

Course syllabus: **Medical Honors Pharmacology**

MDU 4002, UF Medical Honors Program
Spring 2021

I. General Information

Course Director:

Dan Wesson, Ph.D.; Associate Professor
Dept of Pharmacology and Therapeutics
University of Florida, College of Medicine
ofc: ARB 5-204, 352-294-8767, danielwesson@ufl.edu
ofc hours: by appointment only on Zoom. Contact Tamara Suggs (t.suggs@ufl.edu)

Location: <https://ufl.zoom.us/j/92972773301?pwd=U0h5TIRpZC9Ba251RjZ1RENmY3REZz09>
→mtg ID 92972773301; passcode 837038

Time/day: Wednesday, 2-5pm

II. Course description and educational goals

How do endogenous chemicals in the body maintain normal bodily function? How do drugs act upon the body to modify these processes in manners which may prevent or treat disease? These questions are paramount to the discipline of Pharmacology – the scientific branch concerned with the uses, modes of action, and effects of drugs on the body. This course will serve to provide you with an introduction to pharmacology and will do so by placing pharmacological therapies into a bigger context. Through this course you will gain an appreciation for the discipline of Pharmacology and the importance of Pharmacological therapies for maintaining human health.

III. Course organization

The course is hosted weekly and designed to allow all students to participate each week in a ‘flipped classroom’ paradigm. This will be accomplished by students delivering either a 1) short or 2) in-depth presentation each week. Discussions are encouraged following both types of presentations to further facilitate participation.

The class will start-off each day with short presentations. A short presentation consists of a student delivering a 5 minute oral presentation in their own words to their peers in class which raises awareness and discusses the fundamental issues surrounding a basic concept in that week’s subject. Each week there will be 8-10 short presentations. The faculty advisor(s) will develop these questions which I will distribute to you after the preceding class. Guidance from the faculty advisor(s) should not be needed for the short presentation preparation, however, they may be consulted.

An in-depth presentation consists of a student delivering a 20 minute *ppt* presentation to their peers in class regarding a topic of interest selected with guidance from a faculty advisor. Each week there will be 1-3 in-depth presentations thus allowing each student to deliver 2 presentations throughout the semester. Students must meet with their faculty advisor well in advance (plan weeks ahead!) to plan/develop this presentation. You should anticipate scheduling three meetings: *1st meeting*) to discuss the topic and scope of the presentation, *2nd meeting*) to further discuss the content after the student has delved into background reading, and *3rd meeting*) to receive final feedback on the final presentation, including effectiveness of any visual aids. You and your faculty advisor may agree the *3rd* meeting is not needed based upon satisfactory progress. Students must be proactive in scheduling these meetings. Please email the *ppt* for your in-depth presentation to me (danielwesson@ufl.edu) by noon the day of class.

In order to prepare these presentations, all students are encouraged to consult the required text for the course (see section VI), additional professional reference texts, and/or additional reading materials which may be provided by the faculty advisor(s).

For the written report, students will be allowed a month to develop written reports concerning a specific drug of their choosing. The reports should be around 6 pages double spaced (8 max), using 12pt Arial font (1" margins), with references to support content (references not included in page limit). In the written report, each student will select/identify one specific drug, discuss in detail its pharmacological properties building off of content which has been covered in class thus far (metabolism, receptor interactions, signaling, etc), detail what conditions the drug is indicated for, and what side effects may occur and why. All attempts should be made to ensure the drug is not a focus of interest in any content presented / to be presented in the semester. At least one illustration (referencing source) should be included in the main pages of the report. It is anticipated that these reports will require seeking of resources and information on pubmed.gov and related databases for students to go beyond what is briefed in *The Pharmacological Basis of Therapeutics* or Katzung's *Basic and Clinical Pharmacology*. Separate from the page limit, the report must include a cover page with a title, data, and name, and the report should end with a list of literature cited. A 10 minute presentation overviewing the salient aspects of the drug you selected will follow completion of the reports.

All students should read the assigned readings to enhance classroom participation. Additional readings may be assigned by the faculty advisors for all students to read prior to class.

IV. 2021 Course calendar

Date	Subject (name after ":" is who will lead the in-depth presentation)	Faculty Advisor
Jan. 13	Course Introduction and scheduling of presentations. Students leading the in-depth presentations on Jan 15 will meet with Dr. Bird at about 4:00 PM.	Dr. Wesson
Jan 20	Pharmacokinetics I (Drug Metabolism by the Liver:) Pharmacokinetics II (Renal Excretion of Drugs:) <i>Reading: Goodman & Gillman's Chapter 2</i>	Dr. Bird Dr. Bird
Jan 27	Drug-Receptor Interactions I (Nicotinic Acetylcholine Receptors:) Drug-Receptor Interactions II (G-Protein Coupled Receptors:) Drug-Receptor Interactions III (EGF and other Kinase Receptors:) <i>Reading: Goodman & Gillman's Chapter 3</i>	Dr. Moehle Dr. Urs Dr. B. Law
Feb. 3	Autonomic Pharmacology I (Anti-Hypertensive Drugs:) Autonomic Pharmacology II (Treatment of Asthma:) <i>Reading: Goodman & Gillman's Chapter 8, 12, & 28</i>	Dr. Wesson Dr. Wesson
Feb. 10	Cancer Therapy (TBA:) <i>Reading: Katzung Chapters 21-23, & 32</i>	Dr. Guryanova
Feb. 17	Cardiovascular Pharmacology (TBA:) <i>Reading: Goodman & Gillman's Chapters 28-31</i>	Dr. Martens
Feb. 24	Gastrointestinal Pharmacology (Treatment of Gastric HCl Secretion:) Discussion and assigning of written reports <i>Reading: Goodman & Gillman's Chapter 49</i>	Dr. M. Law Dr. Wesson
Mar. 3	Therapy of Infectious Disease I (TBA:) <i>Reading: Katzung Chapters 43-49</i>	Dr. Rowe

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Mar. 10	Chemotherapy of Parasitic Disease (TBA:) <i>Reading: Katzung Chapters 52-53</i>	Dr. Kima
Mar. 17	Antiepileptic drugs (TBA:) Antiepileptic drugs (TBA:) <i>Reading: Goodman & Gillman's Chapter 17</i>	Dr. Wesson Dr. Wesson
Mar. 24	NSAID Analgesics (Mechanism of action of acetaminophen:) Opioid Analgesics (Opioids and addiction:) <i>Reading: Katzung Chapters 31 & 36; Goodman & Gillman's Chapter 38</i>	Dr. Harrison Dr. Levitt
Mar. 31	Local Anesthetics (TBA:) General Anesthetics (TBA:) <i>Reading: Goodman & Gillman's Chapters 21 & 22</i>	Dr. Kopinke Dr. Morey
April 7	Report presentations & Reports due	Dr. Wesson
April 14	Therapy for movement disorders (Dystonia:) Therapy for movement disorders (Parkinson's:) <i>Reading: Goodman & Gillman's Chapter 18; Katzung Chapter 28</i>	Dr. Burns Dr. Moehle
April 21	Therapy for Alzheimer's disease (Symptomatic therapies:) Therapy for Alzheimer's disease (Disease modifying therapies:) <i>Reading: Goodman & Gillman's Chapter 18</i>	Dr. Wesson Dr. Wesson

V. Evaluations and grading

Grading will be in accordance with UF policy

(<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>) and will be based upon a combination of your classroom participation, professionalism, presentations, and written report as follows:

<p>20% -- in-depth presentations (10% each, based in-part upon feedback from faculty advisors)</p> <p>30% -- participation</p> <p>10% -- written report and report presentation</p> <p>15% -- professionalism (based in-part upon feedback from faculty advisors)</p> <p>25% -- <u>your short presentations</u></p> <p>100% total possible</p>

Grading will be distributed / updated regularly on Canvas.

VI. Required materials

Pharmacology texts are available online and/or to download from the UF library. These include Goodman & Gillman's *The Pharmacological Basis of Therapeutics*, 13th Ed (2018) and Katzung's *Basic and Clinical Pharmacology*, 14th Ed (2018).

