**Course Title:** Advanced Concepts in Oncology

**Academic Semester:** Spring 2017

**Course Number (alpha/numeric):** PHIN-451

**Credits (including format such as lecture or lab/practicum or combination):** 2

**Prerequisites:** Successful completion of PHBM441 (Hematology, Oncology & Transplant) and approval of both course instructors

**Scheduled Class Meeting Times and Class Location:** Mondays, 3 – 4:40 pm in 318 Bayer

**Instructor(s) and Office Location(s):**

Karen Fancher (Course Coordinator) fancherk@duq.edu 322 Bayer 412-396-5485

Marc Harrold harrold@duq.edu 435 Mellon 412-396-6364

**Office Hours:** Scheduled upon request. Please email the instructor to set up an appointment time.

**Course Description:** This is an integrated course designed to further examine chemical, pharmacological, and therapeutic aspects employed in the treatment of hematological and neoplastic diseases that were introduced in PHBM441. At the completion of this course, the student should be proficient in the application of pharmacotherapy to the disease states and clinical situations reviewed in this course. Furthermore, students should be able to utilize knowledge of pharmacology, medicinal chemistry, and pharmaceutics principles to improve patient outcomes associated with the disease states and clinical situations discussed in this course. Each learning outcome will be assessed using an assessment strategy appropriate to the level of learning. Teaching and learning methods will involve self-assessment of knowledge, active learning, case studies, group discussions and/or written papers to foster active, life-long learning.

**Required Textbooks and/or other Course Materials:**


3) Foye’s Principles of Medicinal Chemistry, 7th edition (2012), Lemke, Thomas L. et al., eds., Lippincott Williams & Wilkins

**Educational Technology Requirements:** This course will maintain a Blackboard site. It is the responsibility of the student to remain current on postings on this site. Educational Technologies required by the Mylan School of Pharmacy will also be used in this course. Students are responsible for assuring that their equipment is in working order and is up to date with these guidelines.

**Assignments, Presentations, Examinations, and other Methods of Evaluation:** There will be 2 regular examinations and a formal student or group presentation (depending upon the number of students in the class). Topic coverage, lecture cut-offs for exams and dates of presentations will be announced in class and via Blackboard. The number and scheduled “breakdown of points” for each exam can also be found in the lecture schedule. Exams will focus on topics from a given segment of lectures; however, **instructors retain the right to assess student translation of major concepts from earlier in the course as they apply to later subjects.** There will not be a cumulative final. Questions on exams will encompass a variety of styles including (but not limited to) multiple choice, fill-in-the-blank, true/false, calculation, and short answer. Additionally, faculty reserve the right to have unannounced quizzes, assign out of class work, case studies, etc. The point values for all such activities will be announced at the time of the assignment(s). Please note that these are generally given to help student learning.

**Student Presentation**

Students will be divided into groups of 1-4 depending upon course enrollment. Each group will choose (or be assigned) a topic discussed in the first nine weeks of the semester. The student groups will prepare a 15 minute presentation summarizing (in their own words) the key concepts that they learned about the topic. Students will be expected to do some literature research beyond class notes in order to successfully pass this portion of the course. Students will be expected to correctly reference all salient points of their presentation. Students will be graded on presentation skills as well as the completeness of their summary.

**Grading Policy:**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Points</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exam 1</td>
<td>100 pts.</td>
<td>(40%)</td>
</tr>
<tr>
<td>Exam 2</td>
<td>100 pts.</td>
<td>(40%)</td>
</tr>
<tr>
<td>Group presentation</td>
<td>50 pts.</td>
<td>(20%)</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>250 pts.</td>
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**Grading Scale and Policy:** The following grading scale will be used to assign the final grade at the end of the course. Numerically weighted grades are rounded to the nearest tenth of a percent using conventional rounding rules. Final grades will be assigned after review by both of the instructors in the course.
A    89.5% - 100%
B+   87.5% - 89.4%
B    79.5% - 87.4%
C+   77.5% - 79.4%
C    69.5% - 77.4%
D    60.0% - 69.4%
F    < 60.0%

**Learning Outcomes and Assessment Strategy:**
This course examines less commonly encountered hematological and neoplastic diseases, the drugs and drug classes used to treat these diseases, and recently approved drugs with novel mechanisms of action. Student pharmacists who successfully complete this course will be able to:

1) Describe the pathophysiology of the disease states and clinical situations associated with this course.

