

The University Of Toledo

New Graduate Course Proposal

* denotes required fields

1. College*:
- Department*:
2. Contact Person*: Phone: (xxx - xxxx) Email:
3. Alpha/Numeric Code (Subject area - number)*: -
4. Proposed title*:
Proposed effective term*: (e.g. 201140 for 2011 Fall)
5. Is the course cross-listed with another academic unit? Yes No
- Approval of other academic unit (signature and title)
- Is the course offered at more than one level? Yes No
- If yes, an undergraduate course proposal form must also be submitted. If the undergraduate course is new, complete the [New Undergraduate Course Proposal](#); if the undergraduate course is existing, submit an [Undergraduate Course Modification Proposal](#).
6. Credit hours*: Fixed: or Variable:
- to
7. Delivery Mode:
- | | Primary* | Secondary | Tertiary |
|---------------------------|--------------------------------------|---|---|
| a. Activity Type * | <input type="text" value="Lecture"/> | <input type="text" value="--SelectType--"/> | <input type="text" value="--SelectType--"/> |
| b. Minimum Credit Hours * | <input type="text" value="2"/> | <input type="text"/> | <input type="text"/> |
| Maximum Credit Hours * | <input type="text" value="2"/> | <input type="text"/> | <input type="text"/> |
| c. Weekly Contact Hours * | <input type="text" value="2"/> | <input type="text"/> | <input type="text"/> |
8. Terms offered: Fall Spring Summer
- Years offered: Every Alternate

Year **Years**

9. Are students permitted to register for more than one section during a term? No Yes

May the courses be repeated for credit?

No Yes

Maximum Hours

10. Grading System*:
- Normal Grading (A-F, S/U, WP/WF, PR, I)
 - Satisfactory/Unsatisfactory (A-C, less than C)
 - Grade Only (A-F, WP/WF, PR, I)
 - Audit Only
 - No Grade

11. Prerequisites (must be taken **before**): i.e. C or higher in (BIOE 4500 or BIOE 5500) and C or higher in MATH 4200

none

PIN (Permission From Instructor)

PDP (Permission From Department)

Co-requisites (must be taken **together**):

PHPR 6450

12. Catalog Description* (**75 words Maximum**)

This course discusses the pharmacology, pathophysiology, diagnosis and therapeutics related to fluids, electrolytes, acid and base disorders, diuretics and kidney disease. Selected disorders of the kidney including acute, chronic and end stage kidney disease, and renal replacement therapy.

13. Attach a syllabus - a syllabus template is available from the University Teaching Center. Click [here](#) for the Center's template.

File Type	View File
Syllabus	View

14. Comments/Notes:

New PharmD Program

15. Rationale:

New PharmD Program was developed to meet new accreditation standards (Standards 2016) set out by the Accreditation Council for Pharmacy Education.

Course Approval:

Department Curriculum Authority:	Mariann D Churchwell	Date	2017/02/15
Department Chairperson:	Diane Cappelletty	Date	2017/02/15
College Curriculum Authority or Chair:	Frederick E. Williams	Date	2017/02/17
College Dean:	Laurie S. Mauro	Date	2017/02/20
Graduate Council:	Constance schall, GC mtg 4/18/17	Date	2017/04/19
Dean of Graduate Studies:	Amanda C. Bryant-Friedrich	Date	2017/05/01
Office of the Provost :		Date	

print

Administrative Use Only

Effective Date:

  (YYYY/MM/DD)

CIP Code:

Subsidy Taxonomy:

Program Code:

Instructional Level:

Registrar's Office Use Only

Processed in Banner on:

 

Processed in Banner by:

Banner Subject Code:

Banner Course Number:

Banner Term Code:

Banner Course Title:



Fluids, Electrolytes and Kidney Disease

The University of Toledo
College of Pharmacy and Pharmaceutical Sciences, Doctor of Pharmacy Program
PHPR 6300

Instructor:	<i>see below</i>	Class Location:	TBD
Email:	<i>see below</i>	Class Day/Time:	TBD
Office Hours:	<i>see below</i>	Lab Location:	N/A
Office Location:	<i>see below</i>	Lab Day/Time:	N/A
Office Phone:	<i>see below</i>	Credit Hours:	2
Term:	Fall		

Course Coordinator:

Mariann D. Churchwell, PharmD, BCPS, FCCP
Faculty Office: HEB 114E
Office Hours: MW 3:15-4:30 PM or *email for an appointment*
Phone: 419-383-1567
E-Mail: mariann.churchwell@utoledo.edu

Course Instructors

Department of Pharmacology TBD

COURSE/CATALOG DESCRIPTION

This course discusses the pharmacology, pathophysiology, diagnosis and therapeutics related to fluids, electrolytes, acid/base disorders, diuretics, and kidney disease. Selected disorders of the kidney including: acute, chronic and end stage kidney disease, and renal replacement therapy.

