

Oakland University School of Nursing

Pathophysiology

**NRS 2011 (227)
CRN #11858**

Faculty:

**Kristan Munyan, DNP, MSN-ED, RN
Assistant Professor**

Winter, 2018

COURSE NUMBER: NRS 2011 (227) - CRN #11858

CREDIT & HOUR ALLOCATION:	Credits		Hrs/Wks	Total Hours Semester
	Theory	3	3 x 14	42

COURSE TITLE: Pathophysiology

**CLASS TIME
& LOCATION:** Friday, 8:00-10:30 AM
Room 5045, Human Health Building (5045 HHB)
January 3, 2018 – April 25, 2018

FACULTY OF RECORD: Kristan Munyan, DNP, RN
Assistant Professor
Office: 2038 Human Health Building (HHB)
Office Telephone: (248) 364-8727
Office Hours: via Telephone or Email Only
Email: kmunyan@oakland.edu

PREREQUISITE OR COREQUISITE

Prerequisites: BIO 307

COURSE OVERVIEW

This course focuses on physiological deviations that can occur across the human lifespan. Underlying concepts and principles common to health deviations in all major physiological systems are presented. Knowledge gained from this course will lay the foundation for nursing interventions and clinical reasoning necessary for professional nursing practice.

COURSE OBJECTIVES:

1. Describe the etiology and pathogenesis of various disease states experienced by humans.
2. Explain major alterations in normal body functions brought about by disease, age, genetics, functional ability, internal and/or external stressors, and lifestyle behaviors across the lifespan.
3. Identify common diagnostic tests used to determine various physiological systems' status.

ESSENTIAL CONTENT

Health deviations affecting all of the major physiological systems

Effects of genetics, age, disease, functional ability, stress, and lifestyle behaviors on human health across the lifespan

Common diagnostic tests used to determine physiological system status

TECHNICAL REQUIREMENTS

All e-Learning courses at Oakland University are delivered using a learning management system called Moodle that allows instructors to design entire courses online or to enhance a classroom-based course. The Moodle software resides on a server allowing students to access it via a web browser, e.g. Mozilla, Firefox. Each course is uniquely designed by the instructor who may include some of the following components in his/her web-based or web enhanced course: course syllabus, course material/content, course assignments, quizzes/tests, hyperlinks to other websites on the Internet and/or other OU web pages, discussion boards, Internal email, and the course grade book.

Logging into Moodle

Students login to Moodle with their NetID (oakland.edu email) account password. Please remember that anytime you change your NetID password, it will be reflected in your Moodle login.

- Open the Moodle Login page: <https://moodle.oakland.edu>
- Log-in using the first part of your NetID username and password, e.g. if your email is jwilson3@oakland.edu then:
 - Username: jwilson3
 - Password: whatever your Oakland University email password is

If you have any problems/issues with Moodle, you need to contact or fill out a help desk request form for e-Learning and Instructional Support.

To view course materials in MOODLE you will need the latest version of Adobe Reader that can be downloaded free of charge at www.adobe.com

REQUIRED TEXTBOOK

Huether, S., & McCance, K. (2017). *Understanding Pathophysiology* (6th ed). St. Louis: C.V. Mosby.

COURSE REQUIREMENTS

1. Courtesy with all communication.
2. Completion of all course exams.
3. Completion of final exam.
4. Completion of all case studies.
5. Completion of the course with a satisfactory grade (2.5) or above for Oakland University nursing students.

CLASS FORMAT

This is an on-campus course within the Undergraduate Program within the School of Nursing. The readings, lectures and videos are to enhance the content of the course. Due to the range of content to be covered, guest lecturers may offer their expertise. When possible, these lectures will be recorded and provided to students to view in preparation for class activities. This course is interactive, meaning that regular attendance and participation is both expected and required. All course materials will be posted to Moodle on Sundays to enhance learning opportunities.

In order to understand changes in body anatomy and physiology, you will need to understand normal anatomy and physiology. In the Heuther and McCance (2017) textbook there are sections in the unit modules that review structure and function of various systems. These chapters are not assigned reading but serve as a good review if you feel you are weak in certain systems.

GENERAL INFORMATION

If you want to contact the faculty, it is best to do so by internal email on the moodle site You can also email cmripper@oakland.edu. Students may contact faculty via email and expect a response within 24 hours Monday – Friday between the hours of 9AM and 5PM.

