PURPOSE:
The purpose of this course is to provide a mechanism for understanding and predicting the properties of drugs: absorption, distribution, interaction with receptors and enzymes, metabolism, and excretion. The mechanism involves identification of individual functional groups in drugs, prediction of the physicochemical/biochemical properties of those individual functional groups and prediction of how the collective individual functional groups can contribute to the properties of the drugs.

ABILITY OUTCOME OBJECTIVES:
The student will be able to:
1. Show the Biochemical basis of gene therapy
2. Show the Biochemical basis for gene expression
3. Show the Biochemical basis for replication, transcription and translation
4. Recognize and predict the mechanisms for antiviral activity of nucleotide based drugs based on Biochemical principles
5. Recognize and predict the mechanisms for anticancer activity of antimetabolites based on Biochemical principles
6. Recognize and predict the mechanisms of anticancer activity of alkylating type drugs
7. To understand the effect of biotransformation on the desired therapeutic activity and the undesired toxicities of a drug
8. To know the major organs/tissues in the body where drug biotransformation occurs, and to understand entero-hepatic cycling
9. To understand the many factors that can influence the rate and extent of biotransformation of a drug in a particular patient
10. To understand the molecular process of regulation of drug-metabolizing enzymes and the implications for drug therapy
11. To understand and predict drug-drug, drug-food and related interactions that are based on alternations of drug metabolism

TEXT: None required. Biochemistry text from PHA 5451 is useful.
FORMAT:
The format of the course will involve lectures delivered using live chalk board or power point presentations, pre-recorded videos, online posted material and material in hard copy packets that can be purchased at the designated copy centers. The use of case studies, homework problems and discussion board to further define the material will be used as needed depending on the individual lecturers.

EVALUATION:
The students will be evaluated in three exams during the term and a final exam that is optional and available for students to improve their final grade or replace missed exams. There are no make up exams. The exams will involve identifying/drawing chemical structures, writing short answers or identifying correct answers in lists of answers. Exams from the previous two years with and without correct answers will be available in the packets (see Format) so that students can anticipate the type and format of exam questions as well as the depth of the answer expected to give full credit for short essay questions. Students will have opportunities to inspect their exams for about three weeks after the exam has been given, but the faculty will keep the exams and will retain them for two years. If
questions about the way an exam question has been graded are raised by individual students and it is
determined by the faculty responsible for that question that the question has not been graded
correctly, that question on the exams of all students will be regarded. A key of correct answers for
each exam will be available for students to compare their answer with the correct answer and to
determine whether they have properly applied the processes of induction and deduction to arrive at
their answer.

The first three exams will be worth 100 points each. Grading will be on a points basis with >270
(A), >260 (A-), >250 (B+), >240 (B), >230 (B-), >220 (C+), >210 (C), >200 (C-), >190 (D+), >180
(D), >170 (D-), <170 (E). There will be no make-up exams. However, the final, cumulative, fourth
exam which is optional and can be substituted for one exam.
http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

CLASS ATTENDANCE:
Class attendance is not mandatory. However the student will be tested only on the lecture
materials which, for the most part, are not covered in precisely the same way in any available
textbook.

ACCOMODATIONS FOR DISABILITIES:
Students requesting classroom accommodation must first register with the Dean of Students
Office. The Dean of Students Office will provide documentation to the student who must then
provide this documentation to the Instructor when requesting accommodation.
http://www.dso.ufl.edu/drc/current.php and

ACADEMIC INTEGRITY:
Students are expected to act in accordance with the University of Florida policy on academic
integrity (http://www.dso.ufl.edu/sccr/honorcodes/honorcode.php)
The Honor Pledge: We, the members of the University of Florida community, pledge to hold
ourselves and our peers to the highest standards of honesty and integrity by abiding by the Honor
Code. On all work, submitted for credit by students at the University of Florida, the following
pledge is either required or implied: “On my honor, I have neither given nor received
unauthorized aid in doing this assignment.”

FACULTY AND COURSE EVALUATION:
Behave professionally. All students are strongly encouraged to complete the course and
instructor evaluations. The Office of Curricular Affairs and Accreditation will provide students
with directions for completing the online evaluations.

LEARNING STRATEGY:
In order to achieve the objectives of the course it is important to keep up with the lectures daily
and not wait until the last moment to review all the material at once. Learning over time is
important for retention of knowledge. It is also important to write your own notes (and in this
class draw your own structures) and recopy them if necessary. Reading someone else’s notes
will not produce retention of knowledge over time unless one possesses a photographic memory.
Finally, it is important to take frequent breaks in your studies to allow time for your brain to
assimilate what it has been exposed to in your studies.

GENERAL COLLEGE OF PHARMACY COURSE POLICIES:
The College of Pharmacy has a website that lists courses policies that are common on all courses. This website covers the following: University Grading Policies, Academic Integrity Policy, How to request learning accommodations, Faculty and course evaluations, Student expectations in class, Discussion board policy, Email communications, Religious holidays, Counseling & student health, How to access services for student success, Faculty lectures/presentations download policy.

Please see the following URL for this information: