

The University of New Mexico

College of Pharmacy

PHARMACY 782 - CLINICAL TOXICOLOGY

Fall 2007

COURSE GOALS

The goals of this course are to make the student familiar with: the acute toxicity in humans of common drugs, chemicals and household products; the physical and laboratory assessment of common poisonings; the development of clinical management plans for common poisonings; and the role of pharmacists in prevention of poisoning.

COURSE OBJECTIVES

At the end of this course, the student should be able to:

1. describe the patterns of poisoning seen in New Mexico and how these patterns conform or conflict with national trends.
2. describe the general management of topical, ocular, inhalation, and ingestion exposures to toxic substances.
3. describe the presentation, assessment and management of poisonings from the agents listed in the course lecture schedule.
4. describe strategies for preventing unintentional poisonings which may be implemented by the hospital or community pharmacist.
5. differentiate poisonings by clinical presentation.
6. select appropriate laboratory tests to determine the identity and severity of poisoning.
7. develop a risk assessment based on patient and poisoning data.
8. create an appropriate management plan for selected poisoning scenarios.

COURSE CONDUCT

INSTRUCTOR OF RECORD

The faculty member responsible for the conduct of the course is Blaine (Jess) Benson, Pharm.D. He may be reached through e-mail (jebenson@salud.unm.edu) or by making an office appointment by calling Ms. Lauri Ivy at 272-4261. Dr. Benson's office is located in room 130 in the Health Science Center Library (across from Medical Bookstore). If you need to reach Dr. Benson urgently, please contact the poison center (800-222-1222, select option 1). Ask the Specialist to page Dr. Benson.

COURSE INSTRUCTORS

In addition to Dr. Benson, lecturers will include physician toxicologists, Pharm.D. fellows, and Specialists in Poison Information from the New Mexico Poison Center.

CLASS TIME & LOCATION

Class will meet in room B-28 in the College of Pharmacy. The class time is from 8:00 AM to 9:50 AM on Fridays. Please be in the class room by 7:55 AM.

CREDITS

Student will receive two credits for completing Pharmacy 782.

REQUIRED TEXTBOOK

The required textbook for Pharmacy 782 is Goldfrank LR et al, editors. Goldfrank's toxicologic emergencies. 8th ed. New York (NY): McGraw-Hill; 2006. This book is available at the UNMHSC Bookstore. It is also available electronically via UNM HSC Library & Informatics Center, through eBooks/Stat!Ref/Table of Contents. The procedure for accessing this resource is:

- 1) Go to UNM Library Home Page: <http://hsc.unm.edu/library/>
- 2) Click on "ebooks" hyperlink under "Resources" on left-hand side of the page
- 3) Click on "Stat!Ref" at the bottom of the page.
- 4) Accept conditions of use (first-time use).
- 5) Click on "Table of Contents" tab.
- 6) Click on "Goldfrank's Toxicologic Emergencies" and read desired chapters. These may be read online or printed out.

After you have accepted the conditions of use, you can access Goldfrank's via the following hyperlink:

<http://online.statref.com/TOC/TOC.aspx?SessionId=A15AE4QNALZGCJFX>

COURSE CONTENT

Course content will be presented through textbook readings, lectures and accompanying lecture outlines. All lecture materials will be posted to the UNM Ereserves website (<http://ereserves.unm.edu/eres/default.aspx>).

EXAMINATIONS

There will be four examinations; three during the semester and one at the time assigned during finals week. Each examination during the semester will consist of multiple-choice and/or short answer style questions. There will be seven exam points per lecture hour. Five points per lecture hour will be in the form of multiple-choice, true-false, or matching questions. Two points per lecture hour will be integrated into a patient management problem requiring a short answer response in the form of a SOAP note. Students will be given up to 1 hour (and no longer) to complete each examination. The final examination will be cumulative and will consist of two points per lecture. Students should bring a calculator to each exam.

Students must arrive on time for the examinations. Instructions and corrections will be made at the beginning of the examination period, and once made will not be repeated. Any student arriving after the first examinee leaves the room will not be allowed to sit for the exam, and will receive a grade of zero for that examination.

