

PHAR 6220
PEDIATRIC DRUG THERAPY
Spring Semester 2020

COURSE INFORMATION

2 credits

Tuesdays, 8:00 am – 9:55 am

Moos Tower 1-451

Life Science 163

COURSE DIRECTOR:

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OFFICE HOURS:

Call

COURSE FACULTY

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COURSE DESCRIPTION

Phar 6220 is a 2 credit elective course directed towards 3rd year pharmacy students who want to expand upon their knowledge base with respect to pediatric pharmacotherapy. This course consists of lectures and small group case discussions designed to provide the student with a foundation in pediatric pharmacotherapy to build upon. The goal of the course is to give students an introduction to pediatric pharmacotherapy and an understanding of its basic principles.

COURSE GOALS AND OBJECTIVES

Phar 6220 is an elective course on the pathophysiology and therapeutics of disease states and common issues encountered in providing pharmaceutical care to pediatric patients. The goals of this course are to:

1. Provide an understanding of the pathophysiology associated with disease states commonly encountered in pediatric medicine including medical consequences of premature birth, selected infectious diseases, pediatric cardiovascular disease, leukemia, sickle cell disease, cystic fibrosis, pediatric emergency medicine and over the counter therapy in pediatrics.
2. Provide a firm knowledge base of the pharmaceutical products and pharmacotherapy decisions required to provide pharmaceutical care to pediatric patients.
3. Apply pharmacokinetic models and pharmacodynamic variables to calculate medication dosage adjustment in pediatric patients.
4. Apply the principles of the Pharmacist's Work-up of Drug Therapy in pediatric patients with the disorders listed above.

PEDAGOGICAL GOALS and TOOLS

To have you participate in your own education. In order to be successful in this course you need to:

- Come prepared to class:
 - Read assigned readings for large group instruction
 - Be prepared for weekly quizzes from the previous week's class
 - Submit completed patient cases on time before small group discussions
- Participate in small group discussions:
 - Contribute in discussing treatment options and monitoring plans for patient cases which will presented during small group discussions
- Seek help when you need it!

Pedagogical Tools (pedagogy = art and science of teaching)

- **Pharmaceutical Care cases:** to help you develop problem-solving skills for pediatric patients with multiple problems and issues. Nine patient cases will be assigned during the course. The first case will be worked up as a group assignment. Each student will work up eight of the remaining cases prior to the small group discussions and upload their completed patient cases to the class website before the small group discussion.

COURSE PREREQUISITES:

This course is open to students in their third year of the curriculum.

REQUIRED TEXTBOOKS:

Koda-Kimble and Young's Applied Therapeutics: The Clinical Use of Drugs. 10th Edition. Brian K. Alldredge. Philadelphia: Lippincott Williams and Wilkens.

READINGS:

Selected articles have been designated as required and suggested readings. Required reading assignments are those that have particular relevance to the classroom material. Exam questions may come from required readings, even though the specific information may not have been covered by the instructor in class. Suggested readings are those that help give the student additional perspective towards a particular topic. These may be helpful references for future use.

COURSE REQUIREMENTS AND EXAM POLICY:

Exams:

Three exams will be offered during this course. The exams will cover the information contained in the required readings and lecture materials; with 4 exam points per hour of classroom instruction. The exams are non-cumulative. Exam #1 will include material covered through February 11th. Exam #2 will include material covered through March 24th. Exam #3 will include material covered after exam #2 and the end of the course. Exam #3 will be given during the last week of instruction, on May 5th. Each exam will consist of multiple choice questions and/or case-based, short answer questions. Exams are "closed book" exams and the use of calculators/personal data assistants will not be allowed. If, due to scheduling conflicts, you need to change the date of the exam, you must contact the course director at least one week in advance of the scheduled exam to arrange an alternate time and location. If you would like to submit your examination for re-grade, you need to submit your original test, with a sheet that details the

question number and reasons why you feel your answer is correct within one week from the date when tests are handed back.

Homework Assignments:

Students will work up a total of 9 patient cases during the semester. Patient cases will be discussed in the student’s small discussion group which meets 5 times during the semester. Each case is worth 8 points.

During the first small group session on February 11, the entire group will work up and submit a single case together. For the remaining small group discussions, students will receive two patient cases per small group discussion to work up outside of class prior to the small group discussion. Students will upload their completed cases to the class website for grading prior to the small group discussion.

Small group leaders will facilitate discussion about the assigned cases and review treatment options with their small group. Graded cases will be either posted on the course website or emailed directly back to the student.

Daily Quizzes:

With the exception of week 1 and exam dates, at the start of each class (or at the start of the 2nd hour of class following small group discussions) a three point quiz will be given. The quiz will cover the material presented at the previous week’s class. Students who are late to class, or who have not been previously excused from class will not be able to make up these quizzes. A total of 11 quizzes will be given, but only 9 will be used towards the student’s overall grade. The student may drop their lowest quiz score.

GRADING INFORMATION

The grade for this course will be determined by the results of 10 quizzes given at the start of each class, five small group discussions and three exams:

Nine quizzes:	27 points
Nine cases:	72 points
Exam #1:	26 points
Exam #2:	28 points
Exam #3:	28 points
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Total Points	181 points

A minimum passing level for the course is 60%.

Small group discussions:

Letter Grades Are:	≥93	A
	90-92.9	A-
	87-89.9	B+
	83-86.9	B
	80-82.9	B-
	77-79.9	C+
	73-76.9	C
	70-72.9	C-
	67-69.9	D+
	60-66.9	D
	<60	F

MAKE-UP POLICY

University policy recognizes that there are a variety of legitimate circumstances in which students will miss coursework, and that accommodations for makeup work will be made. This policy applies to all course requirements, including any final examination. Students are responsible for planning their schedules to avoid excessive conflicts with course requirements. The University policy is located at:

<https://policy.umn.edu/education/makeupwork>

HONOR CODE

Each student is bound by the following specific provisions as part of the honor code: Academic misconduct is any unauthorized act which may give a student an unfair advantage over other students, including but not limited to: falsification, plagiarism, misuse of test materials, receiving unauthorized assistance and giving unauthorized assistance. Specifically, each student will be required to do her/ his own work on all assessments unless otherwise stated.

DISABILITY ACCOMMODATIONS

Students with a documented disability (eg. physical, learning, psychiatric, vision, hearing, etc.) already registered with the Disability Resource Center must contact the course director within the first week of class to discuss your accommodations. Accommodations take advance planning to implement. Students who do not present documentation from Disability Services a minimum of one week before an assessment will adhere to original/traditional expectations for that assessment. Please contact Disability Services to quantify and arrange the necessary accommodations:

Twin Cities: <http://ds.umn.edu/> 612-626 1333

Duluth: <http://www.d.umn.edu/access/> 218-726-8217

All discussions concerning this issue will remain confidential. English as a second language is not considered a disability by the College of Pharmacy and this course will not accommodate requests for additional exam time based on this criterion. Any student with a documented disability who needs to arrange reasonable accommodations must contact the Course Director (624-1900) and Disability Services (626-1333) at the beginning of the semester. All discussions will remain confidential.

Minneapolis Campus

Disability Services

McNamara Alumni Center

200 Oak St SE Suite

Minneapolis, MN 55455

612-626-1333

www.ds.umn.edu/students/

Duluth Campus

Disability Services

256 Kirby Student Center

180 1120 Kirby Drive

Duluth, MN 55812

218-726-8217

www.d.umn.edu/access/

CLASSROOM ETIQUETTE

You signed the following statement upon accepting a class place in the University of Minnesota College of Pharmacy:

I hereby affirm that I have read and understood the provisions and stipulations of the University of Minnesota Pharmacy Student Code of Ethical Responsibility and Professional Behavior.

The Code was established in the belief that central to any intellectual and professional endeavor is an atmosphere of mutual trust and respect, based on individual maintenance of community standards. Your professional community starts here...at the College of Pharmacy with your peers, faculty, preceptors, staff and administration. It is our expectation that you will exhibit professional behavior towards other students and to faculty in the classroom at all times. In turn, we will treat you with the professional respect you deserve.