Any general information about the course, assignments, etc. can be found on through Moodle. Remember that in the discussion area, faculty can read your postings.

Technical Skills Required:

You are also expected to have a moderate level of computer proficiency. You should already be comfortable doing all of the following:

- Using your chosen computer operating system and web browser
- Following online directions for using a new program
- Typing at least 20 words a minute
- Troubleshooting basic computer problems
- Working through problems you can't resolve on your own with remote support technicians

Required Technology:

In order to fully participate in this course, you will need:

- An internet connected computer with the most updated versions of your favorite web browser installed. Use of smartphones and tablets is not recommended.
- In the event that your computer crashes or internet goes down, it is essential to have “backup plan” in place where you are able to log in using a different computer or travel another location that has working internet.
- Any files intend to use for your course should be saved to a cloud solution and not to a local hard drive, USB stick or external disk. Saving files this way guarantees your files are not dependent on computer hardware that can fail.

Technical Assistance:

If you have general questions about the course (such as due dates, content, etc) or accessing course content, please contact me (Dr. Kristen Munyan). For Moodle technical issues that you cannot resolve on your own, please contact the e-learning and Instructional Support Office at (248) 805-1625 or go to “Get Help” link at the top of Moodle.

Student and Faculty Expectations:

Students taking this course are expected to:

- Ensure that their computer is compatible with Moodle.
- Login in weekly, at a minimum, to access course materials.
- Review course materials and reading PRIOR to attending class
- Complete all assignments by the deadline
- Respond to emails within 2 days
- Participate in a thoughtful manner
- Use rules of "netiquette" as they will be observed at all times. Since we want a free exchange of ideas, we must feel free to express ourselves and have our views respected.

The faculty will:

- Moderate conversations in discussion forums.
- Respond to “Let’s discuss” forums and email within 1-2 days.
- Grade assignments within 7 days of the assignment deadline.
- Facilitate lecture periods and offer opportunities to ask questions and receive clarification
- Be available on campus for office hours for students who would like a private meeting

DETAILED CLASS OUTLINE with ASSIGNED READINGS AND ASSIGNMENTS

Course Date	Content This calendar provides chapters for assigned reading and specific topics that will be discussed in class. These are the topics that will be covered on exams. This calendar is a tentative plan for the course. The faculty reserves the right to make changes to topics/dates of content as needed.
Week 1: 1/3/18	Chapter 2, 3, 4 Adaption and Death/Immunity and Inflammation Disease Process: Lupus, Sjogren’s Syndrome, Rheumatoid Arthritis, HIV Labs/Diagnostics : ANA, WBC, Rheumatoid factor, ASA, ESR, CRP, hand radiograph
Week 2: 1/10/18	Chapters 5 pp. 114-131, page 125-130 Fluid and Electrolyte Balance, Acid Base Balance Disease Processes: Potassium, Sodium, Calcium imbalances, Metabolic Acidosis/Alkalosis, Respiratory Acidosis/Alkalosis

	<p>Labs/Diagnostics: Arterial blood gases, comprehensive metabolic panel</p> <p>Exam 1 – Cellular Adaptation and Death, Immunity and Inflammation</p>
Week 3: 1/17/2018	<p>Chapters 21 (pp. 513-544) Children (Chapter 22)</p> <p>Alterations in Hematologic Function</p> <p>Disease Processes: Anemia, Leukemia, Thombocytopenia</p> <p>Labs/Diagnostics: CBC, Iron studies, Vit B12</p>
Week 4: 1/24/2018	<p>Chapters 7, 8, 41</p> <p>Infection, Alterations in Integumentary Function</p> <p>Disease Processes: Sepsis, Cellulitis, Burns, HIV, Scabies, Measles, Mumps, Rubella, Impetigo, C. Diff</p> <p>Labs/Diagnostics: CBC, Cultures – Wound, Blood and Stool</p> <p>Exam 2 – F & E Balance, Acid Base Balance, Alterations in Hematologic Function</p>
Week 5: 1/31/2018	<p>Chapters 14, pages 183-184, 347, 348, 350- See Moodle for supplemental readings)</p> <p>Alterations in Head, Ears, Eyes, Nose and Throat</p> <p>Disease Processes: Conjunctivitis, Sinusitis, Strep Pharyngitis, Cataracts, Glaucoma, Macular degeneration, Influenza</p> <p>Labs/Diagnostics: Throat culture, PCR</p> <p>Case Study # 1: Pediatrics</p>
Week 6: 02/07/2018	<p>Chapters 27/28 pages 692-698, 703, 706-707, 723</p> <p>Alterations in Respiratory Function</p> <p>Disease Processes: TB, Lung Cancer, Pneumonia, COPD, Asthma, Pleural effusion, Acute bronchitis, PE</p> <p>Labs/Diagnostics: Chest radiography, TB testing</p> <p>Exam 3 – Infection, Alterations in Integumentary Functions, Alterations in HEENT</p>
Week 7: 02/14/2018	<p>Chapters 24 (pp. 598 – 646), Shock (pp.637-646) , Chapter 25 (Children)</p> <p>Alterations in Cardiac Function</p>

