



Clinical Toxicology Online Graduate Program

PHA6840 Medicinal Chemistry of Drugs of Abuse

3 Credit Hours – Grades A-E

Medicinal Chemistry of Drugs of Abuse is a graduate and professional level course that explores the Controlled Substances Act and the Diagnostic and Statistical Manual of Mental Disorders in more detail to provide an in-depth view of the current trends in drug abuse in the US. The rest of the course is dedicated to the chemical and pharmacological information relating to CNS depressants, stimulants, inhalants and hallucinogenic drugs of clinical and forensic significance. The course will provide the current understanding of the mechanism of action for each drug class discussed, their pharmacokinetics, potential interactions, and a discussion on legal, clinical, and forensic implications.

Course Faculty and Office Hours

See Appendix A. for Who to Contact.

Teaching Partnership Leader:

Grundmann, Oliver

Clinical Associate Professor

Department of Medicinal Chemistry, College of Pharmacy

Email: grundman@ufl.edu

Office: off-campus

Phone: 352-246-4994

Office Hours: virtual office hours on Monday & Thursday via BigBlueButton, see Canvas Course Calendar and Course Scheduler

Course-Level Objectives

Upon completion of this course, the student will be able to:

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1. Outline the structure of the US controlled substances act and the definitions of each drug classification.
2. Explain and contrast the models of addiction and the observations on which they are based.
3. Demonstrate the pharmacological and abuse profiles of the:
 - a. CNS depressants, barbiturates and benzodiazepines
 - b. Alcohol
 - c. Opioid drugs
 - d. Hallucinogens
 - e. Cannabinoids
 - f. CNS stimulants, cocaine and the amphetamines
 - g. Inhalants
4. Assess patients based on common symptoms as to potential drug exposure and suggest possible treatment approaches.

Course Prerequisite

1. Completion of all Year 1 Pharm.D. program coursework including milestones.

Course Corequisite

1. Completion of all Year 1 Pharm.D. program coursework including milestones.

Course Outline

Please routinely check your campus calendar and the Canvas course site for any messages about changes in the schedule including meeting dates/times, deadlines, and room changes.

Mod #	Unit Topic	Faculty Author	Contact Hours [hr.] ^a
1	Drug Classes and Controlled Substances Act	Grundmann	6 hrs
	Module 1 assigned reading		3 hrs
	Welcome discussion		

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	Module 1 discussion		
	Introductory chat session		1 hr
	Assignment & quiz 1 due		2 hrs
2	Drug Dependence and Addiction	Grundmann	5.5 hrs
	Module 2 discussion		
	Module 2 assigned reading		3.5 hrs
	Assignment & quiz 2 due		2 hrs
3	CNS Depressants	Grundmann	5.5 hrs
	Module 3 discussion		
	Module 3 assigned reading		3.5 hrs
	Assignment & quiz 3 due		2 hrs
4	Alcohol	Grundmann	5.5 hrs
	Module 4 discussion		
	Module 4 assigned reading		3.5 hrs
	Assignment & quiz 4 due		2 hrs
5	Opioids	Grundmann	5.5 hrs
	Module 5 discussion		
	Module 5 assigned reading		3.5 hrs
	Drug of the term		1 hr
	Assignment & quiz 5 due		2 hrs
6	Cannabinoids	Grundmann	5.5 hrs
	Module 6 discussion		
	Module 6 assigned reading		3.5 hrs
	Assignment & quiz 6 due		2 hrs
7	Hallucinogens	Grundmann	5.5 hrs
	Module 7 discussion		
	Module 7 assigned reading		3.5 hrs
	Assignment & quiz 7 due		2 hrs
8	CNS Stimulants	Grundmann	6.5 hrs
	Module 8 discussion		

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	Module 8 assigned reading		3.5 hrs
	Assignment & quiz 8 due		2 hrs
9	CNS Volatile Substances	Grundmann	5.5 hrs
	Module 9 discussion		
	Module 9 assigned reading		3.5 hrs
	Assignment & quiz 9 due		2 hrs

Required**Textbooks/Readings**

No required or recommended textbooks for this course.

Student Evaluation &**Grading**

Evaluation Methods and how grades are determined.

The Canvas© gradebook will be set-up using the percentages below to compute the grade.

Assessment Item	Grade Percentage
9 Written essay assignments (varying points, total of 280 points)	59.60%
9 Online timed quizzes (each 20 points)	38.30%
1 Drug of the term discussion board post (10 points)	2.10%
Total	100%

Grading Scale:

Percentage Range	Letter Grade
92.50-100%	A
89.50-92.49%	A-
86.50-89.49%	B+
82.50-86.49%	B
79.50-82.49%	B-
76.50-79.49%	C+
72.50-76.49%	C
69.50-72.49%	C-
66.50-69.49%	D+
62.50-66.49%	D
59.50-62.49%	D-
< 59.50%	E

Rounding of grades:

Final grades in Canvas will be rounded to the 2nd decimal place. If the decimal is X.495 or higher, Canvas will round the grade to X.50. The above scale depicts this policy and grades are determined

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accordingly. Grade assignment is made using this policy and NO EXCEPTIONS will be made in situations where a student's grade is "close."

Educational Technology Use

The following technology below will be used during the course and the student must have the appropriate technology and software. *Appendix A*. outlines who to contact if you have questions about technology.

1. Canvas™ Learning Management System

Pharm.D. Course Policies

Navigate to the [Pharm.D. Course Policies](#) web-page at this URL:

<http://curriculum.pharmacy.ufl.edu/current-students/course-policies/> (copy and paste this URL into your internet browser) OR visit the curriculum.pharmacy.ufl.edu website and navigate to *Course Policies* under the 'For Current Students' tab.

Appendix A. Faculty and Staff: Who to Contact

Teaching Partnership Leader/Course Director: Dr. Oliver Grundmann,

grundman@ufl.edu

1. Issues related to course policies (absences, make up exams, missed attendance)
2. Absence requests (Only the Academic Coordinator handles absence requests)
3. Questions about dates, deadlines, meeting place
4. Availability of handouts and other course materials
5. Assignment directions
6. Questions about grade entries gradebook (missing grades, wrong grade)
7. Questions about grades
8. Concerns about performance
9. Guidance when there are performance problems (failing grades)
10. General questions about content
11. Questions about specific content

Technical Support:

For technical support related to eLearning, educational videos, mobile learning tools and other course-related issues, contact *College of Pharmacy Educational Technology Support* at:

- HPNP Rm. 4309 or 4312, Monday – Friday, 8:30 am to 4:30 pm
- E-mail: edu-help@ahc.ufl.edu
- Phone: 352-273-9492

Contact the **University of Florida Computing Help Desk** for issues related to Gatorlink accounts, UF e-mail, ONE.UF, myUFL and other centralized UF systems, contact UF Computing Help Desk at:

- Website: <https://my.it.ufl.edu/CherwellPortal/UFITServicePortal>
- E-mail: helpdesk@ufl.edu

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- Help Wiki: <https://wiki.helpdesk.ufl.edu/>
- Phone: (352) 392-4357