of international economic policy.

Prerequisite: Major standing.

**ECN 423 The Multinational Firm (4)**

Analysis of the scope, structure, and environment (legal, social, political, and economic) with emphasis on management strategies of planning, marketing, location, and finance across cultural and national boundaries. Identical with MGT 423.

Prerequisite: ECN 301 or 323.

**ECN 433 Labor-Management Relations (4)**

Analysis of management-employee relations in modern industry. Topics include: factors influencing the supply and demand for labor, evolution and government of trade unions, procedures and economic impact of collective bargaining, and public policy concerning labor and management relations. Identical with MGT 433.

Prerequisite: Major standing.

**ECN 444 Simulation in Economics (4)**

Introduction to the use of simulation techniques in economic analysis. Identical with QMM 444.

Prerequisite: Major standing, computer programming, and ECN 304.

**ECN 467 Economics of Health Care (4)**

Application of the tools of economic analysis to the health care industry and government health care policy. Examines the impact of the special characteristics of health care and the medical services industry on the pattern of health care produced, its distribution, and resource allocation within the industry.

Prerequisite: Major standing.

**ECN 480 Advanced Economic Theory (4)**

Selected topics in the economic theory of resource allocation, economic growth, and stability. Topics change from time to time.

Prerequisite: Major and senior standing.

**ECN 490 Independent Research (1, 2, 3, or 4)**

Independent individual research on a topic chosen by the student and approved by the Executive Committee before the semester in which the student elects this course.

Prerequisite: Major standing and an approved contract.

**ECN 494 Independent Group Study (4)**

Students determine which current economic issues are of interest to them and prepare a program for pursuing these issues in depth. The

course consists primarily of student participation, but faculty provide consultation and direction.

Prerequisite: Major standing and an approved contract.

**ECN 497 Apprentice College Teaching (2)**

An elective open to any well-qualified upperclassperson with consent of a faculty member in his/her major field to assist in presenting a regular college course to underclasspersons.

Prerequisite: Major standing and an approved contract.

**COURSE OFFERINGS IN MANAGEMENT**

The following is a list and description of upper-level required and elective courses offered in the past three years by the School of Economics and Management. Any new course offering, change in a course description, or change in a course prerequisite will be announced in a supplementary bulletin published during the advising period for a given semester.

The following courses are part of the core program for the management major and normally will be offered each fall and winter and either spring or summer: ACC 200, ACC 210, FIN 322, MGT 435, MKT 302, ORG 330-331, and QMM 304.

The 300-level courses should be taken in the junior year (59-90 credits). The 300-level electives are designed for management majors and students with concentrations and minors in management. Nonmajors may elect these courses if they meet the prerequisites and have an approved application for a minor in management or international management.

The 400-level management electives are designed for management students who have major standing.

**Accounting (ACC)**

**ACC 200 Introductory Financial Accounting (4)**

Introduction to accounting information as an aid to decision-making for external users of financial statements. Students learn how to measure and record accounting data, derive financial statements, and analyze data presented in published financial reports.

Prerequisite: Sophomore standing.





**ACC 210 Managerial and Cost Accounting I (4)**

A comprehensive analysis of accounting methods providing data for optimal managerial decisions, implementation, and control. Topics include cost allocation; cost, volume, and price relationship; various product cost accounting and control systems; operations and capital budgeting; differential analysis; and related behavioral, reporting, and information processing aspects.

Prerequisite: ACC 200.

**ACC 311 Intermediate Financial Accounting (4)**

An in-depth study of financial accounting and reporting problems. Generally accepted accounting principles applicable to investments inventories, productive resources, and debt and equity capital issues will be discussed. Emphasis is on providing useful information to external financial statement users.

Prerequisite: ACC 200.

**ACC 312 Advanced Financial Accounting (4)**

Topics include accounting and reporting leases, foreign operations, partnerships, consolidated entities, pensions, interim financial statements, segments of business enterprises, and not-for-profit organizations.

Prerequisite: ACC 311.

**ACC 410 Managerial and Cost Accounting II (4)**

An in-depth analysis of available procedures and techniques to sharpen accounting analyses for managerial planning and control. Extends the budget and cost controls introduced in ACC 310 to nonmanufacturing firms and to decentralized firms, including transfer pricing and segment performance measurement.

Prerequisite: ACC 210.

**ACC 411 Auditing (4)**

Introduction to the objectives, techniques, and standards of internal and external audits of the accounts of an enterprise. Generally accepted auditing standards will be critically examined.

Prerequisite: ACC 312 and major standing.

**ACC 412 Government and Not-for-Profit Accounting (2)**

The characteristics and objectives of not-for-profit entities are analyzed and used to identify and define the basic concepts of accounting for funds. Accounting and reporting principles applicable to governmental units, hospitals, schools, eleemosynary and other entities organized to be nonprofit are discussed.

Prerequisite: ACC 311

**ACC 413 Regulatory Agencies and the Accounting Profession (2)**

The nature, origin, and workings of the SEC, ICC, and others, as related to the accounting profession are examined. The legal framework, registration, and reporting requirements, professional liability, regulation of the accounting profession, and the continuing issue of establishing generally accepted accounting principles are studied.

Prerequisite: ACC 311

**ACC 414 Accounting Theory (4)**

Examination of selected topics of current interest in accounting theory. Opinions of the Accounting Principles Board (APB) and similar standard-setting committees of the accounting profession will be examined.

Prerequisite: ACC 312.

**ACC 415 Tax Accounting (4)**

The concepts of taxation. The essential logic underlying the federal tax laws will be developed. The class will analyze individual and corporate income tax laws rather than train students to prepare current-year tax returns.

Prerequisite: ACC 312.

**ACC 416 Contemporary Accounting Issues (4)**

Topics vary, and the course may be repeated for credit. An examination of the changes in accounting associated with infusions of theories of other disciplines: behavioral science, organizational theory, economic theory, sociology, psychometrics, and anthropology. Also considered are changes in the role of the accountant.

Prerequisite: ACC 312.

**ACC 418 Computer-Based Accounting and Systems (4)**

Examination of computer applications in accounting integrated with related operating and sales data processing. Internal control features are stressed. Also an introduction to computer hardware, software, and data systems analysis, development, and implementation.

Prerequisite: ACC 210 and CIS 120-121 or 180.

**Finance (FIN)****FIN 320 Personal Financial Management (4)**

The student is viewed as a business manager, responsible for all his/her financial affairs. By adopting the "MBO" approach, the student develops competence in personal financial management. Topics include estate planning, retirement, insurance, investment, savings, and credit.

Prerequisite: ECN 201.

**FIN 321 Money, Credit and Capital Markets (4)**

The course has three objectives: an introduction to commercial banking; an introduction to the role of financial institutions; and an in-depth study of the U.S. money and capital markets. Identical with ECN 321.

Prerequisite: ECN 201.

**FIN 322 Managerial Finance I (4)**

The basic elements of managerial finance. Topics include: capital budgeting techniques, financial structure and analysis, the cost of capital, and working capital management. Offered fall, winter, and spring semesters. Identical with ECN 322.

Prerequisite: ECN 201 and ACC 200.

**FIN 421 Investment Analysis (4)**

Comprehensive treatment of the important aspects of security analysis and portfolio theory. Four areas are covered: investment management and the money and capital markets, the analytical procedures for appraising securities, portfolio analysis, and the assessment of capital market efficiency.

Prerequisite: FIN 322 and major standing.

**FIN 422 Managerial Finance II (4)**

The application of the tools of financial analysis to specific cases in the financial management of corporate businesses and not-for-profit enterprises.

Prerequisite: ACC 200, FIN 322, and major standing.

**Marketing (MKT)****MKT 302 Marketing (4)**

Analysis of consumer behavior and its significance for market analysis. The relationship between market structure and marketing behavior.

Prerequisite: ORG 330 and ECN 301.

**MKT 403 Marketing Management (4)**

In-depth study of a selected topic relevant to the management of the marketing function. Topics may include: marketing and society, advertising and the mass media, institutional marketing, distribution channel management, and promotional policies.

Prerequisite: MKT 302 and major standing.

**MKT 404 Consumer Behavior (4)**

Study of basic factors influencing consumer behavior, with emphasis on structuring and managerial use of consumer decision-making models. Examination of social-psychological and economic variables, including learning, motivation, attitude, personality, small groups, demographic and economic factors, and culture, to analyze their effect on buying behavior.

Prerequisite: MKT 302 and major standing.

**MKT 480 Seminar in Marketing (4)**

Applications of recent theoretical and empirical findings in marketing. Student works on a project in cooperation with local firms, where he applies the tools acquired in marketing and related courses to a current managerial problem.

Prerequisite: MKT 403-404 and major standing.

**Management (MGT)****MGT 291 Introduction to Cooperative Education (2)**

An introduction to the cooperative education program at Oakland including: career planning, employment interviews, interpersonal relations, and related topics.

Prerequisite: Approval for Cooperative Education Placement.

**MGT 292 Cooperative Education Seminar (2)**

A seminar for students working in cooperative education settings designed to integrate their work experience with the relevant academic research and analysis.

Prerequisite: Cooperative Education Placement.

**MGT 325 Industrial Organization (4)**

The structure of American industry and the factors affecting it, with

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emphasis on economies of scale; barriers to entry; structure-behavior relationships, including pricing, product differentiation, and technical change; evaluation of performance and implications for public policy in the areas of antitrust and regulation. Identical with ECN 325. Offered fall semester.  
Prerequisite: ECN 301.

**MGT 390**      **Apprentice College Teaching (2)**  
An elective open to any well-qualified upperclassperson who has the consent of a faculty member in his/her major field to assist in presenting a regular college course to underclasspersons. Offered every semester.  
Prerequisite: Major standing and an approved contract.

**MGT 392**      **Directed Readings in Management (2)**  
Independent but directed readings for junior and senior majors in fields of management in which advanced courses are not available. Offered every semester.  
Prerequisite: Major standing and an approved contract.

**MGT 423**      **The Multinational Firm (4)**  
Analysis of the scope, structure, and environment (legal, social, political, and economic) with emphasis on management strategies of planning, marketing, location, and finance across cultural and national boundaries. Identical with ECN 423.  
Prerequisite: ECN 301 or 323.

**MGT 424**      **The Legal Environment of Enterprise (4)**  
The study of the legal framework in which business decisions are made and the types of economic conflict and political activity that have created this framework. Topics include: contracts, anti-trust legislation, conflict resolution, and regulatory agencies.  
Prerequisite: Major standing.

**MGT 433**      **Labor-Management Relations (4)**  
Analysis of management-employee relations in modern industry. Topics include: factors influencing the supply and demand for labor, evolution and government of trade unions, procedures and economic impact of collective bargaining, and public policy concerning labor and management relations. Identical with ECN 433.  
Prerequisite: Major standing.

**MGT 435**      **Management Strategies and Policies (4)**  
Managerial problem perception and the application of economics, statistics, organizational behavior, accounting, and quantitative methods to the systematic analysis of organizational case studies.  
Prerequisite: Major standing and senior status.

**MGT 468**      **Health Care Management (4)**  
Application of the management tools of economics, statistics, organizational behavior, marketing, finance, and quantitative methods to the systematic analysis of the management of health care institutions.  
Prerequisite: ECN 467 and major standing.

**MGT 490**      **Independent Research (1, 2, 3, or 4)**  
Independent individual research on a topic chosen by the student and approved by the Executive Committee before the semester in which the student elects this course. Offered every semester.  
Prerequisite: Major standing and an approved contract.

**MGT 494**      **Independent Group Study (4)**  
Students determine which current management issues are of interest to them and prepare a program for pursuing these issues in depth. The course consists primarily of student participation, but faculty provide consultation and direction.  
Prerequisite: Major standing and an approved contract.

### Organizational Behavior (ORG)

**ORG 330**      **Organizational Behavior I (4)**  
The theoretical and empirical issues surrounding organizational management as it relates to individual and organizational processes, e.g., perception, learning, motivation, communication, decision-making, leadership, power, and authority. Covers individual processes in organizations, interpersonal, and group processes.  
Prerequisite: QMM 304 recommended.

**ORG 331**      **Organizational Behavior II (4)**  
Analysis of organizational management through study of groups and organizations. Organizations will be viewed from a "macro" perspective; i.e., the study of groups and the structures and processes of organizations. Emphasis is on theory and research from social psy-

chology and the sociology of organizations.  
Prerequisite: QMM 304 and ORG 330.

**ORG 334**      **Human Development in Organizations (4)**  
Surveys the developmental processes of employees in complex organizations both from a managerial and psychological standpoint. Topics include: personnel recruitment, selection, placement, training, and development; manpower planning; employee evaluation and reward systems; and job analysis and design. For nonmanagement majors only. Management majors should take ORG 434.  
Prerequisite: Junior standing.

**ORG 430**      **Assessment of Organizational Behavior (4)**  
Use of findings and methods of various behavioral research strategies as input for managerial problem-solving. Comparison of case, experimental, survey, correlational, and other approaches. Review of various methods of individual and organizational measurement devices, including industrial tests, morale surveys, etc.  
Prerequisite: ORG 331 and major standing.

**ORG 431**      **Leadership and Group Performance (4)**  
Comprehensive examination of selected theories of leadership. Emphasis on relevant empirical evidence and application of the theories to case studies which involve leadership behavior and group functioning.  
Prerequisite: ORG 331 and major standing.

**ORG 432**      **Motivation and Work Behavior (4)**  
Analysis and discussion of individual and organizational factors affecting employee motivation, performance, and satisfaction in the work environment. Topics include: the role of leadership, job design, environmental variation, compensation policies, goal-setting techniques, and group influences as each affects employee attitudes and behavior.  
Prerequisite: ORG 331 and major standing.

**ORG 434**      **Management of Human Resources (4)**  
Exploration and analysis of the role of the personnel function in modern organizations. Topics include: job analysis and design; manpower planning; recruitment, selection, and placement; employee training and development; performance analysis and appraisal; compensation policies and practices; employee information systems; and personnel research techniques.  
Prerequisite: ORG 331 and major standing.

**ORG 437**      **Job Design (4)**  
Alternative job design strategies will be evaluated from two perspectives—theory related to the structuring of organizational roles and findings of empirical research. Includes implications of alternative job design strategies for employee attitudes, motivation, and performance.  
Prerequisite: QMM 304 and ORG 331.

### Quantitative Methods (QMM)

**QMM 304** <sup>250</sup> **Statistical Methods for the Social Sciences (5)**  
Statistical techniques useful in management and economic analysis. Emphasis on statistical description and inference, including hypothesis testing, estimation, and regression techniques. Includes computer exercises. Identical with ECN 304.  
Prerequisite: MTH 122 or 154.

**QMM 306**      **Systems Analysis (4)**  
Emphasizes identification of goals and use of resources for achieving goals through application of analytical and quantitative tools developed in earlier courses to problems from a variety of experiences, e.g., financial management, marketing, production, and capital budgeting. Identical with ECN 306. Offered fall and winter semesters.  
Prerequisite: ECN 301.

**QMM 307**      **Management Information Science (4)**  
To introduce the theory and practice related to the development and operation of information systems in organizations. Topics include: systems approach, information economics, management uses of information, alternative designs of information systems, data base concepts and languages, management of the information system.  
Prerequisite: CIS 120-121 or CIS 180.

**QMM 340**      **Quantitative Methods of Management Science (4)**  
Applications of statistics, linear programming, and other quantitative techniques to management problems.  
Prerequisite: MTH 122 and QMM 304.

**QMM 400      Advanced Systems Analysis (4)**

Topics in the modeling, instrumentation, and control of complex systems. Emphasis is on the specification, testing, and implementation of policies in which direct controls must be foregone in favor of educational control policies.

Prerequisite: Major standing and QMM 306.

**QMM 405      Econometrics (4)**

Introduction to the testing of economic models, expressed mathematically, by statistical methods and including real world problems. Identical with ECN 405.

Prerequisite: Major standing.

**QMM 442      Operations Research (4)**

Application of network models, nonlinear and dynamic programming, and other analytical techniques to decision-making in economics and management. Identical with ECN 442.

Prerequisite: Major standing and QMM 340.

**QMM 443      Operations Management (4)**

Analysis of the economic problems in management of productive processes in general manufacturing and service industries. Mathematical programming, statistical, and Monte Carlo methods will be used to solve problems of inventory management, quality control, plant and equipment investment, facility location, operations scheduling, etc.

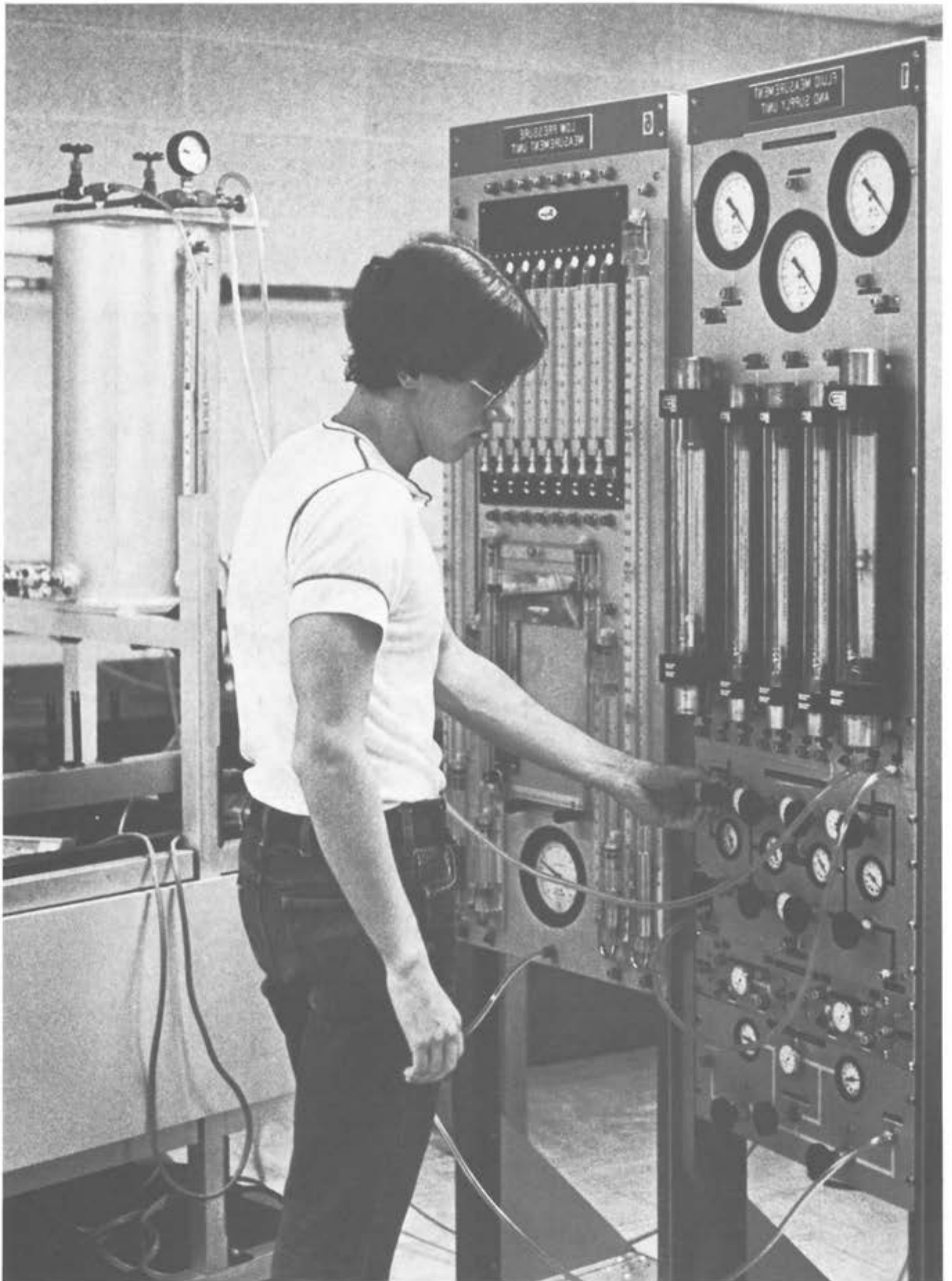
Prerequisite: Major standing.

**QMM 444      Simulation in Management (4)**

Introduction to the use of simulation techniques in economic analysis. Identical with ECN 444.

Prerequisite: Major standing, computer programming, and QMM 304.





# SCHOOL OF ENGINEERING

## OFFICE OF THE DEAN

Mohammed S. Ghausi, Dean and John F. Dodge Professor of Engineering  
Howard R. Witt, Associate Dean  
Gregory P. Knoff, Assistant to the Dean  
Frederick J. Lutz, Engineering Cooperative Education Coordinator  
Kenneth A. Meade, Adviser

**PROFESSORS:** August J. Durelli (John F. Dodge Professor Emeritus), David H. Evans, Mohammed S. Ghausi (John F. Dodge Professor), William G. Hammerle, Richard E. Haskell, J. Carroll Hill, Joseph D. Hovanesian, Keith R. Kleckner, Nan K. Loh, Gilbert L. Wedekind, Howard R. Witt

**ASSOCIATE PROFESSORS:** David E. Boddy, Robert H. Edgerton, Donald R. Falkenburg, Yau Yan Hung, Glenn A. Jackson, Ronald R. Mourant, Dhiraj K. Pradhan, Peter Stavroulakis, Sarma R. Vishnubhotla, Tung H. Weng

**ASSISTANT PROFESSORS:** Osman D. Altan, Bhushan L. Bhatt

**ADJUNCT PROFESSORS:** Ralph M. Grant, Kenneth A. Meade

**ADJUNCT ASSISTANT PROFESSORS:** Ronald R. Beck, Frank W. Bliss, Susanne M. Gatchell, Josette Morel, Ranjit K. Roy

**SPECIAL INSTRUCTOR:** Jerry E. Marsh

## BOARD OF VISITORS

The Board of Visitors for the School of Engineering is composed of industry leaders in southeast Michigan. They assist the School of Engineering in developing educational and research programs to meet the rapidly expanding requirements in the technical world. The board is available as a body or individually for consultation on such matters as curriculum, research, facilities, equipment requirements, special subjects, and long-range planning. Board members are:

Mr. Rupert Atkin, Vice-President, Engineering, TRW, Inc.  
Dr. Paul F. Chenea, Vice-President, Research Laboratories, General Motors Corporation  
Dr. W. Dale Compton, Vice-President, Scientific Research, Ford Motor Company  
Mr. Sidney D. Jeffe, Vice-President, Engineering, Chrysler Corporation  
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Mr. R. Jamison Williams, Director, Lear Siegler, Inc.  
Mr. Frank J. Winchell, Vice-President of Engineering Staff, General Motors Corporation

## PROGRAMS

The Oakland University School of Engineering is an interdisciplinary oriented academic unit offering programs leading

to the Bachelor of Science degree with majors in engineering and in computer and information science.

The basic component of the engineering program is a core of engineering courses which provide a broad background in the fundamentals of engineering. This is augmented by work in specialty areas. Specialization is available in computer engineering, electrical engineering, mechanical engineering, and systems engineering. A general engineering option is available for students who do not wish to specialize. Additionally, engineering students may avail themselves of minors and concentrations offered by other academic units. Concentrations approved for engineering majors but offered outside the School of Engineering are in environmental studies, statistics, and preprofessional studies in medicine, dentistry, and optometry. Minors in chemistry, economics, and management are also available.

The computer and information science degree program provides a solid foundation for a career in computer science. Program cognates are in engineering, mathematics, statistics, economics, and management.

The School of Engineering also offers a minor in computer and information science for nonmajors. See page 111 of this catalog.

Programs leading to the degrees of Master of Science and Doctor of Philosophy are available in the School of Engineering. These degree programs are detailed in the *Oakland University Graduate Study Catalog*.

## Plan of Study

Each student in the School of Engineering is assigned an adviser who should be consulted regularly for assistance in planning a program of study. Engineering and computer and information science majors must complete a Plan of Study form, which is a timetable of courses to be taken for undergraduate credit. It must be submitted no later than the end of the semester in which the student completes 48 credits. Transfer students should submit a Plan of Study when they enter Oakland, regardless of the number of credits they already have earned. The student completes the form in consultation with his/her adviser, and it is then approved by the dean's office. The student is responsible for updating the plan regularly, preferably each semester. The first update must occur before completion of 80 credits; the second, before completion of 108 credits. Although advisers are obligated to assist students in planning their programs, the responsibility for fulfilling degree requirements remains with the student.

## General Education

All students in engineering and computer science must take a series of courses distributed for broad exposure to liberal education. To satisfy the general education requirements, majors in engineering or computer and information science must:

1. Complete 24 credits in general education courses. Up to 8 credits in English composition courses may be part of the 24 general credits, but they do not apply to any designated field group.
2. Complete at least 4 credits in each of two of the five designated field groups, and at least 8 credits in a third field group. The field groups are arts; history, philosophy, and area studies; language and thought; literature; social sciences. For a description of the field groups, see

the College of Arts and Sciences section on page 19. Majors in engineering or computer and information science may use these additional courses within field groups:

Arts: AH 363, DAN 173

Social Sciences: ECN 201, 301, 302, and ORG 330

Engineering majors are required to complete either ECN 100, 200, or 201 as part of the social science distribution requirement.

The general education requirement may also be met by completing the general education program of New Charter College or the Honors College of Arts and Sciences.

## UNDERGRADUATE CURRICULUM IN ENGINEERING

Oakland's engineering programs prepare students for a career in an industrial-based society. Recognizing that today's engineer must be able to solve complex problems transcending narrow categories as well as specialized problems, Oakland's engineering programs blend an interdisciplinary core with study in specialty areas. Oakland graduates are prepared to enter the traditional fields of government, product design, development, manufacture, sales, service and systems analysis, newer areas of application such as transportation, pollution control, energy systems, computer and information processing, medical electronics and automotive electronics, or to pursue graduate study for research and teaching careers. A growing number of students also find that their undergraduate engineering education is excellent preparation for careers in business, law, and medicine.

### Accreditation

Oakland University's undergraduate engineering programs have been fully accredited by the North Central Association of Colleges and Schools and by the Accreditation Board for Engineering and Technology (formerly the Engineers' Council for Professional Development) which is the official accrediting agency for the engineering profession in the U.S.

### Preparation for Admission

Entering freshmen planning to major in engineering should present at least three years of high school mathematics, including one-half unit of trigonometry. Additional high school courses in mathematics, physics, chemistry, and English are desirable. Elementary drafting and machine shop practice are useful but not necessary. Normally, a B average is required for admission to the program.

A student planning to transfer into one of the engineering programs should present as many as possible of the following: four courses in analytic geometry and calculus including linear algebra and differential equations; two courses in introductory college physics using the calculus; and one or two courses in college chemistry. Other credits in mathematics, science, or engineering will be evaluated with reference to courses required for graduation in the Oakland University engineering curriculum. Technician course credits do not generally apply to these requirements.

Community college students who plan to transfer into an engineering program are advised to take the engineering transfer program as prescribed by the Engineering College-Community College Liaison Committee. A brochure describing this transfer program is available from any community college or the School of Engineering. Generally, community college graduates with the associate degree have satisfied the general education requirements of Oakland's School of Engineering. See page 00 for other information regarding admission of transfer students.

## Requirements for the Degree of Bachelor of Science with a Major in Engineering

Engineering majors must meet the following graduation requirements:

1. Have completed at least 128 credits, 32 credits of which must be in courses at the 300 level or above.
2. Have completed 32 credits at Oakland University. At least 16 of these credits must be in required engineering courses.
3. Have taken at Oakland University the last 8 credits needed to complete baccalaureate requirements.
4. Have a cumulative grade point average in courses taken at Oakland University of at least 2.00.
5. Have demonstrated writing proficiency by meeting the university standard in English composition.
6. Have completed 24 credits of general education as specified by the School of Engineering.
7. Have completed mathematics program of 18 credits consisting of MTH 154, 155, 256, APM 257 and
  - a. MTH 254 for the electrical, mechanical and systems engineering specializations and the general engineering option, or
  - b. APM 363 for the computer engineering specialization.
8. Have completed the science program of 16 credits consisting of CHM 144 or 164; PHY 151, 152, and 4 credits from the approved list of science courses.
9. Have completed the core program of 34 credits consisting of CIS 130, EGR 101, 272, ECE 222, 326, ME 221, 341, SYS 317, and 325.
10. Have completed the general engineering option or one of the approved engineering specializations of 28 credits. The approved specializations are computer engineering, electrical engineering, mechanical engineering, and systems engineering.
11. Have completed 8 credits of free electives.
12. Have an average grade of 2.00 or higher in the engineering and computer and information science courses taken to satisfy the engineering core and the general engineering option/specialization requirements, and also in the courses taken to satisfy the mathematics and science requirements.
13. Have completed an application for degree card at the Office of the Registrar, and have paid the graduation service fee.
14. Be in substantial compliance with all legal curricular requirements.

Students are encouraged to participate in a graduation check-off in the Office of the Dean during the first two weeks of the semester in which they expect to graduate.

### Core Requirements in Engineering (34 credits)

CIS 130 ✓	Introduction to Computer Science I (4)
EGR 101	Introduction to Engineering Design (with lab) (4)
EGR 272	Properties of Materials (with lab) (4)
ECE 222	Introduction to Electrical Circuits (with lab) (4)
ECE 326	Electronic Circuit Design (with lab) (4)
ME 221	Statics and Dynamics (with lab) (4)
ME 341 ✓	Thermodynamics (with lab) (4)
SYS 317	Engineering Probability and Statistics (3)
SYS 325	Lumped-Parameter Linear Systems (3)

## GENERAL ENGINEERING OPTION AND ENGINEERING SPECIALIZATIONS

The general engineering option and the engineering specializations permit students to choose courses to meet various career objectives. Requirements are detailed below.