	<p>Disease Processes: Myocardial infarction, Arrhythmias, Hypertension, Peripheral vascular disease, Valvular heart diseases, Congestive Heart failure, Peripheral Vascular disease, Congenital heart defects</p> <p>Labs/Diagnostics: EKG, BNP, Echocardiogram, Troponins</p> <p>Case Study # 2 – Geriatrics</p>
	BREAK!!!!
Week 8: 02/28/2018	<p>Chapters 36 (Adult) & 37 (Children), pages 909, 915, 920-923, 931-933, 935-937, 939-941</p> <p>Alterations in Gastrointestinal Function</p> <p>Disease Processes: Esophagitis, Hiatal Hernia, Gastritis, Peptic Ulcer Disease - Gastric & Duodenal Appendicitis, Diverticular Disease, Ulcerative Colitis, Crohn’s Disease, Hepatitis, Cirrhosis, Disorders of the Gallbladder, Pancreatitis, Cancer – Esophagus, stomach, colon</p> <p>Labs/Diagnostics: LFTs, Amylase, Lipase, H. Pylori, Stool occult blood</p> <p>Exam 4 – Alterations in Respiratory Function and Cardiac Function</p>
Week 9: 03/07/2018	<p>Chapter 30 (pp. 747-766), Chapter 31 (pp. 770-776) Children</p> <p>Alterations in Renal Function</p> <p>Disease Processes: Chronic kidney disease, Acute Renal Failure, Urinary tract infection, Pyelonephritis, Glomerulonephritis, Hypospadias/Epispadias, Nephrotic Syndrome, Enuresis</p> <p>Labs/Diagnostics: BUN, Creatinine, UA</p> <p>Case Study #3 – Acute Care</p>
Week 10: 3/14/18	<p style="text-align: center;">Chapter 19</p> <p>Alterations in Endocrine Function</p> <p>Disease Processes: Diabetes (I & II), Hypo/hyperthyroidism, Addison’s disease, Cushing’s disease</p> <p>Labs/Diagnostics: TSH, T3, T4, HbA1C, Blood glucose, UA</p> <p>Exam 5 – Alterations in GI Function, Alterations in Renal Function</p>
Week 11: 03/21/2018	<p style="text-align: center;">Chapter 14, 15, 16</p> <p>Alterations in Neurological Function</p> <p>Disease Processes: Migraine, Dementia, Delirium, Stroke, Multiple sclerosis, Muscular dystrophy, Increased intracranial pressure, CVA.</p>

	<p>Labs/Diagnostics: CT scan, UA, CBC, MMSE</p> <p>Case Study # 4 – Critical Care</p>
Week 12: 03/28/18	<p>Chapters 39 & 40 pages 991-994, 1000-1006, 1009-1016, 1018-1021</p> <p>Alterations in Musculoskeletal Function</p> <p>Disease Processes: Gout, Fractures, Arthritis, Fibromyalgia, Pain</p> <p>Labs/Diagnostics: Uric acid, ANA, radiography</p>
Week 13: 04/04/18	<p>Chapters 33 & 34</p> <p>Alterations in Reproductive Function</p> <p>Disease Processes: BPH, PCOS, Breast cancer, Hypospadias, STIs</p> <p>Labs/Diagnostics: PSA, DRE, Cultures, PAP, Mammography</p> <p>Exam 6 – Alterations in Endocrine Function and Neurological Function</p>
Week 14: 04/11/18	Final Exam Review
Week 15: 04/20/18	Final Exam

