

Pharmaceutical Chemistry
CHMD71H3
LECTURE OUTLINE

This document contains important course information and should be kept in a safe place where you can refer to it throughout the semester.

Lectures:

Mondays 3-5pm BV260

Lecturers: Dr. Kagan Kerman (SW533):st 6 weeks of lectures (Janth 6 to Feb 10th inclusive)
Dr. Shadi Dalili (SW636):nd 5 weeks of lectures (Marrd 3 to March 31st inclusive)
Reading Week-no classes Feb 18th to Feb 21st

Emails: kagan.kerman@utoronto.ca & sdalili@utsc.utoronto.ca

Office Hours: Dr. Kerman: Mon 1:00-2:30pm (SW533)

Dr. Dalili: Mon 1:00-2:30pm (SW-636) start^{ing} Mon Feb 24th; by appointment
between Janth 6 and Feb 24th

Course Website: CHMD71 maintains a Blackboard web space which ~~has~~ a variety of course-

Method of Evaluation: The grading scheme for the course is shown in the table below:

Mid-term Test	25%	Mid-term test will be in class on February 24, 2014.
Final Exam	35%	Entire course work, including assignment/quiz questions, reports and oral presentations
Weekly in-class quizzes	10%	10 minute closed-book quizzes reviewing material from lectures
Assignment-1	10%	Proposal and essay on an approved pharmaceutical agent, discussing the pharmacokinetics, dynamics and effects of the drug under physiological conditions. Each student must present a different drug and must have their drug of choice approved by the instructor. More details to be given in lectures
Final Term Assignment (10%) and Oral Presentation (10%)	20%	Proposal and essay on the approved pharmaceutical agent, discussing/analyzing synthetic routes to the drug in laboratory and industrial settings. Students will prepare a 15 minute oral presentation on their approved pharmaceutical agent encompassing both term assignments. More details to be given in lectures.

Turnitin.com: Students will be required to submit their papers to Turnitin.com for review of textual similarity and to access the site, please login to www.turnitin.com and in order to access the course, you will need a course ID and password provided below:

Course ID: 4677809

Course password:pharma

Statement about Turnitin.com: "Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the

University's use of the Turnitin.com service are outlined on the Turnitin.com web site"

Online Grades:

Individual grades will be posted on the Blackboard Gradebook as they become available. Please check these periodically to make sure that the posted grades match your own records. Any discrepancy should be reported immediately to the instructors.

No calculators, models, pagers, cell phones or other aids will be allowed during any quizzes, lectures or exam, unless announced previously.

Persons who miss a test or exam are expected to contact Dr. Kerman immediately. Documentation, for approval, must be given within one week (e.g. Doctor's note - which should say that you were absent on the day in question, and that in the Doctor's opinion you were unable to write a test that day). If the documentation is insufficient, you may be required to obtain further, signed, paperwork. The exact date of the mid-term test is February 24th, 2014. Students who miss the term test will be assigned a mark of zero for the test, unless they can document a compelling reason for missing it. Those presenting a valid, documented reason for absence, in writing, within this timeframe, will be allowed to be excused OR to write a deferred exam, AT THE INSTRUCTOR'S DISCRETION.

Please note that if you miss the Final Exam, you must petition the Registrar's Office to write a make-up exam in the next formal exam period. Check the UTSC Calendar for instructions and dates.

There is no individual textbook assigned for this course and students should rely on course notes, literature articles, and lectures for the material covered. The following is a list of suggested texts.

10) Johnson, D. S.; Li, J. J., Editors The Art of Drug Design (978-0-471-75215-8, Wiley, 2007)
The following is a tentative list of topics that will be covered throughout the semester. The topics may change so students should refer to lecture notes provided for content of the course.