2) Apply pathophysiology to therapeutic decisions.

3) Describe the chemical, biochemical, and pharmacological mechanism of drug action for compounds appropriate for treatment of diseases and clinical situations associated with this course.

4) Identify adverse drug effects, drug interactions, and precautions for compounds appropriate for treatment of diseases and clinical situations associated with this course.

5) Apply patient data and dosing information to identify and/or develop safe and effective dosing regimens.

6) Apply knowledge of the above areas to the clinical management of diseases and clinical situations associated with this course, which includes: selecting appropriate drug therapy; monitoring patient compliance, drug safety, and drug efficacy; recommending changes in patient therapy due to ADRs, drug interactions, patient complaints, and lack of drug efficacy.

7) Identify and interpret clinical and laboratory data necessary for designing and monitoring a pharmacotherapy plan for patients with the disease states and clinical situations discussed in this course.

8) Integrate pathophysiology, pharmacotherapy, pharmacokinetics, pharmacodynamics, economic, and ethical considerations in designing a therapeutic plan for patients with the disease states and clinical situations associated with this course.
9) Identify therapeutic outcomes (endpoints) for the diseases and clinical situations associated with this course.

10) Identify therapeutic alternatives and select the most appropriate alternatives for the individual patient considering other concurrent diseases.

11) Discuss important points relating to patient education for the diseases and clinical situations associated with this course and their therapeutic regimens.

Outline of Course Topics and Lecture Schedule:

<table>
<thead>
<tr>
<th>Week #</th>
<th>Date</th>
<th>Topic / Activity</th>
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<tbody>
<tr>
<td>1</td>
<td>January 16, 2017</td>
<td>No class – Martin Luther King Jr. Day</td>
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<tr>
<td>2</td>
<td>January 23, 2017</td>
<td>Metastatic melanoma</td>
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<td>3</td>
<td>January 30, 2017</td>
<td>Chronic myeloid leukemia</td>
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<td>4</td>
<td>February 6, 2017</td>
<td>Chronic lymphocytic leukemia</td>
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<tr>
<td>5</td>
<td>February 13, 2017</td>
<td>Pancreatic cancer</td>
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<td>6</td>
<td>February 20, 2017</td>
<td>Upper gastrointestinal cancers</td>
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<td>7</td>
<td>February 27, 2017</td>
<td>Refractory non-small cell lung cancer</td>
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<td>8</td>
<td>March 6, 2017</td>
<td>No class – Spring Break</td>
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<td>9</td>
<td>March 13, 2017</td>
<td>Brain cancer</td>
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<tr>
<td>10</td>
<td>March 20, 2017</td>
<td>Exam #1 / Pain in cancer patients</td>
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<tr>
<td>11</td>
<td>March 27, 2017</td>
<td>Benign hematology</td>
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<tr>
<td>12</td>
<td>April 3, 2017</td>
<td>Supportive Care (depression, fatigue, appetite stimulation)</td>
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<tr>
<td>13</td>
<td>April 10, 2017</td>
<td>Supportive Care (graft versus host disease management)</td>
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<tr>
<td>14</td>
<td>April 17, 2017</td>
<td>No class – Easter Break</td>
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<td></td>
<td>April 18, 2017</td>
<td>Ethics in cancer care</td>
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<td>15</td>
<td>April 24, 2017</td>
<td>Group presentations</td>
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<tr>
<td>16</td>
<td>May 1, 2017</td>
<td>Exam #2 / Future directions of therapy</td>
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General learning strategy:
Each session will begin with an overview of the pertinent points of the disease state (incidence, risk factors, symptoms, etc). Options for treatment will then be discussed, beginning with an overview of chemical and pharmacological aspects of the available treatment agents and followed by a review of the clinical drivers of each agent (efficacy, pertinent adverse effects and management of such effects). The session will conclude with a group discussion of each agent's place in therapy and current “state of the art” based on clinical guidelines and observed practices.

