

OAKTON COMMUNITY COLLEGE
 BIO 244 Pharmacology Course Syllabus
 Fall Session 2016

Instructor: Linnea R. Boyev, MD, PhD

Des Plaines: Lee Room 146 4:00-5:50pm Tue
 Room 146 11:00am-12:50pm Thu
 Room 154 1:00-2:50pm Fri

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 10-11am Thu
 Noon-1pm Fri
 Other times by appointment (text me!)

Website: www.boyev.com

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Dr. Boyev's Cell/Text: _____

I.	<u>COURSE</u>	<u>COURSE</u>					
	<u>PREFIX</u>	<u>NUMBER</u>	<u>COURSE NAME</u>	<u>CREDIT</u>	<u>LECTURE</u>	<u>LAB</u>	<u>INSTRUCTOR</u>
	BIO	244	Principles of Pharmacology	2	2	0	Boyev

II. PREREQUISITES:

BIO 231 or equivalent (previously listed as BIO 131, Human Anatomy and Physiology I)
BIO 232 or equivalent (Human Anatomy & Physiology II) with minimum grade of C or concurrent enrollment in BIO232.

III. COURSE (CATALOG) DESCRIPTION:

Course introduces pharmacology, primarily for students in allied health fields. Content includes an introduction to terminology, pharmacokinetics, pharmacodynamics, drug category, use, and side effects.

IV. LEARNING OBJECTIVES:

After successfully completing this course, the student should be able to:

1. Explain the principles of pharmacokinetics related to medication administration.
2. Contrast the routes of drug administration with inclusion of proper terminology.
3. Summarize the therapeutic and side effects of major drug categories.
4. Summarize policies, regulations, and legal standards relative to drug administration.
5. Explain the basics of body systems, related diseases, and representative drugs used for treatment.
6. Analyze medication information with the use of online drug references (ie. pdrhealth.com/drugs, rxlist.com, medicinelist.com, etc).
7. Explain major drug interactions.
8. Explain mechanisms of actions for major drug categories.

BIOLOGY DEPARTMENT LEARNING OUTCOMES

By the completion of your biology courses at Oakton, you will have gained the experience to.....

1. **Think critically** – identify, define, analyze, interpret, and evaluate ideas, concepts, information, problems, solutions, and consequences. This includes the ability to compute and comprehend quantitative information and to engage in the scientific process.
2. **Communicate** – communicate ideas, concepts, and information through written and oral means. Collaborate with people of diverse backgrounds and abilities.
3. **Demonstrate literacy** – demonstrate the ability to read critically within content areas. Use technology to locate, evaluate, and communicate data, information, ideas, and concepts. Assess, critique, and select from a variety of information resources.
4. **Demonstrate responsibility** – demonstrate an understanding of personal responsibility and ethical behavior in one's own academic and civic life.

V. ACADEMIC INTEGRITY AND STUDENT CONDUCT:

Students and employees at Oakton Community College are required to demonstrate academic integrity and follow Oakton's Code of Academic Conduct. This code prohibits:

- **cheating,**
- plagiarism (turning in work not written by you, or lacking proper citation),
- falsification and fabrication (lying or distorting the truth),
- **helping others to cheat,**
- unauthorized changes on official documents,
- pretending to be someone else or having someone else pretend to be you,
- making or accepting bribes, special favors, or threats, and
- any other behavior that violates academic integrity.

There are serious consequences to violations of the academic integrity policy. Oakton's policies and procedures provide students a fair hearing if a complaint is made against you. If you are found to have violated the policy, the minimum penalty is failure on the assignment and, a disciplinary record will be established and kept on file in the office of the Vice President for Student Affairs for a period of 3 years.

Please review the Code of Academic Conduct and the Code of Student Conduct, both located online at: <http://www.oakton.edu/studentlife/student-handbook.pdf>

Photo ID may be required to take some or all quizzes or examinations.

VI. OUTLINE OF LECTURE TOPICS: Time permitting, topics will include:

Introduction to Pharmacology, Prescribing

General Characteristics of the following:

- Drugs affecting the autonomic nervous system
 - Adrenergic/Cholinergic agents and blockers
- Drugs affecting the Central Nervous System
 - Anesthetics, Analgesics
 - Sedatives, Anxiolytics, Antipsychotics
 - Drugs for seizures
 - Antidepressants
 - Antiparkinson drugs
- Drugs affecting the cardiovascular system
 - Diuretics, Antihypertensives, antiarrhythmics, and antianginals
- Drugs affecting blood
 - Anticoagulants, Thrombolytics, Lipid-reducing drugs
- Drugs affecting the lungs
 - Antihistamines and bronchodilators
- Drugs affecting the Gastrointestinal (GI) tract

Drugs for ulcer, GERD, lower GI motility abnormalities
 Drugs affecting the Endocrine System
 Adrenal, pituitary, pancreatic hormones

VII. METHODS OF INSTRUCTION:

- Lecture supplemented by handouts and videos
- Class discussion where students are expected to participate by asking pertinent questions and to respond to questions asked of them
- Relevant readings in the textbook, handouts, and online

VIII. COURSE PRACTICES REQUIRED:

- Courteous attendance at class sessions
- Submission of all assignments **on time** (at the beginning of class)
- Completion of all four examinations

Due to the huge volume of material to be covered in this course, lectures will begin promptly and end on time. Tardiness and absences from class will result in an inability to successfully pass tests and quizzes. A basic understanding of anatomy and physiology of *all* the basic organ systems (heart, lung, kidney, gastrointestinal, nervous system) is *extremely* important to succeed in this course. **Therefore, you are responsible for the information you learned in Bio231 and Bio232: Anatomy and Physiology I and II.** Please see me after the first session if you are uncertain about this.

IX. INSTRUCTIONAL MATERIALS:

Official Textbook: Hitner and Nagle, Pharmacology: An Introduction, 7th edition, McGraw Hill, 2015. *(Be aware that copies of this book, as well as other useful reference materials are available at the Oakton Libraries at Des Plaines.*

Videos: These will be videos either made by me, Dr. Boyev, or videos hand-selected by me. Links will be available at my www.youtube.com/TaiChiKnees Youtube channel, and I will also post the links in D2L. You will be responsible for the material in the videos that I assign. This will also include some physiology review videos, such as those from Crash Course Anatomy and Physiology, to help you review the relevant material from your BIO231 and BIO232 Prerequisite courses.

X. METHODS OF EVALUATING STUDENT PROGRESS:

- Exams (containing objective and short-answer/essay critical thinking questions)
- Written assignments
- Quizzes
- Student Participation

All lecture material and reading and written assignments are “fair game” for inclusion on tests and quizzes. However, the most important concepts will be emphasized during lectures and in handouts. I will emphasize information that is of common practical use and information that will keep your future patients safe.

QUIZZES: Quizzes will cover reading and lecture material announced when the quiz is announced. There are **no make-up quizzes**. **Your lowest quiz grade will be dropped. If you miss more than one quiz, you will need written documentation to have the quiz excused.** Unless otherwise advised, there will be a quiz at the beginning of **every** class meeting unless there is an exam.

HOMEWORK: Written assignments must be **your own work** and turned in on time at the beginning of class. A late assignment will receive a drop in grade. **Assignments will not be accepted more than one class meeting late.**

In-class open book assessments and surveys: These may cover specific topics and will usually administered after the normal (closed-book) exams.

EXAMS: Exam I will cover information in class discussed in class prior to the test. 20% of Exams II & III will cover material from the previous exam(s). Up to 60% of Exam IV covers prior material. **You are expected to know the material from lecture handouts 1 & 2 (Intro and ANS) for every exam** as well as basic information from prior exams.

All exams consist of 50% objective (multiple choice, check all that apply, matching) questions and 50% short answer/essay critical thinking questions.

Make-up exams will be given only under the most extreme and well-documented circumstances (i.e. for an illness you must have a doctor's note, for the death of a relative you must have a copy of the death certificate or obituary page). **If you miss the exam you must contact the instructor within 72 hours of the exam or take a zero.** The make-up exam may differ in content and form (i.e. it may be an oral or essay exam) from the original exam and will be administered one-on-one with the instructor or at the testing center. **Make-up exams must be taken within one week of the missed exam and no student will be allowed to make up more than one exam.** If you ever need to take an exam early, please see me. I can usually arrange that fairly easily.

Grading Scheme: Grades will be assigned on the standard 60% (D) 70% (C) 80% (B) 90% (A) scale. There will be 450 points divided between the four exams.

Over the semester there will be *approximately* 150 points worth of quizzes and homework. This number has varied between 120-200. The majority of your grade is the exams! Regardless of the total points, the percentage will control your final grade.

Grades are NOT "on a curve".

There is no "rounding up" of final grades.

