COURSE INFORMATION
CARDIOPULMONARY THERAPEUTICS
30:725:460
FALL 2015

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Textbooks:
Pharmacotherapy: A Pathophysiologic Approach, 9th ed.
Edited by DiPiro, et al.

Pharmacotherapy: A Patient-Focused Approach, 9th ed.
Edited by Schwinghammer, et al.

**Note both textbooks are available on AccessPharmacy via Rutgers Libraries.**

Course Objectives:

Students completing Cardiopulmonary Therapeutics will be able to demonstrate the following competencies:

I. Pharmaceutical Care
   a. Provide patient-centered care: design, implement, monitor, evaluate, and adjust pharmaceutical care plans that are patient-specific and evidence-based.
      i. Identify, obtain, and evaluate patient information including medication, laboratory, and disease state histories.
      ii. Identify and/or use instruments and techniques related to patient assessment and diagnosis.
      iii. Identify and define the terminology, signs, and symptoms associated with diseases and medical conditions.
iv. Identify and evaluate patient factors, genetic factors, biosocial factors, and concurrent drug therapy that influence the maintenance of wellness and the prevention or treatment of a disease or medical condition.

v. Identify specific mechanisms of actions, uses, and indications for drug products.

vi. Evaluate drug therapy for the presence of pharmacotherapeutic duplications and interactions with other drugs, food, diagnostic tests, and monitoring procedures.

vii. Identify contraindications, warnings, and precautions associated with a drug product’s active and inactive ingredients.

ix. Interpret and apply pharmacodynamic and pharmacokinetic principles to calculate and determine appropriate drug dosing regimens.

x. Interpret and apply biopharmaceutic principles and the pharmaceutical characteristics of drug dosage forms and delivery systems, to assure bioavailability and enhance patient compliance.

xi. Identify pharmacotherapeutic outcomes and endpoints.

xii. Assess and evaluate patient signs and symptoms and results of monitoring tests to determine achievement of desired outcomes and to assess for adverse reactions and recommend appropriate pharmacotherapeutic alternatives.

xiii. Assure safe and accurate preparation and dispensing of medications.

b. Provide population-based care: develop and implement population-specific, evidence-based disease management programs and protocols based upon analysis of epidemiologic and pharmaco-economic data, medication use criteria, medication use review, and risk reduction strategies.

i. Provide medication therapeutic management.

iii. Interpret epidemiologic and pharmaco-economic data relevant to specific diseases and their management.

c. For patient-centered and population-based care:

iii. Retrieve, analyze, and interpret the professional, lay, and scientific literature to provide drug information to health care providers, patients, and to the public.

iv. Identify and analyze emerging issues, products, and services that may impact patient or population-based therapeutic options.

III. Professionalism: exhibit professional attitudes and behaviors.


b. Establish and maintain professional, ethical, compassionate, and caring relationships with patients.

c. Respect the autonomy, dignity, values, and confidentiality of each patient.

f. Act as an advocate to advance the profession of pharmacy.

i. Demonstrate awareness of key issues and debates in healthcare.

g. Act with honesty and integrity in professional relationships.

h. Maintain professional competence.

IV. Public Health

a. Provide health care information regarding nutrition, lifestyle, and other non-drug measures that are effective in promoting health or preventing or minimizing progression of a disease or medical condition.

b. Provide information regarding the documented uses, adverse effects, and toxicities of dietary supplements.

c. Provide health care information regarding the prevention and treatment of diseases and medical conditions, including emergency patient care.

d. Provide information regarding the selection, use, and care of medical/surgical appliances and devices, self-care products, and durable medical equipment, as well as products and techniques for self-monitoring of health status and medical conditions.

e. Promote wellness, health improvement, and disease prevention in collaboration with patients, communities, at-risk populations, and other members of an interdisciplinary team of health care providers.

f. Identify at-risk patients and populations for screenings and preventive care interventions.