COURSE OVERVIEW

Students will be exposed to the integrated principles of pharmacology and therapeutics as it relates to the functions of the kidney. After successfully completing this course the student learner should be able to apply this knowledge to the delivery of pharmaceutical care to patients.

UTCP DOCTOR OF PHARMACY ABILITY BASED OUTCOMES - achieved in this course

Domain 1 – Foundational Knowledge

1.1. Learner (Learner) - Develop, integrate, and apply knowledge from foundational sciences (i.e. **pharmaceutical, social/behavioral/administrative, basic biomedical sciences and clinical sciences**) to evaluate the scientific literature, explain drug action, solve therapeutic problems, and advance population health and **patient centered care**.

Domain 2 – Essentials for Practice and Care

2.1. Patient-centered care (Caregiver) - Provide **patient-centered care** as the medication expert (collect and interpret evidence, prioritize, formulate assessments and recommendations, implement, monitor and adjust plans, and document activities).



Domain 3 - Approach to Practice and Care

3.1. Problem Solving (Problem Solver) – Identify problems; explore and prioritize potential strategies; and design, implement, and evaluate a viable solution.

STUDENT LEARNING OUTCOMES

1. Describe the role of kidney physiology in maintaining homeostasis of fluids and electrolytes
2. Describe common kidney related disorders and the appropriate lifestyle modifications and therapies to treat these disorders
3. Interpret pharmacokinetic changes in patients with chronic kidney disease and those patients receiving renal replacement therapy to facilitate appropriate therapies for this patient population
4. Evaluate therapies including adverse effects and monitoring in patients with kidney disease.
5. Formulate therapeutic care plans for patients with kidney disease.

TEACHING STRATEGIES

Each Instructor within this module will use a combination of teaching methods including in-class lectures and lecture captures (pre-recorded lectures), case-based examples, practice problems, cases and quizzes. Many of the lectures will use Echo recordings and Blackboard quizzes to facilitate in class discussions and quizzes.

PREREQUISITES AND COREQUISITES

Prerequisites: None

Corequisites: PPHR 6450

REQUIRED TEXTBOOKS AND OTHER READING MATERIALS/ASSIGNMENTS

Required Readings:

1. Pharmacotherapy Principles and Practice 3rd Edition. Chisholm-Burns M. Eds

ISBN-13: 978-0071780469 ISBN-10: 0071780467

Additional Resources and Readings:

1. Pharmacotherapy: A Pathophysiologic Approach 10th Edition. Editor Dipiro (*Access Pharmacy*)
2. Harrison's Principles of Internal Medicine 19th Edition (*Access Pharmacy*)
3. National Kidney Foundation Kidney Disease Outcomes Quality Initiative (KDOQI)
<http://www.kidney.org/professionals/kdoqi/guidelines.cfm> or www.kidney.org
4. Kidney Disease Improving Global Outcomes (KDIGO) Clinical Practice Guidelines
http://www.kdigo.org/clinical_practice_guidelines/
5. International Society of Peritoneal Dialysis (ISPD) www.ispd.org or
http://www.ispd.org/treatment_guidelines.html
7. Rennke HG, Denker BM. Renal Pathophysiology: The Essentials. 3rd edition Lippincott, Williams & Wilkins Philadelphia, PA 2010



Additional readings may be assigned during the course. Most readings will be provided to the student via Blackboard posting. Students will be expected to access and review these readings as needed.

Main textbook readings— Pharmacotherapy: Principles and Practice 3rd Edition

****Supplemental Readings** as listed include Pharmacotherapy: A Pathophysiologic Approach 9th edition and Harrison's Principles of Internal Medicine 19th edition (*online through Access Pharmacy*).

TECHNOLOGY EXPECTATIONS

Laptop computer or tablet is required for all Exams. Exam Soft will be used for all exams, lectures, quizzes, grades and communications will be posted or sent via Blackboard. Clickers and LectureTools will be used for in-class activities. An outline of the requirements is listed below.

Exam Soft Procedures and Information

*****See the Exam Soft Website for the most up-to-date information on requirements.**

ExamSoft website <http://learn.examsoft.com/exam-takers-overview>

Under Support is information including system requirements of computers and iPads.

Login in under Exam Takers using your utad ID and your password. You were sent an email with your login and password.

Select the download and training tab.

Follow the instructions to download Softest.

Laptop Requirements – see Exam Soft website

BEFORE EXAM DAY

1. IT IS YOUR RESPONSIBILITY TO FAMILIARIZE YOURSELF WITH YOUR COMPUTER EQUIPMENT AND THE SOFTEST SOFTWARE AND INSTRUCTIONS PROVIDED BY EXAMSOFT ON ITS WEBSITE PRIOR TO THE START OF YOUR EXAM. PLEASE ALLOW YOURSELF SUFFICIENT TIME TO BECOME FAMILIAR WITH YOUR LAPTOP AND THE APPLICATION.
2. Confirm that there is plenty of free hard drive space on your computer.
3. Ensure that your PC is virus-free.
4. Locate the A/C battery power indicator light on your laptop and confirm you can determine you are running on A/C power (i.e. power from a wall outlet).
5. Ensure that your battery has at least 20 minutes of charge in the event there is a temporary power outage during the exam.
6. Ensure that your computer's internal clock has the correct date and time. To verify the date and time, double-click the clock in the lower-right corner of your screen.
7. YOU MUST DOWNLOAD THE EXAM BEFORE THE DAY OF THE EXAM.
 - a. You will not be able to access the exam until you are given a code unique for the exam.

ON EXAM DAY

1. Bring your laptop, a fully charged battery, and a computer power cord (if applicable).
2. Use the instructions that will be provided to you on exam day to launch SofTest.

****Immediately before SofTest launches the exam, you will be provided a warning screen with RED STOP SIGNS indicating that you should not begin the exam until instructed to do so. Heed this warning.**

1. ANY ATTEMPT TO DISABLE OR TAMPER WITH SOFTEST'S SECURITY FEATURES WILL BE CONSIDERED A VIOLATION OF THE APPLICANT HONOR CODE.



2. Disable the sleep/hibernate mode on your computer during the exam. Some computers go into sleep/hibernate mode during extended periods of nonuse. During an exam, it can be difficult to exit this mode. Refer to the instructions for your operating system to modify these settings.
3. PLEASE NOTE THAT COMMENCEMENT OF THE EXAM WILL NOT BE DELAYED DUE TO A HARDWARE OR SOFTWARE PROBLEM WITH YOUR LAPTOP NOR WILL YOU BE PROVIDED ADDITIONAL TIME TO TAKE YOUR EXAM.
 - a. So if you did not download the exam in advance you will lose time for taking the exam.
4. If you encounter computer difficulty during the exam notify a proctor for instructions.
5. DO NOT UNINSTALL SOFTEST.

UNIVERSITY POLICIES

The University is an equal opportunity educational institution. Please read [The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.](#))

Academic Accommodations

The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would like information regarding academic accommodations/adjustments in this course please contact the [Student Disability Services Office.](#))

ACADEMIC POLICIES

*(Academic policies are the policies the student is expected to comply with; policies **may** include student conduct, academic dishonesty, missed class policy, student grievances, etc.)*

CLASSROOM PROCEDURES

Attendance, Absences, and Tardiness

The University of Toledo Missed Class Policy

This policy provides for basic protections and reasonable accommodations for students who miss class with excused absences. Students are expected to attend every class meeting of courses in which they are registered.

Only in specific, unavoidable situations does the University excuse absences from class: 1) personal emergencies, including, but not limited to, illness of the student or of a dependent of the student [as defined by the Board of Trustees' Policy on Family and Medical Leave], or death in the family; 2) religious observances that prevent the student from attending class; 3) participation in University-sponsored activities, approved by the appropriate University authority, such as intercollegiate athletic competitions, activities approved by academic units, including artistic performances, R.O.T.C. functions, academic field trips, and special events connected with coursework; 4) government-required activities, such as military assignments, jury duty, or court appearances; and 5) any other absence that the professor approves.