Specifically,

1. We expect you to arrive on time to class as walking in late is very disruptive to your classmates. If you are habitually late without an appropriate reason, we will ask you to take the class another time when it fits into your schedule better.
2. If you need to leave early, please sit in the back right next to the aisle, so your departure will be less disruptive to your classmates.
3. We expect that there will be no conversation once class has begun, except during the time periods allotted for case discussion. Side conversations not only break the concentration of your fellow students but also your course faculty. We will ask you to take your conversation outside of the classroom if we notice that you (or a group of students) habitually talk during class.
4. We expect that you will pack up your books after class has officially ended. We will be giving you instructions on new assignments during this period, and it is important that everyone can hear those instructions. In turn, we will promise to end the class on time.
5. On exam days, students must be seated with at least one open seat between students. Backpacks will not be allowed on the tables where the students are completing their exams.

COURSE INSTRUCTOR and CLASS INSTRUCTOR EVALUATIONS

Students will have an opportunity to complete a course evaluation at the end of the semester. Feedback for individual instructors will be solicited after each instructor's class. Student feedback is reviewed annually to incorporate changes to improve the course.

PHAR 6220: Pediatric Drug Therapy

MoosT 1-451 / 163 Life Science

Tuesdays; 8:00 am – 9:55 am

Date	Topic	Quiz	Instructor
Jan 21	Foundation Skills Drugs to avoid in pediatrics Pediatric compliance Maturational Changes in Organ Development Absorption, Distribution, Metabolism, Excretion	--	Paul Jensen, PharmD, BCPPS
Jan 28	Neonatal Pulmonary Disease Bronchopulmonary dysplasia Apnea of prematurity Respiratory Distress Syndrome	#1	Hannah Mortland, PharmD Katie Meyers, PharmD, BCPPS
Feb 4	Sickle cell disease Pertussis / Pneumonia	#2	Jennifer Lissick, PharmD, BCPS Kati Munson, PharmD, BCPPS
Feb 11	Small Group Case: Neonatal RDS Gastroenteritis / Dehydration	#3*	-- Kayla Huebner, PharmD
Feb 18	Exam #1 Cystic Fibrosis	--	-- Torie Engle, PharmD
Feb 25	Neonatal Infectious Disease Group B streptococcal infections Neonatal meningitis Neonatal bacteremia/sepsis Necrotizing enterocolitis	#4	Nicole Loudon, PharmD Maren Van Mieghem, PharmD
Mar 3	Small group cases: CF / Neo ID Leukemia	#5*	-- Kim Maxa, PharmD, BCOP
Mar 10	Spring break		

Mar 17	Pediatric Infectious Diseases: Cellulitis Osteomyelitis Return of vaccine preventable diseases Fever without a source	#6	Leigh Furman, PharmD Christina Koutsari, PharmD, PhD
Mar 24	Small group cases: Leukemia / Peds ID Bronchiolitis / Croup	#7*	-- Jeff Pykkonen, PharmD
Mar 31	Exam 2 ADHD	--	-- Patricia Tran, PharmD
Apr 7	Pediatric Cardiovascular Disease Congenital heart defects Pediatric dysrhythmias (SVT) Pediatric hypertension	#8	Kayla Huebner, PharmD David Hoff, PharmD, BCPPS
Apr 14	Small Group Cases: ADHD / Peds CV Pediatric Emergencies Status asthmaticus Anaphylaxis Rapid sequence intubation	#9*	-- Ted Simper, PharmD, BCPS
Apr 21	Pediatric Seizures Hemolytic Uremic Syndrome/ Kawasaki Syndrome	#10	Mary Gustafson, PharmD, BCPS Mike Raschka, PharmD, BCPPS
Apr 28	Small Group Cases: Peds ER / Seizures Use of OTCs in Pediatrics	#11*	-- Raylesha Creighton-Lewis, PharmD, BCACP, BCPPS
May 5	Exam #3		

*Quizzes on days of small groups will be given at 9:05 am, at the start of the 2nd hour of class.