### General Engineering Option (28 credits)

COORDINATOR: Howard R. Witt

Minimum requirements for the general engineering option are:

	<u>Credits</u>
Required Courses:	8
ME 331 Introduction to Fluid and Thermal Energy Transport (4)	
ME 361 Mechanics of Materials (4)	
400-Level Engineering Electives. At least 8 credits must be chosen from:	20**
EGR 490 Senior Engineering Project (4)	
ECE 426 Advanced Electronics (4)	
ECE 437 Introduction to Communication Electronics (4)	
ECE 470 Microprocessors and Microcomputers (4)	
ECE 478 Design of Digital Systems (4)	
ME 454 Solar and Alternate Energy Systems (4)	
ME 461 Analysis and Design of Mechanical Structures (4)	
ME 482 Fluid and Thermal Energy Systems (4)	
ME 486 Machine Design (4)	
SYS 410 Optimization in Systems Engineering (4)	
SYS 431 Automatic Control Systems (4)	
SYS 483 Production Systems (4)	
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\*\*The 400-level elective requirement in the general engineering option is reduced to 16 credits for students completing a concentration in environmental studies or statistics, or a minor in chemistry, economics, or management. ECN 414 may also be applied towards this requirement.

### Computer Engineering Specialization (28 credits)

COORDINATOR: Richard E. Haskell

Minimum requirements for the computer engineering specialization are:

	<u>Credits</u>
Related Courses	16
CIS 131 Introduction to Computer Science II (4)	
CIS 280 Introduction to Computer Organization Assembly Programming (4)	
ECE 470 Microprocessors and Microcomputers (4)	
ECE 478 Design of Digital Systems (4)	
Two courses chosen from either Group A or Group B:	8
<b>Group A:</b>	
CIS 342 Introduction to Information Structures (4)	
CIS 439 Software Engineering (4)	
CIS 450 Operating Systems (4)	
CIS 465 Translation of Computer Languages (4)	
<b>Group B:</b>	
ECE 418 Switching Theory and Sequential Machines (4)	
ECE 464 Computer Organization and Architecture (4)	
ECE 471 Microprocessor Systems Applications (4)	
Additional Electives Chosen from Group A or Group B, or from:	4
EGR 490* Senior Engineering Project (2 - 8)	
EGR 494* Independent Study (2 - 4)	
ECE 426 Advanced Electronics (4)	
ECE 484 Electronic Devices (3)	
SYS 469 Simulation in Engineering (4)	
CIS 413 Pattern Recognition (4)	
CIS 417 Applied Numerical Methods: Approximations (4)	
CIS 418 Applied Numerical Methods: Matrix Methods (4)	
CIS 455 Computer Graphics (4)	
ECN 414 Engineering Economics (2)	
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### Electrical Engineering Specialization (28 credits)

COORDINATOR: Richard E. Haskell

Minimum requirements for the electrical engineering specialization are:

	<u>Credits</u>
Required Courses:	14
ECE 426 Advanced Electronics (4)	
ECE 445 Electric and Magnetic Fields (3)	
ECE 478 Design of Digital Systems (4)	
ECE 484 Electronic Devices (3)	
+One of:	4
<del>ECE 437</del> Introduction to Communication Electronics (4)	
SYS 431 Automatic Control Systems (4)	
400-Level Electives Chosen from:	10
EGR 490* Senior Engineering Project (2-8)	
EGR 494* Independent Study (2-4)	
ECE 437 Introduction to Communication Electronics (4)	
ECE 464 Computer Organization and Architecture (4)	
ECE 470 Microprocessors and Microcomputers (4)	
ECE 471 Microprocessor Systems Applications (4)	
<del>ECE 487</del> Integrated Electronics (4)	
SYS 431 Automatic Control Systems (4)	
CIS 417 Applied Numerical Methods: Approximations (4)	
CIS 418 Applied Numerical Methods: Matrix Methods (4)	
ECN 414 Engineering Economics (2)	
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+Both courses are recommended

### Mechanical Engineering Specialization (28 credits)

COORDINATOR: Joseph D. Hovanesian

Minimum requirements for the mechanical engineering specialization are:

	<u>Credits</u>
Required Courses:	8
ME 331 Introduction to Fluid and Thermal Energy Transport (4)	
ME 361 Mechanics of Materials (4)	
One course chosen from Group A and one from Group B:	8
<b>Group A</b>	
ME 461 Analysis and Design of Mechanical Structures (4)	
ME 486 Machine Design (4)	
<b>Group B</b>	
EGR 490* Senior Engineering Project (4)	
ME 454 Solar and Alternate Energy Systems (4)	
ME 482 Fluid and Thermal Energy Systems (4)	
400-Level Engineering Electives Chosen from Group A or Group B or from:	8-12
ME 421 Dynamics (4)	
ME 438 Fluid Transport (4)	
ME 448 Thermal Energy Transport (4)	
ME 455 Combustion Processes (4)	
ME 456 Energy Systems Analysis (4)	
ME 472 Mechanical Properties of Materials (4)	
ECN 414 Engineering Economics (2)	
400-Level Electives Chosen From:	0-4
EGR 407 Environmental Engineering (4)	
EGR 490* Senior Engineering Project (2-4)	
EGR 494* Independent Study (2-4)	
SYS 431 Automatic Control Systems (4)	
SYS 469 Simulation in Engineering (4)	
SYS 483 Production Systems (4)	

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CIS 417	Applied Numerical Methods: Approximations (4)
CIS 418	Applied Numerical Methods: Matrix Methods (4)

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### Systems Engineering Specialization (28 credits)

COORDINATOR: Donald R. Falkenburg

Minimum requirements for the systems engineering specialization are:

	<u>Credits</u>
Required Courses:	12
✓ SYS 410	Optimization in Systems Engineering (4)
✓ SYS 431	Automatic Control Systems (4)
SYS 481	Industrial Engineering/Operations Research I (4)
One of:	4
ME 331	Introduction to Fluid and Thermal Energy Transport (4)
✓ ME 361	Mechanics of Materials (4)
400-Electives Chosen from:	12
EGR 407	Environmental Engineering (4)
EGR 490*	Senior Engineering Project (2-8)
EGR 494*	Independent Study (2-4)
ECE 437	Introduction to Communication Electronics (4)
ECE 470	Microprocessors and Microcomputers (4)
ECE 471	Microprocessor Systems Applications (4)
✓ ECE 478	Design of Digital Systems (4)
✓ ME 421	Dynamics (4)
ME 454	Solar and Alternate Energy Systems (4)
ME 482	Fluid and Thermal Energy Systems (4)
✓ SYS 432	Analysis of Nonlinear Systems (4)
✓ SYS 469	Simulation in Engineering (4)
✓ SYS 482	Industrial Engineering/Operations Research II (4)
✓ SYS 483	Production Systems (4)
CIS 413	Pattern Recognition (4)
CIS 417	Applied Numerical Methods: Approximations (4)
CIS 418	Applied Numerical Methods: Matrix Methods (4)
ECN 414	Engineering Economics (2)

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\*Must be a 4-credit course directed and approved for the specialization by a member of the appropriate faculty group, or with prior approval of the group.

### Approved Sciences Courses

The approved science courses are:

Biology courses numbered 190 and higher, except BIO 300  
CHM 145, 165, and chemistry courses numbered 225 and higher  
except CHM 270 and 497  
ENV 308, 372, 373

Physics courses numbered 317 and higher, except PHY 341

Special topics and independent study courses require prior approval.

Students choosing the computer engineering specialization may use MTH 254, STA 322, or APM 463 to meet the science elective option.

### STANDARD ENGINEERING

Engineering curricula, particularly in the first two years, are highly structured. The standard program, given below for the first year, is not a required course sequence, but a suggestion of the best schedule for a program that is fairly prescribed.

Each student, in consultation with his/her adviser, will develop a program to meet his/her individual needs.

**Semester 1**  
English composition or  
distribution requirement  
EGR 101 or CIS 130\*  
MTH 154 or 104-105  
CHM 144 or 164

**Semester 2**  
English composition or  
distribution requirement  
PHY 151 or elective\*  
MTH 154 or 155  
CIS 130 or EGR 101\*

Scheduling for the remaining years depends on the student's desired specialization and career objectives. Students should refer to the *School of Engineering Handbook* for suggested schedules.

\*Students not prepared to take MTH 154 in their first semester should take the courses marked with an asterisk. These students are encouraged to take MTH 155 and PHY 151 during the spring session following their freshman year.

### EXTERNAL CONCENTRATIONS AND MINORS

Students who wish to add an established concentration or otherwise participate in an interdepartmental program must apply to the coordinator of the appropriate program committee or the department involved.

Minors in chemistry, economics, and management and a concentration in environmental studies have been approved for engineering majors.

Described below are the requirements for the minors in chemistry, economics, and management and the concentration in environmental studies. In addition the University Committee on Applied Statistics offers a concentration in statistics, described on page 87. Students planning a medical, dental, or optometry career are advised to take the concentration in preprofessional studies in medicine, dentistry, and optometry described on page 90.

**Minor in Chemistry** (Paul Tomboulion, Coordinator): The minor in chemistry is offered by the Department of Chemistry for engineering majors. To obtain the minor a student must complete the following courses (24 credits) with an average grade of 2.00 or better: CHM 144, 145, 147, 148, 303, 441, 471, 570.

**Minor in Economics** (David P. Doane, Coordinator): To obtain the minor in economics offered by the School of Economics and Management, engineering and computer and information science majors must complete the following courses with a average grade of 2.00 or higher: ECN 200, 201, two 300- or 400-level ECN electives and SYS 317 or another approved statistics course.

**Minor in Management** (John Tower, Coordinator): Engineering students interested in engineering management should complete the management minor offered by the School of Economics and Management. To obtain the minor, engineering and computer and information science majors must complete the following courses with an average grade of 2.00 or higher: ECN 200, 201, ACC 200, ORG 330 and one 300- or 400-level elective in finance, accounting, quantitative methods, organizational behavior, management, or marketing.

**Concentration in Environmental Studies** (Paul Tomboulion, Coordinator): The environmental studies concentration approved for engineering majors requires completion of:

- CHM 303, ENV 308, EGR 407
- 8 credits of electives chosen from ENV 362, 372, 373, 481, and BIO 301
- 4 credits of EGR 490 or 494 on an approved environmental engineering topic



## UNDERGRADUATE CURRICULUM IN COMPUTER AND INFORMATION SCIENCE

PROGRAM COORDINATOR: *Glenn A. Jackson*

The program in computer and information science leads to the degree of Bachelor of Science and provides a solid foundation for a career in computer science. It prepares the student for professional practice in systems programming, software design, and computer applications or for graduate study in computer science.

The digital computer has assumed a central role in society. Nearly all phases of business, health care systems, energy, commerce, industry, education, and research employ the computers as an important tool. Persons interacting with computers have diversified complementary interests; thus a viable computer and information science program encourages a broad outlook and multidisciplinary viewpoint. The Oakland program balances the practical with the abstract in providing the requisite technological training, while simultaneously insuring broad educational experience.

### Requirements for the Degree of Bachelor of Science with a Major in Computer and Information Science

A computer and information science major must meet the following graduation requirements:

1. Have completed at least 124 credits, 32 credits of which must be in courses at the 300 level or above.
  2. Have completed 32 credits at Oakland University. At least 16 of these must be in required CIS courses.
  3. Have taken at Oakland University the last 8 credits to complete baccalaureate requirements.
  4. Have a cumulative grade point average in courses taken at Oakland University of at least 2.00.
  5. Have demonstrated writing proficiency by meeting the university standard in English composition.
  6. Have completed 24 credits to satisfy the School of Engineering general education requirement as specified on page 107.
  7. Have completed 40 credits with a minimum grade point average of 2.00 in computer and information science courses including:
    - a. The CIS core of CIS 130, 131, 280, 335, 342.
    - b. 12 credits of 400-level CIS electives, of which a maximum of 4 credits may be from CIS 490.
    - c. 8 credits to be chosen by the student with written approval of his/her CIS adviser.
  8. Have completed the following mathematics sequence with an average grade of at least 2.00:
    - a. MTH 154, 155, 256, and APM 363.
    - b. STA 321 or an approved course in statistics in the student's cognate area.
  9. Have completed 8 credits in either biology, physics, or chemistry from:
    - CHM 144 and 145 or 164 and 165 or
    - PHY 101 and 102 or 151 and 152 or
    - BIO 104 and 105 or 190 and 200.
  10. Have completed the requirements for an approved cognate as described below with an average grade of at least 2.00.
  11. Have completed an application for degree card at the Office of the Registrar, and have paid the graduation service fee.
  12. Be in substantial compliance with all legal curricular requirements.
- Although it is not a requirement, it is recommended that computer and information science majors complete PHL 370 Symbolic Logic.

Students are encouraged to participate in a graduation check-off in the Office of the Dean during the first two weeks of the semester in which they expect to graduate.

### Core Requirements in Computer and Information Science (20 credits)

CIS 130	Introduction to Computer Science I (4)
CIS 131	Introduction to Computer Science II (4)
CIS 280	Introduction to Computer Organization and Assembly Programming (4)
CIS 335	Programming Languages (4)
CIS 342	Introduction to Information Structures (4)

### COGNATES

The following cognates are approved for CIS majors:

#### Engineering Cognate

ECE 222, 326, 478

Plus two courses from either Group A or Group B

Group A (Electronics oriented): ECE 418, 426, 437, 470, 471, 484, EGR 490

Group B (Systems oriented): SYS 325, 410, 431, 432, 469, 481, 482, 483, EGR 490

#### Mathematics Cognate

MTH 254, APM 335, STA 321, and one course from APM 336, APM 463, STA 322, MOR 342

#### Statistics Cognate

STA 321, 322, 323, and one course from STA 425, STA 427, SYS 483, or an approved 400-level statistics related course

#### Economics Cognate

ECN 200, 201, ECN 304 or another approved statistics course plus two 300- or 400-level electives.

#### Management Cognate

ECN 200, 201, ACC 200, ORG 330, plus any 300- or 400-level electives in finance, accounting, marketing, organizational behavior, quantitative methods, and management.

Other cognate programs may be approved. Students desiring approval of a nonstandard cognate program should consult with their CIS adviser.

### MINOR IN COMPUTER AND INFORMATION SCIENCE (for other majors)

COORDINATOR: *Glenn A. Jackson (Engineering)*

The School of Engineering offers a minor in computer and information science to students in nonengineering majors. Many combinations are feasible.

Requirements for majors in the College of Arts and Sciences are 20 credits in CIS courses, including:

- a. CIS 130 or 120-121.
- b. Two courses from CIS 131, 220, 221, 280.
- c. 8 credits from CIS courses labeled 300 or higher (only 4 credits of CIS 490 may be applied toward this requirement).

### COURSE OFFERINGS IN THE SCHOOL OF ENGINEERING

The course offerings in engineering are listed under the following designations: EGR—Engineering; ECE—Electrical and Computer Engineering; ME—Mechanical Engineering; SYS—Systems Engineering. The computer and information courses carry the CIS designation. Course numbers in parentheses signify the old designations as used in previous catalogs.

#### COURSE OFFERINGS IN ENGINEERING

**EGR 101 Introduction to Engineering Design (Core) (4)**

Engineering analysis and solution of design problems in mechanical, electrical, computer and systems engineering. Specific analytical methods and technical reporting procedures will be covered. Offered fall and winter semesters.

Corequisite: MTH 154

**EGR 106 Machine Shop Practice (2)**

Introduction to basic machining principles and machine shop tech-

niques, use of lathes, milling machines, and other power machines. Emphasis is on practical experience.

**EGR 108 Engineering Drawing**

Introduction to the use of drafting instruments and procedures. Geometric construction and projection, dimensioning, tolerancing, and graphic symbols.

Prerequisite: Permission of instructor.

**EGR 272 Properties of Materials (Core) (4)**

The atomic, molecular, and crystalline structure of solids, including a description of x-ray analysis, metallography, and other methods for determining structure; correlation of structure with the electric, magnetic, and mechanical properties of solids. With laboratory.

Prerequisite: CHM 144 Corequisite: PHY 152.

**EGR 290 Engineering Project (2 to 4)**

Introductory laboratory project. Topic chosen jointly by student and instructor before registration. May be taken more than once. Offered every semester.

**EGR 294 Independent Study (2 to 4)**

Introductory and intermediate individual study in a special area. The student must have approval of the supervising instructor before registration.

**EGR 360 History of Automobile Design (4)**

Identical with AH 360.

**EGR 363 Modern Architecture and Urban Design (4)**

Identical with AH 363.

**EGR 400 Engineering Seminar (1)**

Lectures and discussions conducted by faculty, graduate students, and speakers from industry and other universities. Emphasis is on current research interests of the school. May be taken twice.

**EGR 407 (EGR 415) Environmental Engineering (4)**

A design course that includes environmental factors. Consideration of resources and recycling in terms of available energy; economic-thermodynamic combined factors are related to environmental decisions. Problems and solutions in environmental situations are illustrated through field trips and guest speakers. A group or individual project is required.

Prerequisite: ME 341.

**EGR 490 Senior Engineering Project (2 to 8)**

Independent work on advanced laboratory projects. Topic to be chosen jointly by student and instructor before registration. May be taken more than once.

**EGR 494 Independent Study (2 to 4)**

Advanced individual study in a special area. The student must have approval of the supervising instructor before registration. May be taken more than once.

**EGR 495 Special Topics (2 to 4)**

Advanced study of special topics in engineering. May be taken more than once.

**COURSE OFFERINGS IN ELECTRICAL AND COMPUTER ENGINEERING**

For additional related courses students should refer to the course offerings in Systems Engineering (SYS) and Computer and Information Science (CIS).

**ECE 222 (EGR 222) Introduction to Electrical Circuits (Core) (4)**

Logic circuits, introduction to logic gates, and Boolean algebra; resistive DC circuits, Kirchhoff laws, Thevenin and Norton theorems, transients in RL and RC circuits, and reactance. With laboratory.

Prerequisite: MTH 155

**ECE 326 (EGR 326) Electronic Circuit Design (Core) (4)**

Analysis and design of solid-state electronic circuits. Nonlinear dissipative characteristics, large-signal analysis of amplifiers, small-signal analysis of active two ports, voltage amplification, transducers, and feedback. With laboratory.

Prerequisite: ECE 222, MTH 155, and PHY 152.

**ECE 418 (EGR 485) Switching Theory and Sequential Machines (4)**

Different classes of combinational switching, functions such as

threshold, unate, and symmetric; synchronous and asynchronous sequential machines, experiments on sequential machines, properties of definiteness and information lossness, Turing machines, deterministic and nondeterministic automata and languages.

Prerequisite: ECE 478.

**ECE 426 (EGR 426) Advanced Electronics (4)**

Analysis and design of single- and multi-stage transistor amplifiers, including frequency response, gain and bandwidth calculations. Feedback and operational amplifiers including stability considerations. Sinusoidal oscillators using discrete and linear integrated components. With laboratory.

Prerequisite: SYS 325, ECE 326.

**ECE 435 (EGR 425) Analog, Digital and Optical Filtering (4)**

Analog, digital, and optical filtering techniques for one- and two-dimensional data studied from a common theoretical viewpoint. Low-pass, highpass, and bandpass filtering in the time and spatial domains. Continuous discrete Fourier transforms.

Prerequisite: SYS 325, ECE 326.

**ECE 437 (EGR 427) Introduction to Communication Electronics (4)**

Introduction to analysis and design of analog and digital electronic data communication systems. Spectral analysis; amplitude and angle modulation; demodulation techniques; filtering; frequency- and time-division multiplexing. The sampling theorem and digital data transmission. Introduction to detection theory. With laboratory.

Prerequisite: SYS 325, ECE 326.

**ECE 445 (EGR 445) Electric and Magnetic Fields (3)**

Introduction to the fundamentals of electric and magnetic fields. Fundamental laws, basic postulates, Maxwell's equations, electrostatics, magnetic fields of steady currents, time varying fields, waves, transmission lines, reflection and refraction of interfaces, guided waves, radiation, and elementary radiators. Use of computers to solve practical problems.

Prerequisite: SYS 325.

**ECE 464 (EGR 486) Computer Organization and Architecture (4)**

Interchangeability between software and hardware; automatic parsing, stacking and list structure management; near-term future structures for miniprocessors and networks; Boolean models for sequential control in processor systems; exercises in microprogramming of the CPU and input/output flows.

Prerequisite: CIS 280 and ECE 478.

**ECE 470 (EGR 470) Microprocessors and Microcomputers (4)**

Introduction to microprocessors and microcomputers; the CPU on a chip; interfacing microprocessors with external systems; programming considerations; logic design with microcomputers; hands-on laboratory experience.

Prerequisite: ECE 418 or 478.

**ECE 471 (EGR 471) Microprocessor Systems Applications (4)**

The design of microprocessor-based equipment and systems. Interfacing techniques; serial asynchronous and synchronous communications methods; direct memory access, A/D and D/A converters, peripheral interface devices, computer graphics. Project-oriented course.

Prerequisite: ECE 470.

**ECE 478 (EGR 488) Design of Digital Systems (4)**

Development of the components and techniques at the gate and flipflop level needed to design digital systems for instrumentation, communication, control, and related fields. Topics include combinational logic circuits, memory devices, sequential circuits, and organization of digital systems.

Prerequisite: ECE 326.

**ECE 484 (EGR 473) Electronic Devices (3)**

Basic concepts of quantum mechanics as applied to electronic devices. Semiconductor physics, including carrier densities, diffusion and conduction mechanisms. Theory of P-N junction and junction devices. Also included are FET, CCD, and MOS devices. Fabrication and fundamentals of integrated circuits.

Prerequisite: EGR 272 and ECE 326.

**ECE 487 (EGR 474) Integrated Electronics (4)**

Crystal growth—bulk and epitaxial techniques. Fabrication of P-N junctions, Ion implantation. Integrated circuits technology; semiconductor materials; tunnel diodes, photodiodes; light-emitting

diodes; semiconductor lasers; switching devices.  
Prerequisite: ECE 484.

#### COURSE OFFERINGS IN MECHANICAL ENGINEERING

##### ME 221 (EGR 215) Statics and Dynamics (Core) (4)

Introduction to mechanics, particle statics and dynamics, equilibrium, analysis of structures, and dynamics of rigid bodies about fixed axes. With laboratory.

Prerequisite: MTH 155 and CIS 130. Corequisite: PHY 151.

##### ME 331 (EGR 345) Introduction to Fluid and Thermal Energy Transport (4)

Fundamentals of fluid mechanics; properties of fluids; conservation principles; viscous and inviscid flow; laminar and turbulent flow; boundary layer theory; basic concept of heat transfer; fundamental modes; conduction, convection, and thermal radiation, and applications to problems of engineering interest. With laboratory.

Prerequisite: CHM 144 or 164, MTH 254, and ME 221.

##### ME 341 (EGR 341) Thermodynamics (Core) (4)

Introduction to fundamental concepts, thermal energy, thermodynamic properties and equilibrium, basic physical laws of thermodynamics, entropy and its consequences, reversible energy transfers in both open and closed systems, and application of thermodynamics to systems involving energy conversion and transport. With laboratory.

Prerequisite: CHM 144 or 164. Corequisite: MTH 254 or APM 363.

##### ME 361 (EGR 361) Mechanics of Materials (4)

Introduction to the mechanics of deformable bodies: distribution of stress and strain in beams, shafts, columns, pressure vessels, and other structural elements. Yield and fracture criteria of materials with applications to design. With laboratory.

Prerequisite: EGR 272, ME 221 and MTH 155.

##### ME 421 (EGR 416) Dynamics (4)

Kinematics and dynamics of systems of particles. General theory of rotating coordinate frames, work-energy principle, relative motion, Lagrange's equations. Introduction to rigid body motion.

Prerequisite: ME 221 and SYS 325.

##### ME 438 (EGR 449) Fluid Transport (4)

Continued study of the fundamentals of fluid mechanics and their applications, potential flow of inviscid fluids, laminar and turbulent boundary layer theory, compressible flow, similarity, modeling, and dimensional analysis.

Prerequisite: ME 331, 341, and APM 257.



##### ME 448 (EGR 448) Thermal Energy Transport (4)

Continued study of the basic concepts, properties, and descriptions of the three fundamental modes of heat transfer (conduction, convection, and thermal radiation), theoretical, numerical, and analogical methods of analysis of steady, transient, and single- and multi-dimensional problems. Includes laboratory.

Prerequisite: ME 331, 341 and APM 257.

##### ME 454 (EGR 454) Solar and Alternate Energy Systems (4)

The analysis and design of energy conversion systems. Principles of optimum power transfer and efficiency. Availability analysis of systems for heating, chemical conversion and electrical generation. Emphasis on solar applications and alternative energy technology.

Prerequisite: ME 331 and 341.

##### ME 455 (EGR 455) Combustion Processes (4)

Thermodynamics of state, mixtures, Gibbs free energy; chemical equilibrium, stoichiometry; chemical reaction kinetics, reaction rate, mixing, catalyst action; fluid vaporization, condensation, atomization; applications, spark and compression ignition, continuous combustion.

Prerequisite: ME 341.

##### ME 456 Energy Systems Analysis (4)

Thermodynamics of non-reacting mixtures, psychrometry. Concepts of availability and irreversibility. Power cycles; vapor, gas and combined cycles. Reciprocating engines and compressors. Refrigeration and heat pump cycles; vapor compression system, air-conditioning. Thermodynamics of reacting mixtures; combustion.

Prerequisite: ME 341.

##### ME 461 (EGR 461) Analysis and Design of Mechanical Structures (4)

Use of methods of advanced mechanics of materials to design mechanical structures to meet elastic strength criteria. Topics include plates and shells, torsion of noncircular cross-sections, curved and composite beams, energy methods, and mechanical stability.

Prerequisite: ME 361.

##### ME 472 (EGR 462) Mechanical Properties of Materials (4)

Mechanical behavior of materials, with emphasis on defect structures in metals. True stress-strain properties of real materials. Plastic deformation and fracture of materials. Theories of yield and fracture strength. Cyclic loading behavior including cumulative damage. Creep, temperature, and rate-of-loading effects.

Prerequisite: ME 361.

##### ME 482 (EGR 453) Fluid and Thermal Energy Systems (4)

Study of systems involving fluid and thermal phenomena. Includes systems with conventional and unconventional energy conversion, fluid and thermal energy transport, environmental pollution and its abatement, associated measurement, and control devices. Analysis, design, and optimization of systems are emphasized via application of basic integral, differential, and lumped parameter modeling techniques. The course bridges conventional engineering design disciplines.

Prerequisites: ME 331 and 341.

##### ME 486 (EGR 466) Machine Design (4)

Analysis and design of machine elements and systems. Stress, strain, strength, and cost considerations. Design optimization criteria such as strength/weight. Applications of fasteners, shrink-fits, springs, bearings, lubrication, power transmitting elements, and complex structures subjected to static and/or dynamic loads.

Prerequisites: ME 361.

#### COURSE OFFERINGS IN SYSTEMS ENGINEERING

For related courses students should refer to the course offerings in electrical and computer engineering (ECE).

##### SYS 317 (EGR 337) Engineering Probability and Statistics (Core) (3)

Elements of probability for discrete and continuous random variables. Sampling distribution and hypothesis testing. Examples and problems from quality control, communication, reliability, and other engineering areas.

Corequisite: MTH 254 or 256.

**SYS 325 (EGR 325) Lumped-Parameter Linear Systems (Core) (3)**

Laplace transform methods, transfer functions, and impedance concepts in the analysis of electrical and mechanical lumped-parameter linear systems. Natural and forced behavior of first- and second-order systems. Frequency response methods. Computer techniques for analysis and design.  
Prerequisite: ECE 222 and APM 257.

**SYS 410 (EGR 433) Optimization in Systems Engineering (4)**  
Optimal design and decision, formulation of performance index, maxima and minima, constrained optimization, Lagrange multipliers, search methods, mathematical programming, calculus of variation, and functional optimization.  
Prerequisite: SYS 325.

**SYS 431 (EGR 431) Automatic Control Systems (4)**  
Performance specifications for automatic control systems. Transfer functions, static error coefficients, and the correlation between transient response and pole-zero patterns. Stability theory and Routh's criterion. The root locus method. Frequency response and the Nyquist criterion. Design of compensation networks.  
Prerequisite: SYS 325.

**SYS 432 (EGR 432) Analysis of Nonlinear Control Systems (4)**  
Analysis of nonlinear physical systems with engineering applications. Phase-plane analysis for autonomous systems, singular points, and characterization of equilibrium points. Stability analysis via theorems of Liapunov, existence of limit cycles, harmonic analysis, and describing functions.  
Prerequisite: SYS 325.

**SYS 469 (EGR 434) Simulation in Engineering (4)**  
Modeling of networks, discrete event systems, and dynamic systems with continuously changing variables. A FORTRAN-based simulation language, SLAM is used. On-line (user interactive) and graphical output are used for statistical analyses and simulation validation.  
Prerequisite: SYS 317.

**SYS 481 (EGR 437) Industrial Engineering/Operations Research I (4)**  
Deterministic models for optimum allocation of resources: linear programming, transportations and assignment problems, network flows, dynamic programming, branch and bound sequencing. Computer oriented approach with emphasis on applications.  
Prerequisite: MTH 256 or APM 257

**SYS 482 (EGR 438) Industrial Engineering/Operations Research II (4)**  
Models for stochastic systems: Critical path with random length tasks (PERT), queueing theory, simulation, Markov chains. Computer oriented approach with emphasis on applications.  
Prerequisite: SYS 317.