Past experience is that the average performance on examinations is about 75%

So, **for example**, given a final number of points of 700, the scheme would be:

EXAM I	100 points	A = .9x700 = 630 points or more
EXAM II	100 points	B = .8x700 = 560-629 points
EXAM III	100 points	C = .7x700 = 490-559 points
EXAM IV	150 points	D = .6x700 = 420-489 points
Homework	120 points	F = 0-419 points
Quizzes	120 points	
<u>Misc</u>	<u>10 points</u>	
Total	700 Points	

Attendance: You do not get points just for attending class; however, **there will be a quiz or exam at the beginning of EVERY class meeting**, so if you're late or absent, it's an automatic zero for that quiz.

If you are currently in the nursing program, if you earn a D or F, or you drop the course, you will be dropped from the nursing program.

Religious holidays are considered valid excuses for missed quizzes and exams, but of course you will need to make arrangements ahead of time with me, in writing, no later than **noon on September 3, 2016** (see also below for official college statement).

XI. OTHER COURSE INFORMATION:

Oakton Community College is committed to maintaining a safe campus environment emphasizing the dignity and worth of all members of the community; and complies with all Title IX requirements by state and federal law.

RE: Pregnancy: For **pregnancy-related accommodations**, please see: http://www.oakton.edu/about/title_ix_pregnancy_parent/. If you are pregnant or become pregnant during the semester, you have the option to meet with me to discuss reasonable accommodations that may be necessary. It may not be possible to grant accommodations after the fact, so it is better to prepare in advance for any possible scenarios.

RE: Sexual Misconduct: For resources and support for victim-survivors of sexual misconduct (including sexual harassment, sexual assault/rape, domestic violence, dating/intimate partner violence, and stalking), please see: http://www.oakton.edu/about/title_ix_sexual_misconduct/

RE: LGBTQ+: For resources and support for LGBTQ+ students, please contact the Office of Student Affairs at 847-635-1739 (information on Oakton's website will be coming shortly). If you have a name that may appear differently on the roster or have a preference for gender pronouns, please see me after class.

RE: Disabilities: If you have a documented learning, psychological, or physical disability you may be entitled to reasonable academic accommodations or services. To request accommodations or services, contact the Access and Disability Resource Center (ADRC, formerly known as ASSIST) at the Des Plaines or Skokie campus. All students are expected to fulfill essential course requirements. The College will not waive any essential skill or requirement of a course or degree program.

RE: Religious Holidays: Any student who is unable, because of his or her religious beliefs, to attend classes or participate in any required exam, study, or work on a particular day shall be excused from that exam, study, or work requirement and shall be provided with an opportunity to make up any requirement that he or she may have missed on that day, provided that he or she notifies the instructor well in advance [*via text or e-mail is best for Dr. Boyev*] **no later than noon on September 3, 2016** for any of any anticipated absence or conflict between a scheduled class and the religious observance, and provided that the make-up exam, study, or work does not place an unreasonable burden upon the institution.

RE: StudentsFirst: Oakton has implemented an academic intervention program, and I am a participating faculty member. I am committed to your success in this course and at this college. I may, therefore, refer you to other individuals and/or services available to help you achieve academic success. Please understand that these referrals are intended to *supplement*, not replace, interactions you may have with me during office hours or in class. They are intended to provide a support network for your academic and personal success at the College. As such, please help us help you by responding promptly and appropriately to these referrals. If you have any questions regarding this program, please don't hesitate to ask.

Important Academic Dates for our Tuesday, Thursday and Friday sections:

Friday November 11, Veterans Day, college closed

Thursday & Friday November 24-25th Thanksgiving recess, college closed

September 18: Last day to change to withdraw from class & have it dropped from record

September 19: Last day to change to audit

October 23: Last day to withdraw from class & have a "W" in the class

Outside of class hours, the best way to reach me is to either text me or contact me via e-mail at **LRB@boyev.com** (You may also get e-mails from me from LinneaRetina@mac.com or lboyev@oakton.edu)

I will also give you my cell phone number on the first day of class. Put it in your phone!

You can text or call that number any time during the semester. I turn off my phone when I'm sleeping, driving, etc for reasons of safety and sanity. Please text me before calling when possible.

In case of life-threatening emergency, call 911 or go to your local emergency room.

Other times can be **easily** made by appointment and I *strongly* encourage you to contact me if you have any concerns or need clarification of lecture material. I am more than happy to spend time with students who need help. I honestly want to help you. Please don't hesitate to ask.

I will make all the lecture handouts also available on the internet at www.boyev.com in the Intro to Pharmacology Download files and links to important videos as well. I'm in the process of updating that website this summer so your best resource is going to be D2L.

If I need to contact the class, I will do so through the e-mail account you have listed with your Oakton profile unless you give me a different e-mail on the sheet on the last page. If you do not have internet access at your home, be aware that as an Oakton student you have an e-mail account and internet access on campus.