Students are responsible for complying with the missed class policies of their instructors. Students bear the responsibility of notifying the instructor of a planned absence by one of the methods provided by the instructor. In the event of an emergency or an unavoidably short notice of absence, the student must present the instructor with an approved written excuse upon the student's return to class. Approved written excuses will be at the instructor's discretion, including, but not limited to, doctor's notice, funeral programs, etc. It is strongly recommended that the student use two of the three aforementioned methods (email, writing, or voicemail) to insure that the instructor is properly notified of the planned absence. In the event that the instructor should not receive the student's notification, the student should be prepared to present an alternative excuse. It will be at the instructor's discretion



to approve or disapprove of the alternative excuse.

Students are responsible for all material covered in classes they miss, even when their absences are excused as defined above. Students must make arrangements with instructors to complete missed assignments, labs, examinations or other course requirements. In turn, instructors are not to penalize students with excused absences.

Policies on Late Work

It is up to the instructor as to the acceptance of assignments not completed by the deadline and each case will be evaluated individually

Drop / Withdrawal

The petition for withdrawal must be received in the Office of the Registrar, Rocket Hall, Room 1100, by the deadline date either: in person, fax, or mail. When mailing, the envelope must be postmarked by the deadline date. For the **fall** and **spring** terms, it must be filed between the 15th calendar day of the term through Friday of calendar week 10.

Academic Dishonesty

Academic dishonesty will not be tolerated. Among the aims of education are the acquisition of knowledge and development of the skills necessary for success in any profession. Activities inconsistent with these aims will not be permitted. Students are responsible for knowing what constitutes academic dishonesty. If students are uncertain about what constitutes plagiarism or cheating they should seek the instructor's advice. Examples of academic dishonesty include, but are not limited to:

- Plagiarizing or representing the words, ideas or information of another person as one's own and not offering proper documentation;
- Giving or receiving, prior to an examination, any unauthorized information concerning the content of that examination;
- Referring to or displaying any unauthorized materials inside or outside of the examination room during the course of an examination;
- Communicating during an examination in any manner with any unauthorized person concerning the examination or any part of it;
- Giving or receiving substantive aid during the course of an examination;
- Taking, converting, concealing, defacing, damaging or destroying any property related to the preparation or completion of assignments, research or examination;
- Submitting the same written work to fulfill the requirements for more than one course.

While academic integrity is particularly the responsibility of the student, the faculty members also have a responsibility. Assignments and tests should be constructed and proctored so as to discourage academic dishonesty. Faculty members are expected to inform their students explicitly as to what materials and procedures are authorized for use in the preparation of assignments or in examinations (e.g., the use of calculator, computer, text materials, etc.). Should cases of academic dishonesty be found among students, the instructor may choose to impose the following sanctions:

- The student may be assigned an F for the work in question.
- The student may be assigned an F for the course. In this case the instructor should inform the Dean and the student of this action. The Dean will make certain that the student receives the F grade and is not permitted to withdraw from the course.



- The student may be placed on probation or suspended for some definite period of time, dismissed or expelled by the Dean if either the seriousness of the offense or a record of repeated offenses warrants it. A notation that such a sanction has been imposed will be made part of the student's permanent record. It is expected that the Dean will consult with the instructor and the student in making such a judgment, and that the Dean will notify the student of the sanction imposed and of the appeals procedure.

A student found to be academically dishonest by a faculty member may appeal according to procedures approved by the respective colleges. The procedures for making a final appeal to the Student Grievance Committee may be found in the Student Handbook.