No personal items such as backpacks, briefcases, books or notebooks will be allowed in the seating area during exams. No one will be allowed to wear a hat, answer pages or answer cellular phone calls during the exams. Pagers and cellular phones must be silenced during exams. The use of handheld (e.g. "Palm Pilot") computers is prohibited during examinations.

GRADE RECONSIDERATION REQUESTS

Students may ask the Instructor of Record to reconsider their answer on an exam based on additional documentation or explanation. A reconsideration sheet is included in the syllabus and can also be downloaded from the college course material website. All reconsideration requests should be written with courtesy and professionalism. All requests must be accompanied by a justification based on the textbook, primary literature or the lecturer's handout. Please use the following procedure:

1. Fill out the "Grade Reconsideration Request" sheet on your computer.
2. Email the request to the Instructor of Record within 5 business days of posting of exam grades.
3. Your request will be reviewed with the lecturer responsible for the material associated with the request. The Instructor of Record will contact you within 3 – 5 business days regarding the outcome of your request.

MAKEUP EXAMINATIONS

Make-up exams will be given only for missed exams when the student presents a bona fide written reason for the absence (doctor's note or family emergency). Personal travel conflicts on University class days will not be accepted. The Instructor of Record must be contacted before an exam is missed and a typed request for a make-up exam, as well as other documentation (i.e., doctor's note, etc.) must be provided. If a bona fide excuse is not provided, the student will be assigned a zero for the exam and no make up exam will be allowed. The make up exam will be administered at the discretion of the Instructor of Record, within one week of the regularly scheduled examination. The make up exam may be essay, short answer, multiple-choice, matching, oral or any other format. It is appropriate to assume that the make up exam will require a greater understanding of the material than the original exam. Special circumstances will be heard and accommodated on a case-by-case basis at the discretion of the Instructor of Record and may include consultation with the Pharmacy Practice Area Head and/or the Associate Dean of Student Affairs.

EXTRA CREDIT

Extra credit points will be available through in class through iClicker questions and via a variety of written or public service exercises throughout the semester. Grade reconsiderations will not be processed for extra credit opportunities.

GRADING

Final grades will be assigned based on the cumulative number of points earned expressed as a percentage of the total number of points possible. The following scale will be used: $\geq 90\%$ (A), 80 to 89% (B), 70 to 79% (C), 60 to 69% (D), $< 60\%$ (F) Student scores and percentages will be updated and posted after each exam.

COURSE REMEDIATION

Students who earn a final grade of D or less for the course will have an opportunity to remediate the grade by taking a comprehensive examination. The comprehensive examination will be administered once, within 4 weeks after the conclusion of the semester in which a final grade of D or less was earned, at a time and location to be determined by the Instructor of Record for the course. The comprehensive examination will be composed of new questions and can include essay, short answer, multiple choice, matching, oral or any other format covering the entire course content. If a score of C or greater is achieved on the remedial comprehensive examination, the final grade will be changed to a "C". If a score of C or greater is not achieved, the student's original grade remains as the grade for the course. A final grade of greater than "C" will not be awarded regardless of the score on the remedial comprehensive examination and no student will have the assigned grade decreased by the remedial comprehensive exam. Students who have earned a grade of "C" or better are not eligible to take a comprehensive examination

in order to improve their grade. Instructors of record for each course are responsible for establishing grading scales for their respective courses.

It is the responsibility of students receiving a grade of D or less for the course to ascertain their final grade and to inform the Instructor of Record within 3 days of the posting of the final grade whether they wish to attempt the remediation comprehensive examination. The Instructor of Record will contact the Assistant Dean of Student Affairs to verify eligibilities.

ATTENDANCE POLICY

Students are expected to attend each class. Official course announcements will be made in class, and if the student is not in attendance, it is his/her responsibility to obtain the information presented in class that day.

CLASSROOM CONDUCT

Students are required to follow the University of New Mexico and the College of Pharmacy (COP) Student Code of Conduct at all times. Students not following the Code of Conduct will be subject to appropriate actions by the COP.

SPECIAL CIRCUMSTANCES

Any student experiencing an event prohibiting him or her from taking an examination or for which he or she feels will otherwise impair his or her ability to perform optimally in this course such as accident, illness, or death in the family must notify the course coordinator immediately. Special circumstances will be heard and accommodated on a case-by-case basis at the discretion of the course coordinator and may include consultation with the Associate Dean of Student Affairs.

SCHOLASTIC DISHONESTY

The College of Pharmacy abides by the University of New Mexico regulations governing scholastic dishonesty. Scholastic dishonesty is defined as commission of any of the actions listed in the current University of New Mexico – College of Pharmacy Doctor of Pharmacy Student Handbook in the Student Code of Conduct Section as well as in The Pathfinder – The University of New Mexico Student Handbook, Student Code of Conduct Section. Scholastic dishonesty will be grounds for disciplinary action consistent with the UNM Student Code of Conduct.

Participants in iClicker exercises must use their own input device. If a student forgets to bring their iClicker they will not be able to participate in the exercise and they forego any extra credit points associated with the exercise. Students may only participate with their own iClicker. Sharing an iClicker or participating in an exercise with multiple iClickers is considered an act of academic dishonesty and will be grounds for disciplinary action.

AMERICANS WITH DISABILITIES ACT

The University of New Mexico is compliant with the provisions of the Americans with Disabilities Act. Qualified students with disabilities needing appropriate adjustments should contact the Instructor of Record as soon as possible to ensure that their needs are met in a timely manner. Handouts are available in alternative accessible formats upon request.

CLASS SCHEDULE

Date	Topic	Goldfrank's Chapter(s)	Lecturer
08/24/2007	General Management Principles I	4, 8	Jess Benson, Pharm.D.
	General Management Principles II	10	Jess Benson, Pharm.D.
08/31/2007	NSAID's & Acetaminophen	34, 36	Jess Benson, Pharm.D.
	Methemoglobin Inducers	122	Susan Kunkel, Pharm.D.
09/07/2007	Household Products & Corrosives	100, 101	Stephanie Harvey, Pharm.D., CSPI
	Hypoglycemics	48	Steve McLaughlin, M.D.
09/14/2007	Sedative Hypnotics, Lithium, and Antipsychotics	67, 68, 72	Jody Rogers, M.D.
	Salicylates	35	Jess Benson, Pharm.D.
09/21/2007	Exam 1		
	Vitamins and Iron	40, 41	Jess Benson, Pharm.D.
09/28/2007	Anticonvulsants	47	Steven Seifert, M.D.
	Toxic Alcohols	103	Steven Seifert, M.D.
10/05/2007	Cyclic Antidepressants	71	Jody Rogers, M.D.
	MAO's, SSRI's & Miscellaneous Antidepressants	69, 70	Jess Benson, Pharm.D.
10/12/2007	Fall Break		

Date	Topic	Goldfrank's Chapter(s)	Lecturer
10/19/2007	Stings & Bites	115, 117	Stephanie Harvey, Pharm.D., CSPI
	Plants	114	Holly Jones-Lovato, R.Ph., CSPI
10/26/2007	Exam 2		
	Opioids	38	Susan Kunkel, Pharm.D.
11/02/2007	Cardiovascular Agents	58, 59, 62	Jess Benson, Pharm.D.
	Food Poisoning	45, 46	Steven Seifert, M.D.
11/09/2007	Skeletal Muscle Relaxants		Rose Kao, R.Ph., CSPI
	Toxic Gases	119, 120, 121	Steven Seifert, M.D.
11/16/2007	Pesticides	109, 110, 111	Mariya Farooqi, Pharm.D.
	Street Drugs	73, 74, 78, 81, 83	Damon Cano, R.Ph., CSPI
11/23/2007	Thanksgiving Holiday		
11/30/2007	Exam 3		
	Heavy Metals	85, 91, 92	Steven Seifert, M.D.
12/07/2007	Hydrocarbons	102	Jess Benson, Pharm.D.
	Inhalant Abuse	79	Jess Benson, Pharm.D.
TBA	Final Exam		