There is also additional general math and science tutoring available through the Learning Center, Room A135 (847) 635-1434 in Skokie, or (847) 635-1658 in Des Plaines. The Learning Center is for everyone, not only students with learning disabilities. You can find out more about the Learning Center at www.oakton.edu/learn

Extra Credit: You can earn a **total of 5 extra credit points** by doing either **one** of the following:

1. Attending the STEM lecture "Anatomy of Death" on Wednesday November 9 at 3pm and writing a 400 word reflection essay on the experience. Note that images of cadavers will be shown at the presentation.
2. Starring in and producing a short YouTube video on a drug topic I will assign you. You must request a topic *in writing* no later than noon on **November 10** (I will send you the topic and a rubric for grading). The video must be completed and posted as a video on YouTube no later than **noon** on **November 28**. You may post as a private video provided I can view the content.

I will also be giving you at least 20 total possible extra credit points on the quizzes and exams over the course of the semester!

Attending other sections: I am teaching three sections of this class. However, because of space limitations, I prefer you to attend class on the day you are normally enrolled. If you need to miss a class and want to sit in on another section, you need to clear that with me first. You may not take a quiz with another section. Your written assignments are due at the beginning of your own class section.

Addendum to syllabus regarding required classroom etiquette:

Odors: I have **extreme** asthmatic reactions to some perfumes, colognes and scented products. **Please do not assault the instructor (Dr. Boyev) with your perfumed personal care products.** I'll make you leave the classroom if I can't breathe, even if it's an exam day. I want to live! -LRB

The remainder of these notes are (sometimes hilarious) instances of actual, unprofessional, student behavior I've seen during my teaching career. I and the nursing program expect students to practice good manners. Remember that one of your classmates might someday be your boss!

Electronic devices: During class **all** laptops, .mp3 players, DVD players, portable game devices, iPods, and similar electronics are to be **turned off**. If you are maintaining an overall grade of A, you may have limited use of electronics; talk to me about that after the first exam. Studies have proven that students who follow the notes along on their computers master less material than those taking notes with a pencil. Cell phones, pagers and text-messaging devices should be silenced. **Audio or video recording the lecture is fine with me**

Cell phones/pagers: Please switch your **phone to "silent" or "vibrate"**. Please leave the classroom to respond to the phone (either verbally or via text message) and if you are expecting a call, you should sit near the door so you will not disturb other students when you leave the room. This is standard procedure among health professionals. Texting during a lecture is considered rude in professional circles. **You do not have to ask permission to leave the room unless you are taking a quiz or exam.**

Quizzes/Exams: Students should not leave the classroom during quizzes or examinations. Phones **must be turned completely off** during quizzes and exams. Answering a phone during a quiz or exam will result in a zero grade for that assessment due to the text messaging ability of most modern cell phones. If you are expecting an emergency call, please let the instructor know.

Food/Drink: You may have water or non-alcoholic beverages in the room during lecture, but **do not bring any loudly packaged, crunchy or smelly food into the classroom**, as noise & smell from food is distracting. **No gum chewing, please.** Gum chewing is considered *extremely* unprofessional in the health professions.

Attire: **No hats with brims during quizzes or exams.** No overly revealing attire that might distract other students. Shoes and shirts are mandatory. Also do not play excessively with your toes.

Random noises: Do not interrupt other students when they are speaking and maintain a calm demeanor during the class period. Refrain from humming, whistling, singing showtunes or making other unnecessary and distracting noises during lecture, quizzes and exams. If you have a medical condition with a verbal tic, please let me know during the first week of class.

Failure to follow basic rules of classroom etiquette may result in your being asked to leave the classroom or class proper and may result in a formal complaint to the Dean of Student Affairs.

Regarding cheating: **If you have "wandering eyes while thinking" during tests, you must sit in the front row or you will be suspected of cheating.** (I used to sit in the front row when I was in school!) You may not copy off of other student's papers, homework, tests or quizzes. All homework handed in for a grade must be your own work unless otherwise specified.

-Linnea R. Boyev, MD, PhD

TENTATIVE Schedule of Topics - Fall 2016 - **EXAM DATES are DEFINITE**

Additional topics to be covered, time permitting, are endocrine drugs, antimicrobials and cancer drugs
 Chapters refer to the relevant readings in Hitner and Nagle, 7th Edition

Please note that because of the holiday schedule, the Thursday class will be short one lecture and the Friday class will be short two lectures.

Note that we'll have an EXAM EVERY FOUR WEEKS. There is a quiz at every other class meeting, even the week following an exam.