Classroom Courtesy

- The University has jurisdiction over any individual student, group of students or student organization alleged to have violated the Student Code of Conduct on the University of Toledo premises.
- Students must conduct themselves in a manner which is conducive to learning for themselves and others. Disruptive behaviors are not acceptable and may affect a student's final grade, or in severe cases result in a student being removed from class.
- Disruption of operations of the University Community. Disruption is an action or combination of actions by an individual or a group, which unreasonably interferes with, hinders, obstructs, or prevents the right of others to freely participate in its programs, services, or academic settings. This may include, but is not limited to a disruption by the use of pagers, cell phones and/or any other communication devices.
- The use of cell phones, pagers, iPods, MP3 players and such will not be permitted in the classroom. No pets are to be brought to the classroom.
- Students may audiotape lectures; otherwise, no A/V equipment or use of telephotoing is permitted.
- For issues pertaining to lecture content, contact the lecturer of the topic. For issues pertaining to grades, tests, lecture schedule, reading assignments, etc., contact either the instructor for the material or the course coordinator.

EXAMINATION REGULATIONS

A. Promptness - Students should be in the assigned **examination room** at the start of the class period. **No extra time** will be permitted for students who arrive late for an examination. Students who do arrive late, provided no previously arriving student has finished his/her examination and left the room, will be subject to **losing 1 point for each minute he/she is late**. However, **if a student arrives late, but after a previously arriving student has finished his/her examination and left the room**, the tardy student will be considered to have been absent from the examination and will be treated as described below in MAKEUP EXAMINATIONS.

B. Articles in Examination Room – Coats, hats, purses, notebooks, papers, books, book bags, telephones, electronic devices, pencil pouches/boxes, etc. are **NOT** permitted in the seating area during an examination **These items should be stored in your lockers or in the front, back or side of the classroom during exams**. The use of pagers, telephones, PDAs, or other electronic equipment including watches such as an Apple watch or MOTO 360 are not permitted to be used in any capacity during an examination and **must be turned off**.

The exception would be when Exam Soft is utilized for exams and laptops, chargers, mouse or tablet are permitted as required.

Students are required to have picture ID (UT or Driver's License) visible at their assigned seat during all exams.

C. Calculators can be used on examinations **only when permitted**.

The required calculator for this course is a TI-30X IIS. You will be expected to use this calculator for all exams and in class exercises. If you are using a different calculator it will be taken away from you and returned at the end of the exam or class. There is no sharing of calculators allowed on exams or quizzes. Bring the TI-30X IIS calculator with you to all class periods.



NOTE FOR ALL EXAMS: For exams please remove the cover prior to the time of the exam and leave it with your other belongings. The cover should not be at your seat. All exam proctors have the right to inspect calculators at any time if academic dishonesty of any kind is suspected.

- D. Violation of the Student Academic Code - Violation of the student academic code WILL NOT BE TOLERATED on any examination. Individuals accused of a violation will be prosecuted according to the policies and procedures of the College and University.
- E. Seating - Instructors in the Course reserve the right to seat individuals during examinations as they see necessary.
- F. Format of Examinations - The format of each examination is determined by the instructor(s) responsible for that section of lectures. Multiple choice, essay, true/false, fill-in, matching, or any combination of these may be utilized.
- G. Asking Questions - Technical questions (misspellings, missing a page, wrong numbering or lettering, etc.) will happily be answered during examinations. Any questions arising regarding interpretation of an exam question can be typed into the Notes Section of the exam question on Exam Soft.
- H. The use of dictionaries of any sort during examinations is prohibited.
- I. Consumption of food or beverages, the use or expectoration of chewing tobacco, smoking, or listening/viewing to audio/video equipment, is not permitted during examinations.
- J. Conversing with anyone other than instructors is not permitted once answer sheets and/or tests are being passed out or the Exam Soft password is provided to the class to initiate an exam or quiz. One may resume conversation once they have left the testing room. When speaking outside the classroom following an exam, voices should be at a level that will not disrupt those remaining who are still taking the exam.
- K. Items in one's possession during an examination are subject to inspection.
- M. During an exam or quiz students shall treat the exam material whether it is paper or electronic in a manner that does not allow or tempt other students to look at them. This would include provided cases, scratch paper, answer sheets, test booklets, laptops or tablets.
- N. **Students who request the use of the lavatory during an exam are subject to a 5 point deduction of their examination score.**
- O. If a class period, during which an exam or quiz was to be given, is canceled or interrupted, assume the exam or quiz will be given during the next scheduled class period if it is not completed on the assigned day.
- P. Grades can only be passed out directly to the student or mailed (via U.S. mail) directly to the student. Grades cannot be given over the phone, to a friend, or via email.
- **Grades are posted on to Black Board site once all grading is completed. Grades are not emailed to students.**