EVALUATION:

Biweekly Exams	6 X 30 points (Total 180 points)	60%	180 points
Case Studies	4 X 5 points (Total 20 points)	6.6%	20 points
Final Exam	1 X 100 points (Total 100 points)	33.3%	100 points
	Total	100%	300 points

EVALUATION DETAILS:

EXAM CONTENT

Exams will be given Weeks 2, 4, 6, 8, 10 & 12 and a cumulative exam will be given finals week. Each of the biweekly exams are based on the previous weeks content and the final exam will be a cumulative exam with most of the content based on the previous 2 weeks lectures. The Exams will cover the following content:

Exam 1 – 1/12/18- Cellular Adaption and Death, Immunity and Inflammation

Exam 2 – 1/26/18 – Fluid and Electrolyte Balance, Acid Base Balance, Alterations in Hematologic Function

Exam 3 – 2/09/2018 - Infection, Alterations in Integumentary Function, Alterations in HEENT

Exam 4 - 3/02/2018 – Alterations in Respiratory and Cardiac Function

Exam 5 – 3/16/2018- Alterations in GI Function, Alteration in Renal Function

Exam 6 – 3/30/2018 – Alterations in Endocrine Function and Neurological Function

Final Exam – 4/20/18 - Alterations in Musculoskeletal Function and Reproductive Function (60%) and Cumulative (40%)

Exams

There will be a total of 6 non-cumulative exams. The exams will be given during the first 45 minutes of class time. Late arrivals will not receive additional testing time. There will be six multiple choice exams based upon the content from the previous week(s). Example: Exam 1 will be over week 1 content; Exam 2 will cover weeks 2 and 3.

If a student is unable to complete an exam according to the published dates and times, the Faculty of Record must be notified in advance. Voice messages and e-mails are not considered as a form of notification. The student must talk with the Faculty of Record in person prior to the administration of the exam. The Faculty of Record reserves the right to administer an exam at a later date, provide the student with an alternative assignment equivalent to the exam or to give the student a zero for the exam. Social events and/or vacations are NOT considered to be a valid reason to miss a exam. There will be NO MAKE UP for this exam and exam times will NOT be changed for any reason. Please consult the academic calendar for important dates.

Final

There is **one final-cumulative** exam scheduled during the semester. If a student is unable to complete an exam according to the published dates and times, the Faculty of Record must be notified in advance. Voice messages and e-mails are not considered as a form of notification. The student must talk with the Faculty of Record in person prior to the administration of the exam. The Faculty of Record reserves the right to administer an exam at a later date, provide the student with an alternative assignment equivalent to the exam, or to give the student a zero for the exam. Social events and/or vacations are NOT considered to be a valid reason to miss an exam. There will be NO MAKE UP for this exam and exam times will NOT be changed for any reason. Please consult the academic calendar for important dates.

Case Studies

There will be a total of 4 Case Studies each worth 5 points. The case studies will be Week 5, Week 7, Week 9 and Week 11. These case studies will be based upon the Pediatric, Gerontology, Acute and Critical Care populations. Assignment details and case study dates will be posted on Moodle.

The grading for case studies will be based upon:

Case Study	
Identify Disturbance	1 point
Pathophysiology of Disturbance	2 points
Clinical Manifestations of Disturbance	1 point
Evaluation and Treatment of Disturbance	<u>2 points</u>
	5 points

Use of Camera and/or Recording Devices:

Use of recording devices, including camera phones, laptop recorders and tape recorders are prohibited in this classroom or any other location where instruction or testing occurs

ACADEMIC CONDUCT

Course Policy On Undergraduate Student Professionalism Expectations

Students are expected to practice and uphold standards of academic integrity and honesty as outlined in the Oakland University undergraduate and graduate catalogs under the section titled "Academic Conduct". Academic dishonesty may result in a numerical grade of 0.0 for this course. Suspected academic dishonesty must be reported to the Dean of Students for consideration by the Academic Conduct Committee of the University Senate and may result in a numerical grade of 0.0 for assignment or course.