VII. Attendance and participation

Due to covid, this class will be held on-line and all meetings with faculty *should* be held virtually as well, although is a faculty member offers to meet in person that is at both of your discretion. No recordings of any class sessions or meetings are allowed without consent by all involved. Class sessions are never to be recorded.

“Requirements for class attendance ... assignments, and other work in this course are consistent with university policies that can be found at:

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

There are only 15 class days this semester. Please try to never miss a class, or be late. If you must miss a class please send an email to Dr. Wesson and attach needed documentation in order to have an excused absence.






All students are expected to participate in discussions within the class, every class session. Faculty advisors should be treated with the utmost respect and students must be mindful and flexible when arranging meetings with faculty. All students should plan to arrive on zoom prior to the start of class. In exchange, students should expect faculty participants to show up engaged and ready for class.






Dr. Wesson will inform the Medical Honors office of students who have difficulty meeting attendance and participation goals.

VIII. List of Faculty Participants

Faculty	E-Mail (*also contact for scheduling)
Jonathan Bird, Ph.D.	j.bird@ufl.edu
Matthew Burns, M.D., Ph.D.	matthew.burns@neurology.ufl.edu
Olga Guryanova M.D., Ph.D.	oguryanova.ufl.edu
Jeffrey Harrison, Ph.D.	jharriso@ufl.edu
Peter Kima, Ph.D.	pkima@ufl.edu
Daniel Kopinke, PhD.	dkopinke@ufl.edu
Brian Law, Ph.D.	bklaw@ufl.edu
Mary Law, Ph.D.	marylaw@ufl.edu
Erica Levitt, Pharm.D., Ph.D.	erica.levitt@ufl.edu
Jeffrey Martens, Ph.D.	martensj@ufl.edu *(Ellen Esparolini [eesparol@ufl.edu])
Timothy Morey, M.D.	morey@ufl.edu *(Jennifer Barghour [jbarghout@anest.ufl.edu])
Mark Moehle, Ph.D.	mark.moehle@ufl.edu
Thomas Rowe, Ph.D.	tomrowe@ufl.edu
Nikhil Urs, Ph.D.	nikhilurs@ufl.edu
Dan Wesson, Ph.D.	danielwesson@ufl.edu *(Tamara Suggs [t.suggs@ufl.edu])

IX. Student roster

	<p>Bishoy Abdelmalik University of Florida bishoyabdelmalik@ufl.edu</p>
	<p>Sydney Cabana University of Florida scabana@ufl.edu</p>
	<p>Daniel Chong University of Florida danielchong@ufl.edu</p>
	<p>Alice Hamilton Florida State University hamiltonalice@ufl.edu</p>
	<p>Kenneth Harland University of Florida kharland@ufl.edu</p>

	<p>Jamie Harris University of Florida jamieharris@ufl.edu</p>
	<p>Zachary Mayer University of South Florida z.mayer@ufl.edu</p>
	<p>Sonile Peck University of Florida sonilepeck@ufl.edu</p>
	<p>Joshua Riklan Tulane University jriklan@ufl.edu</p>
	<p>Madison Wnuk University of Florida madison.wnuk@ufl.edu</p>



XI. Miscellaneous important information

a) Accommodations for students with disabilities:

“Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.”

b) Online course evaluation process:

The course evaluation process in accordance with the UF Policy on Course Syllabi.

“Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.”

c) Student conduct and demeanor:

I expect students to be passionate about topics within this course and to approach the discussions with creativity and thoughtfulness. While critical discussion is encouraged, all students are expected to be respectful of unique opinions which may differ from their own. It is also expected students will engage faculty advisors with the utmost respect and courtesy. These are some of the aspects of professionalism – a significant portion of the final grade is for professionalism.

d) University policy regarding cheating, plagiarism, etc:

“UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are

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obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with [the instructor] in this class.”

e) Campus resources:

The following resources are available to you at UF:

U Matter, We Care:

If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that you can talk with a team member or so a team member can reach out to your friend.

Counseling and Wellness Center:

<http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Assault Recovery Services (SARS) Student Health Care Center, 392-1161.

University Police Department, 392-1111 (or 911 for emergencies). <http://www.police.ufl.edu/>

f) Academic resources:

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling.
<http://www.crc.ufl.edu/>

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.