

DRAFT SYLLABUS

PGS 362L

Summer 2016

Tue & Thur 1:00 – 4:00 pm, PHR 4.114

CLINICAL TOXICOLOGY

Course Supervisor: Dr. John DiGiovanni

Email: john.digiovanni@austin.utexas.edu

General Comments: This syllabus lists the topics that will be taught, and it lists the examinations and other course requirements. There will be three exams weighted as follows: Exam I (30%); Exam II (30%); Exam III (40%). The particular rules and restrictions applying to each are shown in this syllabus.

Course Communication: Announcements pertaining to this class will be sent to your registered UT email and/or posted on Blackboard (see below). Please watch for these notices as you are responsible for all information sent to you or posted on the Blackboard course site. Therefore, check emails and visit the Blackboard site regularly.

The *official Blackboard® web site* for this course can be accessed either through UTDirect or *via* <http://courses.utexas.edu>. Either access point is UTEID-protected, and provides you links to the courses in which you are currently enrolled. Visit this site for additional resources associated with this course (your grades, power point presentation, the discussion board, contacting faculty by Email, electronic versions of suggested and **required** readings and hyperlinks).

The website will also be used for official, course-related announcements and for the exchange of class information and questions via the discussion board. Be aware that any messages posted to the discussion board are available to all enrolled students and faculty

You may also contact faculty members directly via **phone** or **Email**.

Contact information for participating faculty:

| | |
|----------------------------|-----------------------------------|
| *Dr. John DiGiovanni | john.digiovanni@austin.utexas.edu |
| Dr. Edward "Ted" Mills | tedmills@austin.utexas.edu |
| Dr. Casey Wright | cww@austin.utexas.edu |
| Dr. Somshuvra Mukhopadhyay | som@austin.utexas.edu |

***Please note**, faculty participants denoted with asterisks have primary offices located off campus and will require advanced notice to schedule meetings.

Course Text: Any required reading material pertaining to lectures will be made available via the Blackboard. Reference books for this course are as follows: Casarett & Doull's Essentials of Toxicology 2nd Edition (online) and Clinical Toxicology: Principles and Mechanisms 2nd Edition (hardcopy available in LRC).

Lecture Notes: These will be posted on Blackboard at least 2 days prior to lectures. If you want to get the notes earlier, contact the instructor of record. Please print lecture notes and have them available during the corresponding lecture.

Course Content

I. GENERAL PRINCIPLES

- A. History of Toxicology
- B. Principles of Toxicology: Dose-Response Relationship
- C. Principles of Toxicology: Animal models as predictors of human toxicity
- D. Mechanisms of Toxicity
- E. General Principles of Clinical Toxicology

II. CURRENT TOPICS

- A. Chemical Carcinogens/Radiation
- B. Alcohols/Analgesics
- C. Pulmonary/Inhalation Toxicants
- D. Health Risks of Tobacco and Marijuana
- E. Psychostimulants/Antidepressants
- F. Pesticides
- G. Bacterial, Insect & Snake Toxins
- H. Heavy Metals

III. SCHEDULE:

Course Schedule

The class meets on Tuesday and Thursday from 1:00 – 4:00 pm in room PHR 4.114.

| | | |
|----------------------------------|---|------------------|
| Tuesday July 12 th | General Principles of Toxicology I | Dr Wright |
| Thursday July 14 th | General Principles of Toxicology II | Dr. Wright |
| Tuesday July 19 th | Chemical Carcinogens/Radiation | Dr. DiGiovanni |
| Thursday July 21 th | Psychostimulants/Antidepressants (Exam I) | Dr. Mills |
| Tuesday July 26 th | Alcohols/Analgesics | Dr. DiGiovanni |
| Thursday July 28 st | Pesticides | Dr. Mills |
| Tuesday August 2 th | Pulmonary/Inhalation Toxicants (Exam II) | Dr. Mukhopadhyay |
| Thursday August 4 th | Health Risks of Tobacco and Marijuana | Dr. Mukhopadhyay |
| Tuesday August 9 th | Bacterial, Insect & Snake Toxins | Dr. Mukhopadhyay |
| Thursday August 11 th | Heavy Metals | Dr. Mukhopadhyay |
| Monday August 15 th | Exam III | |

Note: Lectures will consist of a didactic component and for some lectures a presentation of case studies. For some lectures students may also be asked to read a paper in advance for discussion.

EXAMINATIONS

Students must arrive on time for examinations. All instructions and corrections will be made at the beginning of the examination period and will not be repeated. Exams will begin promptly at the designated hour and will be picked up at the time designated in advance by the lead instructor. Students arriving after any students have completed the exam and left the room may not be allowed to sit for the exam, and may receive a score of zero for the exam.

No allowances will be made for an exam being missed, other than documented illness or emergency.

The student must contact the course coordinator for confirmation prior to the exam. If permission is then granted to delay the exam, it is the student's responsibility to complete the College Form titled "Student Request for Alternate Exam Time" for final consideration and final approval by the Faculty member. In this

event, the nature of the make-up will be at the discretion of the course coordinator (oral, written, altered weighting, etc.). An unexcused absence from an exam may result in a grade of "zero" for that exam.

The grading of objective questions will be based upon the scantron sheets turned in; i.e., not on answers written on the exam papers. After the exams have been graded and an item analysis performed (Measurement & Evaluation Center), questions may be discarded at the discretion of the Course Coordinator before arriving at final grades.

Return of Exams; Posting Class Scores & Keys. Your results will be posted within a reasonable time after taking the exam. Individual student scores can be accessed using the Blackboard® "Gradebook" (only you have access to your grades), and individual grades will not be publicly posted in any manner. Tests will be returned at the discretion of the instructors, but if tests are not handed back, you will be granted reasonable access to your exams by appointment with the relevant professor(s).

Post-Exam Remarks and Reconsideration Requests. If there is a disagreement over the answer to a specific question, the student should present his/her exam plus a written explanation (with appropriate documentation) to the instructor within 72 hours of the listserv announcement of posting of the exam results & key as described above. Documentation may include statements from textbooks, handouts, packets, or current scientific reprints; lecture notes are not authoritative documentation. The explanation must be clear, rational, and concise. (This policy does not apply to addition or other grading errors).

Course Grading

| | |
|---------------------------------|-------------|
| Exam I (covers lectures 1-3) | 30% |
| Exam II (covers lectures 4-6) | 30% |
| Exam III (covers lectures 7-10) | 40% |
| Total | 100% |

All exams will be multiple choice. Exams I and II will take place in the final hour of class on the dates indicated in the schedule. Exam III will take on Monday August 19th. If an exam is missed due to excused illness or emergency, the nature of the make-up exam (if any) is the prerogative of the Course Coordinator. The Course Coordinator also has discretion in reallocating the point distribution in these cases. An excuse requires a doctor's note or equivalent.

The following grade ranges will be used:

| | |
|--------------------------|--------------------------|
| A = 93-100% | C = 73-76 % |
| A ⁻ = 90-92% | C ⁻ = 70-72% |
| B ⁺ = 87-89% | D ⁺ = 67-69 % |
| B = 83-86% | D = 65-66 % |
| B ⁻ = 80-82 % | F = ≤ 64 % |
| C ⁺ = 77-79 % | |

No exam scores are "dropped" and no "re-takes" will be offered for poor performance.

HONOR CODE

Students are expected to work independently on all examinations. Any student caught cheating will be given an "F" in the course. Any student suspected of dishonesty will be reported to the Assistant Dean of the College of Pharmacy and to the Dean of Students, as per University regulations. Students are expected to have read and understood the current issue of the General Information Catalog, published by the Registrar's Office, for information about procedures and about what constitutes scholastic dishonesty. (See also "Honor Code Statement")

"Pharmacy practitioners enjoy a special trust and authority based upon the profession's commitment to a code of ethical behavior in its management of client affairs. The inculcation of a sense of responsible professional

behavior is a critical component of professional education, and high standards of ethical conduct are expected of pharmacy students. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including failure of the course involved and dismissal from the college and/or the University. Since dishonesty harms the individual, fellow students, and the integrity of the University and the College of pharmacy, policies of scholastic dishonesty will be strictly enforced in this class.:

The following oath will be included at the end of all class examinations. At the discretion of the instructor, the oath may also be required for other assignments such as quizzes, written reports, or papers:

"I have neither participated in nor witnessed any acts of academic dishonesty pertaining to this assignment."

(your signature)

PROFESSIONAL CONDUCT

Examples of professional conduct

- Follows instructions
- Meets deadlines
- Shows respect for all other people in speech & actions
- Exhibits good judgment
- Cooperates with others
- Diligent (good work ethic)
- Maintains personal self-control and professional decorum
- Hold himself / herself responsible for professional conduct

Pledge of Professionalism¹

"As a student of pharmacy, I believe there is a need to build and reinforce a professional identity founded on integrity, ethical behavior, and honor. This development, a vital process in my education, will help ensure that I am true to the professional relationship I establish between myself and society as I become a member of the pharmacy community. Integrity must be an essential part of my everyday life and I must practice pharmacy with honesty and commitment to service.