**SYS 483 (EGR 436) Production Systems (4)**  
Computer manufacturing systems which control the flow of manufactured products from forecast to ordering: parts explosion, bill-of-material, Pareto distribution and inventory control, lead times, shop floor control, etc. All illustrated by a computer system for a typical product.  
Prerequisite: SYS 317.

**COURSE OFFERINGS IN COMPUTER AND INFORMATION SCIENCE**

For additional computer courses students should refer to the course offerings in Electrical and Computer Engineering (ECE).

**CIS 102 Personal Computing (2)**  
Study of a programming language, such as BASIC, PL/M, or Pascal as implemented on current home computers. Emphasis is on writing useful interactive computer programs and on modifying existing programs that are readily available to individuals at low cost. Graded S/N. May not be taken for credit by CIS or EGR majors.

**CIS 120-121 Introduction to Computer Programming (2 each)**  
Introduction to computer programming and problem solving for nonengineering and noncomputer science majors. CIS 120 includes the programming language BASIC and is offered during the first seven weeks of fall and winter semesters. CIS 121 includes the programming language FORTRAN and is offered during the last

seven weeks of fall and winter semesters. CIS 120 and 121 may be taken separately, or they may be taken together in one semester for 4 credits. Credit applies to graduation but not the major.  
Prerequisite: At least two years of high school mathematics are strongly recommended.

**CIS 130 (CIS 180) Introduction to Computer Science I (4)**  
Introduction to digital computers and digital computation, problem solving and elementary applications, and algorithmic programming languages such as BASIC and FORTRAN. Presumes a good background in high school mathematics; students lacking such background or interest in mathematics should enroll in CIS 120-121. Offered every semester.  
Prerequisite: Good background in high school mathematics.

**CIS 131 (CIS 181) Introduction to Computer Science II (4)**  
Introduction to numerical methods; data structures and non-numerical applications; another important algorithmic language such as PL/1 or Pascal. Offered fall and winter semesters.  
Prerequisite: CIS 130. Corequisite: MTH 154

**CIS 220 Computer-Based Information Systems I (4)**  
Introduction to business data processing using the COBOL programming language. Emphasis is on structured programming and top-down development in an interactive environment.  
Prerequisite: Ability to program in at least one high level language.

**CIS 221 Computer-Based Information Systems II (4)**  
Continuation of CIS 220. Advanced capabilities of the COBOL language are studied. Topics include report writer, relative, direct, and indexed files, data dictionaries, debugging. Sophisticated business data processing systems will be programmed.  
Prerequisite: CIS 220 or equivalent.

**CIS 280 (CIS 290) Introduction to Computer Organization and Assembly Programming (4)**  
Introduction to the internal structure and operation of a digital computer. Hardware organization, machine language, instruction execution, digital arithmetic, addressing techniques, and digital representations of data. Assembly language, macro- and micro-programming, program segmentation, and linkage. The student will write several assembly programs.  
Prerequisite: CIS 130 or 120-121.

**CIS 327 (CIS 377) Computer Techniques for Chemistry (2)**  
Computer programming and applications designed to acquaint chemistry students with problem-solving techniques and use of computers in data processing.  
Prerequisite: MTH 154 and CHM 225. Corequisite: CHM 441.

**CIS 335 (CIS 385) Programming Languages (4)**  
Formal definition of programming languages, including specification of syntax and semantics. Global properties of algorithmic languages including scope of definitions, storage allocation, statement grouping, internal and external program blocks, binding time of constituents, functions, subroutines, coroutines, and tasks. Comparison of general purpose languages and categorization; comparison of the more important languages for list processing, string manipulation, and simulation.  
Prerequisite: CIS 131 and 280.

**CIS 340 (CIS 320) File Systems Design (4)**  
Study of hardware configurations and software systems design for data-oriented applications. Characteristics of mass-storage devices, such as tape, disk, drum, magnetic bubble devices, etc., the impact of the characteristics on data processing algorithm design; standard file access techniques such as sequential, indexed, and hash-addressed file security, integrity, and back-ups; file design for data processing applications.  
Prerequisite: CIS 131 and 280.

**CIS 342 (CIS 382) Introduction to Information Structures (4)**  
Introduction to information structures and their application in digital computer programming. Topics include linear lists, trees, lists, and their various representations using sequential and linked allocation. Emphasis is on the application of these general concepts to particular programming problems in data manipulation, discrete simulation, and formal symbolic manipulation.  
Prerequisite: CIS 131 or permission of instructor.

**CIS 413 (CIS 483) Pattern Recognition (4)**  
Applications of digital computer techniques to a variety of problems in pattern recognition; linear decision functions, Bayes decision

theory, maximum likelihood estimation, multivariate normal features, nonparametric techniques, feature selection, clustering, and unsupervised learning. Applications include industrial inspection and the processing of remote sensing, biomedical, and pictorial data. Prerequisite: MTH 256, CIS 342, and a course in statistics.

**CIS 417 (CIS 480) Applied Numerical Methods: Approximations (4)**

Classical methods for solving general algebraic equations, polynomial factoring, Runge-Kutta and predictor-corrector methods for solution of ordinary differential equations, matrix computer methods, and the Fast Fourier Transform. Emphasis on student development of general purpose subroutines for use in engineering and scientific applications.

Prerequisite: MTH 256 and CIS 131.

**CIS 418 (CIS 481) Applied Numerical Methods: Matrix Methods (4)**

Systems of linear and nonlinear equations, eigenvalue problems, optimization methods, statistical methods.

Prerequisites: MTH 256, CIS 131.

**CIS 420 Review of Computer Science Topics (4)**

Honeywell Multics Software and computer organization; Multics PL/I; data structures; structured system design and programming. May not be used to satisfy a course requirement for a CIS major or minor.

Prerequisite: Proficiency in at least one high-level language.

**CIS 439 (CIS 419) Software Engineering (4)**

The course will study, in a realistic environment, the techniques and methodology of developing programs for user applications. Topics include specifications, top-down modular design, structured programming, documentation, testing, and verification.

Prerequisite: CIS 342.

**CIS 445 Database Systems (4)**

A study of the design and implementation of relational, hierarchical, and network database systems. Query/update data languages, conceptual data model; physical storage methods; database system architecture. Database security and integrity. Includes the study of existing systems such as SEQUEL, MRDS, QUERY-BY-EXAMPLE, DSL ALPHA, IMS, and CODASYL DBTG.

Prerequisites: CIS 342.

**CIS 450 (CIS 460) Operating Systems (4)**

Introduction to computer operating systems. A multi-programming operating system is viewed as a collection of cooperating processes designed for efficient use of the resources of the computer. Process control and synchronization, memory management, and device management are the major topics.

Prerequisite: CIS 280 and 342.

**CIS 455 Introduction to Computer Graphics (4)**

An introduction to the software and hardware aspects of computer graphics systems. Vector and raster displays. Typical data structures and programming language requirements. Emphasis on real time interactive graphics systems.

Prerequisite: CIS 342.

**CIS 465 Translation of Computer Languages (4)**

The student is directed through development of a compiler for a simple language that can be executed on a simulated computer. Topics include: overview of the formal definition of grammars and languages; scanning input strings from a source language; parsing via bottom-up methods; precedence grammars; internal forms for source programs; semantic routines; and symbol table organization. The compiler is constructed in a high-level language such as PL/I.

Prerequisite: CIS 342. Corequisite: CIS 335.

**CIS 470 Microprocessors and Microcomputers (4)**

Introduction to microprocessors and microcomputers; the CPU on a chip; interfacing microprocessors with external systems; programming considerations; logic design with microcomputers; hands-on laboratory experience.

Prerequisite: CIS 280 and 342.

**CIS 471 Microprocessor System Applications (4)**

The design of microprocessor-based equipment and systems. Interfacing techniques; serial asynchronous and synchronous communications methods; direct memory access, A/D and D/A converters,



peripheral interface devices, computer graphics. Project-oriented course.

Prerequisite: CIS 470.

**CIS 490 Computer and Information Science Project (2 to 8)**

Independent work on an advanced project. Topic to be chosen jointly by student and instructor before registration. May be taken more than once.

**CIS 494 Independent Study (2 to 4)**

Advanced individual study in a special area. The student must have approval of the supervising instructor before registration. May be taken more than once.

**CIS 495 Special Topics (2 to 4)**

Advanced study of special topics in computer and information science. May be taken more than once.



# SCHOOL OF HUMAN AND EDUCATIONAL SERVICES

## OFFICE OF THE DEAN

George E. Coon, *Acting Dean*  
 Robert G. Payne, *Associate Dean*  
 Barbara Bennett, *Director, Preprimary Program*  
 Nancy Collins, *Coordinator, Advising Center*  
 Anne DeHaan, *Director, Toddler Program*  
 Harry T. Hahn, *Director, School Services*  
 William J. Jorns, *Director, Office of Field Services*  
 Jean Kirsch-Sullivan, *Administrative Assistant to the Dean*  
 Geraldine M. Palmer, *Coordinator, School Services*  
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 Lucille Smith, *Director, Infant-Parent Program*  
 Laura Snider-Feldmesser, *Director, Instructional Materials Center*  
 Sue Stupsker, *Academic Adviser*  
 Corey M. Van Fleet, Jr., *Director, Physical Education and Athletics*

## DEPARTMENT OF TEACHER EDUCATION

Patrick J. Johnson, *Chairperson*

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**VISITING ASSISTANT PROFESSORS:** David C. Housel, Carlos Olivarez

**VISITING INSTRUCTORS:** Sandra S. Andringa, Anne P. Jaworski, Russell Smith

## ADVISEMENT

The Education Advising Center has been established by the School of Human and Educational Services to provide academic advising for all students. It is important that each student file a program plan with an adviser in this office. It is located in 234-235 Varner Hall, telephone 377-4182, 377-3058.

## UNDERGRADUATE CURRICULUM IN EDUCATION

The School of Human and Educational Services (formerly School of Education) offers programs preparing students for careers in teaching as well as related human service activities. The programs include a Bachelor of Science in elementary education, teaching certification for secondary education, and a Bachelor of Science in human resources.

The elementary education program enables a person to secure a Michigan teaching credential which certifies one to teach all subjects K-8, as well as the ninth-grade subject areas of

one's major or minor fields. Students in this B.S. program must take the planned program in elementary education which is being developed along a competency-based teacher education model.

## Requirements for the Bachelor of Science Degree in Elementary Education

In order to complete the Bachelor of Science degree, the student must:

1. Complete 125 credits.
2. Complete at least 32 of these credits at Oakland University.
3. Complete at least 32 of these credits in courses at the 300 level or above.
4. Take the last 8 credits needed to complete the baccalaureate requirements at Oakland University.
5. Have a cumulative grade point average of at least 2.50.
6. Be in substantial compliance with all legal curricular requirements.
7. Satisfy the university requirement of proficiency in English composition as described on page 12.
8. Complete or place out of by examination MTH 101, 102.
9. Complete a general education requirement of 25 credits.
10. Complete a core program of 24 credits.
11. Complete the childhood curriculum studies program of 24 credits.
12. Complete ED 455.
13. Complete a major concentration of 36 credits, or two minor concentrations of 24 credits each, in a field outside of education.

## General Education Requirement

The student must complete all the following courses: ENG 345, SCS 105, ALS 176, MTE 310, MTE 311, and MUS 149. In addition, the student must also complete one of the following courses: SS 100, AS 210, 220, 230, 240, 250, or 260.

## Admission to the Elementary Education Undergraduate Program

Criteria for admission to the elementary education undergraduate program include a grade point average of 2.50 for a minimum of 16 graded credits, a minimum grade of 2.5 in both field and class components in ED 110, and completion of the application form for program admission. Students who wish to obtain a major concentration in early childhood education may substitute ED 220 and 221 for ED 110, if a minimum grade of 2.5 is obtained in both ED 220 and 221. Courses which carry no numerical or letter grades are excluded from the calculation of grade point average.

A candidate for the elementary education program whose grade in either field or class component in ED 110 is lower than 2.5 must repeat ED 110 with at least a 2.5 in both field and class components before applying for admission to the program. ED 110 and admission to the program are prerequisites for all other elementary education courses.

## Continuation in the Program

Grades in courses submitted for credit in the elementary education program must be 2.0 or better. To continue in the program, the student must maintain a minimum overall grade point average of 2.50. Students whose grades fall below the

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minimum may request review by the Elementary Education Coordinating Committee before registration for the next semester. Students who do not request a review will be dropped from the program.

A student will not be permitted to register for student teaching unless he/she has attained an overall grade point average of at least 2.50 at the time of application. Students not meeting this requirement may request one review by the Elementary Education Coordinating Committee before registering for student teaching.

### Core Program

The student in elementary education must complete the following core program of 24 credits.

1. Foundation  
ED 110 Public Education for the Future
2. Philosophy, Sociology, Anthropology, History  
ED 210 Social and Philosophical Issues in Elementary Education  
  
Plus any two of the following:  
ED 350a Educational Implications  
ED 350b History of Public Education  
ED 350c Private and Parochial Schooling  
ED 350d The Formal Education of Women  
ED 350e Schooling and Social Stratification  
ED 350f Education and Moral Development  
ED 350g Political Issues in Contemporary Education  
ED 350h Independent Study
3. Human Behavior  
ED 215 Educational Psychology for Elementary Teachers  
  
ED 355a Identifying and Diagnosing Learning and Behavior Problems in Children  
  
ED 355b Testing and Assessment  
ED 420 Interaction Laboratory for Teacher Development

### Childhood Curriculum Studies

The student in elementary education must complete the following courses in childhood curriculum studies:

- |                |   |
|----------------|---|
| ED 331 and 333 | Language Arts and Reading   |
| MTE 312        | Intuitive Euclidean Geometry  |
| MTE 313        | Geometry, Statistics, Probability                                       |
| PE 163         | Movement Education  |
| PE 363         | Teaching Physical Education and Play Activity, Preschool to Grade 3     |
| or PE 364      | Teaching Physical Education and Recreation Activity, Grades 4 through 6 |
| SCS 305        | Teaching Science in the Elementary School                               |
| SS 470         | Teaching Social Studies in the Elementary School                        |

### MAJOR/MINOR CONCENTRATIONS

A major (36 credits) or two minor concentrations (24 credits each) are required as part of the elementary education program. These are academic areas in which the student specializes. Designated required courses previously listed can also be used as part of these concentrations. Modifications can be made with adviser approval.

### MAJOR OPTIONS

#### Fine Arts

**Music:** MUT 111, 211, and MUS 320; one MUA or MUE course; 2 credits from MUS 328, 329, 330, 331, 334, 345, 346, 347, 348; 8 credits from MUS 233, 245, 380, 383, 395, 403, 404,

441, 494, 496, 499, and MUT 212, 311, 312, and 314. Cognate: MUS 401, AH 100, and THA 420.

**Art History Concentration:** AH 101, 102, and 104; AH 350, 364, and 490. Cognate: MUS 149, AH 100, and THA 420.

**Theatre Concentration:** THA 100, 267, and 350; and three courses from THA 213, 230, 363, 450, and 462. Cognate: MUS 149, AH 100, and THA 420.

#### Language Arts

**English:** ENG 345; two courses from ENG 200, 301, 303, 304, 306, and 250; ENG 210 or 310; one course from ENG 300, 301, 312, and 342; and ED 333. Cognate: ALS 176 or LIN 207; one course from SCN 320, 321, THA 350, and 420; and ED 332.

**Linguistics:** ALS 176, LIN 207, 301, and 303; one course from ALS 335, 340, and 360; and ED 333. Cognate: ENG 345; one course from SCN 320, THA 350, and 420; and ED 332.

**Speech Communication:** SCN 201, 320, or 321, and THA 420; two courses from THA 230, 267, 350, 450, SCN 375, 376, 305, and JRN 200; and ED 333. Cognate: ALS 176 or LIN 207; ENG 345; and ED 332.

#### Mathematics

MTE 310, 311; STA 320 or 321; MTH 121-122 or MTH 154-155, MTH 104-105; and MTE 410. Cognate: MTE 312 and 313 and an additional 4 credits in mathematics (MTE 418 suggested). (Mathematics courses not on this list may be taken with permission of the Department of Mathematical Sciences Education Committee.)

#### Mathematics/Science

MTE 310 and 311; SCS 105; MTE 410; any biology course; any physics course; and any chemistry course. Cognate: MTE 312 and 313, SCS 305, and one mathematics course from the mathematics major or one science course from the science major. (The combined mathematics/science grouping certifies a person to teach science only in the ninth grade.)

#### History/Social Science

**Afro-American Emphasis:** AS 230; HST 292 and 366; PS 103; SOC 205 and 331; AH 208 or MUS 346. Cognate: SS 470 and ED 350.

**Disciplinary Approach:** SS 100 and ECN 100; one course from AS 210, 220, 230, 240, 250, and 260; and four courses from HST 201, 202, 214, 215, PS 100, 131, and 305 (select at least one from history and at least one from political science. Cognate: SS 470 and ED 350.

**Ethnic Studies:** SS 100; five courses from AS 210, 220, 230, 240, 250, 260, AN 371, and AN 381; and SOC 331. Cognate: SS 470 and ED 350.

**International Emphasis (African Studies):** AS 230; HST 285; three courses from AN 251, 305, 352, SOC 381; and PS 333. Cognate: SS 470 and ED 350.

**Latin American Studies:** AS 250; five courses from AH 307, HST 261, 262, 363, 365, 366, 367, PS 335, AS 300, 385, 390; and AS 490. Cognate: SS 470 and ED 350.

**Problems Approach:** SS 100; five courses from HST 100, PS 110, PSY 130, 220, 271, 310, 325, AN 305, 310, 336, 460, 490, SOC 205, 300, 331, 335, 336, 408 and 445; and one course from HST 491, PSY 480, AN 480, and SOC 480. Cognate: SS 470 and ED 350.

**Urban Studies:** SS 100; PS 305; and ECN 309; and HST 214-215, SOC 445, and SOC 470. Cognate: SS 470 and ED 350.

#### Natural Science

BIO 104 and 105, or BIO 190 and 200; PHY 101-102, or PHY 106 and 107, or PHY 104 and 105; and CHM 101 and 104 or CHM 144-145. (The student is also strongly urged to take



the accompanying 1-credit laboratories with each course, if available.) Cognate: SCS 105 and 305. Recommended: one course from ENV 308, ENV 312, and BIO 301.

## Modern Language

Courses in the chosen language numbered 111 and 114; 112 and 115; 211 and 214; 212 and 215; and 216, 314, 316, 318, 320, and 355.

## MINOR OPTIONS

### Fine Arts

**Music Concentration:** MUT 111 or 211; MUS 320; and selection from major concentration. Cognate: same as major.

**Art History Concentration:** One course from AH 101, 102, and 104; AH 350; and any other AH course. Cognate: same as major.

**Theatre Concentration:** THA 100, 267, and 350. Cognate: same as major.

### Language Arts

**English:** ENG 345, ED 333, and ENG 210 or 310. Cognate: same as major.

**Linguistics:** ALS 176 or LIN 207; LIN 301; and ED 333. Cognate: same as major.

**Speech Communication:** SCN 320 or 321, SCN 201, and ED 333. Cognate: same as major.

### Mathematics

MTE 310, 311, 410, and one other mathematics course from the major list. Cognate: same as major.

### Mathematics/Science

MTE 310 and 311, SCS 105, and one science course from science major listing. Cognate: MTE 312, 313, SCS 305, and one mathematics course from mathematics major listing.

### History/Social Science

**Afro-American Emphasis:** AS 230; HST 292 and 366; and PS 103. Cognate: SS 470 and ED 350.

**Disciplinary Approach:** SS 100; one course from AS 210, 220, 230, 240, 250, and 260; and two courses from HST 201, 202, 214, 215, PS 100, 131, and 305. Cognate: SS 470 and ED 350.

**Ethnic Studies:** SS 100; two courses from AS 210, 220, 230, 240, 250, 260, AN 371, and 381; and SOC 331. Cognate: SS 470 and ED 350.

**International Emphasis—African Studies:** AS 230; PS 333; HST 285; and AN 305. Cognate: SS 470 and ED 350.

**Latin American Studies:** AS 250; and three courses from AH 307, HST 261, 262, 363, 365, 366, 367, PS 335, AS 300, 385, and 390. Cognate: SS 470 and ED 350.

**Problems Approach:** SS 100; and three courses from HST 100, PS 110, PSY 130, 220, 271, 310, 325, AN 305, 310, 336, 460, 490, SOC 205, 300, 331, 335, 336, 445, 404, and 408. Cognate: SS 470 and ED 350.

**Urban Studies:** SS 100, PS 100, PS 305, and ECN 309. Cognate: SS 470 and ED 350.

### Natural Science

Any 4-credit biology course, any 4-credit physics course, and any 4-credit chemistry course. Cognate SCS 105, 305, and one course from ENV 308, 312, or BIO 301.

## Bilingual-Bicultural Education

ED 386, 316, 329; Select one course from: ALS 176, 328, 334, 375, or LIN 204; AS 250; Select four credits from SPN 214, 215, 300, 313, 314, 316, 318, 355, 370, 380, 408, 455.

## Health-Physical Education/ Coaching of Sports

BIO 104, PE 101, 202, 207, and 304; Electives from the following categories: aquatics, coaching sports, dance, elementary school physical education, and general physical education.

## Optional Professional Concentrations

Students wishing to enhance the quality and breadth of their teaching credential may use their free electives in a 12-credit professional concentration. At present these are available in the following fields:

- Early childhood education
- Guidance and counseling
- International education/semester abroad
- Reading and language arts
- Bilingual-bicultural
- Special education—mainstreaming

## TEACHING CERTIFICATION FOR SECONDARY EDUCATION

The College of Arts and Sciences offers Bachelor of Arts degrees with certification for secondary teaching credentials provided by the School of Human and Educational Services. Majors are available in the following subject areas:

Biology	Social studies	Music
Chemistry	German	Physics
English	Language arts	Russian
French	Mathematics	Spanish

Teaching minors are available in the following subject areas:

Art	Music
Bilingual-bicultural education	Physics
Biology	*Political science
Chemistry	*Psychology
English	Science
Health/physical education	Social studies
History	*Sociology
Mathematics	Speech (see
Modern languages	communication arts)

\*These minors are for social studies majors only

## SPONSORSHIP FOR MICHIGAN TEACHER CERTIFICATION

The state Department of Education certifies teachers in Michigan. It issues provisional certification to candidates deemed qualified by colleges and universities. This provisional certificate can be converted to a continuing certificate after a period of teaching and additional studies. Oakland University sponsors its graduates for the Provisional Elementary and the Provisional Secondary Certificate if the following requirements are met:

1. Elementary Education: Listed under requirements for B.S. degree in elementary education.
2. Secondary Education: Completion of a university baccalaureate program with a teaching major (including the required professional sequence) and one appropriate teaching minor; and successful completion of ED 344, 345, and 428.
3. Elementary and Secondary Education: Completion of ED 455 (internship) with a grade of 2.5 or better. Undergraduate students applying for state certification

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must be accepted to a degree program in the School of Human and Educational Services.

### HEALTH-PHYSICAL EDUCATION

Through the Department of Teacher Education, the Department of Physical Education and Athletics offers a variety of activity and theory courses in aquatics, movement education, physical education, and sports. Students may apply up to 8 credits in physical education toward the graduation requirement. Students working toward a teaching certificate in elementary or secondary education may earn a 24-credit minor in physical education. Students working toward a Bachelor of Science in human resources may use electives to earn a 24-credit concentration in physical education. See requirements, page 119. Students anticipating a minor or concentration in physical education must see an adviser in the Department of Physical Education and Athletics for course sequence before they have completed 6 credits in physical education.

The School of Performing Arts offers a minor in dance. For details, see page 131.

### HUMAN RESOURCES DEVELOPMENT

The School of Human and Educational Services offers a Bachelor of Science degree in human resources development (HRD). This program prepares students for service-action careers related to human problems, services, and social change. It provides an opportunity to acquire knowledge and skills usable in a wide range of human service activities. Students may select a major specialization in either youth and adult services or early childhood. A number of career areas of concentration are offered under the youth and adult services specialization.

A major goal is to develop potential leaders who have the analytic abilities, communication and organization skills, and experimental know-how to respond to human needs in an era of rapid social change. The basic approach to the program is joining of understanding, skills, and service. Problem-solving and decision-making abilities are developed through field experiences and an on-the-job internship.

### Requirements for the Bachelor of Science Degree

Candidates for the degree of Bachelor of Science in human resources development must meet the following requirements:

1. Complete 124 credits.
2. Complete at least 32 credits at Oakland University.
3. Complete at least 32 credits in courses at the 300 level or above.
4. Take the last 8 credits needed to complete the baccalaureate at Oakland University.
5. Have a cumulative grade point average of at least 2.00.
6. Be in substantial compliance with all legal curricular requirements.
7. Satisfy the university requirement of proficiency in English composition as described on page 12.
8. Complete 32 credits of general education with 3 to 12 credits in at least five of the six designated areas.
9. Complete a minimum specialization of 64 credits in early childhood education or youth and adult services, which consists of:
  - a. 32 credits of courses in an area of specialization.
  - b. 24 credits in supporting cognate courses.
  - c. 8-12 credits of internship.
10. Have a cumulative grade point average of 2.50 in courses in the specialization.

### General Education

The designated field groups and course subjects applicable to each are:

- a. **Arts**
  - Art and art history courses (SA and AH)
  - Music courses (MUS)
  - Theatre courses (THA)
  - Dance and movement courses (DAN 100, 101, 110, 111, 120, 121, 173, 200, 372, 373, 376, and PE 271)
- b. **History, Philosophy, and Area Studies**
  - History courses (HST)
  - CLS 100
  - Philosophy courses (PHL) except PHL 102 and 170
  - Area studies courses (AS)
- c. **Language and Thought**
  - Foreign language courses (CHE, FRH, GRM, HIUR, IT, RUS, SPN, ML) including classical languages (except CLS 100, 203, and 205)
  - Speech communication courses (SCN)
  - PHL 102 and 170
  - Journalism courses (JRN)
  - Applied languages studies courses (ALS)
  - Linguistics courses (LIN)
- d. **Literature**
  - English courses (ENG)
  - CLS 203 and 205
  - Literature courses (LIT)
- e. **Mathematical and Natural Sciences**
  - Mathematics courses (MTH or MOR, MTE, and STA)
  - Biology courses (BIO)
  - Science studies courses (SCS)
  - Chemistry courses (CHM)
  - PE 304
  - Physics courses (PHY)
  - Environmental courses (ENV)
- f. **Social Sciences**
  - Sociology courses (SOC)
  - Anthropology courses (AN)
  - Political science courses (PS)
  - Psychology courses (PSY)
  - Social studies courses (SS)
  - PE 293

Note: New Charter College courses (NCC) may be counted in any of the above categories in which the subject matter applies, e.g., NCC 122 in social sciences, NCC 123 in literature. General education requirements may also be fulfilled through the Honors College program (see page 93).

### Specialization in Early Childhood Education

The human resources development degree program with a specialization in early childhood education develops competencies for design, evaluation, and licensure of child care facilities and direction of child care centers, family and day care, and group day care homes. The program also provides education for training parents and paraprofessionals in the care and education of young children, as well as dealing effectively with young children and their development in a variety of settings.

### Admission Requirements

Students may apply for admission to the early childhood education program after satisfactory completion of ED 220 and 221. Criteria for admission include a grade point average of 2.50 for a minimum of 16 graded credits and a minimum grade of 2.5 in ED 220 and 221. Courses which carry no numerical or letter grades are excluded from the calculation of grade point average.

A student who wishes to enter the early childhood education program but whose grade in ED 220 and 221 is lower than

2.5 must repeat ED 220 and 221 with at least a 2.5 before applying for admission to the program. ED 220 and 221 and admission to program are prerequisites for all other early childhood education courses.

### Continuation in the Early Childhood Specialization

Grades in courses submitted for credit in the early childhood education program must be 2.0 or better. To continue in the program, the student must maintain a minimum overall grade point average of 2.50. Students whose grades fall below the minimum may request review by the early childhood faculty before registration for the next semester. Students who do not request a review will be dropped from the program.

A student will not be permitted to register for the internship unless he/she has attained an overall grade point average of at least 2.50 at the time of application. Students not meeting this requirement may request one review by the early childhood faculty before registering for student teaching.

### Specific Requirements to Complete the Program

1. Area of Specialization (32 credits): ED 220, 221, 223, 224, 225, 324, 325, and 326.
2. Cognate Courses (24 credits)
  - a. PSY 271 and one course from AN 305, PSY 326, SOC 335, or a family-oriented social science course.
  - b. Additional courses related to development of children, selected with adviser assistance. Possible choices are ED 320 or 450.
3. Internship (8-12 credits): ED 456 (Internship in Early Childhood Education).

### Specialization in Youth and Adult Services

This specialization has been developed in cooperation with agency and industry employers in the community. It prepares students for a wide variety of human service occupations in such settings as employment and training programs, probation and correctional guidance, mental health, substance abuse, youth or family services, and services for older persons.

Students develop helping profession competencies through human interaction courses, special topic courses in human resources development, and field experiences, culminating in the internship. Students may choose preparation in areas such as: employment and training counseling and job development, drug abuse and alcoholism, youth assistance, social justice and corrections, vocational guidance and rehabilitation, community mental health, family and human effectiveness, community development, and assistance to elders.