Course Regulations, Expectations, and Professional Classroom Behavior:

1) All course administrative issues are to be addressed to Dr. Fancher as the course coordinator for this course.
2) Issues regarding questions on individual exams should be directed to the instructor who wrote the question. If you are unsure whom you should consult, please see the course coordinator.

3) You must make every effort to resolve any “examination issues” WITHIN TWO WEEKS of the day that results are posted/distributed.

4) It is each student’s responsibility to review his/her examination results and to consult the appropriate instructors if there are issues/questions regarding the exam or an exam question. Failure of a student to address an examination issue WITHIN TWO WEEKS of the day that results are posted/distributed will result in a forfeiture of the ability to have a grade changed.

5) It is the sole responsibility of the student to manage their time appropriately and arrive at examinations in a timely manner. Students arriving late to an examination room will not be given extra time to complete the examination. Students arriving more than 30 minutes late for an exam will not be permitted to sit for the examination, and will be assigned a grade of zero for that examination.

6) Unless a student has received prior authorization from the University’s Office of Student Services, additional time to complete the examination will not be permitted.

7) Class attendance is optional, but strongly recommended. Students are responsible for ALL class materials, whether or not they attend lectures. Lectures are used to supplement text materials and may include concepts beyond those covered explicitly in texts.

8) Students are expected to act in a professional manner. Specifically, students:
   a) along with the faculty, should help to create a positive learning environment
   b) are expected to be on time, quiet, and attentive during lecture
   c) are expected to turn off all cell phones, pagers, etc. (or turn them to vibrate or another mode that will not interrupt the class). If there is a reason you need to be contacted by an electronic device during class, please inform the instructor prior to class, and quietly remove yourself from the class to take a call.
   d) are highly encouraged to participate in the class in a positive manner by asking/answering questions

8) At any time, the instructors reserve the right to remove a student from a lecture for behavior that is deemed inappropriate and/or distracting.
9) It is the goal of the faculty to have every student successfully complete the course. As a result, students are **highly encouraged** to consult with the faculty throughout the semester in order to optimize learning and increase success in the class.

10) Any student missing an exam **(FOR ANY REASON)** is subject to the make-up policy described within this syllabus. Due to security issues and the number of students in this class, exceptions to this policy will be very **rare**.

11) For all examinations, you are only permitted pens, pencils, and instructor approved materials at your desk. **All other materials** (including, but not limited to: hats, jackets, excess clothing, food, beverages, cellular telephones, pagers, PDAs, laptops, pocket PCs, study notes, assignments, old tests or examinations, etc.) are to be placed at the front or back of the examination room prior to the start of the exam. Students caught with any of these materials on their person or at their desks will be deemed in breach of the academic integrity policy of the class (see below). It is the sole responsibility of the student to ensure that they are not in possession of prohibited items at the time of the examination.

12) Students will not be permitted to leave an examination room during an exam, except under extraordinary circumstances.

13) Instructors reserve the right to either retain or distribute graded examinations. Grades will be posted on Blackboard within approximately one week of the examination date. As a significant portion of the grading of some exams includes evaluating written questions, the instructors maintain that this is a very generous timeframe in which to expect that they can complete that much reading. It is expected that students will take the opportunity to communicate with instructors regarding their answers to exams and make corrections for their own learning.
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Policy on Makeup Exams:
(This is the same for all PHBM courses)
It is in the student's best interest to take all of the examinations at the regularly scheduled times; however, illness, professional meetings, or serious personal matters (death in the family, etc.) occasionally cause students to miss exams. Any student who misses an exam during the course of the semester as the result of a verifiable and legitimate reason will be required to take a make-up exam subject to the following conditions listed below. Exceptions to this policy will be rare.

1) For students missing one exam:
   a. Students who receive a “C” grade or better (69.5% or above) on the make-up exam will be given a "Pass" grade for the exam, and the score will not be used in calculating the student's final grade (e.g., the student's grade would be out of 200 total points instead of 300 total points).
   b. Students who receive a score of less than 69.5% on the make-up will not receive a "Pass" grade. Instead, the score they earned on the make-up will be used in calculating their final grade.