To accomplish this goal of professional development, I as a student of pharmacy should:

DEVELOP a sense of loyalty and duty to the profession of pharmacy by being a builder of community, one able and willing to contribute to the well-being of others and one who enthusiastically accepts the responsibility and accountability for membership in the profession.

FOSTER professional competency through life-long learning. I must strive for high ideals, teamwork and unity within the profession in order to provide optimal patient care.

SUPPORT my colleagues by actively encouraging personal commitment to the Oath of Maimonides and a Code of Ethics as set forth by the profession

INCORPORATE into my life and practice, dedication to excellence. This will require an ongoing reassessment of personal and professional values.

¹ Developed by the American Pharmaceutical Association Academy of Students of Pharmacy/American Association of Colleges of Pharmacy Council of Deans (APhA-ASP/AACP-COD) Task Force on Professionalism; June 26, 1994
American Association of Colleges of Pharmacy 1426 Prince St. Alexandria, VA 22314 Phone: (703) 739-2330 Fax: (703) 836-8982
Email AACP

MAINTAIN the highest ideals and professional attributes to ensure and facilitate the covenantal relationship required of the pharmaceutical care -giver.

The profession of pharmacy is one that demands adherence to a set of rigid ethical standards. These high ideals are necessary to ensure the quality of care extended to the patients I serve. As a student of pharmacy, I believe this does not start with graduation; rather, it begins with my membership in this professional college community. Therefore, I must strive to uphold these standards as I advance toward full membership in the profession of pharmacy.”

Oath of a Pharmacist²

“At this time, I vow to devote my professional life to the service of all humankind through the profession of pharmacy.

I will consider the welfare of humanity and relief of human suffering my primary concerns.

I will apply my knowledge, experience, and skills to the best of my ability to assure optimal drug therapy outcomes for the patients I serve.

I will keep abreast of developments and maintain professional competency in my profession of pharmacy.

I will maintain the highest principles of moral, ethical, and legal conduct.

I will embrace and advocate change in the profession of pharmacy that improves patient care.

I take these vows voluntarily with the full realization of the responsibility with which I am entrusted by the public.”

Web Resources: The **web site** for this course is located under the pharmacy homepage at

<http://www.utexas.edu/pharmacy/courses/>

You are strongly encouraged to visit this site for additional resources associated with this course (electronic quizzes, PowerPoint presentation, previous exams, contacting faculty by Email, electronic versions of suggested and **required** readings).

The **listserv** for this course is PHR362L, and the Course Coordinator has added all students. You should have received Email notification of your enrollment on the listserv by the first day of class. If you have not, send an Email message to the course coordinator, and you will be added. The listserv will be used for posting questions, exchanging class information, and making class announcements. To submit a posting to the listserv, simply submit an Email to the address:

PHR362L@lists.cc.utexas.edu

Any message posted will go to the entire membership of the listserv.

STUDENTS WITH DISABILITIES

The University of Texas at Austin provides, upon request, appropriate academic accommodations for qualified students with disabilities. For more information, contact the Division of Diversity and Community Engagement, Services for Students with Disabilities, 471-6259 (voice) or 232-2937 (video phone) or <http://www.utexas.edu/diversity/ddce/ssd>.

An Essay on Submitting Grade Reconsideration Requests

By Prof. Patrick J. Davis, Associate Dean

5/18/03

² Developed by the American Pharmaceutical Association Academy of Students of Pharmacy/American Association of Colleges of Pharmacy Council of Deans (APhA-ASP/AACP-COD) Task Force on Professionalism; June 26, 1994
American Association of Colleges of Pharmacy 1426 Prince St. Alexandria, VA 22314 Phone: (703) 739-2330 Fax: (703) 836-8982
Email AACP

Definition: You are *requesting* that a faculty member *reconsider* your answer to a specific questions(s) based upon additional documentation or explanation. Therefore, these are neither *challenges* nor contesting of the question; they are reconsideration *requests!*

The Approach: Since these are *requests for re-grade*, not *challenges*, it would be in your best interests to start your email professionally and with courtesy, for example:

- “I am submitting question #3 for reconsideration based upon...Thanks you for your consideration.” -or-
- “I am writing to ask that you reconsider my answer for question #3 based upon...” - but not-
- “I thought this was a dumb question!” -or-
- “I am contesting question #3. I felt that this question was not testing our knowledge of the material but our ability to memorize odd facts. I studied extremely hard for this exam and felt like I knew the material, but I did not memorize how many amino acids were in each hormone.” [anonymous quote, 2003]

The Justification: As indicated in the first-day handout, any submission for reconsideration needs to include appropriate, written justification to support your request. This could include your interpretation of the material and/or information from the textbook, primary references, the faculty member’s handout, etc.