### Admission Requirements

Students must apply for admission to the youth and adult specialization after completing 16 credits with a grade point average of 2.50. Courses which carry no numerical or letter grades are excluded from the calculation of grade point average.

### Continuation in the Youth and Adult Services Specialization

Grades in courses submitted for credit in the youth and adult services specialization must be 2.0 or better. To continue in the program, a student must maintain a minimum grade point average of 2.50 in HI/HRD courses. Students not meeting this requirement may request one review before registering for internship.

### Specific Requirements to Complete the Program

1. Specialization courses (32 credits)
  - a. Completion of a 16-credit core curriculum including HI 361, HI 363, HRD 362, and HRD 366.
  - b. 12-16 additional credits in HI/HRD courses other than HRD 490.
2. Cognate courses (24 credits)
  - a. One course in psychology, 200-level or above.
  - b. One course in sociology or anthropology, 200-level or above.
  - c. One social change course: HRD 401, ECN 309, ECN 368, PS 305, SOC 205, 336, 405, 441, 443.
  - d. A selection from HRD 301, 302, 402, or other behavioral science courses (PSY, SOC, AN, PS, ECN, MGT, ORG, HBS) to total 24 cognate credits.
3. Research or statistics (4 credits)
 

One course within either the specialization or cognate requirement as follows:  
HRD 390—Special Project in Human Resources Development (applies to specialization course requirement). OR a course in research design or statistics: ECN 304, PSY 250, PSY 311, PSY 357, SOC 202, SOC 203, SOC 307, SOC 477, STA 320, STA 321 (apply to cognate course requirements)
4. Internship: HRD 490 (8-12 credits)
5. Concentration: a minimum of 12 credits as listed under one of the approved areas of concentration

### Concentrations for Specialization in Youth and Adult Services

A minimum of 12 credits as listed under one of the approved areas of concentration must be elected within the degree program. The concentrations listed below are sponsored by the human resources development area faculty. Certain other concentrations offered within the university may be substituted. At least 12 credits of a concentration must be completed before registration in HRD 490 Internship in Human Resources Development. Completion of three courses from one of the following areas will meet this requirement. Students who have completed a two year program of study in a human service specialty at a community college, such as Associate in Social Work or Mental Health Associate, have met this requirement. Only students who complete the requirements for a major or a minor in human resources development and the requirements for one of the following concentrations may qualify for certification of the concentration on their official transcript of credit.

### Employment Development and Personnel Practice

COORDINATOR: *David P. Meyer*

Focuses on employment services, vocational rehabilitation, personnel administration, and career development topics. Select three courses from the following:

HRD 364	Career Development and Community Resources
HRD 368	Work and Training Development
HRD 467	Workshop: Critical Issues in Women's Employment
HRD 469	Seminar in Employment and Training
ECN 268	Introduction to Labor Economics
ORG 334	Human Development in Organizations
SOC 357	Industrial Sociology
SOC 455	Sociology of Occupations and Professions

## Family Services

COORDINATOR: *Mary L. Otto*

For students with interest in entry-level positions such as family service caseworkers and intake interviewers, domestic relations workers, and family planning. Select three courses from the following:

HRD 302	Ethics and Personal Crises
HRD 331	Introduction to Community Mental Health
HRD 390	Special Project in HRD (research in social work, cooperative extension service, etc.)
HRD 467	Workshop Parenting
HRD 469	Seminar: Child Abuse
PSY 271	Child Development
PSY 376	Socialization in the Family
SOC 405	Social Context of Social Work
SOC 335	The Family
SOC 336	Sex Roles in Modern Society

## Gerontological Services

COORDINATOR: *William F. Moorhouse*

For those planning to work with elderly persons in retirement planning, senior citizen programs, placement for older workers, care facilities for the elderly, and bereavement counseling. Select three courses from the following:

HRD 369	Field Work in HRD (in services for elderly persons)
HRD 431	Death and Dying
HRD 467	Workshop: Counseling Older Adults
HRD 469	Seminar: Gerontological Services
PE 291	Recreation Programming and Leadership for All Ages
PSY 331	Psychology of Adulthood and Aging
PSY 371	Work with the Elderly I
PSY 372	Work with the Elderly II
SOC 465	Sociological Perspectives on Aging

## Human Interaction

COORDINATOR: *Robert W. Brown*

This area of concentration provides counseling skills for work in a broad range of youth and adult human service settings and serves as preparation for graduate studies in counseling. Select three courses from the following:

HI 461	Introduction to Counseling
HI 463	Group Procedures in Helping Relationships
HI 464	Techniques of Consultation
HRD 469	Seminar: Leadership Skills
PSY 310	Coping Strategies in the Normal Personality
PSY 337	Group Behavior
SCN 402	Small Groups

## Minorities and Equal Opportunity

COORDINATOR: *John W. Atlas*

Prepares students for work as compliance officers, or equal employment opportunity and affirmative action specialists in industry and government. Select three courses from the following:

HRD 390	Special Project in HRD (research paper on current law, rules and requirements)
HRD 467	Workshop: Critical Issues in Women's Employment
HRD 469	Seminar: Civil Rights and Affirmative Action
HST 323	Topics in Afro-American History
PS 342	American Legal System I: Principles and Processes
PS 343	American Legal System II: Constitutional Law and Civil Liberties
PSY 325	Psychology of Women
SOC 331	Racial and Ethnic Relations
WS 200	Introduction to Women's Studies

## Probation and Correctional Guidance

COORDINATOR: *Billy J. Minor*

For students planning careers in the criminal justice system as probation and parole officers, volunteer coordinators and correction workers. Select three courses from the following:

HRD 369	Field Work in HRD (in a probation or rehabilitation setting)
HRD 467	Workshop: Probation and Correctional Guidance
PS 241	Law and Politics
PSY 322	Psychology of Crime and Delinquency
SOC 320	Sociology of Crime and Punishment
SOC 323	Juvenile Delinquency and its Social Control
SOC 327	Police and Society
SOC 425	Corrective and Rehabilitative Institutions

## Substance Abuse

COORDINATOR: *Mary L. Otto*

This concentration is intended for work in crisis intervention, drug and alcohol abuse, residential treatment centers and related substance abuse programs. Select three courses from the following:

HRD 331	Introduction to Community Mental Health
HRD 335	Problems of Drug Abuse and Alcoholism
HRD 369	Field Work in HRD (in a substance abuse setting)
HRD 469	Seminar: Substance Abuse Treatment
PSY 220	Abnormal Psychology

## Supervision and Administration of Human Services

COORDINATOR: *Billy J. Minor*

A beginning for careers in program planning, supervision, or administration. Select three courses from the following:

HRD 390	Special Project in HRD (evaluation of human service program effectiveness)
HRD 401	Organizational Analysis and Change Process
HRD 402	Human Service Delivery and Evaluation
HRD 469	Seminar: Leadership Skills
ORG 330/331	Organizational Behavior
PS 350	Public Administration
PS 453	Public Budgeting
SOC 381	Sociology of Modern Organizations

## Youth Services

COORDINATOR:

For students planning to work with young persons in youth employment programs or a variety of agencies such as run-away shelters, delinquent youth programs, child welfare offices, and residential treatment facilities for youth. Select three courses from the following:

HRD 365	Student Resources Development
HRD 469	Seminar: Youth Services
HI 463	Group Procedures in Helping Relationships
PE 291	Recreation Programming and Leadership for All Ages
PSY 312	Psychopathology of Childhood
PSY 336	Psychology of Adolescence and Youth
SOC 440	Sociology of Youth

## EDUCATION COURSE OFFERINGS

### ED 100 Tutoring Experience in Social Studies (2)

Students work with teachers and secondary students in schools. Students commit 60 to 80 hours to a cooperating teacher to work as tutors, teacher aides, and leaders of group discussions. Transportation must be arranged by the student. To be taken in the freshman year, or for transfer students, during the first semester, upon entering the secondary social studies program.

Corequisite: ED 200.

**SCS 105 Science for the Elementary Teacher (4)**

See page 128.

**ED 110 Public Education for the Future (4)**

To help beginning elementary education students make career decisions. Students work at least four hours per week in educational institutions. An additional two hours per week of class time is spent examining school practices and evaluating students' professional capabilities.

ED 110 is a prerequisite for all other education courses in the elementary education program.

**ED 200 Micro-Teaching in Social Studies (2)**

Students identify areas of inquiry related to secondary schools and design personal learning plans for investigating those areas. Learning plans also include personal goals for working effectively in a public school setting. Current educational literature is used to inquire into creativity, self-perception, critical thinking, educational philosophy, motivation, and learning theory.

Corequisite: ED 100.

**ED 206 Introduction to the Cross-Cultural Education Experience (4)**

To acquaint students with the people and cultural setting of the international site. Basic concepts from the social sciences, language, linguistics, and education help students develop greater multicultural understanding.

Prerequisite: One introductory course in education.

**ED 207 Cross-Cultural Education Experience—Practicum (4)**

Prospective teachers work with educators and students in a foreign country. Four to six weeks will be spent working in classrooms. Students may stay in the homes of teachers or children who attend the host school.

Prerequisite: ED 206.

**ED 208 Cross-Cultural Education Experience—Seminar (4)**

Prospective teachers identify and analyze curricular alternatives for application to their future teaching. The seminar is a complement exclusively for the practicum (ED 207).

Prerequisite: ED 206.

**ED 210 Social and Philosophical Issues in Elementary Education (4)**

Introduction to the use of philosophical and social science skills in analyzing and resolving education problems.

Prerequisite: ED 110 and admission to the program.

**ED 215 Educational Psychology for Elementary Teachers (4)**

Incorporates and places into perspective learning theories, developmental theories, biological theories, and evaluation, with emphasis on the effects of varied qualities of experience during childhood.

Prerequisite: ED 110 and admission to the program.

**ED 220 Early Childhood Development — Experiences with the Young Child (4)**

Child development via observing and analyzing child behavior in settings with young children. Instruction, observation, and experience with focus on children and their developmental needs during infancy and early childhood, especially in the context of particular settings. Students must register concurrently for ED 221.

**ED 221 Early Childhood Development Experience Block (1, 2, 3, or 4)**

Experience in a setting with young children. Observation and participation focus on children and their developmental needs during infancy and early childhood and on providing learning experiences to meet those needs, in particular settings. One credit must be taken concurrently with ED 220 and 224. Students who take additional credits of ED 221 must be taking another early childhood course concurrently.

**ED 223 Physical and Social Environment in Early Childhood Programs (4)**

Emphasizes awareness of the various aspects of the social and physical environment for young children. Includes analysis of what makes a healthful, pleasant physical environment and how the roles and relationships of various staff members contribute to this environment. Provides for study of the center team, including volunteers, paraprofessionals, teachers, directors, nutritionists, consultants,

and referral resources as they relate to the effectiveness of the center's program.

Prerequisite: ED 220 or equivalent.

**ED 224 Early Childhood Programming Activities for the Young Child (4)**

Demonstrations, planning, and participation in activities for physical, social and intellectual development. Uses of various media and materials, supportive play activities, and specific art, music, science, language, and other educational activities for young children. Provides a basic repertoire of skills for the early childhood staff member.

Prerequisite: ED 220 or equivalent. Corequisite: ED 221.

**ED 225 Health and Nutrition—Childhood (4)**

Includes knowledge of basic health and safety requirements and basic nutritional and dietary needs for optimum development, with emphasis on these as they relate to early childhood. Practical questions of menu planning will be stressed as well as methods for creating a healthful and safe environment.

Prerequisite: ED 220 or equivalent.

**ED 316 The Latino in the United States (4)**

A historical analysis of Latinos from their arrival on the Western Hemisphere to the present. Contributions of Latinos to U.S. development as well as sociopolitical issues are covered. Emphasis is on alternate techniques of teaching cultural awareness to children. Students participate in field experiences for exposure to teaching cultural awareness in a multicultural setting.

Prerequisite: ED 386.

**SCS 305 Teaching Science to Children (4)**

See page 128.

**ED 320 Topics in Early Childhood Curriculum (2 or 4)**

Selected curriculum topics relevant to early childhood teachers, with focus on specific curriculum areas identified by advanced early childhood students or special groups working in this field.

Prerequisite: Completion of at least two 200-level early childhood courses or permission of instructor.

**ED 321 The Teacher and the Atypical Child (4)**

Identification and management of atypical children in a regular elementary classroom setting. The course deals particularly with children requiring special management techniques and some modification of curriculum. These children may be hyperactive or withdrawn.

Prerequisite: ED 344 and 345 or ED 210 and 215.

**ED 322 Introduction to Early Childhood: Theory and Practice (4)**

Introduction to the field of early childhood, including birth to age eight. Three major areas will be emphasized: growth and development of infants and young children, optimal learning environments for the young child, and methods and materials which facilitate learning in early childhood. This course is for students who wish some background in early childhood but who are not HRD/ED majors. Students must register concurrently for ED 221.

Prerequisite: ED 210 and 215 or permission of instructor.

**ED 323 Education of the Spanish-Speaking in the U.S. (4)**

An opportunity for teachers and other educators to become familiar with the various aspects of Latino education. Lectures, readings, and discussions will deal with background information about the Spanish-speaking in the U.S.

Prerequisite: ED 344 and 345.

**ED 324 Parent and Community Involvement in Early Childhood Programs (4)**

In-depth study of home/school coordination and education. Development of skills and sensitivities in the areas of parent education, parent-teacher conferences, utilization of parents in the classroom, and working with parents in the home. Includes an introduction to training parents for family day-care roles and exploration of family-based child care models.

Prerequisite: At least two 200-level childhood courses, or permission of instructor.

**ED 325 Learning Environment in Early Childhood (4)**

In-depth study of the learning environment and curriculum in early childhood education, including theoretical and practical aspects. Analysis of curriculum areas as they relate to individual children's needs and to the total learning environment. Child assessment and diag-

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nostic techniques and development of programs appropriate for individual needs.

Prerequisite: At least two 200-level early childhood courses, or permission of instructor.

### **ED 326 Introduction to Early Childhood Program Operation (4)**

Overview of types of program operation in early childhood, including private, industrial, cooperative, government-funded programs, such as Headstart, Follow Through, and current legislation pertinent to early childhood. Designed to give teacher and child-care development majors the skills to direct programs which are in operation.

Prerequisite: At least two 200-level early childhood courses, or permission of instructor.

### **ED 329 Practicum in Bilingual-Bicultural Education (4)**

Specialized field experience in a bilingual/bicultural classroom. Observation, tutoring, diagnostic-prescriptive teaching, writing lesson plans, and using bilingual materials are included.

Prerequisite: Completion of all other requirements for the bilingual education credential or permission of instructor.

### **ED 331 Teaching of Reading (4)**

Intensive preparation for the teaching of reading skills in the elementary grades. Identification of reading readiness, problems of program construction, and a variety of teaching methods are included. Must be taken with ED 333.

Prerequisite: ED 210 and 215 or ED 344 and 345.

### **ED 332 Literature for Children (4)**

The ability to evaluate children's literature critically, to understand its history, to assess children's needs and developmental levels, and to be able to select and use quality literature effectively with children are major objectives of the course.

Prerequisite: LS 101, ENG 345, or equivalent.

### **ED 333 Teaching the Language Arts (4)**

Preparation for teaching language arts in the elementary, middle, and early secondary schools. Teaching composition, creative writing, oral language development, listening, spelling, reading, and the application of linguistic principles to reading and writing are among the topics. Must be taken with ED 331.

### **ED 338 Teaching Reading in the Content Areas (4)**

A basic course in reading for prospective secondary teachers. Content will deal with the nature of the reading process and methods and materials for teaching the reading of English, social studies, and other subjects to junior and senior high school students. Not open to elementary education majors.

### **ED 344 Social and Philosophical Issues in Secondary Education (4)**

Study of secondary education in broad perspective, as both an interpersonal activity and a social institution. Topics include immediate and ultimate aims of secondary education, the social meaning of the schooling process, and the assumptions underlying school policy.

### **ED 345 Psychological and Field Studies in Education (4)**

Psychological factors in learning and development are examined in lectures, class discussions, and observations. These may be observations of actual teaching in the schools, or of videotapes of teaching. Identical with PSY 345.

### **ED 350a Educational Implications of Family Roles and Child Rearing Practices (2)**

Educational implications of anthropological, sociological, and psychological analyses of child-rearing practices in different cultures. Prerequisite: ED 210 and 215.

### **ED 350b History of Public Education in the U.S. (2)**

Social, philosophical, and historical ideas and events which led to the origin and development of the U.S. public school.

Prerequisite: ED 210 and 215.

### **ED 350c Private and Parochial Schooling in the U.S. (2)**

Social, historical, and philosophical origins, trends, effectiveness, and future possibilities of U.S. private and parochial schools.

Prerequisite: ED 210 and 215.

### **ED 350d The Formal Education of Women (2)**

Effects of formal and informal structure of the school on the development of women in contemporary society.

Prerequisite: ED 210 and 215.

### **ED 350e Schooling and Social Stratification (2)**

The role of public schooling in theory and in practice as it relates to patterns of social stratification in the U.S. and other nations.

Prerequisite: ED 210 and 215.

### **ED 350f Education and Moral Development (2)**

Prepares the student to be competent in understanding and guiding the moral development of the child.

Prerequisite: ED 210 and 215.

### **ED 350g Political Issues in Contemporary Education (2)**

A forum on politically current educational issues, using film, outside speakers, field trips, and symposia.

Prerequisite: ED 210 and 215.

### **ED 350h Independent Study (2)**

An opportunity to pursue a problem of particular interest to students, using the skills of philosophical and sociological analysis. Students work in groups or individually under the guidance of a teacher or teachers.

Prerequisite: ED 210 and 215.

### **ED 355a Identifying and Diagnosing Learning and Behavior Problems in Children (2)**

Students will demonstrate knowledge of individual differences among normal school population; develop competency in delivery of educational services to handicapped persons; demonstrate understanding of various theoretical models of behavior; and demonstrate knowledge of the various statutes that govern special education in Michigan.

Prerequisite: ED 210 and 215.

### **ED 355b Testing and Assessment for Teachers (2)**

Prepares a teacher-in-training to make effective use of formal, informal, and teacher-created assessment techniques in the process of planning, implementing, and evaluating instruction.

Prerequisite: ED 210 and 215.

### **ED 356 Mainstreaming I—The Exceptional Child (4)**

An overview of all areas of special education—emotionally impaired, visually impaired, mentally impaired, deaf, learning disabilities, physically handicapped, speech and language impaired, and gifted. Hierarchy of placement and educational interventions will be discussed.

### **ED 357 Mainstreaming II—Individualized Instruction (4)**

Emphasizes development of Individualized Educational Plan (IEP) for handicapped children, development of performance objectives, and short- and long-term goals.

Prerequisite: ED 356 or permission of instructor.

### **ED 358 Mainstreaming III—Classroom Management (4)**

Provides techniques and options for behavior management of exceptional children who are mainstreamed, including behavior modification, life space interviewing, transactional analysis, and Glasser's Class meeting.

Prerequisite: ED 357 or permission of instructor.

### **ED 369 Field Experiences in Guidance (2, 4, 6, or 8)**

Identical with HRD 369.

### **ED 370 Field Problems in Social Science (4)**

To assist prospective social studies teachers in identifying and solving instructional problems. Students are placed in school to work with teachers and secondary students, operating through a written contract agreed upon by themselves, an appropriate secondary school official, and a representative of the social studies program. Transportation must be arranged by the student.

Prerequisite: ED 100 and 200.

### **ED 386 Introduction to Bilingual Education (4)**

Provides prospective elementary teachers with the philosophy and rationale for using bilingual education in the classroom. Students will become familiar with problems of Spanish-speaking students as well as prescriptive techniques. Field exposure to bilingual classrooms is essential. Some of the instruction will be in Spanish.

### **ED 420 Interaction Laboratory for Teacher Development (4)**

Acquaints students with the importance of human relations skills in teaching and provides a clearer understanding of the flexible line separating personal and professional behavior. Laboratory activities involve the student in role-playing and action-oriented problem

solving. A field experience is included.

Prerequisite: ED 110, 210, 215, 350, and 355.

**ED 428 Teaching of the Major Field (4)**

Content and methodology appropriate to the student's major field. Organization of programs and courses, bibliography of the field, and techniques of instruction receive special emphasis. Must be taken concurrently with ED 455, except when other provisions have been made by the major department.

Prerequisite: ED 344 and 345. (For social studies majors, the following are also required: ED 100, 200, 370, and SS 100.)

**ED 430 The Public School in Urban America (4)**

The role of schools in contemporary urban America, with emphasis on the relationship between the school and the urban ethos, social stratification, racial identities, and the functioning of the school in the urban ecology.

Prerequisite: ED 344 and 345 or ED 210 and 215.

**ED 450 Advanced Studies in Early Childhood (2 or 4)**

Current issues affecting the field of early childhood, especially those related to current legislation, child advocacy, and the child welfare concern; research methodology appropriate for young children; and/or in-depth issues such as development of infants or exceptional children.

Prerequisite: Completion of all 200-level early childhood courses and at least two 300-level early childhood courses, or permission of instructor.

**ED 454 Skill Development Laboratories for Teaching Social Studies (4)**

Interns meet weekly with instructor and supervisors to identify and solve problems such as discipline, course planning, grading, motivation, and interpersonal relationships and to share effective strategies. Emphasis is on mutual problem solving. Must be taken concurrently with ED 455.

**ED 455 Internship (12)**

Approximately 15 weeks of supervised teaching in a public school classroom and other activities as directed by a supervising teacher. Seminars are held throughout the semester focusing on general and specific teaching concerns of the interns. The semester may be divided into two segments for a dual assignment, depending on program requirements or student needs.

A student must complete the internship in his/her last semester (a last semester is one in which a student needs no more than 16 credits to satisfy all graduation requirements). A student must apply for internship one full semester in advance. Except for ED 428, a student may not take any other course work concurrently with ED 455.

Prerequisite: Elementary education majors must complete the core program, general education, and childhood curriculum studies requirements listed on pages 117-118, secondary education majors must complete ED 344, 345, and secure permission of the major department and the School of Human and Educational Services. Concurrent registration in ED 428 is required unless other provisions have been made by the major department. Prospective student teachers must register at the Office of Field Services at the beginning (before September 15 or January 15) of the full semester before student teaching.

**ED 456 Internship in Early Childhood Education (8 to 12)**

Culmination of the early childhood education program: work in practicum settings with young children, parents, or caregivers. Students will gradually assume total responsibility for an intensive field experience. Consists of 300 hours of on-site practicum. Includes a seminar. No other courses may be taken concurrently.

Prerequisite: 24 credits in early childhood education with a 2.50 grade point average.

**ED 460 Special Project in Guidance (2, 4, 6, or 8)**

Deals with specialized interests in various phases of guidance and personnel work. Topic will be determined by the student's particular interests. May be taken more than once, for a total of 8 credits. May be elected for independent study.

Prerequisite: Permission of instructor.

**ED 463 Group Procedures in Helping Relationships (4)**

Identical with HI 463.

**ED 464 Teaching in Manpower Education Programs (2, 4, 6, or 8)**

Principles and basic teaching skills required in manpower education programs. The student will develop skills in stating instructional

objectives, planning activities to attain the objectives, and evaluating instructional outcomes. Teaching experiences will be provided through simulation and internships in programs.

Prerequisite: Permission of instructor.

**SS 470 Teaching Social Studies in Elementary School (4)**

See page 128.

**ED 490 Independent Study and Research (2 or 4)**

A program of directed individual reading and research.

Prerequisite: Permission of the Department of Teacher Education (granted only if a student presents written faculty consent to supervise his/her study).

**SCS 490 Independent Problems in Science Education (2 or 4)**

See page 128.

**ED 497 Apprentice College Teaching (2 or 4)**

An elective open to any well-qualified upperclassperson with consent of a faculty member to assist in presenting a regular college course to underclasspersons. The apprentice should be capable of assuming limited classroom teaching duties.

Prerequisite: Permission of the Department of Teacher Education (granted only if a student presents written evidence that a faculty member has accepted him/her as an apprentice).

**HUMAN INTERACTION COURSES**

**HI 261 Fundamentals of Human Interaction (4)**

Introduction to individual and small group interaction, with consideration to interpersonal communication, group leadership, decision-making, and self-awareness. The course helps students to operate more effectively in community service activities. Role-playing, demonstrations, video recordings, simulations, and other experimental activities are used.

**HI 361 Techniques of the Helping Interview (4)**

Emphasizes listening and observation skills, establishing mutual trust and acceptance, and providing support in a one-to-one relationship to help persons make decisions. Includes an introduction to the philosophy, theory, and research of the helping relationship. Techniques of instruction include role-playing, simulation interaction analysis, and experience with actual clients.

Prerequisite: HI 261 or equivalent.

**HI 363 Dynamics of Human Relationships in Education and Work Settings (4)**

Deals with relationships among students and teachers, employees and supervisors, and peers in settings such as schools, industry, adult training classes, and teams of coworkers. Introduces sociological and psychological theories of human group behavior dynamics.

Prerequisite: HI 261 or equivalent.

**HI 461 Introduction to Counseling (4)**

Theories and practices in guidance and counseling. An emphasis can be elected to prepare for work with certain groups such as youth, adults, disadvantaged persons, offenders, persons from a certain culture or ethnic group, etc. Includes opportunity for simulated and authentic experiences. Requirements include development of basic competencies.

Prerequisite: HI 361 and 363.

**HI 463 Group Procedures in Helping Relationships (4)**

Theory and practice of small group process in the helping relationship. Explores several approaches to group leadership and offers an opportunity to experience and/or lead small groups in order to prepare students to foster group interaction. Identical with ED 463.

Prerequisite: HI 363.

**HI 464 Techniques of Consultation (4)**

Techniques of consultation designed to help teachers, parents, families, employers, peers, preprofessionals, volunteers, and other significant persons in the lives of human resources development clients to support and facilitate client growth. Includes preparation for those engaged in helping children, youth, adults, or the aged to become more self-sufficient.

Prerequisite: Two human interaction courses or equivalent.

**HUMAN RESOURCES DEVELOPMENT COURSES**

**HRD 301 The Nature of Man (4)**

The various ways in which human nature has been understood, with attention to the behavioral, humanistic, Marxist, and Christian beliefs about man and their implications for policies and practices in

the teaching and helping professions. Strives to develop tolerance for alternative views of man, rather than propagate one view.

**HRD 302 Ethics and Personal Crises (4)**

Ethics as related to the personal crises of sexual behavior and lifestyles, abortion, suicide, euthanasia, parenthood, and criminal punishment. For students planning to enter the helping professions, especially counseling. Focus is on helping others make a moral decision and handling value conflicts in counseling. Alternative viewpoints are offered so that students may increase their understanding of viewpoints they do not personally hold.

**HRD 331 Introduction to Community Mental Health (4)**

Includes a critical examination of current mental health treatment programs in local institutions, community mental health centers, and family-care programs. Covers the role of social and cultural factors in the cause of mental illness. Introduces roles in the helping process as a member of a treatment team and provides experience in carrying out some facet of a treatment plan under supervision.

**HRD 335 Problems of Drug Abuse and Alcoholism (4)**

Comprehensive study of the modes of prevention and treatment programs for substance abuse. Readings and reports include basic information about various drugs and alcohol, with history, categories and definitions, misuse, abuse, legitimate use, laws, attitudes, and reasons people abuse drugs. Provides a study of methadone maintenance programs, support programs such as Synanon, and volunteer paraprofessional services. Reviews legal and ethical practices, confidentiality, etc.

**HRD 362 Assessment of Youth and Adults (4)**

Overview of techniques used to assess youth and adults for deciding on and implementing educational, occupational, and personal-social goals. Students are introduced to measurement terminology as well as techniques of test administration and interpretation. Emphasis is on the synthesis of data in case studies and in case conferences.

**HRD 364 Career Development and Community Resources (4)**

Sources of occupation, education, and personal-social information, and techniques for using guidance information in the helping process. Establishes a repertoire of knowledge about community agencies and resources. Students gather firsthand information from site visitations as well as through audio-visual and printed media.

**HRD 365 Student Resources Development (4)**

Overview of the process, philosophy, practice, organization, and evaluation of adult student resource development work in colleges and universities, as well as supervised experience in typical higher education settings, such as career advising, residential living, financial aid, and orientation programs.

Prerequisite: Permission of instructor.

**HRD 366 Techniques of Human Resources Development (4)**

Basic preparation for public service work in the emerging field of human resources development. Emphasis is on cooperation among preprofessional and professional workers such as: interviewers, teachers, and community agency personnel, including employability developmental work to assist disadvantaged youth and adults from various cultural backgrounds to discover and develop their potential.

**HRD 368 Work and Training Development (4)**

Contact work with employers and educators to develop jobs and training courses for persons enrolled in related employability training programs and other agency applicants. Stresses appraisal of the needs of employers for persons with certain performance skills, development of on-the-job training programs, and related education. Prerequisite: 12 credits in HI or HRD courses.

**HRD 369 Field Work in Human Resources Development (2, 4, 6, or 8)**

Supervised experiences in a variety of helping relationships in work settings such as schools, employment offices, social services agencies, and industry. Includes an orientation to various local community cultural settings and lifestyles. Experiences emphasize helping young people and adults adjust to education or work experience. Prerequisite: Permission of instructor.

**HRD 390 Special Project in Human Resources Development (2, 4, 6, or 8)**

Directed reading, research, and study in an aspect of human resources development work. May be elected for independent study or

taught as a workshop based on selected topics and issues in the field. The course may be taken more than once, for a total of 8 credits. Prerequisite: Permission of instructor.

