

	Department of Kinesiology
	(3 Units)
PATHOLOGY OF INJURY AND ILLNESS -- Fall 2020	

Meeting days: Thursdays	Instructor title and name: Dr. Jehnan Liu, MD PhD Adjunct Professor, PLNU Emergency Physician, Sharp Grossmont Hospital
Meeting times: 1:30 PM - 4:00 PM	Phone: By request
Meeting location: Zoom & YouTube	Email: jliu@pointloma.edu
Final Exam: Thursday, December 3, 2020 1:30 PM - 4:00 PM	Office location and hours: Appointments via phone/Zoom. (To support your journey through this course and the entire Integrative Wellness program, virtual office will be held.)
Additional info: Learn a lot and enjoy the class!	Teaching Assistant: Annie VanderWeide avanderweide1215@pointloma.edu

PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COVID-19 PANDEMIC

Thank you in advance for your ongoing patience as we tread through another semester submerged in far-from-ideal conditions. I will try to make this course as bearable as possible during this difficult time. Keep in mind that there are lots we do not know about Covid-19, and that "absence of proof is not proof of absence." Please abide by public safety guidelines, protect yourselves, and always exercise good judgement (in addition to the public guidelines). Wishing you and your loved ones good health!

COURSE DESCRIPTION

To sum up, "Pathology of Injury and Illness" (ATR 3085) is a hybrid between science and medicine.

The course primarily explores the pathophysiologies (mechanisms) that govern various diseases. While this course delves into topics organ-system by organ-system, there is a high degree of bridging concepts across the systems. Therefore, an overall broad understanding of normal physiology is strongly encouraged.

Additionally, this course is unique in that a large portion of the material will be presented from a clinical perspective, commonly involving discussions of real-life patient scenarios. For many of the diseases discussed, risk factors, signs, symptoms, physical exam findings, differential diagnoses, diagnostic modalities, lab tests, and basic management plans will be explored. Many common life-threatening diseases encountered in the emergency department will be emphasized. Although medical knowledge has no boundaries, this course will familiarize students with the basic "language" used across many clinical settings.

We hope to provide a strong foundation to what students will be using out there in the future!

COURSE LEARNING OUTCOMES (OBJECTIVES):

1. Learn scientific and medical terms commonly used in health care settings
2. Describe the pathological mechanisms of human diseases
3. Be familiar with the common and life-threatening disorders related to each major organ system
4. For each disease, be familiar with common history and physical exam findings
5. For each disease, be able to come up with differential diagnoses (i.e. common possibilities and mimics)
6. For each disease, be able to choose lab tests and imaging modalities that would rule in or rule out the differential diagnoses
7. For each disease, be able to describe basic management plans

8. Given a common chief complaint (e.g. chest pain), derive a list of possible life-threatening conditions
9. Understand pharmacological mechanisms against certain diseases
10. Better prepare for success in medical settings and get a broad sense of what the medical profession entails
11. Learn how to communicate medical cases
12. Enhance problem solving skills via information gathering and data interpretation.
13. Establish a strong foundation for graduate level coursework related to science and/or medicine.

COURSE FORMAT:

The majority of the course will be lecture format, with notes written out by hand, in real-time. Students are highly encouraged to take/write their own notes. Writing things out will allow for kinesthetic learning and will make retention of material significantly easier. It is highly discouraged to simply read someone else's notes or even my notes posted on Canvas.

From time to time, there will be interactive "Crack the Case" presentations, when students will pretend to be a patient with a particular disease of interest (see below for details). This is part of the course, and fair game on exams.

OTHER TIDBITS:

1. Notes will be posted on Canvas (but again, take your own notes, as what is written may be abridged)
2. Lectures will be recorded and posted on YouTube
(with my disclaimer that if there is technical malfunctioning on recording, I can not guarantee the YouTube posts. It is safest to attend during the allotted time period.)

RECOMMENDED TEXT:

"The Nature of Disease: Pathology for the Health Professions, 2nd edition" ---- by Thomas H. McConnell

This textbook has excellent figures that may be referenced from time to time. But remember, if the material is not discussed in class, it you do not need to know it for the course. The resource, while recommended, is meant to be supplemental and to clarify unfamiliar concepts. Certain material (e.g. clinical aspects) in this course are not covered in the book. Again, it is best to pay very close attention in class.

ADVICE ON MIDTERM AND FINAL EXAM PREPARATION:

Know the following very well:

1. Lecture Material
2. "Crack the Case"
3. Skills Labs Videos
4. Old exam questions: Questions (relevant material only, as content varies from semester to semester) on old exams from Spring 2020 are posted. Students are encouraged to complete (though actual submission is not required). They serve as not only good learning tools to solidify the material, but also great practice for the midterm and final.