Communication

Students are to communicate through Moodle and/or their Oakland University e-mail. Students should also subscribe to the course news forum on Moodle for announcements/clarifications. Students are to demonstrate professional verbal and written communication at all times. The following guidelines for “netiquette” must be followed for all entries in this course in order to create an optimum learning environment for all students.

<http://nursing.wsu.edu/current/Netiquette.pdf>.

Faculty for this course prefer communication through Moodle email and will respond to emails within 48 hours Monday through Friday 0800-1700.

Students communicating to faculty or other students in an **unprofessional manner** will receive a written notice at the first occurrence, a deduction of two points off the total course grade on the second occurrence, and an additional ten points off the total course grade AND referral to the Oakland University Academic Conduct Committee on the third occurrence.

Student And Faculty Communication

Other than internet communications the faculty is available to meet or talk with you as needed by scheduling an appointment. The faculty of this course is interested in making this a positive learning experience for all students and appreciates your feedback and suggestions. If at any time during the course a student is experiencing difficulty or would like to share any concerns with the faculty related to the course you are encouraged to do so.

EMERGENCY SCHOOL CLOSING:

If Oakland University is closed for any reason, we will not have class. Please call the University’s Storm Closing Hotline at (248) 370-2000.

In addition to the Oakland University Academic Conduct policy in the School of Nursing, completion of all course related assignments must be the result of the student's individual effort, except in the circumstance where the assignment requires group effort.

Student Progression

Any student that fails an assignment should schedule an appointment with faculty of record to

discuss potential need for remediation plan or potential impact on unsuccessful completion of course.

Late Assignments

The FOR has the right to refuse to accept any late assignments. If a late assignment is accepted a minimum of five points will be taken off the final grade.

Classroom Participation

Students are expected to actively and regularly contribute to the classroom. Failure to participate will be reflected in 5 points off the total final grade

Computer Access

Since computer access is available worldwide, it is not expected that students will be unable to access the course site. If for some other reason a student must be unavailable for a period of time you must let the faculty know in advance. While absences from discussions or presentations will not be approved, there may be an allowance offered for delayed, early entries or alternative assignments for substantive reasons or events but only if notified prior to the delay.

**Oakland University School of Nursing
GRADE CONVERSION**

Note: 70% = 2.5

<u>PERCENTAGE</u>	<u>GPA</u>
<u>100.00</u>	<u>4.0</u>
<u>98.00 – 99.99</u>	<u>3.9</u>
<u>96.00 – 97.99</u>	<u>3.8</u>
<u>94.00 – 95.99</u>	<u>3.7</u>
<u>92.00 – 93.99</u>	<u>3.6</u>
<u>90.00 – 91.99</u>	<u>3.5</u>
<u>88.00 – 89.99</u>	<u>3.4</u>
<u>86.00 – 87.99</u>	<u>3.3</u>
<u>84.00 – 85.99</u>	<u>3.2</u>
<u>82.00 – 83.99</u>	<u>3.1</u>
<u>80.00 – 81.99</u>	<u>3.0</u>
<u>78.00 – 79.99</u>	<u>2.9</u>
<u>76.00 – 77.99</u>	<u>2.8</u>
<u>74.00 – 75.99</u>	<u>2.7</u>
<u>72.00 – 73.99</u>	<u>2.6</u>
<u>70.00 – 71.99</u>	<u>2.5</u>
<u>68.00 – 69.99</u>	<u>2.4</u>
<u>66.00 – 67.99</u>	<u>2.3</u>
<u>64.00 – 65.99</u>	<u>2.2</u>
<u>62.00 – 63.99</u>	<u>2.1</u>
<u>60.00 – 61.99</u>	<u>2.0</u>
<u>58.00 – 59.99</u>	<u>1.9</u>
<u>56.00 – 57.99</u>	<u>1.8</u>
<u>54.00 – 55.99</u>	<u>1.7</u>
<u>52.00 – 53.99</u>	<u>1.6</u>
<u>50.00 – 51.99</u>	<u>1.5</u>
<u>48.00 – 49.99</u>	<u>1.4</u>
<u>46.00 – 47.99</u>	<u>1.3</u>
<u>44.00 – 45.99</u>	<u>1.2</u>
<u>42.00 – 43.99</u>	<u>1.1</u>
<u>40.00 – 41.99</u>	<u>1.0</u>