**HRD 401 Organizational Analysis and Change Process (4)**

Study of the structure of organizations that provide human services and development and the process of effecting changes leading to improved individual client development. Concerns the assigned role of counselors, teachers, and other helpers within agencies and schools, which often interferes with their helping functions.

Prerequisite: Junior standing and two courses in ED, HI, or HRD.

**HRD 402 Human Services Delivery and Evaluation (4)**

Systems analysis and experimental design for program development and research in human services. Emphasizes skills in developing performance objectives and in organizing and writing proposals for program development. Provides an opportunity to participate in systems design for delivery of a proposed human service or educational program.

Prerequisite: Junior standing and two courses in ED, HI, or HRD.

**HRD 431 Death and Dying (4)**

Seminar of the philosophical, religious, cultural, and psychological issues in death and dying. Topics include: religious views of death and after-life; ethical issues in suicide and euthanasia; cultural attitudes toward death and funerals; psychological studies of counseling the dying and the bereaved; children and death; forming attitudes toward one's own death. Recommended for upper-level students only. Prerequisite: Two HI/HRD courses or permission of instructor.

**HRD 467 Workshop (2 or 4)**

An opportunity for community agency personnel and students preparing for applied human resources development work to develop various aspects of human services programs and practices. Sections are offered as needed for areas of emphasis which meet the current objectives and/or requests of agency or business and industry employers and directors of training programs for personnel skilled in human resources development. May be taken more than once for a total of 8 credits.

Prerequisite: Course work or experience in the workshop topic.





**HRD 469 Seminar (2 or 4)**

Conducted in traditional seminar fashion. Scope is predefined and based on a broad topic in the human resources development field. Class members select research areas and contribute their findings to the group. Visiting consultants and the instructor provide direction and content. May be taken more than once for a total of 8 credits. Prerequisite: Course work or experience in the seminar topic.

**HRD 490 Internship in Human Resources Development (4, 8, or 12)**

A culminating experience where students apply their learning in a supervised experience to human resources development work with youth or adults as an intern in a community agency program. Prerequisite: Senior standing, completion of 24 or more credits in HI or HRD courses with grade point average of at least 2.50, including one 12-credit concentration, and permission of instructor.

**HEALTH-PHYSICAL EDUCATION COURSES**

For courses in dance (DAN), see page 132.

**PE 101 Physical Conditioning (2)**

Although primarily an activity course, one hour per week is devoted to lectures on physical lifestyle. Various forms of physical conditioning are used with emphasis on cardiovascular fitness.

**PE 111 Swimming and Diving (2)**

Principles, safety precautions, and procedures and participation in basic, intermediate, and advanced swimming and diving skills.

**PE 113 Skin and Scuba Diving (2)**

Principles, safety precautions, and procedures and participation in basic and advanced skills in skin and scuba diving.

**PE 121 Tennis and Volleyball (2)**

To develop awareness of the facilities, equipment, supplies, courtesy, rules, and strategy. Includes participation in the basic and advanced skills of tennis and volleyball.

**PE 125 Advanced Golf (2)**

Review and modification of basic grips, stances, and swings. Attention to developing advanced playing skills, interpreting rules, judging distance, club selection, and selective play.

**PE 151 Golf and Badminton (2)**

To develop awareness of the facilities, equipment, supplies, courtesy, rules, and strategy. Includes participation in the basic and advanced skills of golf and badminton.

**PE 152 Handball, Paddleball, and Squash (2)**

To develop awareness of the facilities, equipment, supplies, courtesy, rules, and strategy. Includes participation in the basic and advanced skills of handball, paddleball, and squash.

**PE 155 Advanced Tennis (2)**

Complete review of basic footwork, grips, and stroke movements. After the review attention is given to advanced playing skills and strategy.

**PE 161 Beginning Gymnastics (2)**

To develop awareness of the facilities, supplies, equipment, and safety rules. Includes participation in the fundamentals in conditioning, tumbling, stunts, and apparatus.

**PE 162 Advanced Gymnastics (2)**

To develop awareness of the facilities, equipment, supplies, and safety rules. Includes participation in advanced gymnastics skills and routines on various apparatus.

**PE 163 Movement Education, Low Organized Games, and Leadup Activities to Movement Skills (2)**

Perceptual-motor development and sensory-motor development activities and their relevance to movement in low organized games, leadup activities, and games for basic sports skills.

Prerequisite: Sophomore standing.

**PE 180 Judo (2)**

To develop awareness of the facilities, equipment, supplies, safety rules, and procedures. Includes participation in basic and advanced judo skills.

**PE 182 Karate (2)**

To develop awareness of the facilities, equipment, supplies, safety rules, and procedures. Includes participation in basic and advanced karate skills.

**PE 202 Introduction, History, and Orientation to Health-Physical Education and Allied Fields (2)**

To provide knowledge, interpretation, and understanding of health education, physical education, dance, intramural sports, extramural sports, sports clubs, school and community recreation, and inter-scholastic competitive athletics for boys and girls.

**PE 207 American Red Cross Advanced First Aid and Prevention and Care of Activity-Oriented Injuries (4)**

To provide knowledge, interpretation, understanding, and practice in immediate and temporary care for victims of accident or sudden illness until a physician arrives. To aid in approaches and procedures of "safety-proofing" facilities, equipment, supplies, and participants in athletic activities.

**PE 211 American Red Cross Senior Lifesaving and Water Safety Instructor Course (4)**

Principles and procedures for swimming, lifesaving, and water safety with participation, including physical skills examination and written examination. ARC certification upon successful completion of course.

**PE 212 Teaching and Coaching Competitive Aquatic Activities—Water Safety Instructors and/or Lifesaving (4)**

Philosophy, theory, and instruction in basic and advanced skills of swimming and diving; synchronized swimming, and water games, with emphasis on conditioning, training, scheduling, and pertinent necessities.

**PE 215 Muscular Relaxation (2)**

Theory, instruction, and practice of skills necessary for muscular relaxation, as well as facts on muscle physiology. Students will use bio-feedback laboratory equipment.

**PE 221 Teaching and Coaching Baseball (2)**

Philosophy, theory, and practice in the fundamentals of the game; conditioning, training, offensive and defensive strategy, and setting up practice schedules and drills.

**PE PE 223 Teaching and Coaching Basketball (2)**

Philosophy, theory, and practice in the fundamentals of the game; mental and physical conditioning, training, offensive and defensive systems, strategy, and setting up practice schedules and drills.

**PE 225 Teaching and Coaching Softball and Volleyball (2)**

Philosophy, theory, and practice in the fundamentals of softball and volleyball; mental and physical conditioning, training, offensive and defensive systems, strategy, and development of drills and schedules.

**PE 231 Teaching and Coaching Football (2)**

Philosophy, theory, and practice in the fundamentals of the game; mental and physical conditioning, training, offensive and defensive systems; and strategy and setting up practice schedules and drills.

**PE 233 Teaching and Coaching Soccer (2)**

Philosophy, theory, and practice in the fundamentals of the game; conditioning, training, offensive and defensive systems; strategy, and setting up practice schedules and skill drills.

**PE 243 Teaching and Coaching Golf, Bowling, and Archery (2)**

Philosophy, theory, and practice in basic and advanced skills with strategy of play, including setting up practice schedules and drills.

**PE 251 Teaching and Coaching Cross Country, Track, and Field (2)**

Philosophy, theory, and practice in basic and advanced skills of various events, with emphasis on conditioning, training, form, and technique.

**PE 261 Teaching and Coaching Gymnastics (2)**

Philosophy, theory, and practice in basic and advanced skills of the various apparatus and tumbling events, with emphasis on conditioning, training, form, and technique.

**PE 265 Teaching Physical Education, Recreation, and Play Activities for the Atypical Individual (2)**

Philosophy and theory of various approaches and techniques. Planning, organizing, and implementing activities compatible with the varying abilities and interests of atypical children.

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- PE 271 Teaching Dance and Movement (4)**  
Movement as a means of artistic, emotional, and physical expression, and an aid to child development.
- PE 282 Sports Officiating; Fall Individual and Team Sports (2)**  
Philosophy and theory of sports officiating. Study of National High School Federation rule books, interpretations, and officials' manuals. Experience officiating recreational, intramural, and/or interschool sports contests. Includes basketball, football, soccer, and swimming.
- PE 283 Sports Officiating, Winter and Spring Individual and Team Sports (2)**  
Philosophy and theory of sports officiating. Study of National High School Federation rule books, interpretations, and officials' manuals. Experience officiating recreational, intramural, and/or interschool sports contests. Sports covered are basketball, softball, volleyball, tennis, and track and field.
- PE 291 Recreation Programming and Leadership for All Ages (2)**  
Philosophy and theory of recreation and play; including facilities, equipment, and supplies; with emphasis on quiet and active events and games with an opportunity to give leadership in same.
- PE 293 The Psychology and Sociology of Sports and Coaching of Sports (2)**  
History and theory of the actual and potential value of sports as related by philosophers, psychologists, psychiatrists, medical doctors, educators, coaches, and others to our personal, community, state, national, and international participation.
- PE 301 Physical Education, Play, Dance, and Recreation Program for Elementary School (4)**  
Philosophy and theory of physical education in the total elementary program through reading, discussion, and evaluation of curriculum and materials of state school districts; lecture and discussion with area of study materials of state school districts; lecture and discussion with an area administrative, supervising, and teaching personnel.
- PE 304 Exercise Physiology (4)**  
Effects of exercise and physical training on the physiological systems of the body, with emphasis on cardio-respiratory systems. Includes muscle contraction mechanisms, circulatory and respiratory adjustment during exercise, and nutrition for athletes. Laboratory experiences are provided for insight into the dynamics of human performance.  
Prerequisite: BIO 104.
- PE 312 Organization, Promotion, and Administration of Aquatic Programs and the Operation and Management of Aquatic Facilities (4)**  
Philosophy and theory through reading and discussion of articles, promotional pamphlets, state Department of Health rules and regulations, and textbooks; guest operators' lectures and discussion; observation trips; and participation in management and operation approaches and procedures.
- PE 321 Organization, Promotion, and Administration of Physical Education and Athletic Programs and Allied Areas in the Secondary Schools (4)**  
Philosophy and theory of athletics in the total secondary education program through reading, discussion, and evaluation of curriculum and materials of many state high school athletic and activity associations, plus lecture and discussion with area coaches and directors.
- PE 363 Teaching Physical Education and Play Activities for Children Preschool through Grade 3 (2)**  
Philosophy, theory, and practice in activities compatible with the needs, growth, and development patterns; possible interests at various levels for classroom, multi-purpose room, gymnasium, and playground.  
Prerequisite: Sophomore standing.
- PE 364 Teaching Physical Education and Recreation Activities for Children Grades 4, 5, and 6 (2)**  
Philosophy, theory, and practice in activities, compatible with the needs, growth, and development patterns; possible interests with emphasis on low organized games and leadup activities for team games.  
Prerequisite: Sophomore standing.

- PE 391 Practicum in Physical Education and/or Dance with Preschool and Primary School Children (2 or 4)**  
Experience in teaching and leadership in physical education and/or dance with preschool or primary elementary school children. Includes weekly group discussion of these experiences.  
Prerequisite: PE 211, 271, 363, or 364.
- PE 392 Practicum in Physical Education and/or Dance with Upper Elementary and Middle School Children (2 or 4)**  
Experience in teaching and leadership in physical education and/or dance with children, grades 4 through 7. One period per week involves group discussion of teaching and leadership experiences.  
Prerequisite: PE 211, 271, or 364.
- PE 393 Practicum in Physical Education and/or Dance with Atypical Children**  
Experience in teaching and leadership in physical education and/or dance with handicapped children. One period per week involves group discussion of teaching and leadership experiences.  
Prerequisite: PE 211, 271, 363, or 364.
- PE 491 Problem Solving in Physical Education, Recreation, and Competitive Athletics (4)**  
Survey of areas of concern with opportunity to seek solutions through group observation, visitation, and interaction with area and visiting professionals.
- PE 493 Cooperative-Independent Study in Physical Education, Dance, Recreation, or Competitive Athletics (4)**  
Cooperative-independent study with student recognizing a concern, outlining same and possible steps to a solution, building a bibliography and reading, building an observation schedule and observing, building an interview schedule and interviewing, consulting regularly with instructor, and completing written summation.
- PE 495 Practicum-Seminar in Physical Education and Allied Areas (4)**  
Individual students delve into philosophy, theory, and practice in areas of concern with observation and possible participation, and sharing of the experience regularly with the group.

### SCIENCE STUDIES COURSES

- SCS 105 Science for the Elementary Teacher (4)**  
Science concepts and processes based on recent elementary school science education curricula. For education majors only.
- SCS 305 Teaching Science to Children (4)**  
Students develop philosophies of the nature of elementary school science; why teach science and how children learn science. Knowledge and skills in planning instruction, using instructional models, integrating the curriculum, using current science materials, and evaluation. Field work is included.  
Prerequisite: SCS 105, ED 110, 210, 215, and junior standing.
- SCS 490 Independent Problems in Science Education (2 or 4)**  
Individual work in science methods and materials. Credits may be applied to a teaching major or teaching minor in science/mathematics. May include a field placement as well as development of specific teaching materials.  
Prerequisite: SCS 305 and permission of instructor.

### SOCIAL STUDIES COURSE

- SS 470 Teaching Social Studies in Elementary School (4)**  
An opportunity to examine sources of instructional objectives and strategies, curriculum materials, and evaluative procedures for social studies education. Students completing the course should be able to develop, defend, and implement an elementary social studies program. A field experience is included.  
Prerequisite: ED 110, 210, 215, 355, and junior standing.

For a description of the social studies program leading to secondary teacher certification, see page 86.

# SCHOOL OF NURSING

## OFFICE OF THE DEAN

*Geraldene Felton, Dean*

*Nancy Kleckner, Assistant Professor in the Library/Assistant to the Dean*

*Joyce Van Baak, Program Planning Adviser*

**ASSISTANT PROFESSORS:** *Nadia Boulos, Faithy Justin, Pamela Reed, Diane Wilson*

**INSTRUCTORS:** *Janet Barnfather, Hettie Brown, Maria Decker, Shirley Laffrey, Diane Lenk, Marilyn Lotas, Carol Milewski, Joyce Paape, Elizabeth Pinkstaff, Barbara Russol, Pamela Clarke, Nancy Trygar, Maria Strom*

**SPECIAL INSTRUCTORS:** *Joan Finn, Ramune Mikaila*

**VISITING INSTRUCTOR:** *Sandra Genrich*

**LECTURER:** *Ellen Cary*

**APPLIED NURSING INSTRUCTORS:** *Margaret McGee, Joanne Sedor, Victoria Meiburg*

**ADJUNCT CLINICAL INSTRUCTORS:** *Jane Fitzsimmons, Jean Mohan, Eileen O'Connell, Janet Nagy*

## The Nursing Program

The course of study combines general education in the humanities and the behavioral, biological, and physical sciences with special education in the theory and practice of nursing. Graduates qualify for employment as nurse practitioners in a variety of settings such as homes, community health agencies, hospitals, extended care facilities, and federal nursing services. Graduates also have the educational background necessary for graduate study in nursing.

The major purposes of the program are:

1. To prepare practitioners capable of independent functioning and able to develop nursing regimens and to enter the health care system for the purpose of meeting the nursing needs of individuals, families, groups, and communities.
2. To inculcate the nature and operation of identity in conduct for an image of self that is consistent, believable, and sustainable.
3. To prepare individuals capable of self-directed inquiry who view learning as a lifelong process.

## The Prenursing Year

Students wishing to enter the prenursing year should have completed two years of high school mathematics (including algebra), one year of biology, and one year of chemistry (a grade of B or better is desirable). Overall, a grade of B or better is required.

For diagnostic purposes, all students before or during orientation take the Multi-Stage Math Placement Test, and the Writing Proficiency Test.

Prenursing students are not nursing students. During the freshman (prenursing) year students will complete a minimum of 28 credits (or the equivalent) of general education college work consisting of introductory courses in the physical and behavioral sciences and the humanities. These courses serve to introduce the student to the knowledge and principles embodied in the academic disciplines which he/she will need to incorporate into nursing practice. The School of Nursing will decide whether to accept a student into the professional part of the program after the student completes the prenursing requirements at Oakland University or equivalent courses at another institution. Successful completion of the freshman requirements is evidence of the probability of succeeding in the nursing program. The School of Nursing encourages and actively seeks applicants among males and minority students.

## Admission to the School of Nursing

Admission to the professional part of the program occurs in the fall semester of the sophomore year, is restrictive and selective, and may occur either by progression of freshman students currently enrolled at Oakland, or by transfer from other institutions. The School of Nursing has an enrollment quota which is filled with preference to applicants judged to be best qualified to undertake the program. Grades are therefore important, as they serve a natural, logical, and defensible function in evaluating and reporting.

Nursing students are required to attend the spring session in the sophomore and junior years. Completion of required courses at the sophomore level is necessary to enter the junior year.

## Minimum Criteria for Admission to the Nursing Program

Consideration of students for the nursing program (sophomore year) will be based on the following:

1. Applicant's admissibility to and retention in the university.
2. A cumulative grade point average of 3.00 or above in prenursing courses taken at Oakland University is required for consideration for entrance into the professional portion of the program.
3. Additional specifics to be met at the student's expense before beginning the sophomore year:
  - a. Health history and physical examination to include inoculation for tetanus, skin testing for tuberculosis (and possible chest x-ray), and correction of any physical defects.
  - b. Malpractice insurance (\$1,000,000 coverage).
4. Submission of all required information to the School of Nursing by specified deadlines.

## Plan of Study

Prior to registration for the first nursing course each student will complete a Plan of Study in the Student Program Planning Office in the School of Nursing. The Plan of Study is a timetable of courses to be taken, and assures orderly progress toward satisfying degree requirements. The plan is completed by the student in consultation with the program planning adviser.

## Requirements for the Bachelor of Science Degree in Nursing

In order to graduate with the B.S.N. degree a student must:

1. Have demonstrated writing proficiency by meeting the university standard in English composition (see page 12).
2. Have been admitted to candidacy for the B.S.N. by the university and the School of Nursing.
3. Have completed all credits and courses prescribed in the B.S.N. curriculum:
  - a. 58 credits in the nursing component as prescribed by the School of Nursing.
  - b. 54 credits in the humanities and the physical, biological, social, and behavioral sciences as corequisites to the nursing component and as prescribed by the School of Nursing.
  - c. A minimum of 8 credits in mathematics.
  - d. A minimum of 8 credits in electives.
4. Have a cumulative grade point average of 2.50 in all nursing courses.
5. Have completed a minimum of 128 credits.

## 130/School of Nursing

6. Have completed at least 32 credits in courses at the 300 level or above.
7. Be in substantial agreement with all legal curricular requirements.
8. Be in compliance with all legal regulations of the School of Nursing.

### The Standard Nursing Program

The nursing program is highly structured. A model schedule has been adopted for entering freshmen.

FALL			
Prenursing	Sophomore	Junior	Senior
BIO 200 (4)	NRS 211 (4)	NRS 311 (8)	NRS 411 (12)
LS 100 (4)	BIO 205 (4)	Elective* (4)	or NRS 412
MTH 103/104 (4)	BIO 206 (1)	STA 320 (4)	Elective* (4)
AN 102 or SOC 100 (4)	PSY 271 (4)		
	CHM 201 (4)		
WINTER			
PSY 100 or PSY 130 (4)	NRS 212 (4)	NRS 312 (8)	NRS 411 (12)
LS 101 (HBS) (4)	BIO 207 (4)	PHL 318 (4)	or NRS 412
CHM 104 (4)	BIO 208 (1)		NRS 490
MTH 103/104 (4)	PSY 331 (4)		(optional)
(if not taken)			
PHY 141 (4)			
SPRING			
PHY 141 (4)	NRS 300 (4)	NRS 400 (6)	
(if not taken)			

\*It is suggested that electives be chosen at the 300 level from the humanities, physical, biological, social, and behavioral sciences, and independent study.

Nursing students also completing the Honors College requirements need not take AN 102, SOC 100, PSY 100, and 300- and 400-level psychology electives.

### National Student Nurses Association

Prenursing students and nursing students are eligible and are encouraged to join and remain members of the National Student Nurse Association. NSNA is the mechanism through which students participate in planning and formulating policies related to the school.

### Approval and Accreditation

Approval of the nursing program has been obtained from the Michigan State Board of Nursing. Review for accreditation of the program by the National League for Nursing is in progress.

### Qualification for Licensure

Licensure is obtained through satisfactory performance on the licensing examination prescribed by the state of Michigan. Upon registration of the license, the nurse is known as a Registered Nurse (R.N.). Licensure in one state entitles a qualified holder to licensure by endorsement in other states.

### COURSE OFFERINGS

All nursing courses involve student learning experiences in the following settings: classroom, autotutorial laboratory, and clinical agencies in the community. All nursing classes must be taken in numerical order.

#### NRS 211 Introduction to Nursing I (4)

Orientation to the professional program, the facilities, and the community. Includes identification of aspects of adaptation theories as a conceptual framework for nursing practice, the health care system, beginning socialization into nursing, and the nursing process.

#### NRS 212 Introduction to Nursing II (4)

Theory and experiences focus on human adaptation to stress. Emphasis is on the concept of wellness, responses of individuals to

changes in the health status, and responses of individuals and families experiencing relatively normal pregnancy, and maturational and situational crises.

#### NRS 300 Introduction to Nursing III (4)

Study of selected nursing care problems related to human adaptation to stress. Emphasis is on health and developmental assessment.

#### NRS 311 Nursing of Adults and Children I (8)

The implications of increasingly complex variables related to health and illness in adults and children. Emphasis is on the interaction of biological and behavioral responses to stressors throughout the life cycle. Study provides the base for expanding competence in nursing skills centering on care functions, and more sophisticated application of nursing process with clients in various clinical settings.

#### NRS 312 Nursing of Adults and Children II (8)

A continuation of NRS 311 focusing on specific pathologies as stressors affecting physiological and psychological well-being. Emphasis includes analysis of research in nursing and other related areas of study.

#### NRS 400 Nursing of Adults and Children III (6)

Continuation of NRS 311 and 312.

#### NRS 411 Community Health Nursing (12)

Exploration of the functions of the community health nurse with the individual, the family, and the community. Emphasis is on analysis of client adaptation to environmental stressors, nursing actions directed toward prevention of illness, restoration, maintenance, and promotion of public health, and collaboration with others in the community to achieve mutual goals.

#### NRS 412 Advanced Nursing (12)

Examination of components and processes related to nurse leaders as agents of change. Emphasis is on theories and principles of administration, management and organization of health care agencies, and roles, responsibilities, and characteristics of nurse leaders within such organizations. Laboratory activities enable the student to use theories and principles and test hypotheses. Seminars provide opportunity to explore and discuss issues significant to nursing practice, identify relevant variables, and postulate outcomes.

#### NRS 490 Independent Study (Credit varies up to 12)

Options include the opportunity for selected students to participate in faculty research or preceptorships in areas of special interest.



# SCHOOL OF PERFORMING ARTS

**FACULTY COUNCIL:** *Raynold L. Allvin, Associate Professor of Music; Jane M. Bingham, Associate Professor of Education; Dolores M. Burdick, Associate Professor of French; Melvin Chernov, Professor of History; Pamela Clarke, Instructor in Nursing; David W. Daniels, Associate Professor of Music; Robert T. Ebertwein (chairperson), Associate Professor of English; Carol E. Halsted, Assistant Professor of Dance; Laszlo J. Hetenyi, Professor of Education; Adeline G. Hirschfeld-Medalia, Associate Professor of Communication Arts; Lois L. Reilly, Associate Professor, University Library; David Stevens, Assistant Professor of Communication Arts; Flavio Varani, Assistant Professor of Music*

The School of Performing Arts offers a Bachelor of Music degree and a dance minor under the auspices of the Faculty Council for the School of Performing Arts and the direction of the Office of the Provost.

## REQUIREMENTS FOR THE BACHELOR OF MUSIC DEGREE

The Bachelor of Music degree is for students who wish preprofessional and professional preparation in performance, early music, theory, composition, jazz, or commercial music. The degree is awarded upon completion of the requirements listed below, upon recommendation of the faculty of the Department of Music of the College of Arts and Sciences (see page 60) and the School of Performing Arts.

Prospective music majors must read the *Music Handbook* (available from the Department of Music office) and consult with a departmental adviser before beginning work toward the degree. (See page 60 for music course descriptions.)

The Department of Music offers the Bachelor of Arts in music and Bachelor of Science with music education major. These programs are described on page 60.

## General Degree Requirements

A student must:

1. Have successfully completed a minimum of 128 credits.
2. Have met all general undergraduate requirements (see page 12).
3. Have been admitted to degree candidacy by the university and the School of Performing Arts, have completed the core requirements, and have been admitted to study in at least one of the music specializations.

## The General Education Requirement

The student must complete a total of 32 general education credits distributed in four fields. These credits must be chosen from the designated courses listed here and described in the arts and sciences section:

### Arts

4 to 8 credits in courses selected from:

AH 100	Introduction to Western Art I
AH 101	Introduction to Western Art II
CIN 150	Introduction to Film
DAN 173	Dance History and Appreciation
THA 100	Introduction to Theatre
THA 268	Theatre History I
THA 269	Theatre History II

### Modern Language

8 to 16 credits in a foreign language (or demonstration of proficiency equal to second semester of a language), and/or in courses selected from:

ML 211	Diction for Singers, First Semester
ML 212	Diction for Singers, Second Semester
SCN 207	Semantics

SCN 303	Communication Theory
PHL 102	Introduction to Logic
PHL 170	Introduction to Formal Logic

### History, Literature, and Philosophy

8 credits in courses selected from:

HST 150	History of Western Civilization
HST 200	European History to 1300
HST 201/202	European History, 1300-1815; 1815-present
HST 214/215	Introduction to American History
ENG 100	Masterpieces of World Literature
ENG 105	Shakespeare
ENG 111	Modern Literature
ENG 224	American Literature
ENG 241	British Literature
CLS 100	Introduction to Classical Civilization
CLS 203	Survey of Greek Literature
CLS 205	Survey of Roman Literature
LIT 281	Continental European Literature 1600-1850
LIT 282	Modern Continental Literature
PHL 101	Introduction to Philosophical Thinking
PHL 103	Introduction to Ethics
PHL 204	Ancient Greek Philosophy (Beginnings to Aristotle)
PHL 205	Hellenistic and Medieval Philosophy (to Renaissance)
PHL 206	Early Modern Philosophy (to Kant)
PHL 250	Philosophies and Religions of Asia
NCC 121	Images of Humanity

### Mathematics, Science, Social Sciences, Area Studies

4 to 8 credits in courses selected from:

AS 210	Introduction to China
AS 220	Introduction to Japan
AS 230	Introduction to Africa
AS 240	Introduction to India
AS 250	Introduction to Latin America
AS 260	Introduction to the Slavic World
MTH 104/105	Elementary Functions, Trigonometry
MTH 121-122	Introduction to Mathematics for Social Sciences
MTH 123	Introduction to Mathematics for Life Sciences
MTH 154-155	Calculus
MTH 185	Mathematics—Undergraduate Topics
STA 320	Introduction to Probability and Statistics
BIO 104/105	Biology of the Human
BIO 190/200	Biology
CHM 104	Introduction to Chemical Principles
CHM 144-145	General Chemistry
PHY 101/102	General Physics
PHY 104/105	Astronomy
PHY 106/107	Earth Sciences
PHY 125	The Physics of Music
PHY 127	Human Aspects of Physical Science
ENV 308	Introduction to Environmental Studies
NCC 141	Twentieth Century Science
SOC 100	Introduction to Sociology
AN 101	Evolution of Man and Culture
AN 102	Man in Culture and Society
ECN 100	Introduction to Political Economy
ECN 200	Introduction to Macroeconomics
ECN 225	American Economic Growth and Development
PS 100	Introduction to American Politics
PS 110	Contemporary Political Issues
PS 115	U.S. Foreign Policy
PS 131	Foreign Political Systems
PS 372, 373	Western Political Thought
PS 377	Communism
PSY 100	Foundations of Contemporary Psychology
PSY 130	Psychology and Society
NCC 131	Studies in Human Organization

## Music Specilization Requirements

### Core Requirements for all Specializations

Harmony I and II (MUT 211, 212)	8
Two courses from MUT 311, 312, 314, 410, 412, 414	8
Ear Training (by examination)	
Survey of Music History and Literature (MUS 320)	4
Two music history courses selected from MUS 328, 329, 330, 334, 345, 347	4

### Specialization Requirements

1. Performance: Piano or Organ	
Ensembles (8 semesters; must include 4 semesters of accompanying)	8
Applied Major	32
Applied Minor	8
Pedagogy	4
Repertoire	4
Senior recital	
Recommended: Conducting (MUS 395)	
2. Performance: Voice or Guitar	
Ensembles (8 semesters; 1 semester of accompanying is recommended)	8
Applied Major	32
Applied Minor (must be keyboard or proficiency equivalent to MUA 471)	8
Repertoire	4
Senior Recital	
Recommended: Conducting (MUS 395)	
Language requirement for voice majors: ML 211-212 (Singers' Diction) and one year of Italian, French, or German	
3. Performance: Orchestral Instruments	
Ensembles (2 ensembles each semester for 8 semesters)	16
Applied Major	32
Applied Minor (must be keyboard or proficiency equivalent to MUA 471)	8
Repertoire (via independent study)	2
Senior Recital	
Recommended: Conducting (MUS 395)	
4. Early Music	
Ensembles	12
Applied Major	24
Applied Minor	8
Keyboard (MUA 271 or equivalent proficiency)	4
Performance Practice	4
Bibliography (MUS 490)	2
Language Requirement: 16 credits of German, French, or Italian.	
Recommended: Additional credits in music history and Senior Recital	
5. Theory	
Additional Theory	8
Composition	4
Ensembles (6 semesters)	6
Applied Major	12
Keyboard (MUA 471 or equivalent proficiency)	8
Orchestration (MUT 411)	4
Bibliography (MUS 490)	2
World Music	4
Apprentice College Teaching (MUS 497)	2
Conducting (MUS 395)	4
6. Composition	
Composition	16
Additional theory courses beyond core requirement, chosen from MUT 311, 312, 314, 410, 412, 414	8
Orchestration (MUT 411)	4
Ensembles (6 semesters)	6
Applied Major	8
Keyboard (MUA 471 or equivalent proficiency)	8
Conducting (MUS 395)	4
Senior Recital	
Corequisite: Computer Science	4
7. Jazz	
Ensembles (8 semesters)	8
Applied Major	16
Keyboard (MUA 376, 377, 476, 477)	8

Jazz Improvisation Workshop (MUE 341)	8
World Music	4
Recommended Senior Recital:	
Language requirement: French recommended; may also be completed by Singers' Diction (ML 211-212) or 8 credits in Linguistics and/or Speech Communication.	
8. Commercial	
Ensembles (8 semesters)	16
Applied Major	12
Applied Minor (Guitar, unless intermediate proficiency)	4
Keyboard (MUA 371, or equivalent proficiency)	6
Literature of the American Music Theatre	2
Improvisation (MUE 341)	4
Corequisites: Theatre (Technical Laboratory, Fundamentals of Acting, Dance and Movement, Costuming and Makeup)	
Language Requirement: Must include ML 211-212	

## Concert Attendance Requirement

Completion of a concert attendance card each fall and winter semester a student is enrolled, up to a maximum of six. See *Music Handbook* for details.

