UC 123666 13F

CBM003 ADD/CHANGE FORM

☒ **Undergraduate Committee**	**or**	☐ **Graduate/Professional Studies Committee**
☐ **New Course** ☒ **Course Change**		☐ **New Course** ☐ **Course Change**
Core Category: Life/Phys Sci Effective Fall 2014		**Effective Fall 2014**

1. Department: PPS College: PHAR

APPROVED OCT 0 2 2013 M.M.

2. Faculty Contact Person: Marwaha Telephone: 713-743-2704 Email: akhera@uh.edu
3. Course Information on New/Revised course:
   - Instructional Area / Course Number (*see CBM003 instructions) / Long Course Title: PHAR / 2362 / Principles of Drug Action
   - Instructional Area / Course Number / Short Course Title (30 characters max.) / PHAR / 2362 / PRINCIPLES OF DRUG ACTION

RECEIVED SEP - 9 2013

   - SCH: 3.00 Level: FR CIP Code: 26.1007.00 Lect Hrs: ~~4~~ 3 Lab Hrs: 0
   - Term(s) Course is Offered (*see CBM003 instructions about selection): Fall,Spring
4. Justification for adding/changing course: **To meet core curriculum requirements**
5. Was the proposed/revised course previously offered as a special topics course? ☐ Yes ☐ No
   If Yes, please complete:
   - Instructional Area / Course Number / Long Course Title: ____ / ____ / _____
   - Course ID: _____ Effective Date (currently active row): _____
6. Authorized Degree Program(s): _____
   - Does this course affect major/minor requirements in the College/Department? ☐ Yes ☒ No
   - Does this course affect major/minor requirements in other Colleges/Departments? ☐ Yes ☒ No
   - Can the course be repeated for credit? ☐ Yes ☒ No (if yes, include in course description)
7. Grade Option: Letter (A, B, C ...) Instruction Type: lecture ONLY (Note: Lect/Lab info. must match item 3, above. *See CBM003 instructions.)
8. If this form involves a change to an existing course, please obtain the following information from the course inventory: Instructional Area / Course Number / Long Course Title
   ____ / ____ / _____
   - Course ID: _____ Effective Date (currently active row): _____
9. Proposed Catalog Description: (If there are no prerequisites, type in "none".)
   Cr: 3. (3-0). Prerequisites: None Description (30 words max.):
10. Dean's Signature: see core request form Date: _____
    Print/Type Name: _____

REQUEST FOR COURSES IN THE CORE CURRICULUM

Originating Department or College: Pharmacological and Pharmaceutical Sciences

Person Making Request: Aditi Marwaha Telephone: 7137432704
Email: akhera@uh.edu

Dean's Signature: Date: September 6, 2013

Course Number and Title: PHAR 2362 Principle of Drug Action

Please attach in separate documents:

☒ Completed CBM003 Add/Change Form with Catalog Description

☒ Syllabus

List the student learning outcomes for the course (Statements of what students will know and be able to do as a result of taking this course. See appended hints for constructing these statements):

1. Recognize the scientific knowledge required in order to understand medical advances and the principles of drug action.
2. Explain basic principles of cell biology.
3. Demonstrate the methods used by a pharmaceutical scientist for creation and confirmation of hypotheses.
4. Develop an understanding of the process of drug discovery, mechanism of drug action, and the treatment of disease states.
5. Develop an understanding of the specific Over the Counter (OTC) medications for specific disease states.
6. Classify macro and micro nutrients and compare it with artificial substitutes and dietary supplements.
7. Explain the pharmacological effects of drugs of abuse and the treatment options for drug abuse.
8. Assess based upon scientific knowledge and theory, on whether to seek medical attention or self-treat specific disease states.
9. Assess based upon scientific knowledge and theory, as to which OTC drug treatment is appropriate for specific disease states.

Component Area for which the course is being proposed (check one):

***Note:** If you check the Component Area Option, you would need to also check a Foundational Component Area.

☐ Communication ☐ American History

☐ Mathematics ☐ Government/Political Science

☐ Language, Philosophy, & Culture ☐ Social & Behavioral Science

☐ Creative Arts ☐ Component Area Option

☒ Life & Physical Sciences

Competency areas addressed by the course (refer to appended chart for competencies that are required and optional in each component area):

☒ Critical Thinking ☒ Teamwork

☒ Communication Skills ☐ Social Responsibility

☒ Empirical & Quantitative Skills ☐ Personal Responsibility

Because we will be assessing student learning outcomes across multiple core courses, assessments assigned in your course must include assessments of the core competencies. For each competency checked above, indicated the specific course assignment(s) which, when completed by students, will provide evidence of the competency. Provide detailed information, such as copies of the paper or project assignment, copies of individual test items, etc. A single assignment may be used to provide data for multiple competencies.

Critical Thinking:

Certain assignments and questions in the test require the students to critically think and analyze. For example, based on the mechanism of action of a drug can students derive the beneficial effects and the adverse effects of the drug? Another example is in the assignment stated below; the students are required to think about what is a safe therapeutic index? Based on a number they get they need to come to a conclusion whether the drug stated in the below assignment can be introduced in the market or not.

Introduction of Drugs on the Market

The following preclinical data were obtained with Drug C which is developed for patients suffering from congestive heart failure in animals with experimental heart failure.

ED_{50} = 95 mg
LD_{50} = 100 mg

Should this drug be allowed to undergo Phase I studies?

A. Yes
B. No

Regardless of what your answer is, the drug company conducted Phase I and Phase II and obtained the following results in Phase II:

1. Improvement in heart function
2. Patients were able to perform normal daily activity
3. No change in Liver and kidney function
4. No major side effects

Should they proceed with Phase III clinical trial?

A. Yes
B. No

For turning in this assignment the students need to:

1. Calculate the therapeutic index.
2. Based on the number they need to come to conclusion that this drug has a very narrow therapeutic index which can lead to death of the patients taking this drug.
3. Based on this they should answer "no" to the first part.

For the second part of this assignment:

1. The student has to disregard the previous data and see that this drug is improving the heart function so it is treating what it is intended for.
2. In addition, it does not affect kidney and liver function and does not have major side effects.
3. Based on this the answer should be "yes" to the second part.

Communication Skills:

One of the assignments (Exercise IV) that students turn in is called "Create an Exam".

In this assignment the students write and turn in a multiple choice question exam. The exam has 10 questions, each question has 4 choices. The exam questions should come from the first thirteen lectures covered in class. The choices in the question should make sense for example the following question will not be considered a valid question because choice D is not a valid choice.

Which of the following is your favorite color?

A. Blue
B. White
C. Yellow
D. Eraser

Credit will be given only if:

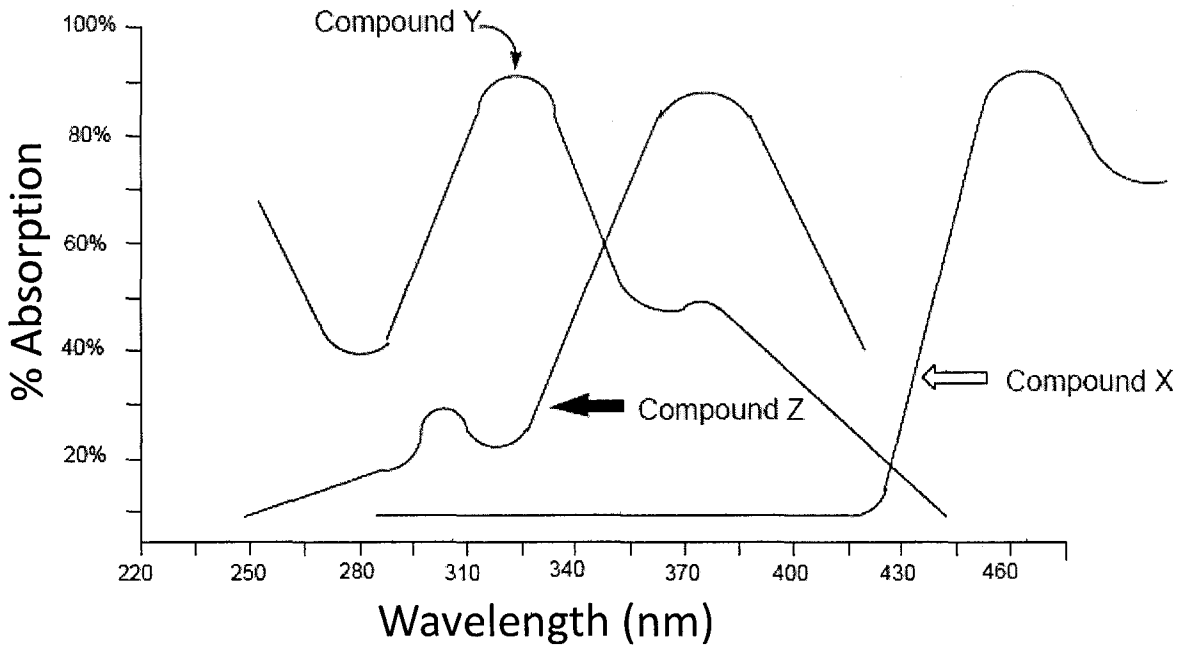
A. The question is a valid question.

B. All the answer choices within a question are valid.
C. Questions 1-3 are from lectures 1-4 (cell biology)
D. Questions 4-6 from lectures 5-9 (drug discovery and development)
E. Questions 7 and 8 from lectures 10-11 (OTC Pain relievers)
F. Questions 9 and 10 from lectures 12-13 (OTC Common cold and cough medications)

Empirical & Quantitative Skills:

The following two are examples of empirical and quantitative skills that students develop in this course:

Sunscreen Selection Based on UV Absorption (Exercise V)
The lecture presentation on sunscreens deals with the role of ultraviolet (UV) light as a causative factor in a variety of skin diseases. The following exercise is meant to demonstrate the use of UV absorption spectra in predicting the benefit of a chemical as a potential sunscreen. Using the UV absorption spectra of Compounds X-Z and associating the absorption at a particular wavelength with diseases caused by UV light you are asked to predict the value of the chemical as a chemoprotective or chemical preventative for that disease.



1. Which chemical would you suggest as a potential candidate for use in a sunscreen product intended to prevent sunburn and to reduce the risk of skin cancer?
    a. Compound X
    b. Compound Y

c. Compound Z

2. Which chemical might have potential use in a sunscreen product intended for a patient on a photosensitizing drug?
    a. Compound X
    b. Compound Y
    c. Compound Z

3. Which chemical has no potential value for use in a sunscreen?
    a. Compound X
    b. Compound Y
    c. Compound Z

For turning in this assignment the student needs to:

1. Analyze the absorption spectra of compounds X, Y and Z.
2. Based on their analysis derive whether these compounds absorb UV A, B or C radiation.
3. Conclude what conditions these compounds will help to prevent.

Another example of empirical and quantitative skills is the following exam question:

If a person develops sunburn in 15 minutes without a sunscreen and in 5 hours (300 minutes) with a sunscreen, what was the SPF of the sunscreen?

A. SPF 3
B. SPF 20
C. SPF 30
D. SPF 45

For answering this exam question, the student need to use a formula provided to them in class.

Teamwork:

In the first part, students take a quiz (8 questions) individually. The individual quiz will be of 10 minutes and will be worth 4 points. In the second part, the students will retake the same quiz as a group of 6-8, they discuss the questions as a group and the group submits an agreed upon answer. The group quiz will be of 10 minutes and will be worth 3 points. Below are examples of questions present in the quiz.

1. What is the relationship between artificial sweetener, aspartame and Phenylketonuria (PKU)?

A. Aspartame causes allergic reactions in the PKU patient.
B. The PKU patient will metabolize aspartame leading to diabetes.
C. There is no relationship between aspartame and Phenylketonuria.
D. Aspartame is a source of phenylalanine which cannot be properly metabolized by a PKU patient.

2. Person A is a 25 year old female; she weighs 160 pounds and is 5 feet 5 inches tall. Person B is a 35 year old female; she weighs 160 pounds and is 5 feet 5 inches tall. Which one of them has a higher metabolic rate?

A. Person A
B. Person B

In the third part, students will solve four clinical cases as a group. The clinical cases will be of 15 minutes and will be 3 points. Below are examples of clinical cases.

1. Hannah, a 28 year old female was taking an antibiotic for treating acne. On this drug, she realized that she developed rash when she went out in the sun. While on the antibiotic, she was unaware of the fact that she was pregnant. When the child was born and started developing teeth, he had stained teeth.
    a. What drug was Hannah on?

    b. She developed a rash after going out in the sun what is the phenomenon known as?

2. Barry, a 52 year old male, was being treated with an anti-cancer drug. He was not responding well to the drug. Upon evaluation the plasma levels of the drug it was found that the drug was below its minimum effective concentration. This was inspite of the standard dose of anti-cancer drug being given to the patient. Further investigation revealed that the patient was taking an herbal supplement to self-treat his depression symptoms.
    a. What herb is this patient taking?

    b. What is this herb doing to the anti-cancer drug?

Social Responsibility:
Click here to enter text.

Personal Responsibility:
Click here to enter text.

Will the syllabus vary across multiple section of the course? ☐ Yes ☒ No
If yes, list the assignments that will be constant across sections:
Click here to enter text.

Inclusion in the core is contingent upon the course being offered and taught at least once every other academic year. Courses will be reviewed for renewal every 5 years.

The department understands that instructors will be expected to provide student work and to participate in university-wide assessments of student work. This could include, but may not be limited to, designing instruments such as rubrics, and scoring work by students in this or other courses. In addition, instructors of core courses may be asked to include brief assessment activities in their course.

Dept. Signature: _____

PRINCIPLES OF DRUG ACTION (PHAR 2362, 3 Credit Hours)
FALL SEMESTER, 2013
COURSE INFORMATION

Didactic Hours (42) Laboratory Hours (0) Total Hours (42)

LECTURE HOURS AND LOCATION: 12-1 pm, MWF, Agnes Arnold Auditorium #2

COURSE COORDINATOR:

Dr. A. Marwaha, Lecturer, Department of Pharmacological and Pharmaceutical Sciences, 542H, S&R 2, akhera@uh.edu 713-743-2704.

TEACHING FACULTY:

- Dr. A. Marwaha, Lecturer, Department of Pharmacological and Pharmaceutical Sciences, 542H, S&R 2, akhera@uh.edu 713-743-2704.
- Dr. L. Simpson, Clinical Associated Professor, Clinical Sciences, Phar-TMC, Lynn@uh.edu, 832-842-8381.
- Dr. J. Fernandez, Clinical Assistant Professor, Clinical Sciences, Phar-TMC, jmfernandez3@uh.edu, 832-842-8352.

TEACHING ASSISTANT:

- Mr. Hironari Akasaka, graduate student, hakasaka@uh.edu
- Mr. Santosh Suryavanshi, graduate student, svsuryavanshi@uh.edu

FACULTY OFFICE HOURS:

Each instructor will attempt to be available in the classroom before and after each lecture for answering questions. Appointments can also be made by calling their offices to make sure that they are available for your visit. Students must allow 2 working days for faculty to reply to e-mails.

REQUIRED TEXTBOOK:

1. ***Principles of Drug Action***; Aditi Marwaha, Thomas Lemke, Samina Salim (M) Cognella Publishers, Second Revised Preliminary ed. (2011). To purchase the textbook, please follow the instructions below:

   Step 1: Log on to https://students.universityreaders.com/store/.
   Step 2: Create an account or log in if you have an existing account to purchase.
   Step 3: Easy-to-follow instructions guide you through the rest of the ordering process. Payment can be made by all major credit cards or with an electronic check.
   Step 4: After purchasing, you can access your FREE 30% PDF by logging into your account and clicking My Digital Materials to get started on your readings right away.
   If you experience any difficulties, please email orders@cognella.com or call 800.200.3908 ext. 503.

REFERENCE TEXTBOOK:

2. Selected chapters from ***Drugs and the Human Body***, Ken Liska (L) Prentice Hall, 7th ed. (2004)
3. Selected chapters from ***Nonprescription Product Therapeutics***, W. Stevan Pray Lippincott Williams & Wilkins, 2nd ed. (2006)(@).

WEBSITE-1: We have a **Blackboard Learn** site for this course. The address is http://www.uh.edu/blackboard. Once on the site click on the Blackboard Learn Tab. To access the site you will need your Cougarnet username and a password.

The web site contains: Syllabus (in case you misplace your hard copy); PowerPoint lecture presentations; Exercises; Course Outcomes; Study guide; Practice Questions for exam preparation; Grade postings for exams, exercises; Communication site to contacting faculty and fellow students. Although an e-mail site is available on blackboard for sending e-mail to faculty, please use the e-mail address provided above to correspond with the faculty. A bulletin board is available for posting general questions which is open to all to see; Calendar lists important due dates and times when TAs are available.

WEBSITE-2: In addition, to the blackboard site there is second website for this course. The address is http://www.uh.edu/phar2362. This site hosts interactive games and animations which reinforce the concepts learned in class. It is required that students visit and use the tools provided in this website as well.

DEFINITION: A critical examination of man's environment with particular emphasis on the mechanism of drug action and the benefits and risks of drug usage and exposure to chemicals.

COURSE OBJECTIVES:

1. Recognize the scientific knowledge required in order to understand medical advances and the principles of drug action.
2. Explain basic principles of cell biology.
3. Demonstrate the methods used by a pharmaceutical scientist for creation and confirmation of hypotheses.
4. Develop an understanding of the process of drug discovery, mechanism of drug action, and the treatment of disease states.
5. Develop an understanding of the specific OTC medications for specific disease states.
6. Classify macro and micro nutrients and compare it with artificial substitutes and dietary supplements.
7. Explain the pharmacological effects of drugs of abuse and the treatment options for drug abuse.
8. Assess based upon scientific knowledge and theory, on whether to seek medical attention or self-treat specific disease states.
9. Assess based upon scientific knowledge and theory, as to which OTC drug treatment is appropriate for specific disease states.

METHOD OF PRESENTATION: The lectures will be presented on the assumption that the students have had no previous training in biology or chemistry. Emphasis will be placed on drugs or chemicals which are currently the objects of widespread public interest. The course is intended to be sufficiently flexible so that as public interest shifts, the course topics will shift accordingly. Every effort will be made to discuss all-sides of any controversial topic as fairly as possible.

COURSE POLICIES

I. Classroom Conduct

Due to large enrollment in this class, it is of utmost importance that all students remain quiet during the class period. Please be considerate of other students and postpone private conversations until after class. A very small number of students talking can make it impossible for a large number of others to hear the lecture.

The lecturers will do their best to answer questions during class. However, due to the size of the class, raised hands are sometimes not seen. Also the lecturer may ask that questions be postponed so that he may finish his presentation within the allotted time. All lecturers will be available for further consultation throughout the week. Offices and telephone numbers are listed on the first page of this handout.

II. Examinations

As indicated in the course schedule, three one-hour exams and a final exam are scheduled. These exams will be worth 100 points each and will be machine scored (50 multiple choice questions). Each student will be required to have a soft-lead pencil in order to properly fill out the answer sheets. Pencils will not be furnished by the instructors. Scantrons will be provided during the exam, please do NOT bring your own scantrons. No student may leave the classroom during an exam without turning in his/her answer sheet. No student may take an exam if he or she arrives after any other student has finished the exam and departed.

The format of the final exam, including its point value, will be identical to that of the one-hour exams except that the questions will be derived from material covered the entire semester rather than just a portion of the semester. The final exam will consist of new questions, not questions taken directly from the hour exams.

In order to receive credit for this course, you must take a minimum of three exams. Only your three highest exam scores will be used to determine your grade. Thus, for students who take all three one-hour exams, the final is optional. These students may take the final, if they choose, to replace the lowest score among the three one-hour exams. Such students cannot possibly hurt their grade by taking the final since, if the final is their lowest score among the four exams, it will be dropped and only the three one-hour exams counted. For students who miss a one-hour exam, for any reason, the final **must** be taken and will serve as the make-up for the missed exam.

Examinations will be given **only** at the scheduled times. Exceptions to this rule will be made only in extremely unusual circumstances and then only if arrangements are made before the scheduled exam date.

Any student observed cheating during an exam will be penalized in accordance with the Student Life Policy.

POSTEXAM CONTESTING: If there is a disagreement over the answer to a question, the student should present an appeal plus documentation for the answer in written form to the Course Coordinator. Documentation may include statements from recommended textbooks, instructor's handout, or reviewed scientific publications, but NOT student's own lecture notes or non-reviewed web information. The documentation must be clear, rational, and concise. The Course Coordinator should be contacted within 7 working days after the posting of the exam score/grade for any suspected error in the score/grade.

III. Attendance

As with any course of this type, to gain the maximum benefit you must attend classes. The instructors strongly recommend that you attend the class regularly. However, attendance is not mandatory as we assume that students are responsible enough and will be attending the classes on a regular basis.

