

OAKLAND UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF MATHEMATICS AND STATISTICS

COURSE INFORMATION SHEET

COURSE: MTH1441, Precalculus, 4 Credits, Winter 2018, 8 – 9:47 am Tuesday and Thursday
Office hours: 9:30 a.m.– 11:00 a.m. Room 442 Math and Science Building; Monday and Wednesday
Instructor: Tom VanHouten
E-mail: vanhoute@oakland.edu

CATALOG DESCRIPTION	Functions; roots of polynomials; polynomial, rational, exponential and logarithmic functions; trigonometric functions (including graphs, identities, inverse functions, equations and applications);
PREREQUISITE	<p>One of the following prerequisites is required for enrollment in MTH1441:</p> <ul style="list-style-type: none"> • A 2.0 or better in MTH 0662 (formerly MTH 062 formerly MTH 012); • An equivalent course at another school; • A placement of R on the department's placement test; or • An ACT mathematics score of at least 22. <p>Prerequisites are strictly enforced: failure to satisfy the prerequisite or failure to provide in a timely manner documentation verifying satisfaction of the prerequisite will result in cancellation of your course registration.</p> <p>It is assumed that if you satisfy one of the above prerequisites, you have a good working knowledge of intermediate algebra, which includes but is not limited to manipulation of fractions, factoring, simplifying rational and radical expressions, solving nonlinear inequalities and equations, solving quadratic equations, and graphing. If you are not familiar with the above topics or cannot factor, simplify, or solve a problem without a calculator, it is recommended that you speak to your instructor to discuss an appropriate course of action. It is not the responsibility of your instructor to re-teach these topics if you have forgotten them because you have not had math for 5 years.</p> <p>Students are sometimes unaware, until after they have taken a college mathematics course, how much more emphasis is placed in college courses on understanding and applying concepts, as opposed to learning to perform routine computations. Indeed, understanding of mathematical concepts and their applications are the central issues of college-level work. Students who have not been in such courses often underestimate the amount of time and hard work need to succeed.</p>
COURSE OBJECTIVES	<p>The successful student in this course will:</p> <ul style="list-style-type: none"> -Be ready to succeed in Calculus; -Learn what is a function and how functions are used to model phenomena; -Learn to use and analyze polynomial, rational, exponential, and trigonometric functions and polar coordinates; and -Further develop algebraic skills in manipulating rational expressions of polynomial, exponentials, logarithmic and trigonometric functions.
REQUIRED	<p>1. One semester of Webassign software homework and ebook \$95. 2. A scientific calculator TI 30X IIS but no graphing calculator. There are a few calculators not allowed. These are TI 84, TI-89, TI-92, and TI Inspire. OPTIONAL: <i>Precalculus</i>, by Stewart, Redlin, and Watson, 7th edition, published by Cengage Learning (The ebook will be in Webassign so unless you have trouble looking at a computer screen, you do not need a hardcopy of the book)</p>
SYLLABUS	For a day-to-day list of topics, see "MTH141 Schedule."
Classroom Etiquette	<p>Proper classroom behavior is an essential piece in the creation of a total learning environment. Please be mindful of the following:</p> <ol style="list-style-type: none"> 1) Be on time for class whenever possible. 2) Don't interrupt a classmate when he/she has the floor. 3) Turn cell phones and pagers off during class. It bothers other students who are trying to listen to the lecture if you're texting and checking your email. 4) Besides a calculator, no electronic devices may be used during a test or exam. 5) No plugs of any kind are allowed in your ears during class.
Webassign	Webassign is a computer based learning software. It can be purchased at webassign.net. This software uses your browser (Firefox, Safari, Explorer) so you do not have to download anything, but you need internet access.
DROPPING THE COURSE	The Department of Mathematics and Statistics is committed to achieving the goal of an academically sound freshman and sophomore mathematical sciences curriculum in which most conscientious Oakland University students can expect to be successful. If you are considering dropping the course and wish to discuss the matter further, you are encouraged to contact your instructor.
EMERGENCY CLOSING	If the University is closed at the time of a scheduled quiz or examination (for example, because of snow), the quiz or exam will be given during the next class period when the university reopens. The Oakland University emergency closing number is 370-2000.

ACADEMIC
HONESTY

Cheating is a serious academic crime. Oakland University policy requires that all suspected instances of cheating be reported to the Academic Conduct Committee for adjudication. Anyone found guilty of cheating in this course will receive a course grade of 0.0, in addition to any penalty assigned by the Academic Conduct Committee. You must read the Academic Conduct Regulations of Oakland University. Working with others on homework is not cheating unless indicated by the instructor; handing in an assignment that has essentially been copied from someone else is cheating. Looking at someone else's work during an exam is cheating. Receiving help from someone else or consulting unauthorized material during an exam is cheating. Providing such assistance for someone else also constitutes cheating.