1. If you believe there is a discrepancy between what two faculty members present in class (or differences between classes), this would obviously come up when the information is presented in class or when you are studying. Therefore, your concerns or confusion should be ironed out with the faculty *before* the test, *not* used as a post exam justification.

It may be that two faculty members are presenting information differently for a reason. For example, the clinician may stress that Pen G is not useful against *Staph*. From a clinical standpoint, since the *vast* majority of *Staph* strains are resistant to Pen G, then this is a very reasonable summary statement. The medicinal chemist/pharmacologist may stress that 95% are resistant, but 5% are still sensitive during the discussion of resistance development over time, *specifically to emphasize* where we’re at in the development of penicillin resistance with this organism. *Both* of these perspectives are clearly valid in the context of what is being taught, and are not contradictory statements.

2. Rarely will you be successful in using old exams as your justification.

- “This question was very similar to question #17 from the 1999 exam, and the answer was ‘D’ (which is what I put).” [anonymous quote, 2003]

It could be that the question on the previous exam was thrown out because of poor statistics, and so the old exam copy you have has a ‘wrong’ answer for which all students were given credit. That doesn’t make it correct. This is one reason why in Pharmacotherapy Ila-IIc, we post previous exams in an ‘unanswered’ form (for you to use for self-evaluation) and then post the keys separately.

In relying on old exams, you should also understand that the information may have changed! Consider the following question:

- “*Strains of Staphylococcus have emerged which are clinically resistant to vancomycin.*”

On the 2001 exam, this statement was *false*; on the 2002 exam it was *true*. Clearly, therapeutic guidelines change as well, which may make old exam questions equivocal or simply incorrect.

3. You may want to have a colleague read your statement for feedback before you submit it for faculty consideration. Examples:
 - “In lecture, you said that side-effects included agranulocytosis, thrombocytopenia, hypoprothrombinemia, and aplastic anemia. But on the test you said blood dyscrasias so I marked it false! You never once mentioned blood dyscrasias! [anonymous quote, 2003]
 - “You said ‘drug of choice’ in the question, but you didn’t ask which one is primarily the best, so I thought any drug on the list used for treatment was appropriate.” [anonymous quote, 2003]
 - “On slide 17 you said ‘most hormones circulate in the blood, coming into contact with essentially all cells,’ but on the test you said ‘most hormones come into contact with all cells.’ Since the question didn’t say anything about blood, I marked it false.” [anonymous quote, 2003]

This is an interesting one. Can you imagine the uproar if this was reversed; i.e., if the faculty member counted this *wrong* for those students who marked it *true* simply because in lecture he mentioned *via the blood*, whereas on the exam, he didn’t mention blood? *The big picture* issue here is that selectivity in hormonal response is not based on cell exposure since essentially all cells are exposed to the hormone via the blood. Rather, selectivity is based on cell-specific recognition of the hormone. Apparently, the student missed this important concept.

4. Never, never, never use as your justification “I need the points”.

The decision on a reconsideration request belongs to the faculty member authoring the question, but all Course Coordinators caution their faculty to *not* consider this “justification” in *any way* in their deliberations. This is *never* an appropriate justification for awarding points, and it simply isn’t fair to the other students to make it a basis for awarding points. Should a student 1-pt from a “C” be given the points for a “B” *just because they asked for them*, while another student with the same score be assigned (and accept) a “C”? What is that faculty member to do when the second student finds out the first was awarded the points just for asking?

5. Just because you can find an article supporting your position doesn’t *automatically* mean that it is correct or that you should be given credit.

Part of the faculty member’s responsibility is to stay current with their field, which involves reading, reviewing, and distilling the often-time copious & conflicting material relevant to their field to create their learning environment and define the content they present to you in class. The faculty member will make their decision on the article/text you cite in the context of their full knowledge of the field and what they present to you in class.

6. If you feel that your reconsideration request has not been fairly considered, you have the right to appeal the decision to the Course Coordinator (consistent with the College Grievance Policy in your Student Handbook). However, you need to *fully justify* your appeal, not just forward a message to the Course Coordinator that “*You have all the emails I sent, and as you can see, the Professor did not give me the points.*”

Conclusion: Not all courses allow for the submission of reconsideration requests; the decision as to whether to do so rests with the faculty. Clearly, if this is allowed, the faculty member is committed to fully and fairly assessing your submission prior to making a decision based on the information you

provide. Therefore, your submission should be well thought-out and presented in a professional manner, *and you have every right to expect* the faculty member to respond in a like manner.