IV. Dropping the Course

University regulations permit a student to drop a course with a "W". Action must be taken on or before the last day to drop (November 1, 2013). To determine if a student qualifies for a "W" the following procedures will be utilized:

A. The student may drop the course at his/her own discretion.
B. No student may drop the course after the last day to drop (See University Class Schedule). Any student still enrolled after this date must receive a letter grade or an "Incomplete" (I).
C. Any student who receives an "Incomplete" must complete the course within one year or the grade will change to F.

It is the responsibility of the student to officially drop the course if he or she wishes to do so. If the student simply stops coming to class and assumes that the instructors will take care of the drop, he or she will receive a grade of F for the course.

V. Grades

Letter grades for the course will be determined from the total number of points accumulated during the semester.

To receive an A, you must accumulate 328 or more points.
To receive a B, you must accumulate 292-327 points.
To receive a C, you must accumulate 255-291 points.
To receive a D, you must accumulate 219-254 points.
(Note: The "plus-minus" grading system will not be utilized.)

Points can be accumulated on the following basis:

Assignments	Points
In Class Quizzes (individual) (Beginning and end of each lecture) (starting Sep.6)	34
On line Exercises (individual) (See course schedule for due dates)	21
Examinations (individual) (See course schedule for exam dates)	300
Team Based Learning (Team) (In class, Oct. 30)	10
Extra credit sessions. (See page 9 for session dates)	20
	365

A. In Class quizzes (34 points): Beginning Sep. 6th, each class will begin with a clicker question related to the previous lecture and end with a clicker question related to the current lecture. The students would use a clicker to respond to these quizzes. Each correct answer is worth 0.5 point.

Use of Turning Technologies clicker pads (E-clickers): It is the faculty's intention to use E-clickers in the classroom as a means of taking in class quizzes and for you to be able to assess how well you comprehend a particular topic. Your answers are recorded by the Turning Point software and stored as usable data. You **will** have to buy the clicker, pay the registration fee and perform simple registration steps via blackboard. In-class quizzes begin from Sep. 6th, make sure you have bought and registered your clicker pad by Sep. 6th 2013.

Clickers: You can purchase the Turning Technologies RF LCD ResponseCard at the Barnes and Noble Bookstore at the UC. The cost is $40.00.

Quiz scores would be posted on blackboard the same day you took the quizzes. The Course Coordinator should be contacted within 7 working days after the posting of the quiz score for any suspected error in the score.

B. Laboratory Exercises (21 points): Interspersed throughout the semester are various exercises which are meant to demonstrate the techniques utilized by pharmaceutical scientists in assessing the value of chemical agents as potential drugs. In addition, one of the exercises involves students creating an exam based on the first thirteen lectures. The students will be presented with the exercises (different sets of

exercises are posted on blackboard and the student is asked to do the exercises independently) and expected to upload the completed exercises at various dates via the **turnitin** tool on blackboard. The assignments will be graded and the student may receive a maximum three points each. The student may earn up to 21 points by successfully completing the laboratory exercises (the best 7 of the 8 exercises will be used in the grading). In addition, the techniques and procedures learned by completing these assignments will serve as material that can be used for test questions, although the questions will use only a small part of what appears in the exercise. A knowledge of Microsoft word and Microsoft excel is required for turning in these exercises.
The Course Coordinator should be contacted within 7 working days after the posting of the exercise score for any suspected error in the score.

Due dates for laboratory exercises: See Course Schedule.

C. Examinations (300 points): As explained in section II above, to receive a grade for the course a student must take at least three of the four scheduled examinations. Thus, a maximum of 300 points can be attained from the examinations alone.

D. Team Based learning (10 points): This activity is scheduled in-class on Oct. 30 and will test your knowledge from lectures 14-26. For this activity, students will be assigned to a group and informed 2 days before the activity about their respective groups and the assigned seats. The activity is divided in three parts. In the first part, students will take a quiz individually. The individual quiz will be of 10 minutes and will be worth 4 points. In the second part, the students will retake the same quiz as a group of 6-8. The group quiz will be of 10 minutes and will be worth 3 points. In the third part, students will solve clinical cases as a group. The clinical cases will be of 15 minutes and will be 3 points.