Other tidbits:

1. For the take-home quizzes, although it's open-resource, do NOT make it into a game of "treasure hunting" without studying beforehand. It is encouraged to take the quiz as if it was proctored without resources. This is the way to best prepare for the proctored midterm and final.
2. Keep up with the material! Based on prior feedback, it'll make life much easier.
3. Any material NOT discussed in class will NOT be on the exams.
4. You may run into "Bonus Question(s)," for extra credit points, which will either be based on prior material or a tad bit more challenging.
(e.g. Quiz #2 may have a question on material from Quiz #1)
5. Microscope slide images (such as those in the textbook) will NEVER be on exams.
6. Make-Up Midterm/Final: Offered for dire circumstances only. Questions will be drastically different, fewer in number, and more challenging/tedious. It is best to avoid this situation.
7. Questions may be similar (but will not be recycled) from old exams. Old exams are available, bearing in mind that material does vary.

"PROCTORING" FOR MIDTERM AND FINAL EXAM:

In nutshell, proctoring will be done virtually via Zoom. The test itself will be hard copy, which you must print out and complete during the time slot. You must show yourself on camera. I'll be virtually present, addressing any potential ambiguities of questions and also monitoring screens from time to time.

1. These exams are done 1:30 PM and 4:00 PM.
2. At 1:30 PM, the exam will be uploaded on Canvas in PDF format. Download the PDF file and print it out.

3. Complete the test on hard copy. Eyes should be on the paper (not the screen).
4. Once complete, take a photo of images and upload them onto Canvas.
(I recommend using a scanner app)
5. Uploads must be complete by 4:00 PM

BONUS QUESTIONS -- ON EXAMS FOR EXTRA-CREDIT POINTS:

The purpose of "Bonus Questions" is three fold:

- (1) To compensate for any other point(s) in the course you may feel unfairly earned
- (2) To give a chance to "boost" for borderline grades
- (3) To encourage students to keep reviewing old material.

Bonus questions will tend to cover old material and/or tend to be more challenging than the rest of the questions. At the end of the semester, grades such as "89.4%" will NOT be rounded up to an A-. Again, that is why these bonus questions are here in the first place.

DISCLAIMER ON MEDICAL ADVICE:

A significant amount of medical knowledge will be discussed in this class. Although my goal is to make the material as relevant as possible to the real world, remember that these discussions are primarily for academic purposes. Some students may ask me for medical advice directly, or somehow try to relate themselves to a case discussed in class or an exam question. Although I can certainly provide opinions in the context of course material, nothing I mention should be construed as formal medical advice. If you need formal evaluation, please go see your doctor, go to the emergency room, or dial 9-1-1 for suspected life/limb threatening conditions (e.g. chest pain with cardiac risks, stroke-like symptoms, etc...). Bear in mind that this course and its material (e.g. lecture notes, exam questions, Crack the Case presentations, etc....) are a gross oversimplification of knowledge used to make real-world medical decisions.

COURSE CREDIT HOUR INFORMATION

In the interest of providing sufficient time to accomplish the stated Course Learning Outcomes, this class meets the PLNU credit hour policy for a 3 unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirement can be provided upon request. (Based on 37.5 hours of student engagement per credit hour.)

Distribution of Student Learning Hours	
Category	Time Expectation in Hours
Online Participation in Discussions, Groups, etc. (i.e. classroom/Zoom time)	35
Reading Assignments (i.e. study time...reading and reviewing notes)	64.5
Written Assignments (no writing assignments in this class)	0
Other Assignments & Learning Activities (i.e. "Crack the Case" assignment & Skills Labs)	3
Quizzes, Surveys (i.e. take-home quizzes)	10
Total Hours	112.5

This is obviously an extremely gross estimation... as students will come from different background and study habits.

TENTATIVE COURSE SCHEDULE AND ASSIGNMENTS:

Topics (listed below) may be modified or shuffled as the semester progresses. See "Modules" for more accurate agendas.

Quizzes, Midterm, and Final exam dates will NOT change
(unless extreme circumstances arise)

Quiz #1, Quiz #2, and Case Report are due at 11:59 PM.
Midterm and Final Exam are due at 4:00 PM

Aug. 20 [See "Modules"]	Oct. 15 COVID-19 Respiratory
Aug. 27 [See "Modules"]	Oct. 22 Gastrointestinal
Sep. 3 Edema Soft tissue Injury Acid-Base derangements Immune System	Oct. 29 Renal Urology
Sep. 10 Cell Injury Cancer	Nov. 5 Take Home Quiz #2 Due OB/GYN
Sep. 17 Take Home Quiz #1 Due Environmental Toxicology Endocrinology	Nov. 12 Neurology Case Report Due
Sep. 24 Hematology Dysrhythmias	Nov. 19 Review Session My career path
Oct. 1 Cardiology Vascular Diseases	Dec. 3 FINAL EXAM
Oct. 8 MIDTERM	

