Pediatric Pharmacotherapy Elective
PHA 538
2 credits

Fall Semester 2018

Nesbitt School of Pharmacy
Wilkes University

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**Course Description / Overview:**
This course is designed to expand the student’s current knowledge base regarding the pediatric population and to introduce the core concepts involved in the care of special populations. The course is provided to prepare students to identify and address drug related problems in pediatric patients and to demonstrate competency within those areas. This will be accomplished by completion of case scenarios, actual patient cases, and open-book examinations. A seminar approach with hands-on experiences will be used when possible, including at least one planned calculations exercise and site visit to The Children’s Hospital of Philadelphia. All lectures will employ active learning processes to help solidify these core concepts.

This course will be open to students in the P2 and P3 years.

**Course Outcomes:**
1.1.1 Demonstrate skills in mathematics for accurate prescription preparation, analysis of bio-physical processes and/or socioeconomic data.
1.1.4 (4) Demonstrate knowledge of drug mechanisms of action and toxicities.
1.1.5 (5) Demonstrate knowledge of physiochemical, pharmacokinetic, and pharmacodynamic principles underlying drug disposition and elimination.
1.2.3 (12) Determine the appropriateness of drug doses, dosage forms, routes of administration, and frequencies of administration.
1.2.4 (13) Perform calculations required to compound, dispense, and administer medications.
1.3.3. (20) Utilize professional treatment guidelines.
1.5.2 (27) Explain the purpose / indication for drug therapy.
1.5.3 (28) Calculate and interpret population and individual pharmacokinetic and pharmacodynamic data.

**Course Objectives:**
Following completion of the course, students will be able to:
1. Understand the basic age-specific pharmacokinetic and pharmacodynamic principles that are exhibited by various pediatric patients.
2. Understand the mechanism of action and rationale for the use of various drugs (prescription and over-the-counter) in the management of the different disease states discussed.
3. Formulate and critically evaluate pharmacotherapy plans for pediatric patients, in terms of:
   a. Efficacy
   b. Safety
   c. Cost
4. Display appropriate interprofessional communication skills required for valuable “teamwork” and collaboration critical to the attainment of optimal patient care.
**Class Meeting Times / Room Assignments:**
Class will be Wednesdays from 4-5:50pm (unless otherwise specified). Room assignment is TBD.

**Texts / Computer / Materials Requirements:**
**Reading assignments**: All assignments for lectures, cases, examinations will be communicated and provided either through computer technology (email or Blackboard®) or provided in hard-copy at specific class times.

**Recommended textbook**: Pediatric & Neonatal Dosage Handbook by Taketomo, et al., Lexi-Comp. This text is also available as PDA software. **Handouts and test materials**: The Powerpoint® and/or Prezi® slides utilized by the instructors will be made available to the class, but will only serve as an outline for class discussion – much of the important information pertinent to the specific class will come from classroom discussion. Therefore, any material presented in class, whether on the provided handout or not, MAY be included in examinations.

**Attendance / Student Attire / Professional Courtesy:**

**Attendance**: Class attendance is mandatory. There will be no makeup of quizzes or tests for unexcused absences, and a grade of zero will be given. In circumstances where the absence is excusable, the students must contact Dr. Ramsey at least one-hour before class (email with time stamp appropriate). Make-up assignments for these cases will be given at the discretion of the instructors. Students must be punctual to all class meetings as a courtesy to the instructor.

**Dress Code**: Appropriate dress is expected at all times. Professional dress is required for the formal presentation of the outreach group project. Professional dress is defined in the Pharmaceutical Care Lab syllabus. Failure to dress appropriately will not be tolerated, and may incur a reduction in class participation grade or outreach project grade.