## Ensemble Requirement

At least half of the required ensemble credit must involve the student's major applied proficiency.

## Major Standing

Prospective music majors must apply to the Department of Music for major standing after completing 48 total college credits, at Oakland or elsewhere. Normally, transfer students should apply during the first semester at Oakland University. For details, consult the *Music Handbook*.

## Auditions

New music majors must audition in their performing medium for a faculty committee within the first week of classes. See the *Music Handbook* for details.

## Applied Music Juries

Music majors must play a jury in their major performing medium at the end of each fall and winter semester of applied study. Failure to do so will result in an "I" grade.

## REQUIREMENTS FOR THE MINOR IN DANCE

1. A minimum of 20 credits is required.
2. Required courses are DAN 173, DAN 372, or DAN 373, and DAN 376 (12 credits).
3. An additional 8 credits must be chosen from DAN 100, 101, 110, 111, 120, 121, 200, 201, 210, 211, 220, 250, 320, 390.

### COURSE OFFERINGS

DAN 100	Ballet I (2)
DAN 101	Ballet II (2)
DAN 200	Ballet III (2)
DAN 201	Ballet IV (2)

Covers the technique of classical ballet in a four-semester progression. The technique, style, aesthetic interpretation, and historical significance are presented in theory and practice.

DAN 110	Modern Dance I (2)
DAN 111	Modern Dance II (2)
DAN 210	Modern Dance III (2)
DAN 211	Modern Dance IV (2)

Covers the technique of modern dance in a four-semester progression. The technique, style, and aesthetic interpretation are presented in theory and practice.

- DAN 120**      **Jazz Dance I (2)**
- DAN 121**      **Jazz Dance II (2)**
- DAN 220**      **Jazz Dance III (2)**
- DAN 320**      **Jazz Dance IV (2)**

Covers the technique of jazz dance in a four-semester progression. The technique, style, and musical relationships are presented in theory and practice.

**DAN 173**      **Dance History and Appreciation (4)**  
A historical survey of the development of theatre dance in Western culture. Course materials presented through lecture, discussion, films, slides, and viewing of live dance performances.

**DAN 250**      **Primitive Dance I (2)**  
The study of primitive technique as devised by Katherine Dunham. Integration of African rhythmic dance and Afro-American dance style defines this popular dance form.

**DAN 299**      **Dance Workshop (1 to 4)**  
A workshop designed to give students opportunities for participation in a variety of dance experiences led by performing artists. Normally offered in the spring and summer. Graded S/N.

**DAN 372**      **Choreography (4)**  
Theory of dance composition through reading, discussion, observation, and experimentation.  
Prerequisite: One full year of dance.

**DAN 373**      **Dance for the Musical Theatre (4)**  
A practical and theoretical survey of dance within musical theatre from 1900 to the present. Class material presented through actual participation with some discussion of the period and style of dance.  
Prerequisite: One dance course.

**Dan 376**      **Practicum: Dance Rehearsal and Performance (2 or 4)**  
A technique- and performance-based laboratory course. Each student will participate in a dance performance during the semester, either as a performer or a choreographer. Four credits are given for performance and choreography and 2 credits for performance only. May be repeated for a maximum of 8 credits.  
Prerequisite: Permission of instructor.

**DAN 390**      **Historical Dance (4)**  
The study of Baroque, Renaissance, and nineteenth century social dance styles. Course includes practical, theoretical, and historical background.

**DAN 490**      **Independent Study (1, 2, or 4)**  
Permission of instructor. Graded S/N.

**DAN 497**      **Apprentice College Teaching (2 or 4)**  
Supervised participation in teaching an undergraduate course in dance, together with discussion of teaching methods and objectives.  
Prerequisite: Permission of instructor.



# CENTER FOR COMMUNITY AND HUMAN DEVELOPMENT

**DIRECTOR:** *Jacqueline R. Scherer, Associate Professor of Sociology*

**COORDINATOR:** *Barbara J. Biallas*

**COOPERATIVE EDUCATION PROGRAM**

**COORDINATORS:** *Janet R. Crossfeld, Frederick J. Lutz*

**FACULTY COUNCIL FOR THE CENTER FOR**

**COMMUNITY AND HUMAN DEVELOPMENT:** *Alphonso R. Bellamy, Assistant Professor of Management; Wilma Ray-Bledsoe, Assistant to the President and Director, Urban Affairs Center (ex officio); Nadia Boulos, Assistant Professor of Nursing; Peter Everts, Professor of English and Learning Skills; James Graham, Associate Professor of History; Edward Heubel, Professor of Political Science; Harvey Hohausser, Director, Urban Program Development; Patrick Johnson, Professor of Education; Audrey Marriner, Director of Conferences; James McGinnis, Assistant Professor of Education; Dhiraj Pradhan, Associate Professor of Engineering; Diane Stricker, Assistant Professor of Management; Elinor Waters, Director, Continuum Center*

The Center for Community and Human Development is an academic instructional and research unit that coordinates activities between the university's academic programs and off-campus needs and interests. Closely connected with the Division of Urban Affairs, the center offers selected students internships and other work-study opportunities in township, municipal, and county settings. The center provides the community service course program described below.

## Cooperative Education

Cooperative education, usually known as co-op, is an academic program that combines theoretical classroom learning with experience in a professional job setting. The traditional co-op program alternates periods of paid full-time employment with full-time study in career fields. Co-op students gain exper-

ience in their vocational areas of interest while supervised by Oakland University faculty and cooperating employers.

Research indicates that students with co-op training are more successful in obtaining entry jobs.

Co-op students at Oakland University have worked at Pontiac Motors, Oakland County government, GM Truck & Coach, Burroughs Corporation, Borg-Warner, Detroit Diesel, and the U.S. Social Security Administration. The program is open to students in all majors for which there are co-op placements. Requirements for participation in co-op vary among academic majors.

Students should contact the Center for Community and Human Development, 374 South Foundation Hall for further information.

## COURSE OFFERINGS

### CHD 310 Community Service Class (4 or 8)

A survey of the human service field to identify community agencies, organizations, and career options. Includes discussion of volunteerism, grants and contracts, client services, communication skills, and training. Depending on number of credits elected, students must spend 6 to 12 hours per week as interns in a metropolitan-area human service agency.

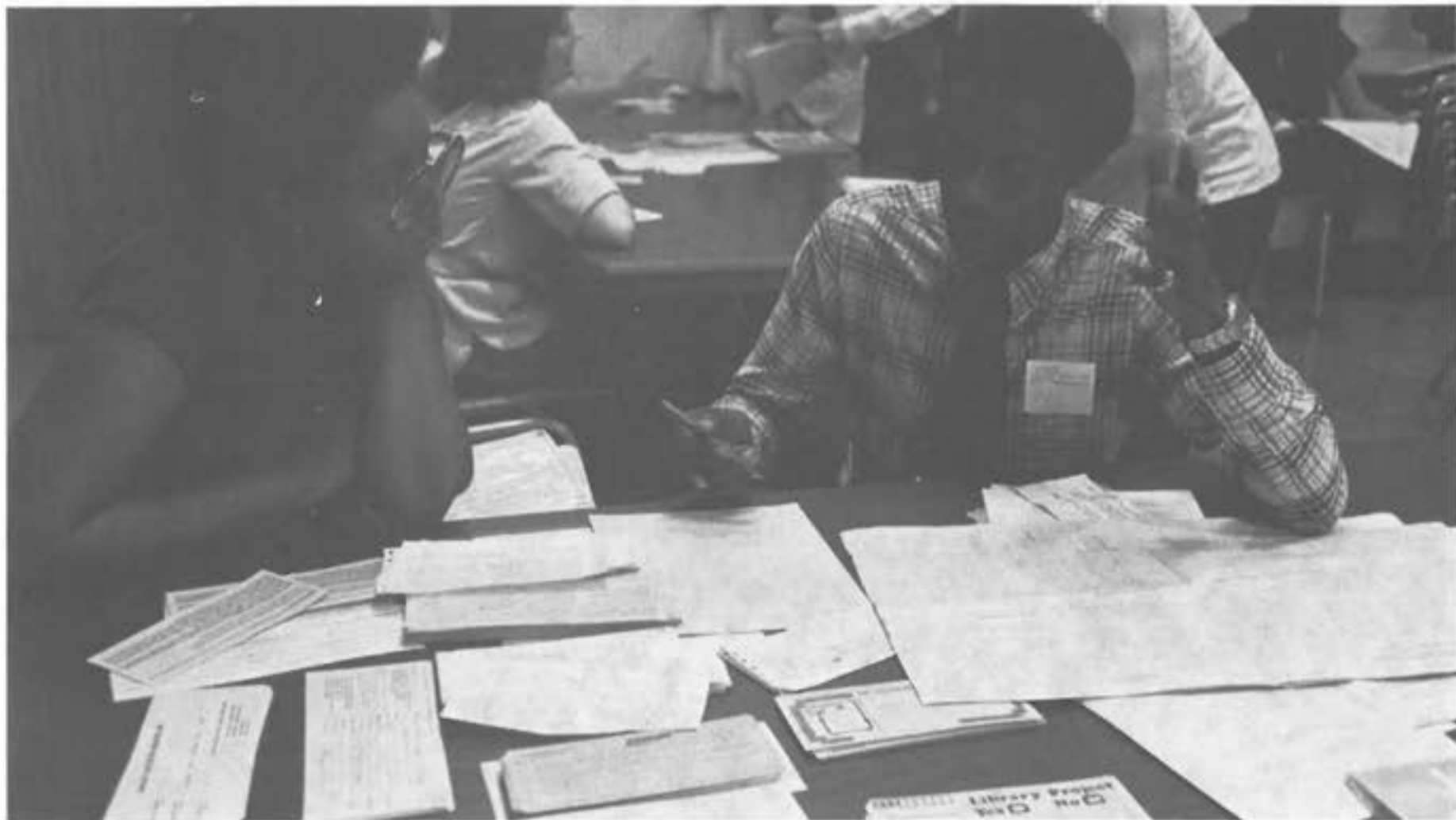
### CHD 399 Elective Field Work (2, 4, 6, or 8)

Designed for students from academic programs which do not have field experience courses. Relates experience to academic and vocational interests.

Prerequisite: Permission of major department and Office of Field Placement.

### CHD 200 University Forum (2)

Students may take one or two University Forum courses as electives. Course will examine a new topic each time it is offered. May be repeated for credit once for a total of 4 credits.





# CENTER FOR GENERAL AND CAREER STUDIES

**ASSISTANT DIRECTOR:** *Dave C. Aussicker*

**COMMUNITY EDUCATION DIRECTOR:** *Freddie Martin*

**FIELD SERVICES COORDINATOR:** *Elaine Chapman-Moore*

**FACULTY COUNCIL FOR GENERAL STUDIES:** *Osman Altan, Assistant Professor, School of Engineering; George Applewhite, Assistant Professor, School of Economics and Management; Mary Avram, B.G.S. student; Bhushan Bhatt, Assistant Professor, School of Engineering; Robert Christina, Associate Professor, School of Human and Educational Services; James Clatworthy, Associate Professor, School of Human and Educational Services; Elizabeth Conner, B.G.S. student and Assistant to the Dean, Graduate School; Indra David, Assistant Dean, Kresge Library; Daniel Fullmer, Associate Professor, Linguistics; Esther Goudsmit, Associate Professor, Biology; Linda Hildebrand, Assistant Professor, Kresge Library; Lawrence Lewis, Assistant Professor, Learning Skills; Dave Meyer, Assistant Professor, School of Human and Educational Services; Donald Morse, Professor, English; Brian Murphy, Associate Professor, English; Margaret Pigott, Assistant Professor, Learning Skills; Elizabeth Pinkstaff, Instructor, School of Nursing; R. Craig Taylor, Associate Professor, Chemistry; John Tower, Assistant Dean, School of Economics and Management*

The Center for General and Career Studies is an administrative, instructional, and research unit for the advancement of nontraditional education — especially for adults who wish to pursue degree programs at the university. To achieve this broad goal, the center initiates academic and administrative services, coordinates its programs with academic and non-academic services in other university offices, and promotes the study and development of university policies that affect adult clientele and nontraditional education.

Through the Faculty Council for General Studies, the center cooperates with faculties, departments, and support services to study, design, and implement appropriate programs. This objective is achieved through evening degree programs and extension offerings, special institutes for individual instruction, innovative course offerings and subject matter experimentation and instruction in reading and composition. The center includes the Bachelor of General Studies program, New Charter College, the Department of Learning Skills, the Evening Program Office, and the Extension Program.

The faculty of New Charter College represents other Oakland University colleges and schools. Their interdisciplinary course offerings personalize teaching and learning. The Department of Learning Skills serves freshmen and transfers who need proficiency in entry-level reading and writing skills. The department also administers the university writing proficiency requirement.

The Evening Program includes all instructional and special services to undergraduates attending on-campus and extension classes after 4 p.m.

Copies of class schedules and B.G.S. program information are available at the center office, 264 South Foundation Hall.

## BACHELOR OF GENERAL STUDIES DEGREE (B.G.S.)

The Bachelor of General Studies degree (B.G.S.) is a university-wide baccalaureate program that offers maximum flexibility and opportunity for student decision-making about courses of study and other educational experiences at Oakland

University. The B.G.S. is primarily for students interested in obtaining a broad liberal arts education without specializing in a particular discipline. Students select courses from any field of study or academic department which enables them to develop a unique educational program. Courses offered in the Bachelor of General Studies program are also offered for students enrolled in other major fields.

Program participants include individuals who have specific educational goals and needs that could be met in the general studies program better than in traditional majors. A unique and challenging academic program can be planned in cooperation with a B.G.S. faculty adviser.

Some program enrollees have academic credits from other colleges and were encouraged by their employers to pursue a baccalaureate degree. The B.G.S. degree has flexible policies for the transfer of credits from other institutions, and it provides a personalized program to meet the educational needs of individuals and employers. Pre-enrollment counseling is available for those who wish to consider the B.G.S. degree.

## TWO-PLUS-TWO PROGRAM FOR ASSOCIATE DEGREE HOLDERS

The B.G.S. degree allows a student to combine broad liberal arts and professional courses with an approved associate degree program from a community college. The two-plus-two program provides for transfer of up to 62 semester credits from the community college.

The B.G.S. degree program accepts all associate degrees as the first two years of the program, except for allied health and nursing associate degree programs. Approved associate degree programs must include at least 12 semester credits of liberal arts courses.

## REQUIREMENTS FOR THE BACHELOR OF GENERAL STUDIES DEGREE

Students eligible for the B.G.S. degree must:

1. Complete 124 semester credits.
2. Complete 32 of those credits at the 300 or 400 level.
3. Complete 32 credits at Oakland University and successfully complete the last 8 credits at Oakland University.
4. Achieve a minimum cumulative grade point average of 2.00 in courses taken at Oakland University.
5. Demonstrate writing proficiency by meeting the university standards in English composition.
6. Be in substantial agreement with legal curricular requirements of the state of Michigan.
7. Have been admitted to candidacy for the B.G.S. degree by the university and the Faculty Council for General Studies.

## Concentrations or Minors for BGS Majors

B.G.S. students may wish to develop programs which include concentrations or minors offered by the College of Arts and Sciences, the School of Engineering, the School of Economics and Management or a variety of academic departments. Concentrations or minors may be considered during the development of the plan-of-work/rationale which is submitted to the B.G.S. adviser. Also, the student should contact the faculty member who coordinates the programs listed in the catalog.

## Requirements for the Minor in Industrial Health and Safety for B.G.S. Majors

Students in the Bachelor of General Studies (B.G.S.) Degree Program who wish to minor in Industrial Health and Safety must take a total of 24 credits as follows: IHS 100; 110; 101 or 202; 111 or 212; 330 or 304; and one of the following: BIO 190; PHY 101, MTH 104 and 105; an approved inorganic chemistry course.

B.G.S. students should apply for this minor on forms available from the B.G.S. Office, 264 South Foundation Hall. Students from other programs may also be considered for this minor with approval from the Director of the Program in Industrial Health and Safety.

## ADVISING

Because the B.G.S. program is relatively nontraditional by design, faculty advising is central to the program. Each B.G.S. student should follow a specific advising procedure, including:

1. **Assignment of Faculty Advisers.** When a student elects a B.G.S. program through an admission application or the Request to Change the Major form, the center will give the student a list of faculty advisers and their special areas of interest. The student will either select a faculty adviser or will be assigned one.
2. **Initial Advising Session.** The prospective B.G.S. student and the adviser will have an initial advising session to discuss the student's goals and courses which may assist the student to achieve those goals. The student will complete a plan-of-work and write a rationale for the course selection.
3. **Plan-of-Work and Rationale.** Within five weeks after the student enters the program, the adviser must receive the plan-of-work and rationale. A second advising session may be scheduled to review and approve both documents.
4. **Advising Committee Approval.** When the adviser approves the plan-of-work and rationale, these documents will be sent to the Center for General and Career Studies office for approval by the B.G.S. Advising Committee, which meets monthly to approve student programs. Following are some reasons the Advising Committee would not approve a plan-of-work and rationale:
  - a. No provision is made for English competency.
  - b. Less than 32 credits are scheduled at the 300-400 level.
  - c. There is a lack of prerequisites for upper-level courses.
  - d. The program is very close to a major and appears to be an attempt to bypass one or two specific courses, especially if those courses are basic requirements in the field (i.e., mathematics in economics and management).
  - e. The plan-of-work is inconsistent with the goals and rationale.
  - f. The goals and program are inconsistent with the concept of a general studies program because of focus in one field. The exact limits are defined by experience.
5. **Maintenance Advising.** Every semester the B.G.S. student is required to meet with the adviser, who completes a "maintenance advising form" for each B.G.S. candidate. If the plan-of-work and rationale are approved, they are considered final unless:
  - a. A significant change in the plan-of-work is contemplated. (Courses may be substituted in the program through consultation with the B.G.S. adviser and are normally not a "significant" change.) If significant changes in the plan-of-work or any rationale change are contemplated, steps 3 and 4 above are repeated.
  - b. The rationale is changed.

## CREDIT EVENING PROGRAM

The Center for General and Career Studies also directs the university's evening program, consisting of undergraduate degree courses and special services after 4 p.m. at the main campus, as well as undergraduate courses taught at extension sites and credit institutes in southeast Michigan.

## On-Campus Evening Degree Programs

Students may earn undergraduate degrees at night in nine major areas: Bachelor of General Studies, economics, English, history, human resources development, journalism, management, political science, psychology, and sociology. In addition, concentrations are available for students attending only in the evening in economics, theatre arts, social justice and corrections, women's studies, and youth and adult services. A management minor is also offered in the evening.

General education courses are offered in almost all other program areas of the university.

## Undergraduate Extension Program

The university offers undergraduate courses at various sites in southeast Michigan including: Shrine High School, Royal Oak; Birmingham Center for Continuing Education, Birmingham; Carleton Junior High School, Sterling Heights; Jewish Community Center, West Bloomfield; and the Oakland County Service Center, Pontiac.

Extension courses are also offered to business, government agencies, private agencies, and civic groups to provide special instruction to the clientele of such organizations. Most courses can be taught at the organization's facility, and the course content is structured to address specific needs or goals identified by the organization.

## Nonmatriculating Admission

Potential evening students who have never attended Oakland University and were unable to secure regular admission to the university because of time may register for classes on a nonmatriculating basis.

A nonmatriculating admission is valid for one semester only. During the first semester of nonmatriculation the student must secure regular admission to the university. To be considered for regular admission a student need only: submit a second application for admission to the director of admissions with the required application fee; forward transcripts from past colleges, universities, or high schools attended; and receive a letter of admission. Nonmatriculating students will receive full academic credit for courses in which they are enrolled.

## Extension Class Cancellation

The university reserves the right to cancel any extension course that does not have sufficient enrollment. All tuition and fees applicable to the canceled section are refunded automatically when a class is canceled.

## NEW CHARTER COLLEGE

**COCHAIRPERSONS:** Marc Briod (Education) and Leo Gerulaitis (History)

**FACULTY:** John Beardman (Art and Art History), Peter Bertocci (Anthropology), Marc Briod (Education), Richard Brooks (Philosophy), Dolores Burdick (Modern Languages), Harvey Burdick (Psychology), F. James Clatworthy (Education), John Cowlshaw (Biology), Peter Evarts (English), Thomas Fitzsimmons (English), Leo Gerulaitis (History), James Graham (History), Carol Halsted (Education), Marvin Holladay (Music), Roy Kotynek (History), Vincent Khapoya (Political Science), Margaret Kurzman (Learning Skills), David Mascitelli (English), Donald Morse (English), Margaret Pigott (Learning Skills), Robert Stern (Chemistry), Ronald Swartz (Education), Irving Torgoff (Psychology)

**ADJUNCT FACULTY:** Charles Martin (Philosophy), Laurel Torgoff (Clinical Psychologist), Bernard Travnikar (Child Counselor)

Drawing on faculty from departments and schools throughout the university, New Charter College (NCC) offers an interdisciplinary, individual approach to learning. Students pursuing a major in the College of Arts and Sciences, School of Engineering, or School of Human and Educational Services (HRD) may fulfill all or part of their general education requirement through interdisciplinary course work in New Charter College. B.G.S. candidates will find the New Charter offerings to be broad, flexible, and challenging. Although New Charter College does not offer a major or a degree, degree candidates in any of Oakland's schools or departments may augment their studies through course work in New Charter. Counseling is also available to students enrolled in New Charter courses.

## NCC General Education Requirements

New Charter students are those who fulfill 32 credits of their general education distribution requirements in New Charter College. New Charter students must plan individual programs of study with assistance from a New Charter faculty adviser. The programs are planned in accordance with the following considerations:

1. Courses on all levels ending in numbers from 11-19 designate orientation toward the creative arts, those ending in 21-29 emphasize humanities, those ending in 31-39 are rooted in social sciences, those ending in 41-49 grow out of natural sciences, and those ending in 51-59 are oriented to community studies.
2. NCC students are encouraged to take courses from differently numbered sequences on different levels to assure breadth in their general education.
3. New Charter students are expected to complete at least 8 credits of NCC coursework at the 300 level.

### COURSE OFFERINGS

#### NCC 100 Individual in the University (4)

A symposium to clarify the nature of general education in relation to life experiences and career development. Explorations include personal competencies, goals, and needs as they pertain to academic subject matter, the history and structure of the university, and critical evaluation of the processes and possibilities of higher learning.

#### NCC 101 Explorations in Interdisciplinary Studies (2 or 4)

An introductory course enabling students to sample various interdisciplinary approaches and to develop broader perspectives on interdisciplinary matter.

#### NCC 112 Creative Expression (4)

Exploration of communication with self and others within structured forms of dance, music, and drama. Visual arts and other media are used to implement expression where appropriate and possible. Graded S/N.

#### NCC 121 Images of Humanity (4)

Literature as a cross-cultural mirror. Literary works of various types will be explored, with emphasis on the ways that writers look outward in order to reflect the world in which they live. Satisfies general education in literature.

#### NCC 122 Alienation in Youth (4)

Problems and questions about why students and adolescents may reject the values of their native society, as well as the difficulties in bringing about genuine change in society and self.

#### NCC 123 Science Fiction, Detective Stories, and the Scientific Method (4)

Using representative works from science fiction, detective stories, and the philosophy of science, this class focuses on the effects of scientific discoveries on human life and culture.

#### NCC 127 Perfect Societies, Old and New (4)

Exploration of utopian thought in Western culture, from Plato and More to Skinner and Huxley. What constitutes the good society? Is it possible, given human nature, to create ideal social conditions?

#### NCC 131 Studies in Human Organization (4)

Interdisciplinary introduction to the behavioral sciences. Topic or problem area to be chosen by the instructor. Topics may range from the cross-cultural study of human relations and lifestyles to the dimensions of a contemporary American social problem. Satisfies general education in social science.

#### NCC 141 Twentieth Century Science (4)

Exploration of current frontiers in scientific thought and conceptualization, in relation to contemporary society and its problems. No advanced specific knowledge of modern science is required. Satisfies general education in mathematical and natural science.

#### NCC 147 History of Science (4)

A look at various relationships between science and society. Several historical periods, from antiquity to the present, are examined to see how the development of science has been influenced by the intellectual climate of the era, and how new insights in the sciences have helped to shape different societies' perceptions of reality.

#### NCC 151 Introduction to Urban Studies (4)

Introduction to the interdisciplinary subject matter of urban studies. Guest speakers provide a wide range of perspectives on the problems and possibilities of human growth in modern American cities.

#### NCC 201 Topics in Interdisciplinary Studies (2 or 4)

An intermediate course enabling students to sample various interdisciplinary approaches and to develop broader perspectives on interdisciplinary subject matter.

#### NCC 210 Study Abroad (2 or 4)

An interdisciplinary topic relating to the culture of a foreign country or region, enriched by traveling and living in that area. Readings, discussion, and structured itineraries are designed to enhance general understanding of that culture in broader academic perspectives.

#### NCC 215 African Music as Oral Culture: West African Drumming (4)

West African drum ensemble traditions will be investigated in a performance context, and comparisons explored with other musical traditions of indigenous African cultures. Special attention is given to linguistic relationships in the tonality of African music, since African music has emerged from different ethnic and linguistic groups. Graded S/N.

#### NCC 223 Personal Worlds (4)

Philosophical and literary sources are used to explore the dreamlike and dramatic inner quality of personal worlds. Analogies are drawn between the fictional lives of others and the stranger within the self.

#### NCC 227 Those Were the Days (4)

From a contemporary perspective, cultural history, and social alienation in America during the 1950s and 1960s are studied. Themes of alienation as seen by different generations, sexes, and ethnic groups are analyzed in relation to prominent individuals in popular music, television, and film.

#### NCC 235 Perspectives on Psychic Research (4)

Survey and analysis of contemporary research into parapsychology and a wide range of observed or purported psychic phenomena—such as clairvoyance, mediumship, faith-healing, precognition, astral projection, etc.

#### NCC 241 Body and Soul (4)

Explores multiple approaches to self-knowledge, based on the writings of different authors who attempt to integrate human biology with psychology and culture. The question of reality of body and soul is examined in light of a systems approach to the life sciences, so that no advanced disciplinary training is necessary.

#### NCC 251 Religion and Contemporary Morality (4)

Examination of selected personal and social problems from a variety of religious and moral points of view. Topics include sexual deviance, abortion, birth control, pacifism, violence, civil disobedience, suicide, and death.

#### NCC 252 Interpersonal Relationships: Marriage, Family, and Divorce (4)

Critical evaluation of individual feelings about tradition and change in marriage and parenthood, male and female roles, sexuality and companionship, marital conflict and divorce, and the single life.

**NCC 300 Independent Study (2 or 4)**

Advanced interdisciplinary reading on a topic of interest to the student, who assumes initiative for planning this reading project in conjunction with NCC faculty sponsor and approval of the NCC Executive Committee. Graded S/N. Offered every semester. Prerequisite: Approved NCC contract.

**NCC 301 Seminar in Interdisciplinary Studies (2 or 4)**

An advanced course enabling students to sample various interdisciplinary approaches and to develop broader perspectives on interdisciplinary subject matter. Offered every year. Prerequisite: Previous NCC course work or permission of instructor.

**NCC 310 Creative Arts Contract (2 or 4)**

Opportunity to develop artistic skills within a broader context of aesthetic history and criticism. The student must submit a learning contract, signed by an NCC faculty sponsor and approved by the NCC Executive Committee, by way of applying for permission to take this class. Graded S/N. Offered every semester. Prerequisite: Approved NCC contract.

**NCC 321 Remedial Wisdom (4)**

Confronts the student with the totality of problems facing an educated person today and explores various attempts to solve them. Prerequisite: Senior standing or permission of instructor.

**NCC 327 The Afro-American Experience in Michigan (4)**

Focus is on the life experiences of Afro-Americans in recent Michigan history, emphasizing black migrations and settlement in the Pontiac and Detroit areas during World War II. Students are expected to interview people and collect, edit, and evaluate oral histories. Prerequisite: Permission of instructor.

**NCC 334 Human Sexuality (4)**

Explores the notion that sexuality connotes the totality of being—the full expression of femaleness and maleness. Various cultural paradigms of the nature and significance of human sexuality are explored; the biosocial nature of sexuality and the functional identity of mind and body are examined.

**NCC 335 Love and Death (4)**

Investigates the genesis of our conceptions about death and love, as well as their conceptual impact on our lifestyles and the ways in which we love and die. Achievement, power, violence, scholarship, and other human activities or motivations can be seen as ways of escaping the real problems posed by death and love. Prerequisite: Permission of instructor.

**NCC 336 Ways of Knowing (4)**

Intensive exploration of personal integration and growth, bridging reading with experience, through the study of humanistic psychology, transactional analysis, bio-energetic theory and technique, and Jungian syntheses. Prerequisite: Permission of instructor.

**NCC 347 Tooling Toward 2001 (4)**

Exploration of future possibilities, through readings and classroom discussion. The connection and conflict between alternative goals and plans for the future are investigated with specific reference to energy, food, social structure, etc. Prerequisite: Previous NCC course work or permission of instructor.

**NCC 351 The Geography of Values (4)**

Explores community values in the context of change and development. Changing values and community development in local areas are researched and analyzed for a deeper understanding of the techniques and uses of social cartography. Prerequisite: Previous NCC course work or permission of instructor.

**NCC 400 Independent Research (2 or 4)**

Advanced interdisciplinary research on a topic of interest to the student. The student assumes initiative for planning this research in conjunction with an NCC faculty sponsor and approval of the NCC Executive Committee. A substantive, well-documented paper is required. Offered every semester. Prerequisite: Approved NCC contract.

**DEPARTMENT OF LEARNING SKILLS**

**CHAIRPERSON:** Peter G. Everts

**ASSISTANT PROFESSORS:** L.M. Lewis, Jr., Margaret Pigott

**SPECIAL INSTRUCTORS:** Rose Cooper-Clark, Bernadette Dickerson, Wilma Garcia, Barbara Hamilton, Margaret Kurzman, Ron Sudol

**STAFF OF READING CENTER:** Rose Cooper-Clark

**TUTORIAL SERVICES:** Wilma Garcia

The Department of Learning Skills helps freshmen acquire basic learning skills necessary to perform college-level academic work. While the emphasis in departmental courses is on coherent and generally effective writing, all modes of communication, including library search skills and research and annotation, are included in the curricula of learning skills courses.

Students are placed in learning skills courses according to the results of preregistration diagnostic testing and, unless exempted, are encouraged to enroll in a two-course sequence in the form and content of composition. The courses are designed so that a student who completes the sequence should also be able to meet the university's certification of proficiency in writing for graduation.

Assistance is available for students who need extra help in reading and study skills. Students may use the Reading and Skill Development centers on a voluntary basis or upon referral by their instructors for short, noncredit courses, or they may be assigned to the center for regular credit tutorial courses. Students who are enrolled in courses below the 100 level should be in close contact with their advisers to ensure that they do not exceed the specific limitation of four such courses counting toward completion of the baccalaureate.

**COURSE OFFERINGS**

The following courses represent the core writing, reading, and study skills courses for freshmen. Students are assigned to the courses on the basis of diagnostic tests and should enroll in the course assigned at orientation or registration.

**LS 060-061 Supervised Study (1)**

Two seven-week courses offered in the Skill Development Center. The student is assigned a tutor for a regular and concentrated series of lessons in the study techniques for a variety of subjects including mathematics, biology, physics, and composition. Graded S/N.

**LS 063 Tutorial in English for Foreign Students (1)**

A course for non-native speakers of English designed to provide tutorial assistance in grammar and composition. May be repeated for credit. Graded S/N.

**LS 075 Tutorial in Writing Skills (4)**

A one-to-one course in writing. Instruction by learning skills faculty for at least six hours per week (two hours conference, four hours preparation). May be taken separately or with LS 050, 100, or 101. Graded S/N. Open to all students by referral and permission of staff. Hours arranged.

**LS 076 Tutorial in Reading Skills (4)**

A course for students who have problems in reading. Utilizes the Reading Center. Offered on a one-to-one basis, with initial diagnosis of reading difficulty and an individual program of study. Graded S/N.

**LS 080 Tutorial in Writing Skills II (4)**

A continuation of LS 075 to serve students who have taken one tutorial course but who need more individual instruction before proceeding to the writing core courses. Graded S/N. Prerequisite: LS 075.

**LS 090 Grammar and Composition for Foreign Students (4)**

A course for foreign students covering the basic syntax of English and the composition of short expository papers. Graded S/N.

**LS 091 Reading English for Foreign Students (4)**  
A course designed to aid foreign students in the effective reading of the English language. Short composition exercises are included. Graded S/N.

**LS 100 Basic Writing Skills I (4)**  
A course emphasizing the formal and functional elements in expository writing. Students are introduced to syntactic and rhetorical patterns of the English sentence and related patterns of paragraph development. Enrollment by assignment.

**LS 101 Basic Writing Skills II (4)**  
A course emphasizing the development of extended rhetorical structures, with focus on organizational patterns and the principles of logic, coherence, and unity. Introduces students to techniques of persuasive argument and fundamentals of research and annotation. Enrollment by assignment.  
Prerequisite: LS 100.

**LS 103 Effective Study Skills (4)**  
Designed to improve skills in the following areas: notetaking, memory and concentration, vocabulary building, preparing for and taking exams, basic library research, analytical reading.

**LS 105 Efficient Reading (2 or 4)**  
A seven-week course for the able reader. Any student who enrolls should comprehend basic material, have established a working vocabulary for the course, and have a primary need for more efficient study habits. Topics include skimming/scanning techniques, adjustment of rate, spotting authors' patterns of organization, drawing inferences and conclusions before and during reading, and proper use of textbooks. Graded S/N.

**LS 110 Introduction to Critical Reading (4)**  
A course in critical reading skills, examining patterns of logical thinking, sentence and paragraph forms, tone, fallacious reasoning, etc. Intensive practice in analyzing arguments.





# CENTER FOR HEALTH SCIENCES

**ASSOCIATE PROVOST AND DIRECTOR:** *Moon J. Pak*

**ASSISTANT TO THE DIRECTOR:** *Arthur J. Griggs*

**ASSOCIATE PROFESSOR:** *Uwe Reischl*

**ASSISTANT PROFESSORS:** *Judith S. Canfield, Michael Chopp, Frank J. Giblin, Kenneth R. Hightower, M. Kazem Mostafapour, Lynne Williams*

**LECTURER:** *Carl R. Stapleton*

**CONSULTING PROFESSORS:** *A. Riley Allen, Donald Dawson, Ivan J. Mader, R. Ralph Margulis, Jr., Joseph A. Rinaldo, Jr., Joseph L. Schirle, Robert Segula, John R. Ylvisaker, Richard Zunker*

**CLINICAL ASSOCIATE PROFESSOR:** *Alexander Ullmann*

**CLINICAL ASSISTANT PROFESSORS:** *Joseph A. Arends, Murray B. Levin*

**CLINICAL INSTRUCTOR:** *Robert C. Nestor*

**CONSULTING ASSOCIATE:** *Benjamin Bisgeier, A. Charles Dorando*

**VISITING ASSISTANT PROFESSOR:** *Hiroyuki Matsuda*

## PROGRAMS

The Center for Health Sciences is an academic and administrative unit offering degree and nondegree programs in health and medically related fields. Presently, programs leading to the Bachelor of Science degree include industrial health and safety (IHS), medical physics (MP), medical technology (MT), and physical therapy (PT). Other programs offered through the center include the concentration in health behavioral sciences and the medical review program.

## HEALTH SCIENCE CORE CURRICULUM

Students entering Oakland University and interested in pursuing the baccalaureate programs in either medical technology or physical therapy will initially be enrolled as health science majors and will be required to follow the health science core curriculum. Other students who wish to pursue an educational program leading to a career in the health sciences, but undecided as to which program to follow, will also be enrolled as health science majors. The health science core curriculum is the recommended program for such students, since it provides not only flexibility but also exposure to basic science courses necessary for any degree-requiring health program.

Admission to major standing in medical technology or physical therapy is both selective and competitive. Completion of the health science core curriculum is one prerequisite for admission.

Students pursuing either the baccalaureate program in industrial health and safety or medical physics are not required to follow the core curriculum. The specific course requirements are outlined under the program descriptions on pages 142 and 143. Many of these course requirements are identical to the courses listed in the core curriculum. A student beginning with the core curriculum and who later wishes to enter either of these two programs will have little difficulty in making the transition.

Designation as an industrial health and safety major or medical physics major does not require prior completion of the health science core curriculum.

The core curriculum courses are:

BIO 190, 195, 200, 321, 322\*  
CHM 144-145, 147-148, 303-304\*  
MTH 104, 105 (or MTH 154†)  
STA 320 (or MTH 155†)

PHY 101-102 (or 151-152†), 158\*\*

PSY 100 (or 130)††, 331††

HS 101

24 credits of general education

8 credits of free electives\*

\*not required for PT major standing

\*\*not required for MT major standing

†students pursuing a MP curriculum are required to take the more advanced course options

††not required for MT major standing; counts towards general education requirement for PT majors

## General Education Requirement

Students pursuing programs in medical physics, medical technology, and physical therapy are required to meet the general education requirement of the Center for Health Sciences as follows:

1. Complete 24 credits of general education courses, meeting the guidelines as set forth in paragraphs 2, 3, and 4.
2. Complete 4 credits of general education in at least two of the five designated field groups, which include: arts; history, philosophy, area studies; language and thought, literature; and social sciences. For a description of these field groups, see the College of Arts and Sciences section on page 19.
3. Complete at least 8 credits in a third designated field group.
4. Complete no more than 12 credits in any one field group.

The general education requirement may also be met by completing the general education program of the Honors College of Arts and Sciences.

Students pursuing the Program in Industrial Health and Safety must follow the general education requirements specified for that program.

## GENERAL HEALTH SCIENCE COURSE OFFERINGS

**HS 101 Careers in the Health-Related Professions (0)**  
Seminar/survey of professional opportunities in the various health fields including nursing, medical technology, histotechnology, cytotechnology, radiation technology, industrial health and safety, medical physics, physical therapy, occupational therapy, medicine, and dentistry.

**HS 301 Introductory Pathology (4)**  
Basic principles of human pathology appropriate for students pursuing curriculums in the health related disciplines. Diseases of the major systems of the body are studied.  
Prerequisites: BIO 200, 321.

**HS 480 Biochemical Pharmacology (2)**  
Classification of drugs and an introduction to their use, abuse, and side effects. Structure-activity relationship and biochemical basis of drug action on biological systems will be emphasized.  
Prerequisite: CHM 303; BIO 321, 325 or equivalent.

## PROGRAM IN INDUSTRIAL HEALTH AND SAFETY

**(Occupational Health and Safety, Environmental Health)**

**PROGRAM DIRECTOR:** *Uwe Reischl*

The Bachelor of Science degree program in Industrial Health and Safety addresses the interests and aspirations of persons seeking responsible involvement in the field of occupational health and safety. State-of-the-art concepts in industrial hygiene and occupational safety are presented with relevant exposure to the basic physical, chemical, biological, and behavioral science disciplines. The program is multidisciplinary in nature and provides advanced options in the form of three

course groupings: A. the Physical/Life Science Perspective; B. the Social/Behavioral Science Perspective; and C. the Work Organization Perspective.

The curriculum is designed as a four-year baccalaureate program. However, students can obtain a certificate after completing the Industrial Health and Safety "core" sequence of courses. This normally involves the successful completion of the first four semesters of course work.

A one semester internship is required for both the certificate and the Bachelor of Science degree. This internship provides first-hand field experience in the practice of industrial hygiene and occupational safety. Internship placements will be the responsibility of the program and will include labor, industry, and government organizations.

Graduates of the Program in Industrial Health and Safety will find excellent employment opportunities within industry, labor, and local, state and federal health agencies. Many courses in this program are scheduled in the evenings to accommodate part-time students.

### Requirements for the Degree of Bachelor of Science in Industrial Health and Safety

1. Completion of the general undergraduate degree requirements, page 12.
2. Completion of 136 credits, as set forth in paragraphs 3 to 5 below.
3. Completion of a major program consisting of: IHS 100, 101, 110, 111, 202, 203, 212, 304, 440, 431, 313, 330; BIO 200, 207; chemistry (one approved course each in inorganic and organic chemistry); MTH 104, 105; STA 320; PHY 101, 102.
4. Completion of 16 credits in either option A, B, or C (see description of options).
5. Completion of 24 credits of general education. Specific requirements depend on program option pursued (see description of general education).

### IHS Program Options

Sixteen credits are required in one of three options; 8 or more of the 16 credits in courses at the 300 level or above. This, along with the 24 credits of 300-level or above courses (IHS and STA) in the curriculum, will satisfy the university requirement of 32 credits at 300 level or above.

The following clusters of option courses are designed to be flexible. There will be a continuous revision of this list, with close consultation of the involved departments, as the program progresses. Also, it is hoped that the introductory courses (100-level courses) listed in options B and C can be waived for at least some of the students in the program who have demonstrated preparation for upper-level courses.

Students will receive close counseling and guidance in the selection of an option, as well as in the planning of courses for the selected option.

#### Option A: Physical/Life Science Perspective

BIO 205	(4)	Anatomy
BIO 321	(4)	Physiology
BIO 325	(4)	Introductory Biochemistry
BIO 319	(4)	General Microbiology
BIO 341	(4)	Genetics
PE 304	(4)	Exercise Physiology
CHM 225	(4)	Analytical Chemistry
CHM 339	(4)	Separations and Applied Spectroscopy
CHM 428	(2)	Analog Electronics for Chemistry
ENV 312	(4)	Energy and the Environment
ENV 353	(4)	Problems of Energy in the Environment
ENV 362	(4)	Impact of Urbanization
ENV 372	(4)	Air Chemistry
ENV 373	(4)	Water Resources
ENV 390	(1-8)	Selected Topics

ENV 481	(4)	Toxicology of Environmental Pollutants
PHY 121	(4)	Physics of Sensory System
PHY 247	(4)	Scientific Instrumentation
CIS 120-121	(4)	Computer Programming

#### Option B: Social/Behavioral Sciences Perspective

HBS 200	(4)	Health Care Dimensions
HBS 400	(4)	Field Practicum in Health Behavioral Sciences
AN 333	(4)	Medical Anthropology
AN 490	(4)	Current Problems in Anthropology
AN 420	(4)	Ethnopsychiatry
PSY 100	(4)	Introduction to Psychology
PSY 350	(4)	Motivation
PSY 351	(4)	Learning, Memory, Thinking
PT 324	(3)	Physical Therapist/Patient Milieu
CIS 120-121	(4)	Computer Programming
SOC 100	(4)	Introduction to Sociology
SOC 357	(4)	Industrial Sociology
SOC 445	(4)	Urban Sociology

#### Option C: Work Organization Perspective

ECN 100	(4)	Introduction to Political Economy
ECN 222	(4)	The Economic Status of Women
ECN 268	(4)	Introduction to Labor Economics
ECN 467	(4)	Economics of Health Care
ORG 330	(4)	Organizational Behavior
PS 100	(4)	Public Administration
IHS 431	(4)	Regulatory Aspects of Safety
CIS 120-121	(4)	Computer Programming

### General Education Requirements

Depending on the IHS program option selected (A, B, or C), the following general education requirements apply:

#### Option A

1. Completion of HIS 302 History of the American Worker.
2. Completion of 8 credits in the social science field group. See list of course options under College of Arts and Sciences section on page 20.
3. Completion of 4 credits in each of three of the remaining four field groups: arts; language and thought; literature; and area studies/philosophy. See list of course options under College of Arts and Sciences section on page 19-20.

#### Option B or C

1. Completion of HIS 302 History of the American Worker.
2. Completion of 4 credits in each of the following field groups: arts; language and thought; literature; area studies/philosophy. See list of course options under College of Arts and Sciences section on page 00.
3. Completion of 4 additional credits in one of the field groups listed in the paragraph above.

### Requirements for the Minor in Industrial Health and Safety

Students in the Bachelor of General Studies (B.G.S.) Degree Program who wish to minor in Industrial Health and Safety must take a total of 24 credits as follows: IHS 100; 110; 101 or 102; 111 or 212; 330 or 304; and one of the following: BIO 190; PHY 101; MTH 104 and 105; an approved inorganic chemistry course.

B.G.S. students should apply for this minor on forms available from the B.G.S. Office, 264 South Foundation Hall. Students from other programs may also be considered for this minor with approval from the Director of the Program in Industrial Health and Safety.

#### COURSE OFFERINGS

**IHS 100 Industrial and Worker Health I (4)**  
Introduction to the principles of industrial hygiene. Recognition of occupational hazards, evaluation methods, and instruments used in



measuring exposure levels. Protective measures and compliance with OSHA requirements.

**IHS 101 Industrial and Worker Health II (4)**

Introduction to methods of environmental testing. Evaluation of occupational stresses found in specific work settings. Noise, heat-stress, illumination, and radiation exposure will be evaluated using selected instrumentation. Includes laboratory experience.

Prerequisite: IHS 100.

**IHS 110 Industrial Safety I (4)**

Introduction to the identification of the role of human factors in accident causation; methods of circumventing human limitations; human capabilities in accident prevention. Consideration of man-machine systems and equipment design based on knowledge of human performance.

**IHS 111 Industrial Safety II (4)**

Assessment of human behavioral factors as applied to industry. Review of methods of evaluation, guidance and modification of behavior; personnel strategies; communication.

Prerequisite: IHS 110.

**IHS 202 Industrial and Worker Health III (4)**

Advanced methods of environmental testing focusing on the evaluation of toxic liquids and gases and assessment of industrial ventilation. Includes laboratory experience.

Prerequisite: IHS 101.

**IHS 203 Industrial Toxicology (4)**

Introduction to the basic concepts and techniques of toxicology with special emphasis on industry. Clinical and experimental aspects of toxicity of substances encountered in occupational environments will be presented. Dose responses and routes of entry of toxic substances. Effects and testing of levels of gases, vapors, air pollutants, radiation hazards, alcohol, drug abuse and acute toxicological emergencies in industry. Field trips included.

Prerequisite: Eight credits in approved organic and inorganic chemistry courses.

**IHS 212 Industrial Safety III (4)**

Introduction to the basic principles of industrial security, protection of property, use of electronic protective systems, personnel systems, disaster response. Control procedures in the design of security systems.

Prerequisite: IHS 110.

**IHS 240 Industrial Health and Safety Internship (4)**

Practical training and field experience in industrial work settings utilizing academic background obtained in classroom and laboratory. Graded S/N.

**IHS 304 Introduction to Epidemiology (4)**

An introduction to the uses of epidemiology in public health practice, using selected diseases to illustrate the development of knowledge on disease causation and the application of such knowledge to disease control.

**IHS 313 Fire Prevention and Protection (4)**

Fundamentals of flame generation and propagation; fire behavior in open and confined spaces; theory of fire fighting methods; methods and devices for fire detection and suppression.

**IHS 330 Environmental Standards (4)**

Examines ambient and work place air, noise, radiation, water and pesticide standards. Topics will be analyzed in terms of standard development, enforcement at state and federal levels, and the validity of the standard's ability to protect health.

**IHS 405 Special Topics (2, 3, or 4)**

Prerequisite: Permission of instructor.

**IHS 420 Public Health Engineering (4)**

Planning, design, and survey of factors related to the physical aspects of environmental health with particular reference to industrial pollution control for water and air, waste, and life-safety in buildings.

**IHS 431 Regulatory Aspects of Safety (4)**

Survey of regulatory basis of accident prevention requirements; federal laws, codes, standards, court judgments and procedures; case studies; worker influences.

**IHS 440 Advanced Industrial Health and Safety Internship (4)**

Field training in industrial safety and health in close collaboration

with professional industrial hygiene and safety personnel. Exposure to health and safety program planning and evaluation. Graded S/N.

**IHS 490 Independent Study (1-4)**

Student initiated and problem-oriented independent study focusing on occupational health and safety issues. Graded S/N.

Prerequisite: Permission of instructor.

## PROGRAM IN MEDICAL PHYSICS

**DIRECTOR:** *Abraham R. Liboff (Physics)*

**ASSISTANT DIRECTOR:** *Michael Chopp (Physics and Health Sciences)*

**CLINICAL PROFESSORS:** *Howard J. Dworkin, Harold D. Portnoy*

**CLINICAL ASSISTANT PROFESSOR:** *Ronald A. Rocchio*

Medical physics, a developing health-related professional field, is concerned with the use of physical techniques to diagnose and treat disease. In the past the subject played a vital part in the development of radiation therapy. Today medical physics also includes the physical aspects of X-ray diagnosis, nuclear medicine, radiation safety, ultrasonics, lasers, thermography, image intensification, EKG, and EEG. It is also involved in related areas such as patient monitoring and general medical instrumentation. In addition to clinical duties surrounding these techniques, medical physicists engage in research and development, consultation and service, and teaching of residents, hospital personnel, and undergraduates. Much of the progress made in the last decade in both diagnosing and treating cancer can be traced directly to the increasing use of physics in medicine.

The medical physics program is based on a group of physics courses, with relevant biology, chemistry, and mathematics courses added.

In their senior year, students take physics of diagnostic radiology and physics of nuclear medicine. In addition, students are placed in hospitals as medical physics interns. During this internship, they assist the resident medical physicist in providing clinical medical physics support and thereby gain direct experience in the clinical environment.

Interested students must consult with the assistant director for specific information and counseling.

## Requirements for the Degree of Bachelor of Science in Medical Physics

1. Completion of the general undergraduate degree requirements, page 12.
2. Completion of 128 credits, as set forth in paragraphs 3 to 7 below.
3. Completion of 24 credits of general education as described under the health science core curriculum. Up to 8 credits in English composition may be part of this total, but they do not apply to any designated field group.
4. PHY 151, 152, 158 or 159, 341, 347, 372, 318, 351, 373, 317, 361, 381, 441, 443, 442.
5. MTH 154, 155, 254 and/or 256; APM 257.
6. 18 credits of chemistry, at a level not below CHM 144.
7. 12 credits of biology, at a level not below BIO 190.

## PROGRAM IN MEDICAL TECHNOLOGY

**PROGRAM DIRECTOR:** *Lynne Williams*

**CLINICAL PROFESSORS:** *Jay Bernstein, Richard H. Walker*

**CLINICAL ASSOCIATE PROFESSORS:** *James J. Humes, John H. Libcke, William O. Reid, Boris K. Silberberg*

**CLINICAL ASSISTANT PROFESSORS:** *A. Al Saadi, Clemens M. Kopp, A.J. Levine*

**CLINICAL INSTRUCTORS:** *Dorothy Cummings, Susan Dingle, Harriet Hillebrand, Lenore L. Johnson, Sheralyn J. Johnson, Margaret M. Kluka, Carolyn A. Shalhoub*

The program prepares students for professional health career opportunities in either hospital clinical pathology or anatomical pathology laboratories. Medical technologists work under the supervision of a pathologist and are primarily responsible for operation of the clinical pathology laboratory, performing a wide variety of tests on which physicians base their diagnosis of a disease and formulate therapeutic plans. The medical technology program offers two specializations that prepare students for employment opportunities in the anatomical pathology departments of hospitals. Histotechnologists and cytotechnologists work under the supervision of a pathologist, aiding in the diagnosis of diseases based on tissue alterations.

Admission to the professional part of the programs is restrictive and selective and occurs in the winter semester of the sophomore year, either by progression of students currently enrolled at Oakland, or by transfer from other institutions. Whether the medical technology program will accept a student into the professional part of the programs is contingent on satisfactory completion of the health science core curriculum. The medical technology programs have enrollment quotas filled with preference to applicants judged to be best qualified to complete the programs. Admissions are based on grades, personal interviews, and, where appropriate, letters of recommendation.

### Requirements for the Degree of Bachelor of Science in Medical Technology

1. Completion of the general undergraduate degree requirements, page 12.
2. Completion of 136 credits, as set forth in paragraphs 3 and 4 below.
3. Completion of the health science core curriculum. Up to 8 credits in English composition may apply toward the general education requirement of 24 credits.
4. Completion of the major course work for clinical medical technology, histotechnology, or cytotechnology.

### Clinical Medical Technology

Medical technologists perform a wide range of diagnostic procedures, including procedures in hematology, clinical chemistry, microbiology, serology, urinalysis, and immunohematology (blood banking).

Students are accepted into the medical technology program after completion of the health science core curriculum. The junior year consists of the prescribed academic program at Oakland, and the senior year consists of a 12-month affiliation at an approved hospital school of medical technology. Upon completion of the internship, the student must pass a national certification examination to become a registered medical technologist.

Currently, the following hospitals are affiliated with Oakland: Pontiac General Hospital, Pontiac; Port Huron Hospital, Port Huron; Providence Hospital, Southfield; St. John Hospital, Detroit; St. Joseph Mercy Hospital, Pontiac; William Beaumont Hospital, Royal Oak.

### Clinical Medical Technology Course Requirements

Students accepted for clinical medical technology major standing must complete the following courses: BIO 365, 421, 422, 423, 407 and 408 (or CHM 453, 454, 457); MT 201, 315, 316, 327-328 (or CHM 225); 28 credits in clinical courses: MT 415, 416, 418, 421, 423, 428.

## Specializations in Anatomic Medical Technology

### Histotechnology

**DIRECTOR:** *A. Al Saadi*

**CLINICAL INSTRUCTORS:** *Dorothy Cummings, Robert Weimer*

Histotechnologists perform a variety of diagnostic and research procedures in the anatomic sciences. Basic histologic techniques involve the processing and staining of tissue specimens which have been removed by biopsy, autopsy, or from laboratory animals. Advanced techniques involve the use of the electron microscope, immunofluorescence microscopy, autoradiography, cytogenetics and medical photography.

Students are accepted into the histotechnology program after completion of the health science core curriculum. The junior year consists of the prescribed academic program at Oakland. The senior year consists of a 12-month affiliation at William Beaumont Hospital, School of Histotechnology.

### Histotechnology Course Requirements

Students accepted for histotechnology major standing must complete the following courses: BIO 305, 306, 325, 429, 430, 445; MT 201; three courses from the following: BIO 341 (or 427), 421, 423, MT 316; 28 credits in clinical courses: HT 401, 402, 403.

### Cytotechnology

**DIRECTOR:** *E.G. Bernacki*

**ASSOCIATE DIRECTOR:** *A.J. Levine*

**CLINICAL INSTRUCTOR:** *Susan Dingle*

A cytotechnologist is a trained medical laboratory technologist who detects cell disease by light microscopic examination of cell samples from all areas of the human body. Students are accepted into the cytotechnology program after completion of the health science core curriculum.

The junior year consists of the prescribed academic program at Oakland, and the senior year consists of a 12-month internship at William Beaumont Hospital, School of Cytotechnology. The training program includes an integrated presentation of didactic material, microscopic study, specimen preparation, clinical observation, cytogenetics, laboratory management, a research project, and a two-week rotation at a satellite hospital.

### Cytotechnology Course Requirements

Students accepted for cytotechnology major standing must complete the following courses: BIO 305, 306, 325, 341 (or 427), 393, 421, 423; MT 201, 316; 28 credits in clinical courses: CT 401, 402.

### MEDICAL TECHNOLOGY COURSE OFFERINGS

#### MT 201 Careers in Medical Technology (0)

An introductory seminar in medical technology, including career opportunities in clinical medicine (medical technology, histotechnology, cytotechnology, industrial sales and/or research and development, basic medical research, and education. Graded S/N.

#### MT 315 Medical Hematology I (4)

Theory and techniques in clinical microscopy, including urinalysis and body fluid analysis. Theory and techniques in blood coagulation and immunohematology, including normal functioning and pathological alterations.

Prerequisite: Permission of instructor.

#### MT 316 Medical Hematology II (4)

Theory and techniques in hematology, including red blood cell, white blood cell and platelet morphogenesis, physiology, and pathophysiology.

Prerequisite: Permission of instructor.

**MT 327-328 Clinical Chemistry and Instrumentation (5)**  
Theory and techniques of clinical biochemistry, including principles and applications of separation and instrumental analysis. Correlation of biochemical alterations with human pathology.

**MT 405 Special Topics (2, 3, or 4)**  
Prerequisite: Permission of instructor.

**MT 415 Clinical Practicum—Urinalysis/Coagulation (3)**  
Didactic and practicum experience at an affiliated hospital school of medical technology, in the fields of urinalysis and coagulation.

**MT 416 Clinical Practicum—Hematology (5)**  
Didactic and practicum experience at an affiliated hospital school of medical technology, in the area of hematology.

**MT 418 Clinical Practicum—Immunohematology (4)**  
Didactic and practicum experience at an affiliated hospital school of medical technology, in the field of immunohematology.

**MT 421 Clinical Practicum—Microbiology (7)**  
Didactic and practicum experience at an affiliated hospital school of medical technology, in the field of medical microbiology, including parasitology and mycology.

