PHAR 6220
PEDIATRIC DRUG THERAPY
Spring Semester 2017

COURSE INFORMATION
2 credits
Tuesdays, 8:00 am – 9:55 am
Moos Tower 1-451
160 Life Science

COURSE DIRECTORS:
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Call

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Instructors:

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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, issues related to pain and sedation, common childhood malignancies, pediatric psychiatric illnesses, cardiovascular disease and enteral nutrition.

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 and class lectures
  - Submit completed patient cases on time before small group discussions
- Participate in class
  - 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. Ten patient cases will be assigned during the course. Each student will work up all of the 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:

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 Feb 7th. Exam #2 will include material covered through March 7th. 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:
You will be given 10 patient cases as homework assignments throughout the semester to work on outside of class. Each patient case is worth 8 points. We expect you to come prepared to small group discussions with your answers to the patient cases. Each student will upload completed homework assignments via the class website before the start of the small group session. The website will not accept late homework assignments. Small group leaders will facilitate discussion about the assigned cases and review treatment options with their small group.

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 10 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:
Ten quizzes: 30 points
Ten cases: 80 points
Exam #1: 26 points
Exam #2: 24 points
Exam #3: 32 points
Total Points 192 points

A minimum passing level for the course is 60%.

Small group discussions:
Five small group discussions have been scheduled for the semester. Two patient cases will be reviewed at each of the small group discussions. Graded cases will be either posted on the course website or emailed directly back to the student.

Letter Grades Are:

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<thead>
<tr>
<th>Grade</th>
<th>Description</th>
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<tbody>
<tr>
<td>≥93</td>
<td>A</td>
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<tr>
<td>90-92.9</td>
<td>A-</td>
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<td>87-89.9</td>
<td>B+</td>
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<td>83-86.9</td>
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<td>80-82.9</td>
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<td>&lt;60</td>
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MAKE-UP POLICY
Make-up exams will be given only under the following circumstances: illness verified by a note from a physician; a family emergency verified by a note from the professional in attendance; or a University-sponsored event verified by a note from the leader of the sponsoring organization in advance of the event or absence. If the conflicting event is scheduled in advance, the student must notify the course director at least 1 week in advance of the scheduled exam to arrange an alternate time and location. There are no terms for an incomplete grade.

HONOR CODE
Each student is bound by the following specific provisions as part of the 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 exam materials, receiving unauthorized assistance and giving unauthorized assistance. Each student will be asked to sign a cover sheet on the course exams. Specifically, each student will be required to do their own work on the course exams. Students are expected to work on patient cases and care plans individually. However, if a student gets stuck with a particular patient case, it is acceptable for him/her to seek advice from another student.

DISABILITY ACCOMMODATIONS
Any student with a documented disability (e.g. physical learning, psychiatric, vision, hearing etc.) 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.
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.
<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Quiz</th>
<th>Instructor</th>
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| Jan 17  | Foundation Skills  
Drugs to avoid in pediatrics  
Dosing strategies  
Pediatric compliance  
Maturational Changes in Organ Development  
Absorption  
Distribution  
Metabolism  
Excretion | --               | Paul Jensen, PharmD, BCPPS |
|         |                                                                      |      | Jacob Brown, MS, PharmD      |
| Jan 24  | Neonatal Pulmonary Disease  
Bronchopulmonary dysplasia  
Apnea of prematurity  
Respiratory distress syndrome | #1   | Katie Meyers, PharmD         |
| Jan 31  | Neonatal Infectious Disease  
Neonatal host defenses  
Neonatal bacteremia/sepsis  
Group B streptococcal infections  
Neonatal meningitis  
Neonatal fungal infections  
Neonatal viral infections: HSV, CMV, HIV | #2   | Amy Gisslen, PharmD          |
| Feb 7   | Small Group Cases: Neo  
Pulmonary / Neonatal ID  
Cystic Fibrosis | #3*  | Small Group Discussions      |
|         |                                                                      |      | Lisa Stay, PharmD, BCPPS     |
| Feb 14  | Exam #1 (26 points)  
Patent Ductus Arteriosus / Necrotizing Enterocolitis | --   | --                          |
|         |                                                                      |      | Monica Premsukh, PharmD      |
| Feb 21  | Pediatric Cardiovascular Disease  
Congenital heart defects  
Pediatric dysrhythmias  
Pediatric hypertension | #4   | Jennifer Lissick, PharmD, BCPS |
| Feb 28  | Small Group Cases: PDA / CV  
Management of Childhood Seizures  
Infantile spasms  
Lennox Gastaut syndrome  
Childhood absence epilepsy  
Focal onset seizures | #5*  | Small Group Discussions      |
<p>|         |                                                                      |      | Mary Gustafson, PharmD, BCPS |</p>
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<th>Date</th>
<th>Topic</th>
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<th>Instructor</th>
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<tr>
<td>Mar 7</td>
<td>Pediatric Infectious Diseases:</td>
<td>#6</td>
<td>Sarah Schuchard, PharmD</td>
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<tr>
<td></td>
<td>Cellulitis</td>
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<td>Fever without a source</td>
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<td>Osteomyelitis</td>
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<td>Menningococcal disease</td>
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<td>Mar 14</td>
<td>Spring Break</td>
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<td>Mar 21</td>
<td>Small Group Cases:</td>
<td>#7*</td>
<td>Small Group Discussions</td>
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<td>Peds ID / Seizures</td>
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<td>Lydia Kouletsis, PharmD</td>
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<td>Sickle Cell Disease</td>
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<td>Mar 28</td>
<td><strong>Exam #2 (24 points)</strong></td>
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<td>Lower Respiratory Tract Infections</td>
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<td>-- Kati Munson, PharmD</td>
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<td>Apr 4</td>
<td>Small Group Cases:</td>
<td>#8*</td>
<td>Small Group Discussions</td>
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<td></td>
<td>Sickle Cell Disease / LRT Infections</td>
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<td>Jacob Brown, MS, PharmD</td>
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<td>Bronchiolitis / Croup</td>
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<td>Apr 11</td>
<td>Pediatric Emergencies</td>
<td>#9</td>
<td>Ted Simper, PharmD, BCPS</td>
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<td>Status asthmaticus</td>
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<td>Anaphylaxis</td>
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<td>Rapid sequence intubation</td>
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<td>Diabetic ketoacidosis</td>
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<td>Chemical restraint</td>
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<td>Apr 18</td>
<td>Small Group Cases:</td>
<td>#10*</td>
<td>Small Group Discussions</td>
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<td>Bronchiolitis / Pediatric Emergency</td>
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<td>Torie Grover, PharmD</td>
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<td>Hemolytic Uremic Syndrome / Kawasaki Syndrome</td>
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<td>Apr 25</td>
<td>Use of OTCs in Pediatrics</td>
<td>#11</td>
<td>Raylesha Creighton-Lewis, PharmD, BCACP, BCPPS</td>
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<tr>
<td>May 2</td>
<td><strong>Exam #3 (32 points)</strong></td>
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*Quizzes on days of small groups will be given at 9:05 am, at the start of the 2nd hour of class.