Topics:

- 1) Drug-Receptor interactions-1: Introduction to Important Functional Groups in Medicinal Chemistry, Physico-chemical Aspects and Principles of Drug Action
- 2) Pharmacodynamics: Drug-dose relationships, actions of agonists and antagonists, efficacy.
- 3) Pharmacokinetics: Factors that affect drug adsorption, distribution, metabolism and excretion.
- 4) Drug Metabolism: Pathways of drug metabolism
- 5) Drug Toxicity: Mechanisms of drug toxicity
- 6) Topic in rational drug design: Pharmacophore based drug design; Functional group modification; Molecular mimicry; Structure modification; Receptor based drug design; Receptors; Docking and Molecular modeling.
- 7) Structure – activity and quantitative structure relationships
- 8) Drug structure and solubility
- 9) Fundamentals of drug development and regulation

hypertension; dihydropyridine calcium channel blockers
15) Anti-cancer agents Aromatase inhibitors for breast cancer: exemestane (aromasin), anastrozole (arimidex), and letrozole (femara); protein-tyrosine kinase inhibitors

Accessibility Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach us and/or the Accessibility Services Office soon as possible. The UTSC Accessibility Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 726-7267 or accessibility@utsc.utoronto.ca. The sooner you let us know your needs, the quicker we can assist in achieving your learning goals in this course.

Cell Phones During lectures, please turn off your cell phones to avoid disruption of the class. If circumstances warrant use of your cell phone and you must receive an emergency call, please inform the instructor in advance at the beginning of the session and excuse yourself from class to receive the call.

Academic Calendar Further information about academic regulations and course withdrawal deadlines can be found in the UTSC Calendar. You are encouraged to read this material.

Centre for Teaching and Learning If you need assistance with effective writing skills, study skills, exam preparation, note taking, or time management, free workshops and advice are available from the Center for Teaching and Learning, which can be reached at: http://www.utsc.utoronto.ca/~ctl/Student_Support.html

Research Help: University of Toronto Scarborough Library: Staff at the University of Toronto Scarborough Library will be happy to help you find the resources you need for your assignments, and learn the research skills you will need for success at university.

Research help is available by phone, e-mail, or in-person in the Library. For more information, please see the Library's Research Help page http://s.library.utoronto.ca/utsc_help

Need in-depth assistance? Contact your Subject Liaison, Sarah Forbes-
<http://guides.library.utoronto.ca/profile/sforbes>

Computer Use Ethical use of University computers is expected at the University of Toronto Scarborough. Guidelines are set out in the UTSC Calendar. It is expected that the equipment and/or resources accessed in the UTSC library and the computer labs are to be used for academic research, assignments, and course activities only.

Academic Integrity: Honesty and fairness are considered fundamental to the University's mission, and, as a result, all those who violate those principles are dealt with as if they were damaging the integrity of the University itself. When students are suspected of cheating or a similar academic offence, they are typically surprised at how formally and seriously the matter is dealt with - and how severe the consequences can be if it is determined that an offence did occur. The University of Toronto treats cases of cheating and plagiarism very seriously.

Examples of offences for which you will be penalized include (but are not limited to):

- Using any unauthorized aids on an exam or test, ("cheat sheets")
- Representing someone else's work or words as your- plagiarism (see web document "How not to plagiarize" available online <http://www.utoronto.ca/writing/plagsep.html>)
- Falsifying documents or grades
- Purchasing an essay
- Submitting someone else's work as your own
- Submitting the same essay or report in more than one course (without permission)
- Looking at someone else's answers during an exam
- Impersonating another person at an exam or test or asking someone else to impersonate you
- Making up sources or facts for an essay or report

As a student it is your responsibility to ensure the integrity of your work and to understand what constitutes an academic offence. If you have any concerns that you may be crossing the line, please refer from the website <http://www.utoronto.ca/academicintegrity/resources/students.html> and always consult your instructor. Your instructor can explain, for example, the nuances of plagiarism and how to use secondary sources appropriately; he or she will also tell you what kinds of aids - calculators, dictionaries, etc. - are permitted in a test or exam. Ignorance of the rules does not excuse cheating or plagiarism. Students agree that by taking this course all required papers may be subject to submission for textual similarity review to Turnitin.com for the detection of plagiarism. All submitted papers will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. The terms apply to the University's use of the Turnitin.com