MAKEUP EXAMINATIONS & QUIZZES

- A. Unexcused absences resulting in a missed exam or quiz will result in a grade of **zero**.
- B. Makeup exams will only be administered for *excused* absences. Prior approval for an absence from an examination can only be obtained from acknowledged **direct contact** with the course coordinator. Post-exam approval for an excused absence from an examination must be sought out immediately upon the student's arrival back to school. Documentation of why the absence occurred will be required.
- C. Makeup examinations will be given either during Finals Week or as soon possible as determined by the instructor. A make-up exam may be given as oral recitation, written or a combination of the two at the discretion of the instructor(s).
- D. Makeup quizzes will not be offered for students who miss quizzes.
- Computer problems before the deadline are not a recognized excuse for missing a quiz
 - For IN-CLASS quizzes/activities - there will be no make-up offered for any missed quiz/activity for any reason
- E. Exceptions may be rarely possible with emergencies upon the discretion of the Course Coordinator.



Excused Absences

The student is responsible for informing Dr. Churchwell in advance by e-mail, voice mail, or pharmacy practice secretaries (383-1922) or (383-1951) or (383-1566), if the student intends to miss an exam. Using more than 1 method of notification is advised. Failure to inform the instructor in a reasonable time frame regarding the need to miss an examination will result in a failing grade for that examination.

Unexcused absences resulting in a missed exam or experience will result in a grade of zero. If a student should miss an examination, the student must contact the faculty in person the day the student returns to campus.

Excusable absences for examinations are stated in University policy and include things such as serious illness, death or serious illness of an immediate family member. Medical excuses require discharge orders, insurance billing statement, or reasonable documentation obtained from the ER/ medical center/ physician's office **on or before the day of the excused absence**). A handwritten physician note will not be accepted. The decision to excuse a student is at the discretion of the course faculty and course coordinator.

COURSE EXPECTATIONS

All assignments are expected to be completed by the deadline. Students are expected to complete the assigned readings and/or listen to the lecture captures prior to lecture.

GRADING POLICY/GRADING SCALE

A course average of 90-100% assures an A

A course average of 80-89.5% assures a B

A course average of 70-79.5% assures a C

A course average of 60-69.5% assures a D

A course average of ≤59.5% assures an F

COURSE GRADING

Description	Content	Percentage of Grade
Exam 1	Renal Physiology through Acid Base	30%
Exam 2	Acute Kidney Injury through RRT	30%
Exam 3	<i>CKD/RRT Drug Dosing</i>	30%
Homework and Quizzes		10 %
TOTAL		100%

See Course Schedule for lecture and exam dates

**Quiz and Homework Assignments will be scheduled by each Course Instructor

Bonus Point Opportunities

Approximately every 4 lecture hours an optional quiz will be posted on Black Board. Successful completion of each quiz with a minimum grade of 70% will count toward a bonus point on the Final Exam (Exam 3) as follows. The quiz must be completed by the assigned due date and time. Since each quiz is an optional quiz there will be no timeline extension or make-up quiz provided.



- 100% = 1(One) bonus question
- 90% = 0.9 (9/10) of a bonus question
- 80% = 0.8 (8/10) of a bonus question
- 70% = 0.7 (7/10) of a bonus question
- <70% = no credit

Re-Challenge Exam Policy: PPHR 6300

a. Policy Statement

The Course Coordinator for PPHR 6300 at the University of Toledo, College of Pharmacy and Pharmaceutical Sciences (UT CPPS) may offer a re-challenge exam to students who achieve failing grades.

- b. Purpose of Policy: To provide guidance on criteria and procedures for when a student may be offered a re-challenge exam in PPHR 6300.
- c. Scope: This policy applies to all professional division pharmacy students enrolled in PPHR 6300 and at the University of Toledo College of Pharmacy and Pharmaceutical Sciences who meet the criteria for a re-challenge exam.
- d. Re-Challenge Exam
 - 1. Re-Challenge Exam is a cumulative exam consisting of questions taken from all course material
 - 2. The exam content and delivery method will be at the discretion of the course coordinator
 - 3. The date, time and location of such exam will be at the discretion of the course coordinator.
 - 4. Passing grade for a re-challenge exam is a minimum of 80%.
- e. Procedures for Re-Challenge Exam - PPHR XXXX (Integrated Module #)
 - Students are eligible to sit for a re-challenge exam if they meet all of the following criteria:
 - 1. A final course grade of "D" (60-69.5%) as determined by the course grading stated in the course syllabus.
 - 2. Final course grade of "D" (60-69.5%) was due to a failing grade (< 70%) on one examination during the course.