Specific learning objectives will be provided for each lecture; however, all lectures/course assignments and exams are designed to emphasize the above general professional competencies.
Internet Aspects of the Course:

This course requires some activities on the internet using Sakai. All students registered for Cardiopulmonary Therapeutics will automatically be able to access the course when logged into Sakai. The address is:

https://sakai.rutgers.edu

To log in, simply use your Rutgers NetID and password. Once at “My Workspace” look for Cardiopulm F15 among the tabs along the top of the screen. Clicking on the “Cardiopulm F15” tab will bring you to the home page for the course.

Handouts:

Handouts for the course will be posted on the Sakai website. It is the student’s responsibility to print a copy of the lecture handout prior to coming to class.

Quizzes:

Self-study quizzes will be available on the Sakai website for most topics covered in the course for the entire time a module is being taught. The questions are derived from the assigned reading from each chapter. Students may elect to take these quizzes, however they DO NOT count toward the final grade.

i>Clicker Information:

You are required to purchase an i>clicker remote for in-class participation. i>clicker is a response system that allows you to respond to questions posed during class. You will be awarded bonus points (added to your final grade) based on your active in-class participation. Responses must be meaningful to count (i.e. responding with a valid choice for the question). In order to receive this credit, you will need to register your i>clicker remote online within the first 2 weeks of class. You must have come to class at least once and voted on at least one question in order to complete this registration properly. Once you have voted on a question in Cardiopulmonary Therapeutics, go to http://www.iclicker.com/registration. Complete the fields with your first name, last name, student ID, and remote ID. Your student ID should be your Rutgers Net ID. The remote ID is the series of numbers and sometimes letters found on the bottom of the back of your i>clicker remote. i>clicker may potentially be used during every class period. Therefore, you are responsible for bringing your remote to each class (excluding examinations).

Attendance:

Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website https://sims.rutgers.edu/ssra/ to indicate the date and reason for your absence. An email is automatically sent to me.

Examinations and Grading:

There will be four examinations during the course covering the material as stated in the course schedule. The first three exams will be held in Hill 114 during the normal class period. The last exam will be given during finals week. Each exam should be considered cumulative – concepts taught earlier in the course may appear on later exams. The format for exams will be multiple choice, type K, and true/false.

Examination Policies:

- **There will be NO MAKE-UP EXAMS for unexcused absences.** You must notify the course coordinator regarding your absence BEFORE the exam (or within 24 hours after the exam if that is not possible) and provide documentation of the reason for your absence in order for the absence to be excused. **Only students who receive authorization for an excused absence from the course coordinator will be eligible to take a make-up exam.** The format of the make-up exam is at the discretion of the instructors (i.e. fill-in, multiple choice, etc). There will be ONE cumulative make-up exam at the end of the semester for all exams missed – there will not be separate make-ups for exams 1, 2, 3, and 4.
- Students are expected to arrive on time for examinations. Students will not be allowed admittance to an exam after any other student has completed the exam and left the exam room. This will be considered an unexcused absence.
- Students must leave coats, book bags, and other belongings at the front or back of the examination room. The only items allowed on the desk are those that are essential to completion of the exam. Other than the examination itself, papers of any kind are not allowed on the desk.
- Students must be prepared to present picture identification (e.g. driver’s license, Rutgers student ID) if requested by the exam proctors.
- A student may be moved to a different seat at any time during the exam at the discretion of the proctors.
- Students who want to keep track of the time during an exam should wear a watch. Exam proctors will also provide periodic updates on the time remaining. Cellular phones and personal digital assistants (PDAs) are not acceptable timepieces and will not be allowed on the desk.
- Programmable calculators or PDAs may not be used during an exam. The exam proctors reserve the right to inspect and remove any calculator that they feel may give a student an unfair advantage.
- Students wearing baseball caps or similar hats with lids must turn the hat around so that the lid does not cover the eyes.
- For multiple-choice questions, students must not write their answers in big block letters in the margin of the exam.
- Students must refrain from talking from the time they enter the examination room until the have left the room AND are out of hearing range. Talking about the exam outside of the room is unacceptable at any time.