FERPA Reminder

Per the Family Educational Rights and Privacy Act(FERPA), college personnel are not allowed to release students' personnel information to anyone, including other students, their parents, brothers and sisters, aunts and uncles, grandparents, their pastor, their lawyer, or their judge.

Incompletes

An incomplete (I) grade may be assigned if the following conditions are met:

- The situation, which prevents the student from completing the course during the regular term, must be outside the student's control.
- At least 75% of the course must already have been successfully completed(passed) by the student to be considered for an "I" grade. No tests will be retaken.
- The instructor must be informed of the circumstances and must agree to award an "I" grade prior to the end of the term.
- The student and the instructor must complete the College Agreement Form for an "I" grade prior to the end of the term.

GRADING CRITERIA AND SCALE	<table border="0"> <thead> <tr> <th style="text-align: left;"><u>Grading Criteria</u></th> <th style="text-align: left;"><u>Scale</u></th> </tr> </thead> <tbody> <tr> <td>Exam 1: 20%</td> <td>95% - 100%: 4.0</td> </tr> <tr> <td>Exam 2: 20%</td> <td>80% - 94%: 3.0 – 3.9</td> </tr> <tr> <td>Exam 3: 20%</td> <td>65% - 79%: 2.0 – 2.9</td> </tr> <tr> <td>Topics in weassign: 10%</td> <td>50% - 64%: 1.0 – 1.9</td> </tr> <tr> <td>Final Exam: 30%</td> <td>Less than 50%: 0.0</td> </tr> <tr> <td>Total: 100%</td> <td></td> </tr> </tbody> </table>	<u>Grading Criteria</u>	<u>Scale</u>	Exam 1: 20%	95% - 100%: 4.0	Exam 2: 20%	80% - 94%: 3.0 – 3.9	Exam 3: 20%	65% - 79%: 2.0 – 2.9	Topics in weassign: 10%	50% - 64%: 1.0 – 1.9	Final Exam: 30%	Less than 50%: 0.0	Total: 100%	
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GRADE COMPONENTS	<p>There are three components to your grade:</p> <ol style="list-style-type: none"> 1. Three exams worth 200 points each. 2. One final exam worth 300 points 3. Online assigned work via weassign. <p>These are the only opportunities by which to earn points. No other methods to earn points will be developed during the class to help you make up for failure to earn points by these methods.</p>														
EXAMS	<p>There will be three exams. Their time length will be one class period. Each will be worth 20% of your grade. The second and third of these exams may include material covered on previous exams. All exams will:</p> <ul style="list-style-type: none"> - Be closed book and closed note with no formula sheet; - Reflect both the content and general objectives of the course. 														
FINAL EXAM	<p>The final exam is comprehensive and is worth 30% of the course grade. The material covered after the third exam may have a greater weight on the final exam than previous material. The date, time, and location of the final is in this information sheet and is different than regular class time. The final exam will reflect both the specific content and broad educational objectives of the course.</p>														
Webassign	<p>In Webassign, each section covered in the text book has an assignment covering the topics from that section. The due dates for each section can be found in the syllabus and on Webassign and in the Syllabus.</p>														
How to be successful in my class	<ol style="list-style-type: none"> 1) Attend class: Learning the material becomes more difficult if you are not in class. 2) Ask plenty of questions: There are no stupid questions. Ask whatever question you like, whenever you like. 3) See me as soon as you are having Math difficulties: Math is one of those subjects where understanding the previous material is necessary in order to move onto the new stuff. 4) Take notes in lecture and read the textbook: Reading the sections before and after lecture will help your understanding of the material. 5) Do the homework! 6) Take advantage of the many resources available. 7) Form Study Groups. 8) Remember, you should be doing at least 2 hours of work outside of class for every hour inside of class (even if you are taking 19 credits and working 40 hours a week). 														
ATTENDANCE	<p>Students are expected to attend each class meeting. Attendance will be taken during every class meeting. A considerable amount of material will be covered during each class meeting. If you do miss a class, it is your responsibility to complete all missed work covered that day. In addition, you are responsible for all information given in class regarding course material, test dates, homework assignments, etc. Get to know someone in class that you can email or call for this information and for class notes that you might want to copy. Please don't come to class late or leave early.</p>														
CALCULATOR USAGE	<p>You will be permitted to use a calculator on some exams. If you are permitted to use a calculator on an exam, be sure to show all the mathematical work necessary for setting up a calculation before using the calculator, or you will not receive full credit. There will be portions of tests where calculators are not allowed.</p>														
MAKE-UP POLICY	<p>No make-up exams will be given. There are no curves on tests. There are absolutely no make-up tests for any reason. If you know of a problem before the test, talk to me (or email me) about it. If it is reasonable, we can arrange an alternative date in the week before the test.</p>														
IMPORTANT DATES	<ul style="list-style-type: none"> • January 18: The last day for 100% tuition reimbursement, registration, to add a class, and a "no-grade" drop. • March 15: The last day for official withdrawal, and the last day drops are accepted. 														