Lecture	Week of	Topic
1	Aug 22	Pharmacology Concepts I (Ch. 1,2)
2	Aug 29	Pharmacology Concepts II (Ch. 1,2)
3	Sept 5	Autonomic Nervous System (Ch 5-7) - Written Assignment #1 Due
4	Sept 12	EXAM ONE , CNS review and neurotransmitters (video lectures) Ch 11
	<i>Sept 18</i>	<i>Last day to withdraw from class & have it dropped from record (or change to audit)</i>
5	Sept 19	Central Nervous System I (Ch 12-18)
6	Sept 26	Central Nervous System II (Ch 12-18)
7	Oct 3	Finish CNS. Over-the-Counter Pain Medications (Ch 20) - Written Assignment #2 Due
8	Oct 10	EXAM TWO , Cardiovascular Physio Review, Intro to HF and Angina (video lectures)
9	Oct 17	Cardiovascular I (Ch 21-24)
	<i>Oct 23</i>	<i>Last day to withdraw from class & have a "W" in the class</i>
10	Oct 24	Cardiovascular II (Ch 25-26)
11	Oct 31	Finish Cardiovascular, Blood Thinners, Written Assignment #3 Due
12	Nov 7	EXAM THREE , Vomiting, Lower GI (video lectures)
13	Nov 14	Upper Gastrointestinal Drugs (Ch 33-34) (<i>Fri, Nov 11 closed for Veteran's Day</i>)
14	Nov 21	Pulmonary Drugs I (Ch 31-32) (<i>Thu Nov 24 & Fri Nov 25 closed for Thanksgiving Break</i>)
15	Nov 28	Diabetes (Ch 39), Written Assignment #4 Due
16	Dec 5	<i>Catch up - Tuesday section</i> FINAL EXAM (Exam Four - 150 points, 60% review) for Thursday and Friday Sections
17	Dec 13	FINAL EXAM (Exam Four - 150 points, 60% review) for Tuesday Section

Because each class meeting is two hours long, we will likely have *either* a video assignment *and/or* an in-class assignment after each of the exams.

If you have a known conflict with an exam day, you are welcome to take the exam early in the testing center, **provided you give me at least one-week notice**. You can do this **ONCE**; many students elect to do this for the final exam. The early exam will be in the same format (50% written answer) as the regular exam. (If you take an exam late, it is 100% short answer & essay).

Intro to Pharmacology: Bio244 *THIS IS WORTH 5 POINTS* Fall 2016

Please detach this page, read it, sign it and hand it in by the *second* class meeting to get all 5 points.

Section: TUESDAY THURSDAY FRIDAY (circle one)

Student Information: NAME _____

e-mail _____ *Is this e-mail is the SAME or DIFFERENT from the one attached to your Oakton account? (circle one)*

I signed up for this class because:

- | | |
|--------------------------------------|--|
| _____ I'm in the Nursing Program now | _____ I'm a student of Chinese Medicine |
| _____ I'm a pre-nursing student | _____ I'm a pre-pharmacy/med tech/MA student |
| _____ I'm a pre-med student | _____ A loved one has medical issues |
| _____ I'd rather not say | _____ Other: |

Communication Access:

I have e-mail access at home: _____ Yes _____ No

I have a phone/cellphone at home: _____ Yes _____ No

I have a phone that can send texts: _____ Yes _____ No

Significant Food or Environmental Allergies?: _____ Yes _____ None
 If you checked "Yes" list below. You do NOT need to list allergies to medications.

I have read the syllabus thoroughly and in particular I understand that:

- 1) I must notify Dr. Boyev of absences from quizzes or exams due to religious holidays in **advance, no later than noon on September 3, 2016**
- 2) There are **no make-up quizzes**,
- 3) There is only one dropped grade; this is usually the lowest quiz grade.
- 4) There are **no dropped exam grades**.
- 5) The **only** extra credit available is on quizzes and exams
- 6) My homework must be handed in **on time** at the beginning of class,
- 7) My name will be written on **every sheet** of paper I turn in,
- 8) Arriving on time is mandatory if I want to take quizzes,
- 9) There is zero tolerance for cheating,
- 10) Final grades are not "rounded up".
- 11) Unexpected absences from exams must be documented & reported **within 72 hours**.
- 12) Make-up exams will likely be 100% essay exams and must be made up **within 1 week**.
- 13) Professional behavior is expected in class and
- 14) **I will not assault the instructor, especially by wearing scented perfumes, lotions or hair products. Seriously.**

Your signature here: X _____

(You should also watch Dr. Boyev's syllabus video on YouTube; links are at D2L, boyev.com and at www.youtube.com/TaiChiKnees)