E. Extra credit sessions (20 points): Extra credit sessions are out of class sessions, conducted by TA's. Extra credit sessions would be offered most of the weeks. Each session is offered twice a week so that students can pick one time slot that fits their schedule. The sessions will be on Friday's from 10:30-11:30 am and 1:00 -2:00 pm (see Page 9). The student needs to sign up for any one of the two time slots that the session is offered using the signup sheet provided on Blackboard. Once the student has signed up for a particular slot the student needs to attend the rest of the sessions on the same time slot. Each session is worth 2 points. A student can get credit for either morning or afternoon session, if he chooses to attend both sessions he would still get credit only for one session. These sessions would be mandatory for anyone who makes less than 60 points in the first exam. However, all students can use these sessions to earn extra credit and enhance their learning experience.

Topics taught during the entire week will be discussed in these weekly sessions. These sessions will be very personalized and interactive and will provide an opportunity for the students to be actively involved in learning.

VI. TA office hours: A TA would be available online on blackboard, in the exercise chat room, the day exercises are due from 9:00-10:00 am. In addition the TAs will be conducting the extra credit sessions and exam review sessions (see course schedule on page 6-9).

VII. Turnitin Assignment tool: To turn in your assignments on blackboard, you would have to upload a word or a Pdf file, the name of the file should have the following format: **Lastname_firstname_assignmentname**

The University of Houston complies with Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, pertaining to the provision of reasonable academic accommodations for students identified as disabled under the law.

PRINCIPLES OF DRUG ACTION
COURSE SCHEDULE
PHAR 2362 FALL SEMESTER 2013
12:00-1:00 p.m., M, W, F (AAA#2)

Lecture	Date	Topic	Lecturer	Pages	Assignments
Week 1					
1	Aug. 26	Course Introduction **Basic Principles of Cell Biology** Cell theory and Cell Components	Marwaha	Chapter 1 (M)	
2	Aug. 28	Transport Mechanisms in Cells	Marwaha	Chapter 1 (M)	
3	Aug. 30	How Cells Communicate	Marwaha	Chapter 1 (M)	
Week 2					
	Sep. 2	**Labor Day – No Class**			
4	Sep. 4	Cell Reproduction and Cell Death	Marwaha	Chapter 1 (M)	
5	Sep. 6	**Principles of Drug Action** Routes of Administration	Marwaha	Chapter 2 (M)	***In Class quizzes begin today. Make sure you have bought and registered a clicker.***
Week 3					
6	Sep. 9	Pharmacokinetics	Marwaha	Chapter 3 (M)	
7	Sep. 11	Pharmacodynamics I	Marwaha	Chapter 4 (M)	
8	Sep. 13	Pharmacodynamics II	Marwaha	Chapter 4 (M)	** Exercise I is due this day**
Week 4					
9	Sep. 16	Premarketing Evaluation of Drugs	Marwaha	Chapter 5 (M)	** Exercise II is due this day**
10	Sep. 18	**Nonprescription Pain Relievers** Mechanism of Pain/Fever	Marwaha	Chapter 10 (M)	
11	Sep. 20	Nonprescription Pain Relievers	Marwaha	Chapter 10 (M)	
Week 5					
12	Sep. 23	**Therapy of the Common Cold** Cough and Cold Remedies I	Marwaha	Chapter 11 (M)	** Exercise III is due this day**
13	Sep. 25	Cough and Cold Remedies II	Marwaha	Chapter 11 (M)	** Exercise IV (Create an Exam) is due this day**
	Sep. 26			*Exam Review-Location to be announced, 4:30-5:30 pm*	
	Sep. 27	***EXAM I (Lectures 1-13)***			
Week 6					
14	Sep. 30	**Pathophysiology of the Skin** Structure and Diseases of the Skin	Marwaha	Chapter 7 (M)	
15	Oct. 2	Perspiration	Marwaha	Chapter 7 (M)	
16	Oct. 4	Acne	Marwaha	Chapter 7 (M)	

