

**University of Florida**  
**College of Public Health & Health Professions Syllabus**  
**Course Number: SPA6581 Auditory Pharmacology (2 credit hours)**  
**Class Time: Tue & Thu (8:30 am – 10:45 pm)**  
**Class Location: HPNP G-105**



Semester: Summer 2022  
Delivery Format: On-Campus & Online (Zoom)  
Course Website: All information for this course will be made available on the e-learning site, which can be accessed at <http://elearning.courses.ufl.edu>. Gatorlink username and password is required to access site.

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Office Hours: Tuesdays and Thursdays 11:00 am – 5:00 pm or by appointment  
Preferred Course Communications: email

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**Prerequisites:** SPA 5102, Anatomy and Physiology of Hearing

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## **PURPOSE AND OUTCOME**

**Course Overview:** This course introduces the fundamental biological and chemical mechanisms through which drugs affect hearing. The course focuses on both drugs used in otolaryngologic practice and ototoxic drugs.

### **Relation to Program Outcomes**

This course meets the following ASHA Standards:

- IV-a1. Embryology and development of the auditory and vestibular systems, anatomy and physiology, neuroanatomy and neurophysiology, and pathophysiology
- IV-a8. Effects of pharmacologic and teratogenic agents on the auditory and vestibular systems
- IV-a10. Pathologies related to hearing and balance and their medical diagnosis and treatment
- IV-f2. Applying research findings in the provision of patient care (evidence-based practice)
- IV-f3. Critically evaluating and appropriately implementing new techniques and technologies supported by research-based evidence

### **Course Objectives and/or Goals**

Upon completion of this course, students will be able to:

1. Explain the fundamental concepts of how drugs affect hearing.
2. Describe how common drugs used in otolaryngologic practice work.
3. Discuss the mechanisms underlying how ototoxic drugs cause hearing loss.
4. Analyze patient symptoms to determine possible ototoxic drug damage.

### **Instructional Methods**

This is a graduate level course using an online lecture format. Active participation in class discussion is expected of all students. Canvas in e-learning will be utilized to disseminate course notes and readings.

## DESCRIPTION OF COURSE CONTENT

**Topical Outline/Course Schedule:** (Tentative and subject to change)

Week	Date(s)	Topic(s)	Readings
1	5/10	Introduction Review - AP of the Auditory System	Chapter 8 (Pharmacology)
	5/12	Review - AP of the Vestibular System	Chapters 1-2 (Pharmacology)
2	5/17	Mechanisms of cell death in the cochlea Student presentation: Jillian Boland, <i>Victoria Torres</i>	Chapter 7 (Pharmacology)
	5/19	Introduction to Pharmacology Student presentation: Cassandra Weller <b>Quiz 1</b>	Chapter 5 (Pharmacology)
3	5/24	<b>Drugs used in ENT practice</b> Student presentation: <i>Nicole Kalpin, Stephanie Eisenberg</i>	Chapter 10 (Pharmacology)
	5/26	Chemotherapeutics	
4	5/30	Aminoglycoside antibiotics Student presentation: Hannah Walsh, <i>Meg Schwalm</i>	Chapter 11 (Pharmacology)
	6/2	Diuretics Student presentation: Grace Tilbrook Student presentation: Samantha Jean <b>Quiz 2</b>	Chapter 12 (Pharmacology)
5	6/7	<b>Perspective paper – Due Sunday June 6</b> Aspirin and anti-inflammatory drugs Student presentation: Alaina Massaro, Samantha Erfe	Chapter 13 (Pharmacology)
	6/9	Industrial chemicals Student presentation: Grayson Bishop <b>Quiz 3</b>	Chapters 14 (Pharmacology)
6	6/14	Final Exam Review Websites and Resources for Ototoxic Drugs and Chemical Information	
	6/16	<b>Final Exam</b>	Chapters 6, 19 (Pharmacology)

### Course Materials and Technology:

The information in the following textbooks is coordinated with the in-class discussions. The textbooks are not required, but chapters from the books will be used for reading, presentation and discussion material.

1. Pharmacology and Ototoxicity for Audiologists 1st Edition (2007). Editor: Kathleen Campbell. Delmar Cengage Learning (ISBN-10: 1418011304).