**MT 423 Clinical Practicum—Serology (2)**  
Didactic and practicum experience at an affiliated hospital school of medical technology, in the field of serology.

**MT 423 Clinical Practicum—Chemistry (7)**  
Didactic and practicum experience at an affiliated hospital school of medical technology, in the field of clinical chemistry.

**MT 490 Individual Laboratory Work (2-4)**  
Prerequisite: Permission of instructor.

**MT 497 Apprentice College Teaching (2)**  
Directed teaching of selected undergraduate courses. May be repeated for credit. Graded S/N.  
Prerequisite: Permission of instructor.

#### HISTOTECHNOLOGY COURSE OFFERINGS

**HT 401 Basic Histotechnique and Histochemical Staining Methods (10)**  
Didactic and practical experience in preparing histologic sections for light microscopy, including the study of over 50 different histologic and histochemical staining methods.

**HT 402 Basic Electron Microscopy and Immunohistochemistry (10)**  
Didactic and practicum experience in basic biological electron microscopy. Basic techniques of fluorescence antibody tracing and the use of the fluorescence microscope with emphasis on techniques as applied to medicine.

**HT 403 Cytogenetics; Advanced Electron Microscopy; and Special Techniques in Anatomic Histopathology (8)**  
An advanced course emphasizing immunoelectron microscopy; human cytogenetics; autoradiography; plus the unique procedures used in special pathology laboratories.

#### CYTOTECHNOLOGY COURSE OFFERINGS

**CT 401 Clinical Internship (14)**  
Supervised full-time clinical internship in an accredited and affiliated hospital school of cytotechnology. Includes tissue preparation and staining techniques; microscopic study of cellular alterations indicative of cancer and precancerous conditions, bacterial, viral, and parasitic infections, and hormonal abnormalities; cytogenetics; and a research project.

**CT 402 Clinical Internship (14)**  
Continuation of CT 401.

### PROGRAM IN PHYSICAL THERAPY

PROGRAM DIRECTOR: *Judith S. Canfield*

The physical therapy program prepares students for professional health careers dealing with the rehabilitation of persons physically disabled by illness or accident or who are born with a handicap.

Upon a physician's referral, therapists evaluate the extent of disability and plan a treatment program. Treatment may include exercise to improve muscle strength and coordination

and/or the application of heat, cold, water, or electricity to relieve pain or to change the patient's condition. Varied opportunities exist both within the public and private sectors.

Physical therapy students follow a four-year academic program at Oakland based on the educational guidelines of the American Physical Therapy Association. The first two years are fulfilled by the health science core curriculum, while the remaining two years can be completed only by students accepted as physical therapy majors. Acceptance into the professional phase of the program is competitive and selective and based on academic performance, letters of recommendation, exposure to the profession, and personal interviews. Application for major standing typically occurs in the winter semester of the sophomore year and may be initiated by students currently enrolled at Oakland or by transfers from other institutions. Physical therapy majors begin classes in the spring. Upon receipt of the degree, a student must pass a state board examination in order to become licensed to practice.

### Requirements for the Bachelor of Science Degree in Physical Therapy

1. Completion of the general undergraduate degree requirements, page 12.
2. Completion of 136 credits, as set forth in paragraphs 3 and 4 below.
3. Completion of the health science core curriculum. Eight credits of the general education requirement will be satisfied by the required courses PSY 100 (or 130) and PSY 331.
4. Completion of a major program consisting of: BIO 381, 405; HS 301; PE 304, 320; PT 322, 323, 324, 331, 341, 342, 343, 351, 425, 432, 444, 445, 446, 452, 453.

#### PHYSICAL THERAPY COURSE OFFERINGS

**PT 322 Physical Therapy and the Human Life Cycle (3)**  
Study of various aspects of the stages of life and the relationship to patient conditions commonly seen in physical therapy. Emphasis is on the developmental foundation for therapeutic techniques.

**PT 323 Clinical Medicine and Physical Therapy (3)**  
Lecture series covering the etiology, signs and symptoms, course, treatment, and implications for physical therapy, of conditions managed by: internal medicine, oncology, surgery, radiology, rheumatology, orthopedics, neurology, neurosurgery, pediatrics, pharmacology, and physical medicine and rehabilitation.

**PT 324 Physical Therapist/Patient Milieu (3)**  
Survey of the various factors impinging upon the patient, the family, and ultimately the patient-therapist relationship and what the therapist needs to consider when interacting with the patient or family.

**PT 331 Evaluation Procedures (3)**  
Basic principles and techniques of manual muscle testing, goniometry, sensory and reflex testing, and neurodevelopmental assessment.

**PT 341 Introduction to Physical Therapy (3)**  
Theory and practice of basic therapeutic techniques utilized in physical therapy. Includes medical emergencies, massage, mobility training, and basic communication skills.

**PT 342 Therapeutic Procedures I (3)**  
Principles and use of superficial and deep heat, cold, infrared and ultraviolet radiation, hydrotherapy, and low voltage currents in therapeutic evaluation and treatment. Includes laboratory.

**PT 343 Therapeutic Procedures II (3)**  
Theory and techniques of basic and traditional therapeutic exercises including general and localized strengthening, relaxation, mobility, coordination, and posture.

**PT 351 Clinical Education I (1)**  
Orientation to clinical education including the practice of basic evaluation and treatment skills through supervised experience in the clinical environment.

**PT 405 Special Topics (2, 3, or 4)**  
Prerequisite: Permission of instructor.

**PT 425 Physical Therapy Administration and Health Care Delivery (3)**

Discussion and group experiences dealing with various aspects related to the administration of a physical therapy service including: patient care audit, policies and procedures, problem oriented medical record systems, quality assurance, interview process, and the code of ethics.

**PT 432 Research in Physical Therapy (2)**

Theory and application of the principles of problem solving and the scientific method, with emphasis on current research in physical therapy, towards the completion of a small scale project.

**PT 444 Therapeutic Procedures III (3)**

Theory, principles, and application of neurophysiologic approaches to therapeutic exercise for specialized problems.

**PT 445 Rehabilitation Procedures (3)**

Therapeutic program planning for the severely handicapped patient for activities of daily living, recreation, home evaluation, family involvement and mobility. Includes principles and techniques regarding orthotic and prosthetic function, component selection, use training and problem evaluation.

**PT 446 Advanced Procedures (2)**

A lecture and laboratory series of medical and surgical conditions seen by physical therapists, with emphasis on orthopedic, pulmonary, and athletic conditions.

**PT 452 Clinical Education II (1)**

Continuation of PT 351.

**PT 453 Clinical Education III (2)**

Continuation of PT 452.

## CONCENTRATION IN HEALTH BEHAVIORAL SCIENCES

**DIRECTOR:** Carl R. Vann

**PROFESSORS:** Philip Singer, Carl R. Vann

Courses in health behavioral sciences are recommended as electives for students pursuing health careers in the programs offered by the Center for Health Sciences. The concentration in health behavioral sciences is planned to be taken in conjunction with a regular departmental major or independent major. Its purpose is to offer a multidisciplinary perspective of the behavioral sciences on the many and varied aspects of the health disciplines, problems, and concerns. It provides a cross-cultural as well as an American perspective. It is especially relevant to students seeking careers in health-related fields and also offers significant insights and opportunities for study to students pursuing programs of general education, administration, and law.

Requirements for the concentration in the health behavioral sciences are 20 credits to be chosen from: HBS 200, 250, 251, 300, 400, 499; AN 333, 420; SOC 428; and ECN 467.

Students interested in a program in health services administration should consult the Department of Political Science in order to combine courses in health behavioral sciences with their program in administration.

Students in the premedical program and majors in any of the natural sciences, with an adviser's approval, may count 4 credits of their major course work toward this concentration.

### COURSE OFFERINGS

**HBS 200 Health Care Dimensions (4)**

Development, present status, and dynamics of the American health care system emphasizing structure of the various health professions and the problems, opportunities, and constraints of health care delivery, and professionalism. Role choice and role integration in health care will be studied. Other topics are relationships between the health care cultures and personality and professional roles of health care practitioners, and issues involving hospitals, health care teams, planning, public policy, client relationships, and factors affecting health.

**HBS 250-251 Health Behavioral Sciences (4 each)**

Human behavior, institutions, professions, and professionalism in the health-medical fields, with emphasis on concepts of health and illness, death and dying, the sick role, doctor-patient relationships, organization and delivery of health care, legal and ethical problems and culture, and politics of health and health care.

**HBS 300 Independent Study in the Health Behavioral Sciences, (4, 8, 12, or 16)**

A semester of off-campus independent study and applied research. Projects are developed with and supervised by faculty within the framework of methodology and explanation in the behavioral sciences.

**HBS 400 Field Practicum in Health Behavioral Sciences (4, 8, 12, or 16)**

Primarily for students seeking careers in health-related fields, this course is a supervised field placement combined with academic content and individually guided research. Students are placed through arrangements with hospitals, government and voluntary health agencies, comprehensive medical service organizations, pharmaceutical companies, and other community agencies.

**HBS 499 Senior Seminar in Health Behavioral Sciences (4)**

## MEDICAL REVIEW PROGRAM

**DIRECTOR:** Moon J. Pak (Health Sciences)

**ASSISTANT PROGRAM DIRECTOR:** Arthur J. Griggs (Health Sciences)

**BOARD OF COORDINATORS:** Moon J. Pak (Health Sciences), Arthur Griggs (Health Sciences), Arthur Lewandowski (Health Sciences), William Schtoab (Linguistics), Alexander Ullmann (Health Sciences), Barry Winkler (Institute of Biological Sciences)

**CLINICAL PROFESSOR:** Bernard A. Bercu

**CLINICAL ASSOCIATE PROFESSORS:** Nasirul Haque, Alexander Ullman

**CLINICAL ASSISTANT PROFESSORS:** George R. Gerber, E. Patrick Juras, Satish C. Khaneja, Robert P. Locey, Moufid Mitri

Oakland University offers a comprehensive medical review program for physicians preparing for examinations for licensure or graduate medical education opportunities, including the Educational Commission for Foreign Medical Graduates Examination (ECFMG), the Federation Licensing Examination (FLEX), and the Visa Qualifying Examination (VQE).

This program, which is offered twice a year, lasts three months and provides an intensive review of basic and clinical science subjects typically associated with medical education programs in the U.S.

# OFFICE OF THE PROVOST

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**PROVOST:** *Frederick W. Obear*

The Office of the Provost administers one active academic program: the university concentration in applied statistics (see page 87). In addition, one inactive program is undergoing extensive reorganization: the University Course Program.

## UNIVERSITY FACULTY

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This list reflects faculty appointments effective June 1, 1980, as they were available on the publication date.

### Officers of Instruction

**GEORGE T. MATTHEWS**, Interim President, and Professor of History; Ph.D., Columbia University

**FREDERICK W. OBEAR**, Vice-President for Academic Affairs, Provost, and Professor of Chemistry; Ph.D., University of New Hampshire

### The Faculty

**CHARLES W. AKERS**, Professor of History; Ph.D., Boston University

**SALLY K. ALBRECHT**, Visiting Instructor in Music; M.A., University of Miami

**RAYNOLD L. ALLVIN**, Associate Professor of Music and Chairperson, Department of Music; D.M.A., Stanford University

**OSMAN D. ALTAN**, Assistant Professor of Engineering; Ph.D., University of California

**SANDRA ANDRINGA**, Visiting Instructor in Education; M.A.T., Oakland University

**HERBERT APPLEMAN**, Associate Professor of English; M.A., Columbia University

**SHELDON L. APPLETON**, Professor of Political Science and Associate Dean for Advising; Ph.D., University of Minnesota

**GEORGE APPLEWHITE**, Assistant Professor of Management; Ph.D., Graduate School of Business Administration, N.Y.

**JOSEPH A. ARENDS**, Clinical Assistant Professor of Health Sciences; M.D., Wayne State University

**HARVEY J. ARNOLD**, Professor of Mathematical Sciences; Ph.D., Princeton University

**JOSEPH ASSENZO**, Adjunct Professor of Mathematical Sciences; Ph.D., Oklahoma University

**THOMAS A. ASTON**, Adjunct Assistant Professor of Communication Arts and Director of Student Enterprises; Wayne State University

**JOHN W. ATLAS**, Assistant Professor of Education; Ed.D., Wayne State University

**EDWARD A. BANTEL**, Professor of Education and Psychology; Ed.D., Columbia University

**JOHN BARNARD**, Professor of History and Chairperson, Department of History; Ph.D., University of Chicago

**CARL F. BARNES, JR.**, Professor of Art History and Archaeology; Ph.D., Columbia University

**JANET S. BARNFATHER**, Instructor in Nursing; M.S.N., Wayne State University

**RICHARD F. BARRON**, Associate Professor of Education; Ph.D., Syracuse University

**NANCY S. BARRY**, Assistant Professor of Economics; Ph.D., Northwestern University

**JOHN W. BARTHEL**, Associate Professor of German and Linguistics; Ph.D., University of Illinois

**JOHN L. BEARDMAN**, Associate Professor of Art; M.F.A., Southern Illinois University

**DAVID C. BEARDSLEE**, Professor of Psychology and Director, Office of Institutional Research; Ph.D., University of Michigan

**ALPHONSO R. BELLAMY**, Assistant Professor of Management; Ph.D., Purdue University

**BEVERLY K. BERGER**, Assistant Professor of Physics; Ph.D., University of Maryland

**PETER J. BERTOCCHI**, Associate Professor of Anthropology and Chairperson, Department of Sociology and Anthropology; Ph.D., Michigan State University

**WILLIAM E. BEZDEK**, Associate Professor of Sociology; Ph.D., University of Chicago

**BHUSHAN BHATT**, Assistant Professor of Engineering; Ph.D., Oakland University

**JANE M. BINGHAM**, Associate Professor of Education; Ph.D., Michigan State University

**PETER J. BINKERT**, Associate Professor of Linguistics and Classics; Ph.D., University of Michigan

**BIRK P. BINNARD**, Adjunct Professor of Mathematical Sciences; M.S., Washington University

**GLORIA T. BLATT**, Assistant Professor of Education; Ph.D., Michigan State University

**DAVID E. BODDY**, Associate Professor of Engineering; Ph.D., Purdue University

**SETH BONDER**, Adjunct Professor of Mathematical Sciences; Ph.D., Ohio State University

**ELEFTHERIOS N. BOTSAS**, Professor of Economics and Management; Ph.D., Wayne State University

**NADIA BOULOS**, Assistant Professor of Nursing; Ph.D., University of Michigan

**LOUIS R. BRAGG**, Professor of Mathematical Sciences; Ph.D., University of Wisconsin

**JEAN S. BRAUN**, Professor of Psychology; Ph.D., Wayne State University

**DANIEL N. BRAUNSTEIN**, Professor of Management and Psychology; Ph.D., Purdue University

**DAVID C. BRICKER**, Associate Professor of Education; Ph.D., Johns Hopkins University

**GOTTFRIED BRIEGER**, Professor of Chemistry; Ph.D., University of Wisconsin

**JANE BRIGGS-BUNTING**, Assistant Professor of Communication Arts; J.D., University of Detroit

## 148/University Faculty

**MAX BRILL**, Associate Professor of Psychology; Ph.D., University of Cincinnati

**MARC E. BRIOD**, Associate Professor of Education and Cochairperson, New Charter College; Ph.D., Northwestern University

**RICHARD W. BROOKS**, Associate Professor of Philosophy; Ph.D., University of Minnesota

**HETTIE LEE BROWN**, Instructor in Nursing; M.S.N., Wayne State University

**JUDITH K. BROWN**, Associate Professor of Anthropology; Ed.D., Harvard University

**MAURICE F. BROWN**, Professor of English; Ph.D., Harvard University

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## 1980-1981 Academic Calendar

<b>Fall, 1980</b>		
Registration	M, T, W	August 25, 26, 27
Classes Begin	4:30 p.m. W	August 27
Labor Day Holiday	M	September 1
Fall Commencement	Sunday	September 14
Thanksgiving Recess Begins	5:30 p.m. W	November 26
Classes Resume	8 a.m. M	December 1
Classes End	10 p.m. M	December 8
Exams Begin	9 a.m. W	December 10
Exams End	10 p.m. T	December 16
<b>Winter, 1981</b>		
Registration	M	January 5
Classes Begin	8 a.m. W	January 7
Winter Recess Begins	10 p.m. S	February 28
Classes Resume	8 a.m. M	March 9
Classes End	10 p.m. T	April 21
Exams Begin	9 a.m. Th.	April 23
Exams End	10 p.m. W	April 29
<b>Spring, 1981</b>		
Registration	F	May 1
Classes Begin	8 a.m. M	May 4
Memorial Day Holiday	M	May 25
Spring Commencement	Saturday	June 6
Classes End	10 p.m. M	June 22
Final Exams	T, W	June 23, 24
<b>Summer, 1981</b>		
Registration	F	June 26
Classes Begin	8 a.m. M	June 29
Independence Day Recess	10 p.m. F	July 3
Classes Resume	8 a.m. T	July 7
Classes End	10 p.m. M	August 17
Final Exams	T, W	August 18, 19

## 1981-1982 Academic Calendar

<b>Fall, 1981</b>		
Registration	M, T, W	August 31, September 1, 2
Classes Begin	4:30 p.m. W	September 2
Labor Day Holiday	M	September 7
Fall Commencement	Saturday	September 19
Thanksgiving Recess Begins	5:30 p.m. W	November 25
Classes Resume	8 a.m. M	November 30
Classes End	10 p.m. M	December 14
Exams Begin	9 a.m. T	December 15
Exams End	10 p.m. F	December 18
<b>Winter, 1982</b>		
Registration	M	January 4
Classes Begin	8 a.m. W	January 6
Winter Recess Begins	10 p.m. S	February 27
Classes Resume	8 a.m. M	March 8
Classes End	10 p.m. T	April 20
Exams Begin	9 a.m. Th.	April 22
Exams End	10 p.m. W	April 28
<b>Spring, 1982</b>		
Registration	F	April 30
Classes Begin	8 a.m. M	May 3
Memorial Day Holiday	M	May 31
Spring Commencement	Saturday	June 5
Classes End	10 p.m. M	June 21
Final Exams	T, W	June 22, 23
<b>Summer, 1982</b>		
Registration	F	June 25
Classes Begin	8 a.m. M	June 28
Independence Day Recess	5:30 p.m. F	July 2
Classes Resume	8 a.m. T	July 6
Classes End	10 p.m. M	August 16
Final Exams	T, W	August 17, 18

## 1982-1983 Academic Calendar

<b>Fall, 1982</b>		
Registration	M, T, W	August 30, 31, September 1
Classes Begin	4:30 p.m. W	September 1
Labor Day Holiday	M	September 6
Fall Commencement	Sunday	September 19
Thanksgiving Recess Begins	5:30 p.m. W	November 24
Classes Resume	8 a.m. M	November 29
Classes End	10 p.m. M	December 13
Exams Begin	7:30 a.m. T	December 14
Exams End	10 p.m. F	December 17
<b>Winter, 1983</b>		
Registration	M	January 3
Classes Begin	8 a.m. W	January 5
Winter Recess Begins	5:30 p.m. S	February 26
Classes Resume	8 a.m. M	March 7
Classes End	10:30 p.m. T	April 19
Exams Begin	7:30 a.m. Th.	April 21
Exams End	10 p.m. W	April 27
<b>Spring, 1983</b>		
Registration	F	April 29
Classes Begin	8 a.m. M	May 2
Memorial Day Holiday	M	May 30
Spring Commencement	Saturday/ Sunday	June 4, 5
Classes End	10 p.m. M	June 20
Final Exams	T, W	June 21, 22
<b>Summer, 1983</b>		
Registration	F	June 24
Classes Begin	8 a.m. M	June 27
Independence Day Recess	M	July 4
Classes Resume	8 a.m. T	July 5
Classes End	10 p.m. M	August 15
Final Exams	T, W	August 16, 17

## 1983-1984 Academic Calendar

<b>Fall, 1983</b>		
Registration	M, T, W	August 29, 30, 31
Classes Begin	4:30 p.m. W	August 31
Labor Day Holiday	M	September 5
Fall Commencement	Saturday	September 17
Thanksgiving Recess Begins	5:30 p.m. W	November 23
Classes Resume	8 a.m. M	November 28
Classes End	10 p.m. M	December 12
Exams Begin	7:30 a.m. T	December 13
Exams End	10 p.m. F	December 16
<b>Winter, 1984</b>		
Registration	Th.	January 5
Classes Begin	8 a.m. M	January 9
Winter Recess Begins	5:30 p.m. S	March 3
Classes Resume	8 a.m. M	March 12
Classes End	10 p.m. S	April 21
Exams Begin	7:30 a.m. M	April 23
Exams End	10 p.m. Th.	April 26
<b>Spring, 1984</b>		
Registration	M	April 30
Classes Begin	4:30 p.m. M	April 30
Memorial Day Holiday	M	May 28
Spring Commencement	Saturday/ Sunday	June 2, 3
Classes End	10 p.m. T	June 19
Final Exams	W, Th.	June 20, 21
<b>Summer, 1984</b>		
Registration	M	June 25
Classes Begin	4:30 p.m. M	June 25
Independence Day Recess	Wednesday	July 4
Classes End	10 p.m. T	August 14
Final Exams	W, Th.	August 15, 16

# Oakland University



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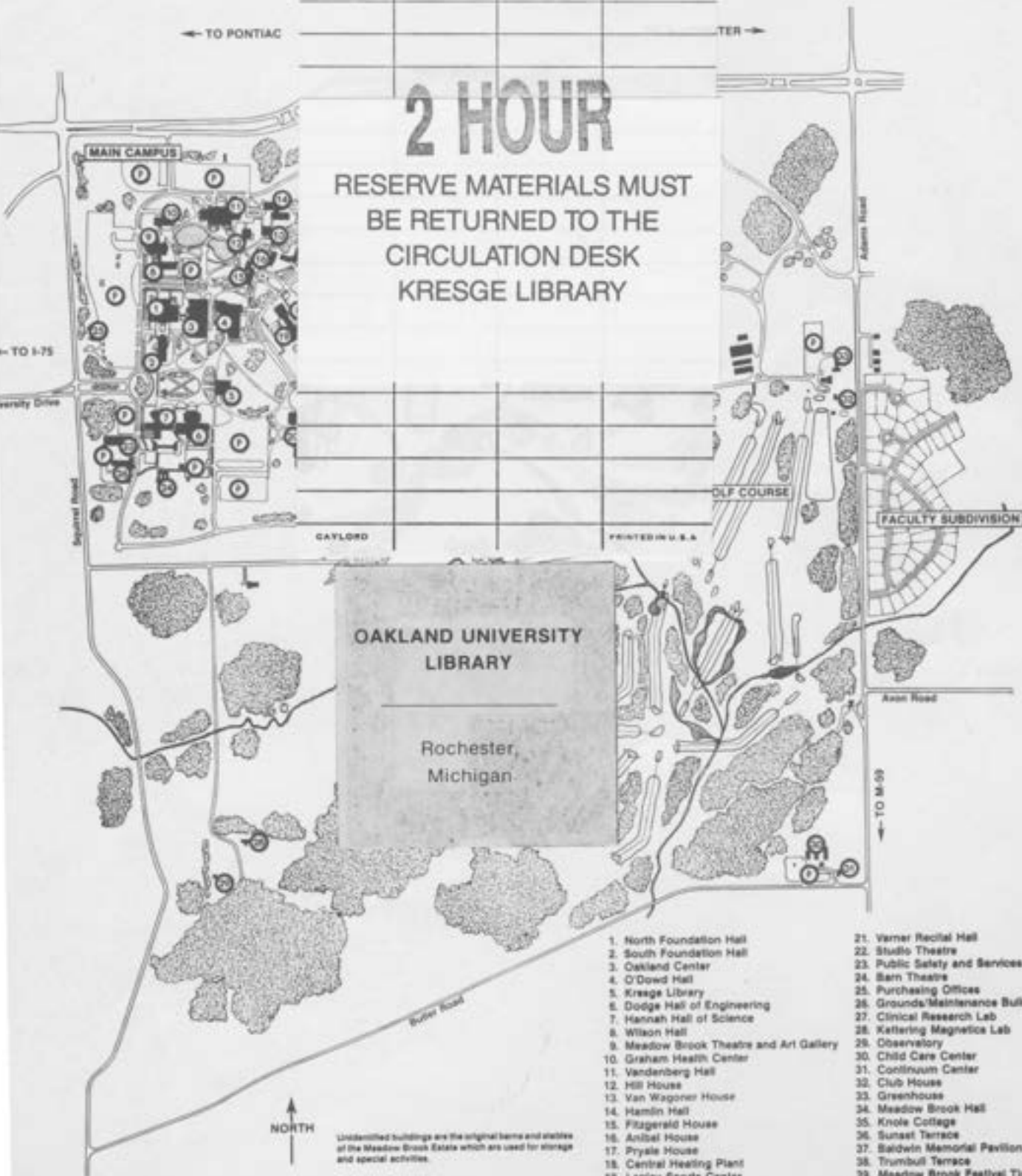
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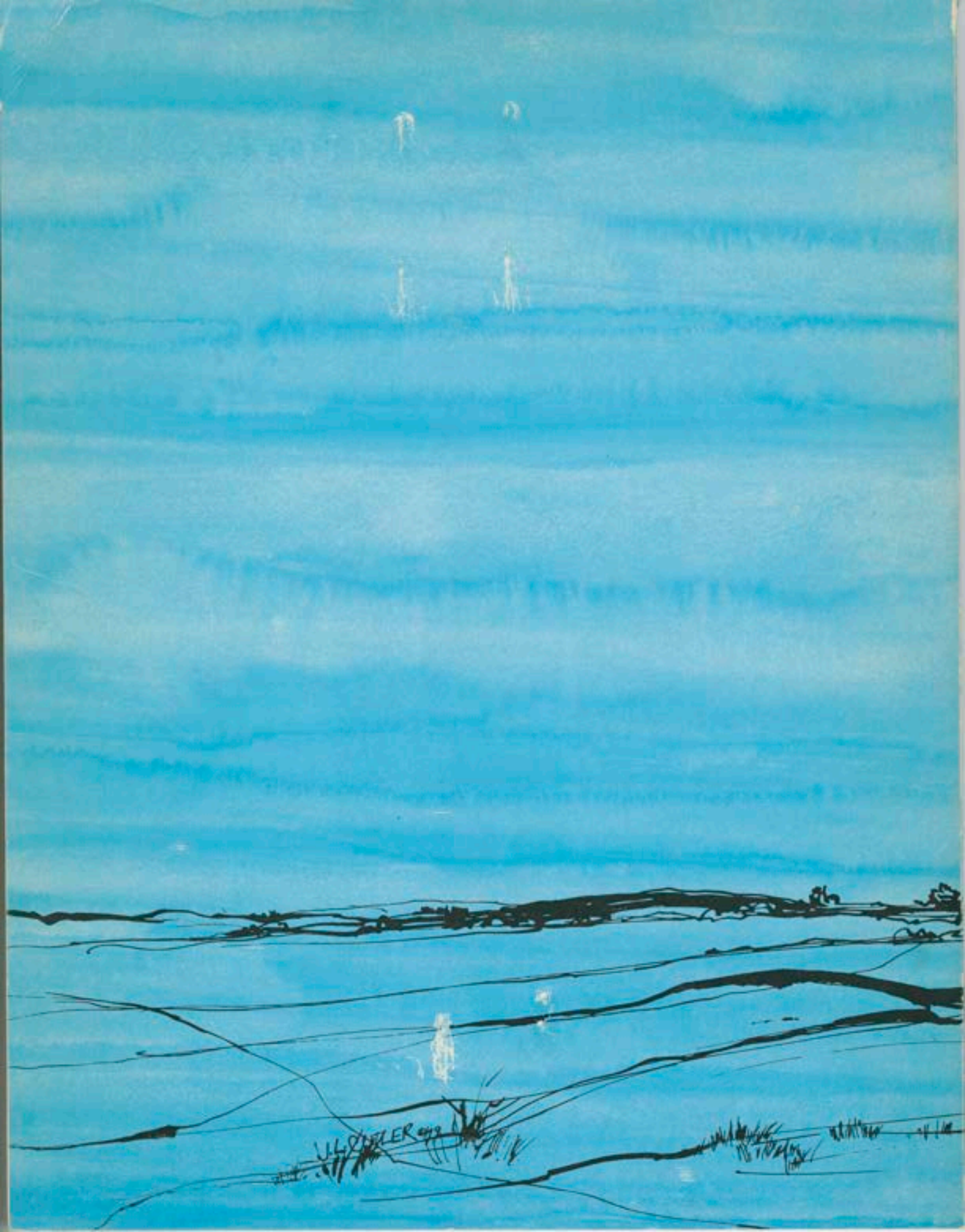


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18. Central Heating Plant
19. Lepley Sports Center
20. Verner Hall
21. Verner Recital Hall
22. Studio Theatre
23. Public Safety and Services Building
24. Barn Theatre
25. Purchasing Offices
26. Grounds/Maintenance Building
27. Clinical Research Lab
28. Kettering Magnetics Lab
29. Observatory
30. Child Care Center
31. Continuum Center
32. Club House
33. Greenhouse
34. Meadow Brook Hall
35. Knole Cottage
36. Sunset Terrace
37. Baldwin Memorial Pavilion
38. Trumbull Terrace
39. Meadow Brook Festival Ticket Office
- Parking

Undenoted buildings are the original barns and stables of the Meadow Brook Estate which are used for storage and special activities.



W. L. SCHLIER 1912