2) Any missed exam must be made up within one week of when the student returns to class. If more than one student misses an exam, one common make-up will be given within one week of when all students are back in class. Failure of a student to meet this timetable could result in the assignment of a zero (0) for that exam.

3) Any student missing an exam must contact the course coordinator as soon as possible – preferably within 24 hours. If you cannot reach the course coordinator directly, please leave a message with the Student Services office (412-396-6393). If you leave a message, indicate why you missed the exam and when you will be returning to school. Failure to do this could result in the assignment of a zero (0) for that exam. The reason for this request is to allow the course coordinator to plan a time for a common make-up in the event more than one student misses the exam.

4) Make-up exams will not be returned; however, any student who takes a make-up exam can review their results in the course coordinator’s office.

For students missing a second exam during the semester, a makeup exam will be given at a time most convenient for the instructor(s) in charge. This examination may or may not be the same format as the original exam and will count towards the student’s final grade.

Policy Procedure for Return/Review of Exams: Feedback options are at the discretion of the individual instructors in the course and may include return of exams, posting of
exams, review of selected questions, or other opportunities for individual review of the exam.

**Academic Integrity:** The Mylan School of Pharmacy has a long-standing commitment and adherence to academic integrity as a critical component of professional conduct. Pharmacy students are bound by the Duquesne University Academic Integrity Policy and the Mylan School of Pharmacy Code of Student Conduct. The Code of Student Rights, Responsibilities, and Conduct can be found within the Duquesne University Academic Integrity Policy: [http://www.sites.duq.edu/student-life/student-handbook/_pdf/student-code-book-09-10.pdf](http://www.sites.duq.edu/student-life/student-handbook/_pdf/student-code-book-09-10.pdf). School of Pharmacy Student Services, Academic Policies, and Code of Student Conduct may be found at: [www.blackboard.duq.edu](http://www.blackboard.duq.edu).

**Services for Students with Disabilities—Special Student Services:**
Student pharmacists with designated disabilities who are applying for special accommodations, must provide proper written documentation for evaluation to the University Office of Special Student Services. Upon a request from an approved student, the Office of Special Student Services will notify, in writing, individual instructors of those students who are eligible for reasonable accommodations in class work, labs or practicums, exams, and Experiential Education courses. Pharmacy students who have been granted special accommodations must contact the University Office of Special Student Services each semester and summer session for renewal of their status. Student pharmacists with defined disabilities who have been granted special accommodations, must discuss reasonable accommodations with each course coordinator (including each preceptor for Experiential Education assignments) at the beginning of each academic semester or summer session. For all student pharmacists, it is the student’s responsibility to demonstrate that the required competencies have been acquired to a satisfactory degree for successful completion of the course.

**Miscellaneous:** *All examination dates are tentative as of the writing of this syllabus.* An official schedule of all exams this semester will be distributed by the Office of Student Services. Exam percentages assigned to individual faculty members are based on the distribution of lecture hours. If lecture hour distribution should change during the semester, exam percentages will change also. If this occurs, students will be informed prior to the exam. Finally, the “cut-off” designations refer to the topic, not necessarily the date.

**Grade Appeals Policy:** This policy will apply to any course examination, case presentations, laboratory evaluations or course final grade. Students are instructed to see the instructor(s) for the course and attempt to resolve any grade discrepancy. If previous interactions have failed to resolve the grade discrepancy, then this more formal grade appeal process would be initiated. Details of this process may be located by clicking the following link: [https://duquesne.blackboard.com/bbcswebdav/orgs/ORG-](https://duquesne.blackboard.com/bbcswebdav/orgs/ORG-)
Administrative Policies Governing All Courses:
Students are required to review these policies in their entirety. Complete copies of or links to the policies may be found on the Student Services Blackboard site, Policy and Procedures.

- Exam Tardiness Policy
- Missed Exams Policy
- Grade Appeal Policy
- Academic Integrity Policy
- Services for Students with Disabilities
- Audio/Visual Taping Policy