MTH1441 SCHEDULE – WINTER 2018

Day	Date	Section	Topic(s)*
Th	1-4	Intro 3.7 2.1	Polynomial and Rational Inequalities Functions
Tu	1-9	2.2 2.3 2.4	Graphs of Functions Getting Information from the Graph of a Function Average Rate of Change of a function
Th	1-11	Webassign 2.5 2.6 2.7	3.7,2.1,2.2,2.3, 2.4 Linear Functions and Models Transformations of Functions Combining Functions
Tu	1-16	3.1 3.2	Quadratic Functions and Models Polynomial Functions and Their Graphs
Th	1-18	Webassign 3.3 3.4	2.5,2.6,2.7,3.1,3.2 Dividing Polynomials Real Zeros of Polynomials
Tu	1-23	1.6 3.5	Complex Numbers Complex Zeros and the Fundamental Theorem of Algebra
Th	1-25	Webassign 3.6 2.8	3.3,3.4,1.6,3.5 Rational Functions One-to One Functions and Their Inverses
Tu	1-30	4.1 4.2	Exponential Functions The Natural Exponential Function
Th	2-1	Webassign 4.3 4.4	3.6,2.8,4.1,4.2 Logarithmic Functions Laws of Logarithms
Tu	2-6		Exam I (Chapters 1,2,3)
Th	2-8	Webassign 4.5 4.6 1.9	4.3,4.4 Exponential and Logarithmic Equations Modeling with Exponential and Logarithmic Functions Circles only
Tu	2-13	5.1 5.2	The Unit Circle Trigonometric Functions of Real Numbers
Th	2-15	Webassign 6.1 6.2	4.5,4.6,1.9,5.1,5.2 Angle Measure Trigonometry of Right Triangles
Tu	2-27	6.3 5.3	Trigonometric Functions of Angles Trigonometric Graphs
Th	3-1	Webassign 5.4 5.5	6.1,6.2,6.3,5.3 More Trigonometric Graphs Inverse Trigonometric Functions and Their Graphs
Tu	3-6	5.5 6.4	Inverse Trigonometric Functions and Their Graphs Inverse Trigonometric Functions and Right Triangles
Th	3-8	Webassign 6.5 6.6	5.4,5.5,6.4 The Law of Sines The Law of Cosines
Tu	3-13	7.1	Trigonometric Identities

Th	3-15	Webassign 7.2	6.5,6.6 Addition and Subtraction Formulas
Tu	3-20		Exam II (through Chapter 6)
Th	3-22	Webassign 7.3	7.1,7.2 Double-Angle and Half-Angle Formulas
Tu	3-27	7.4 7.5	Basic Trigonometric Equations More Trigonometric Equations
Th	3-29	Webassign 8.1 8.2	7.3,7.4,7.5 Polar Coordinates Graphs of Polar Equations
Tu	4-3	8.3 10.2	Polar Form of Complex Numbers; De Moivre's Theorem Systems of Linear Equations in Several Variables Sequences
Th	4-5		Exam III (through Chapter 8)
Tu	4-10	Webassign 10.7	8.1,8.2,8.3,10.2 Partial Fraction Decomposition
Th	4-12	10.8 10.9	Systems of Nonlinear Equations Systems on inequalities
Tu	4-17	Webassign 11.2 11.3	10.7,10.8,10.91 Ellipses Hyperbolas
W	4-18 11.59pm	Webassign	11.2,11.3
Fri	4-20		Final Exam (cumulative) 8:00 – 10:45 a.m.

CHANGES TO SYLLABUS

All test/quiz dates are considered tentative and subject to change. Students will be notified during the class period if there is a need to change any test/quiz date or homework assignment. Any substantial change made to this syllabus, such as grade calculation, will be provided in writing and documented with the math department.

Webassign COURSE COMPONENT

To sign up for Webassign go to www.webassign.net on your computer.

You will need the following **class key**: oakland 6229 6998

You can start with a free trial, but you will eventually have to pay \$95 for access to your homework and ebook.

For good link to show you how to log in anytime, how to get to homework and how to see you grade, go to:
assets.cengage.com/pdf/gui_ewa-stu-brief-user-guide.pdf

During the registration process, you will be given a login name and password. You will have the opportunity to change your password if you wish. **Write down your login name and password, and keep them in a safe place.**

When looking at your scores on webassign, the points for homework are not equivalent to the points for the Exams. Your homework is worth only 10% of your grade. To find the amount of points earned by homework take homework points earned and divide by total homework points possible. Multiply this decimal by 100. This is the exam points earned by homework. There is a maximum of 100 exam points available by homework.