ASSESSMENT AND GRADING:

Grades will be based on the following:

TOTAL:	1000 points
Quiz#1 (take home)	150 points
Midterm (proctored)	200 points
Quiz#2 (take home)	150 points

Final Exam (proctored)	300 points
Skills Labs (online videos)	50 points
Case Report	150 points

Standard Grade Scale Based on Percentages				
A	B	C	D	F
A 93-100	B+ 87-89	C+ 77-79	D+ 67-69	F Less than 59
A- 90-92	B 83-86	C 73-76	D 63-66	
	B- 80-82	C- 70-72	D- 60-62	

Please see comment above about "Bonus Questions"

It is the student's responsibility to ensure that entries are recorded accurately. If you feel there is a clerical mistake, please notify me immediately.

Student grades will be posted in the Canvas grade book no later than midnight on Tuesday of each week beginning in Week Two of this course. It is important to read the comments posted in the grade book as these comments are intended to help students improve their work. Final grades will be posted within one week of the end of the class.

SUBMITTED ASSIGNMENTS AT-A-GLANCE: 5 total

Quiz#1

Midterm

Quiz#2

Final Exam

Case Report

UPLOADING ONTO CANVAS:

When uploading onto Canvas, please make sure photographs are in proper "portrait" orientation, so we are not tilting our heads when grading.

CASE REPORT (tentative guidelines)

Choose a disease of interest that has NOT been used in "Crack the Case"

1. In one paragraph, what is the pathophysiology underlying the disease? (20 pts)
2. Pretend to be the patient. Write a paragraph describing your symptoms (20 pts)
3. Write out the patient's medical history, surgical history, medications, allergies, social history, and family history. (6 pts)
4. Write out the patient's vital signs. (5 pts)
5. Write out the patient's physical exam findings (20 pts)
6. Write out list of differential diagnoses (20 pts)
7. Write out what lab tests you'd like to order, and their results (20 pts)
8. Write out what imaging tests you'd like to order, and their results (5 pts)
9. Write out any medications given (for each, write one phrase on mechanism) (10 pts)
10. Write out a management plan other than medications (e.g. procedures, fluids, positioning, etc.) (10 pts)
11. What is their disposition? (5 pts)
12. What consultants/specialists are involved? (4 pts)
13. What is the prognosis of the disease? (5 pts)

SIDEBAR: For those who volunteer to do the "Crack the Case" presentations, #2 to #5 will be waived.

"CRACK THE CASE"

In other words, these are medical cases we will discuss in lecture. I encourage you to print out and use the provided template to take notes. Material discussed here are fair game on the exams. Student volunteers are needed to "act out" the cases during class. Not every student will need to volunteer. As mentioned above, students who volunteer will get a big chunk of the "Case Report" waived (#2 - #5, as shown above).

SKILLS LAB (VIDEOS):

Due to the conditions of the Covid-19 pandemic, videos will be assigned. (Specific assignments to come later.) We will use the honor system, and there is nothing to submit. However, the material in the videos are fair game on exams.

INCOMPLETES AND LATE ASSIGNMENTS

For assignments to be uploaded online, the exact deadline will be known (see above). If an assignment is late, you may still complete it, but will only 70% maximum grade for that assignment.

GENERAL POLICIES:

STATE AUTHORIZATION

State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on [State Authorization](#) to view which states allow online (distance education) outside of California.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See [Academic Policies](#) for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

PLNU ATTENDANCE AND PARTICIPATION POLICY

Online Format

Students taking online courses are expected to attend each week of the course. Attendance is defined as participating in an academic activity within the online classroom which includes posting in a graded activity in the course. (Note: Logging into the course does not qualify as participation and will not be counted as meeting the attendance requirement.)

Students who do not attend at least once in any 3 consecutive days will be issued an attendance warning. Students who do not attend at least once in any 7 consecutive days will be dropped from the course retroactive to the last date of recorded attendance.

SPIRITUAL CARE

Please be aware PLNU strives to be a place where you grow as whole persons. To this end, we provide resources for our students to encounter God and grow in their Christian faith.

If students have questions, a desire to meet with the chaplain or have prayer requests you can contact the [Office of Spiritual Development](#)

USE OF TECHNOLOGY

In order to be successful in the online environment, you'll need to meet the minimum technology and system requirements; please refer to the [Technology and System Requirements](#) information.

Problems with technology do not relieve you of the responsibility of participating, turning in your assignments, or completing your class work.