Lecture	Date	Topic	Lecturer	Pages	Assignments
Week 7					
17	Oct. 7	Dandruff and Seborrheic Dermatitis	Marwaha	474-486@	
18	Oct. 9	Sun Damage and Sunscreens	Marwaha	Chapter 8 (M)	
19	Oct. 11	**Nutrition** Nutritional Requirements	Marwaha	Chapter 6 (M)	
Week 8					
20	Oct. 14	Carbohydrates	Marwaha	Chapter 6 (M)	**Exercise V is due this day**
21	Oct. 16	Fats, Protein	Marwaha	Chapter 6 (M)	
22	Oct. 18	Vitamins I	Marwaha	Chapter 6 (M)	
Week 9					
23	Oct. 21	Vitamins II	Marwaha	Chapter 6 (M)	**Exercise VI is due this day**
24	Oct. 23	Dietary Supplements	Marwaha	694-710@	
25	Oct. 25	Dietary Supplements	Marwaha		
Week 10					
26	Oct. 28	Dietary Supplements	Marwaha		
	Oct. 30	**Team Based Learning (Lectures 14-26)**	Marwaha		
	Oct. 31			*Exam Review -Location to be announced, 4:30-5:30 pm*	
	Nov. 1	***EXAM II (Lectures 14-26)***	Marwaha		
Week 11					
27	Nov. 4	Pathophysiology of the Oral Cavity-I	Marwaha	35-53@	
28	Nov. 6	Pathophysiology of the Oral Cavity-II	Marwaha	56-77@	
29	Nov. 8	**Drugs that Affect Awareness** Sleep Aids and Stimulants	Marwaha	Chapter 9 (M)	
Week 12					
30	Nov. 11	**Pathophysiology of the Central Nervous System** Structure of the CNS & Theories Drug Dependence and Tolerance	Fernandez	173-200(L)	
31	Nov. 13	Marijuana	Fernandez	Chapt 11(L)	
32	Nov. 15	Nicotine	Simpson	200-8(L), 736-74@	
Week 13					
33	Nov. 18	Amphetamines and Cocaine	Fernandez	173-200(L)	** Exercise VII is due this day**
34	Nov. 20	Alcohol	Fernandez	Chapt 9(L)	**Exercise VIII is due this day**
35	Nov. 22	Disorders of the Gastrointestinal Tract	Simpson	81-102@	

Lecture	Date	Topic	Lecturer	Pages	Assignments
Week 14					
36	Nov. 25	Antacids	Simpson	363-67(L),81-102@	
	Nov. 27-29 No Class, Thanksgiving holidays				
Week 15					
37	Dec.2	Laxatives	Simpson	369-72(L), 142-64@	
38	Dec. 4	Antidiarrheals	Simpson	168-180@	***Exam Review -Location to be announced, 1-2 pm ***
	Dec. 6	*****EXAM III (Classes 27-38)*****	Marwaha		
Final Exam Week					
Dec 18, W (12: 00- 1:00 p.m.) AH #2 FINAL EXAM (Lectures 1-38)					

(M): Marwaha et al; *Principles of Drug Action*, preliminary edition.

(L): Liska; *Drugs and the Human Body*, 7th edition. @: Pray, *Nonprescription Product Therapeutics*, 2nd Edition. Copies of (L) and @ books are on reserve in the M.D Anderson Library

EXAM QUESTION DISTRIBUTION

	Exam Date	#Questions
Examination I: (Lectures 1-13)	09/27/13	50/50 (Marwaha)
Examination II: (Lectures 14-26)	11/01/13	50/50 (Marwaha)
Examination III: (Lectures 27-38)	12/06/13	13/50 (Marwaha) 20/50 (Simpson) 17/50 (Fernandez)
Final Exam: (Lectures 1-38)	12/18/13	38/50 (Marwaha) 06/50 (Fernandez) 06/50 (Simpson)

REFERTO PAGE 9 OF THE SYLLABUS FOR EXTRA CREDIT SESSION SCHEDULE.

EXTRA CREDIT SESSION SCHEDULE

- Each session is offered twice a week.
- Sign up for either Friday morning or Friday afternoon session using the signup sheet on blackboard.
- Sign up only once at the beginning of the semester.
- Come the same time slot for the rest of the sessions.

Day	Date	Room	Time
Extra Credit Session # 1			
F	Sep. 6	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 2			
F	Sep. 13	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 3			
F	Sep. 20	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 4			
F	Oct. 4	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 5			
F	Oct. 11	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 6			
F	Oct. 18	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 7			
F	Oct. 25	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 8			
F	Nov. 8	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 9			
F	Nov. 15	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm
Extra Credit Session # 10			
F	Nov. 22	128/129 S&R Bldg 2	10:30-11:30 am
			1:00-2:00 pm