For technical support for this class, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

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## ACADEMIC REQUIREMENTS AND GRADING

### Assignments:

Reading assignments will be discussed during the scheduled class times. Students should prepare by reading materials in advanced in order to fully engage in class discussions. Supplementary materials are to be used as study aids for particular topics. There will be 3 Quizzes, 1 presentation, 1 perspective paper and 1 Final Exam.

### Quizzes:

There will be three quizzes, each earning 10% of the semester grade. The quiz will multiple choice, true/false, matching, and fill in the blank.

### Exam:

One final exam will be given on the last day of class, for 30% of the semester grade. The quiz will multiple choice, true/false, matching, fill in the blank, and short essay questions.

### Presentation:

Each student will be assigned an original research article which supplements the textbook reading for the week. The presentation should be 20 minutes in length and will be assessed incorporating the following components:

- Introduce the question (5 pts)
- Background (5 pts)
- Methods (5 pts)
- Results (5 pts)
- Interpretation/Limitations (5 pts)
- Style of presentation (5 pts)

### Perspective papers:

Students will select one lecture topic and compose a 3-4 page double-space "perspective" paper that describes the major aspects of the research presentation and your own interpretation.

This perspective paper should have the following components:

- Compose a 3-4 page double-space paper, excluding references (5 pts)
- Background (5 pts)
- Methods (5 pts)
- Results (5 pts)
- Your own interpretation (5 pts)
- Cite (e.g., APA style) the readings to support your perspective (5 pts).

### Exam Policy:

Missed Exam Policy. If you have an emergency or become sick and cannot attend class during the exam, you must contact me prior to the class time on the day that you will miss the exam or you will not be able to make-up the exam. You are responsible for scheduling when you will make-up the missed exam.

### Class Attendance Policy:

Attendance to classes is required, within the UF Attendance Policy guidelines. For information regarding the UF Attendance Policy see the Registrar website for additional details:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

## Grading

Requirement	Date	Points or % of final grade	Clinical Standard(s) Being Assessed
Quiz I	TBA	20%	IV-B
Quiz II	TBA	20%	IV-B
Quiz III	TBA	20%	IV-B
Presentation	TBA	10%	IV-B
Perspective Paper	6/6	10%	IV-B
Final Exam	6/16	20%	IV-B
Total		100%	

Point system used (i.e., how do course points translate into letter grades).

Points earned	95-100	90-94	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	<60
Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E

Please be aware that a C- is not an acceptable grade for graduate students. A grade of C counts toward a graduate degree only if an equal number of credits in courses numbered 5000 or higher have been earned with an A. In addition, the Bachelor of Health Science Program does not use C- grades.

You must include the letter grade to grade point conversion table below. Letter grade to grade point conversions are fixed by UF and cannot be changed.

Letter Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E	WF	I	NG	S-U
Grade Points	4.0	3.67	3.33	3.0	2.67	2.33	2.0	1.67	1.33	1.0	0.67	0.0	0.0	0.0	0.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:

<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### Policy Related to Required Class Attendance:

You are expected to attend every class scheduled.

All faculty are bound by the UF policy for excused absences. For information regarding the UF Attendance Policy see the Registrar website for additional details:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

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## STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

### Expectations Regarding Course Behavior:

Academic Honesty: The UF student Honor Code states: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." On all work submitted for credit by students at the university, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment."  
UF's Academic Honesty Policy can be found at <http://regulations.ufl.edu/chapter4/4017.pdf>.

### Communication Guidelines:

Office Hours: Wednesdays 2:00 pm -4:00 pm or by appointment.

### Academic Integrity:

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

**"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."**

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

**"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>  
<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

### Online Faculty Course Evaluation Process:

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.



## **SUPPORT SERVICES**

### **Accommodations for Students with Disabilities:**

If you require classroom accommodation because of a disability, you must register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class. The Dean of Students Office will provide documentation of accommodations to you, which you then give to me as the instructor of the course to receive accommodations. Please make sure you provide this letter to me by the end of the second week of the course. The College is committed to providing reasonable accommodations to assist students in their coursework.

### **Counseling and Student Health:**

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:  
Alachua County Crisis Center  
(352) 264-6789  
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.