A student is **NOT** eligible to participate in re-challenge if they have:

- a. Achieved a final course grade below 60%
- b. Achieved < 70% on more than one exam
- c. Achieved a grade less than C in 3 or more courses within the academic semester

COMMUNICATION GUIDELINES

Appointments outside of office hours need to be scheduled with each instructor via email. Generally responses to email will occur within 24 hours with the exception of holidays and weekends. Students are expected to practice business appropriate etiquette in all communications with faculty.

STUDENT SUPPORT SERVICES

The Academic Enrichment Center, located on the west end of the fifth floor, provides study skill and time management training, assigns student tutors, and handles student ADA issues. While the AEC is not officially part of the University Libraries, its location in the Mulford Health Science Library places it in the ideal location to assist students. <https://www.utoledo.edu/library/mulford/floorplans/floor5/acadenrich.html>

COURSE SCHEDULE

Week	Day	Topic	Discipline		Notes	Learning Outcome
1	Wed	Renal Physiology	PHCL		Physiology review workbook posted prior to semester	SLO 1
1	Wed	Diuretics	PHCL		Review diuretics and application to Kidney disease	SLO 1 & 2
1	Fri	Glomerular filtration & Renal hemodynamics Fluids	PHPR		Lecture and Cases	SLO 1, 2 & 3
1	Fri	Electrolytes: Sodium	PHPR		Hypo & Hypernatremia cases	SLO 2, 3 & 4
2	Wed	Potassium, Magnesium, Calcium & Phosphorus Lecture Potassium & Calcium	PHPR		Magnesium and Phosphorus Echo recordings Cases: Potassium, Magnesium, Calcium, Phosphorus	SLO 2, 3 & 4
2	Wed	Acid/Base In class cases and problem solving examples/cases	PHPR		Basic concepts review with Echo In class activities and cases In class problems with explanations	SLO 2, 3 & 4
3	EXAM 1					
Week	Day	Topic	Discipline		Notes	
2	Fri	AKI Alterations to hemodynamics Supportive therapy	PHPR		Pre-renal, intrinsic, post-renal, hospital & community examples OTC & Rx examples	SLO 1, 2, 3, 4 & 5
2	Fri	CKD (pathophysiology, epidemiology, etiology, assessment and risk factors)	PHPR		General overview and treatment goals	SLO 2, 3, 4 & 5
3	Wed	CKD – (diabetes, HTN, lipid, and fluid management) Lipids, Restless leg syndrome, Uremic bleeding, Nutrition	PHPR		Cases and class activities	SLO 2, 3, 4 & 5
3	Wed	CKD – Anemia	PHPR		Lecture Cases	SLO 2, 3, 4 & 5
3	Fri	CKD- Mineral Bone Disorder	PHPR		Lecture Cases	SLO 2, 3, 4 & 5
EXAM 2						

Week	Day	Topic	Discipline		Notes	
3	Fri	Renal Replacement Therapy (HD & PD)	PHPR		Lecture	SLO 2, 3, 4 & 5
4	Wed	CKD and RRT Influences on Drug Dosing	PHPR		Lecture Cases plus	SLO 2, 3, 4 & 5
4	Wed	Drug Induced Nephropathies/ Glomerulopathy	PHPR		Lecture Cases	SLO 2, 3, 4 & 5
4	Fri	Gout, Hyperuricemia & Nephrolithiasis	PHPR		Lecture Cases	SLO 2, 3, 4 & 5
EXAM 3						

Note: the lecture schedule and readings are subject to change.

Main textbook readings— Pharmacotherapy: Principles and Practice 3rd Edition

**SR - Supplemental Readings: Harrison's Principles of Internal Medicine 19th edition (online through Access Pharmacy)

**SR1 Supplemental Reading 1 Pharmacotherapy: A Pathophysiologic Approach 9th edition (online through Access Pharmacy)

*FC – Flipped Classroom