**Cell Phones**: All cell phones, pagers, etc. are to be turned off and put away during class!

**Expectations for Class Preparation / Participation**: As stated above, all lecture materials will be provided either prior to the lecture via electronic dissemination or in hardcopy immediately prior to the lecture. The course instructors will provide sufficient time at the conclusion of their lecture to address any questions from students or revisit any lecture points that require clarification. Student participation is fundamental to the success of this course. Faculty will engage students in discussions, and correspondingly, students will be called on and expected to participate in daily learning activities and respond when called upon.
**Academic Honesty:**

Any violation of the Intellectual Responsibility and Plagiarism Policy, as stated in the University Handbook, will be subject to disciplinary action. This action may include failure of the course (see student handbook for additional information).

**Course Grading Criteria:**

The total number of points possible for the course is 100, from class participation, a calculations exercise, a drug information exercise, outreach group project, and two exams [midterm (take-home, open notes) and final (in-class, closed, not cumulative)]. The breakdown is as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class participation / attendance</td>
<td>10</td>
</tr>
<tr>
<td>Calculations exercise</td>
<td>10</td>
</tr>
<tr>
<td>Drug Information exercise</td>
<td>10</td>
</tr>
<tr>
<td>Outreach project (group)</td>
<td>20</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>25</td>
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<tr>
<td>Final Exam</td>
<td>25</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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**Final grade:** The student is guaranteed the following letter grades by accumulation of the following point totals:

- 4.0 = 93 – 100 accumulated points
- 3.5 = 87 – 92 accumulated points
- 3.0 = 80 – 86 accumulated points
- 2.5 = 75 – 79 accumulated points
- 2.0 = 70 – 74 accumulated points
- 1.5 = 65 – 69 accumulated points
- 1.0 = 60 – 64 accumulated points
- 0.0 = <60 accumulated points

**Course Evaluation:**

Regular course and instructor evaluations are required by state, university, college and national accreditation agency regulations. Furthermore, this feedback is necessary to improve the course content, direction, and future students’ learning. Safeguards will be implemented, as needed, to ensure that all responses are completely anonymous.
Course Topics / Schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Hour</th>
<th>Topic</th>
<th>Lecturer</th>
</tr>
</thead>
<tbody>
<tr>
<td>27-Aug</td>
<td></td>
<td>Introduction</td>
<td>Ramsey</td>
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<tr>
<td>3-Sep</td>
<td>1</td>
<td>Calculations / Admin Nutrition</td>
<td>TBD</td>
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<tr>
<td>10-Sep</td>
<td></td>
<td>ID</td>
<td>Dillinger</td>
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<tr>
<td>17-Sep</td>
<td></td>
<td>Pregnancy and Lactation</td>
<td>Erush</td>
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<tr>
<td>24-Sep</td>
<td>1</td>
<td>Drug Information</td>
<td>McIntyre</td>
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<td></td>
<td>2</td>
<td>GI</td>
<td></td>
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<tr>
<td>1-Oct</td>
<td></td>
<td>Neurology</td>
<td>Collier</td>
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<tr>
<td>7-Oct</td>
<td></td>
<td>TBD</td>
<td>TBD</td>
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<tr>
<td>15-Oct</td>
<td>1</td>
<td>Heme/Sickle Cell Dz</td>
<td>Martino</td>
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<td></td>
<td>2</td>
<td>Immunizations</td>
<td></td>
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<tr>
<td>22-Oct</td>
<td></td>
<td>Pulmonology</td>
<td>Jones</td>
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<tr>
<td>29-Oct</td>
<td>1</td>
<td>OTC / Self Care</td>
<td>Heindel / Ramsey</td>
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<tr>
<td></td>
<td>2</td>
<td>Outreach Project</td>
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<tr>
<td>5-Nov*</td>
<td></td>
<td>Toxicology</td>
<td>Trella</td>
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<tr>
<td>12-Nov</td>
<td></td>
<td>Pediatric Critical Care</td>
<td>Hughes</td>
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<tr>
<td>19-Nov*</td>
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<td>Neonatology</td>
<td>Bodenstab</td>
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<td>26-Nov</td>
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<td>Thanksgiving Break</td>
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<tr>
<td>3-Dec</td>
<td></td>
<td>Pediatric Cardiology</td>
<td>Ramsey</td>
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*denotes likely distance lecture