Grading Policies:

Grades for each examination will be posted on Sakai, and students will be given the opportunity to see their exams during office hours. A time period of two weeks will be allowed for students to contest the grading of their exam once scores are posted.

Final grades will be calculated as follows:

<table>
<thead>
<tr>
<th>Exam</th>
<th>Percentage</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>25%</td>
<td></td>
</tr>
</tbody>
</table>

Letter grades will be assigned using the scale below:

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Letter Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90 – 100</td>
<td>A</td>
</tr>
<tr>
<td>86 – 89</td>
<td>B+</td>
</tr>
<tr>
<td>80 – 85</td>
<td>B</td>
</tr>
<tr>
<td>76 – 79</td>
<td>C+</td>
</tr>
<tr>
<td>70 – 75</td>
<td>C</td>
</tr>
<tr>
<td>60 – 69</td>
<td>D</td>
</tr>
<tr>
<td>≤ 59</td>
<td>F</td>
</tr>
</tbody>
</table>

Note: Bonus points will be added to students’ final grades based on active and meaningful class participation through i>clicker responses.

Academic Integrity Policies:

Students are required to be familiar with the university’s Policy on Academic Integrity (see http://academicintegrity.rutgers.edu/integrity.shtml). Violation of academic integrity is a separable offense under the University Code of Student Conduct. Violations of academic integrity occurring during exams will be either level three or four violations. The recommended sanction for level three violations is suspension from the university for one or more terms with a notation of “academic disciplinary suspension” placed on the student’s transcript for the period of suspension and a failing grade in the course. The recommended sanction for level four violations is expulsion from the university and a permanent notation on the student’s transcript. Any student who is aware of academic misconduct by another student is obligated to notify a faculty member; failure to do so is also a violation of the Policy on Academic Integrity. Any violations of academic integrity relating to this course will be handled by the student disciplinary process as outlined in the University Code of Student Conduct.
Course and Instructor Evaluation:

Evaluations will be conducted online at the end of the semester to evaluate the design and content of the course and to evaluate each instructor. Your comments and suggestions are greatly appreciated and will be used to modify (and improve) the course in the future.

Office Hours:

All instructors practice at clinical sites that are removed from the School of Pharmacy. Office hours will therefore be scheduled by appointment only unless otherwise announced by an instructor. Dr. Saleh will provide office hours following each exam (schedule to be announced).

Tutoring:

If students should require additional help throughout the semester, they may contact the Pharmacy Practice and Administration Tutoring service by emailing RUPharmTutor@gmail.com.
<table>
<thead>
<tr>
<th>DATE</th>
<th>DAY</th>
<th>TOPIC</th>
<th>LECTURER</th>
<th>CHAPTER</th>
<th>CASES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sep. 3</td>
<td>THUR</td>
<td>Allergic Rhinitis</td>
<td>Saleh</td>
<td>76</td>
<td>Allergic Rhinitis</td>
</tr>
<tr>
<td>Sep. 7</td>
<td>MON</td>
<td>Labor Day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep. 8</td>
<td>TUES</td>
<td>Asthma</td>
<td>Saleh</td>
<td>15</td>
<td>Acute Asthma</td>
</tr>
<tr>
<td>Sep. 10</td>
<td>THUR</td>
<td>Asthma</td>
<td>Saleh</td>
<td></td>
<td>Chronic Asthma</td>
</tr>
<tr>
<td>Sep. 14</td>
<td>MON</td>
<td>Asthma</td>
<td>Saleh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep. 14</td>
<td>MON</td>
<td>Pediatric Asthma</td>
<td>Kimler</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sep. 17</td>
<td>THUR</td>
<td>Chronic Obstructive Pulmonary Disease</td>
<td>Saleh</td>
<td>16</td>
<td>COPD</td>
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<tr>
<td>Sep. 21</td>
<td>MON</td>
<td>Chronic Obstructive Pulmonary Disease</td>
<td>Saleh</td>
<td></td>
<td></td>
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<tr>
<td>Sep. 24</td>
<td>THUR</td>
<td>Hyperlipidemias</td>
<td>Reilly</td>
<td>11</td>
<td>Dyslipidemia</td>
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<tr>
<td>Sep. 28</td>
<td>MON</td>
<td>Hyperlipidemias</td>
<td>Reilly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. 1</td>
<td>THUR</td>
<td>Exam 1 (Allergic Rhinitis through COPD)</td>
<td>Saleh</td>
<td>6</td>
<td>IHD</td>
</tr>
<tr>
<td>Oct. 5</td>
<td>MON</td>
<td>Ischemic Heart Disease</td>
<td>Saleh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. 8</td>
<td>THUR</td>
<td>Ischemic Heart Disease</td>
<td>Saleh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. 12</td>
<td>MON</td>
<td>Acute Coronary Syndromes</td>
<td>Saleh</td>
<td>7</td>
<td>ACS</td>
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<tr>
<td>Oct. 15</td>
<td>THUR</td>
<td>Acute Coronary Syndromes</td>
<td>Saleh</td>
<td></td>
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</tr>
<tr>
<td>Oct. 19</td>
<td>MON</td>
<td>Acute Coronary Syndromes</td>
<td>Saleh</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct. 22</td>
<td>THUR</td>
<td>Hypertension</td>
<td>Barone</td>
<td>3</td>
<td>HTN</td>
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<tr>
<td>Oct. 26</td>
<td>MON</td>
<td>Exam 2 (Hyperlipidemias through Acute Coronary Syndromes)</td>
<td>Barone</td>
<td></td>
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</tr>
<tr>
<td>Oct. 29</td>
<td>THUR</td>
<td>Hypertension</td>
<td>Barone</td>
<td></td>
<td>HTN Crisis</td>
</tr>
<tr>
<td>Nov. 2</td>
<td>MON</td>
<td>Hypertensive Urgencies and Emergencies</td>
<td>Barone</td>
<td></td>
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</tr>
<tr>
<td>Nov. 2</td>
<td>MON</td>
<td>Pediatric Hypertension</td>
<td>Meyers</td>
<td></td>
<td></td>
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<tr>
<td>Nov. 5</td>
<td>THUR</td>
<td>Heart Failure</td>
<td>Reilly</td>
<td>4</td>
<td>Diastolic HF</td>
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<td>Nov. 9</td>
<td>MON</td>
<td>Heart Failure</td>
<td>Reilly</td>
<td>5</td>
<td>Systolic HF</td>
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<tr>
<td>Nov. 12</td>
<td>THUR</td>
<td>Heart Failure</td>
<td>Reilly</td>
<td></td>
<td></td>
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<tr>
<td>Nov. 16</td>
<td>MON</td>
<td>Shock</td>
<td>Dixit</td>
<td>13</td>
<td>Shock</td>
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<tr>
<td>Nov. 19</td>
<td>THUR</td>
<td>Exam 3 (Hypertension through Heart Failure)</td>
<td>Dixit</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Nov. 23</td>
<td>MON</td>
<td>Shock</td>
<td>Dixit</td>
<td></td>
<td></td>
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<tr>
<td>Nov. 26</td>
<td>THUR</td>
<td>No Class - Thanksgiving</td>
<td>Durie</td>
<td>2</td>
<td>A-fib</td>
</tr>
<tr>
<td>Dec. 4</td>
<td>THUR</td>
<td>Arrhythmias</td>
<td>Durie</td>
<td>8</td>
<td>Vent. Arr.</td>
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<tr>
<td>Dec. 7</td>
<td>MON</td>
<td>Arrhythmias</td>
<td>Durie</td>
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<td>Cardiac Arrest</td>
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<tr>
<td>Dec. 10</td>
<td>THUR</td>
<td>Arrhythmias</td>
<td>Durie</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBA</td>
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<td></td>
<td></td>
<td></td>
<td>Exam 4 (Shock through Arrhythmias)</td>
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</table>