I. COURSE DOMAIN AND BOUNDARIES

This course is designed to introduce the social worker to key concepts in pharmacology and pharmacotherapy. The mechanism of action, pharmacokinetics, side effects, major drug interactions, and therapeutic uses of major drug classes will be discussed in detail. Major topics will include general principles of pharmacology and pharmacokinetics, cardiovascular drugs, respiratory system drugs, psychoactive drugs, drugs of abuse, selected antimicrobial therapy, antidiabetic drugs, reproductive system drugs, special considerations in elderly populations, over-the-counter (nonprescription) medications, and herbal remedies.

The student will be exposed to evidence-based medicine to assess the efficacy of the different drug classes. The impact of social worker's role on their client's compliance and affects of their medications will be emphasized throughout the course. Special issues related to specific patient populations (i.e., differences arising from race, ethnicity, culture, class, gender, sexual orientation, religion, physical or mental disability or illness, age or national origin) will also be integrated into the course.

II. MSW COMPETENCIES ADDRESSED IN THIS COURSE

<table>
<thead>
<tr>
<th>Competency</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrate Ethical and Professional Behavior</td>
<td>C1</td>
</tr>
<tr>
<td>Engage diversity and difference in practice</td>
<td>C2</td>
</tr>
<tr>
<td>Engage with individuals, families, groups, organizations, and communities</td>
<td>C6</td>
</tr>
<tr>
<td>Assess individuals, families, groups, organizations, and communities</td>
<td>C7</td>
</tr>
<tr>
<td>Intervene with individuals, families, groups, organizations, and communities</td>
<td>C8</td>
</tr>
<tr>
<td>Evaluate individuals, families, groups, organizations, and communities</td>
<td>C9</td>
</tr>
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III. BROWN SCHOOL ACADEMIC POLICIES

Academic Integrity: Academic integrity in the completion of tests, oral presentations and written assignments (including statistical syntax) is expected. Violations of academic integrity (e.g., plagiarism) are very serious offenses. Violations will result in notification to the Assistant Dean for the appropriate (MSW or MPH) program and may result in referral to the Academic and Professional Integrity Committee, which could lead to dismissal from the program. Please review and adhere to the entire set of Academic Integrity guidelines in the student handbook on Inside Brown:

Student Handbook 2017-2018

Accommodations: If you have a learning disability, sensory, or physical disability or other impairment, and you may need special assistance in lectures, reading, written assignments, and/or exam taking, please contact the Brown School Director of Student Affairs who can provide coordination of accommodations at Washington University and the Brown School. The Disability Resource Center, a University-wide resource, provides diagnostic and academic accommodations support and referrals.

English Language Proficiency: If your English language proficiency is such that you may need special assistance in lectures, reading, written assignments, and/or exam taking, please communicate these needs to your instructor who may refer you to the English Language Program (ELP), a University-wide resource which provides classes and academic English language support designed to increase non-native English speaking students' English language proficiency and to facilitate their academic success at Washington University. You may also find the Academic Assistance resources available through the Office for International Students and Scholars to be helpful.

Professional Use of Electronic Devices in the Classroom: Computers or other electronic devices, including “smart pens” (devices with an embedded computer and digital audio recorder which records the classroom lecture/discussion and links that recording to the notes taken by the student), may be used by students at the discretion of the faculty member to support the learning activities in the classroom. These include such activities as taking notes and accessing course readings under discussion. If a student wishes to use a smart-pen or other electronic device to audio record lectures or class discussions, they must notify the instructor in advance of doing so. Permission to use recording devices will be at the discretion of the instructor, unless this is an accommodation approved by Disability Resources.

Nonacademic use of laptops and other devices is distracting and seriously disrupts the learning process for everyone. Neither computers nor other electronic devices are to be used in the classroom during class for non-academic reasons. This use includes emailing, texting, social networking, and use of the Internet. The use of cell phones during class time is prohibited, and they should be set on silent before class begins. In the case of an emergency, please step out of the room to take the call. The instructor has the right to hold students accountable for meeting these expectations, and failure to do so may result in a loss of participation points, a loss of the privilege of computer use in the classroom, or being asked to leave the classroom.
Religious Holidays: The Brown School recognizes the individual student’s choice in observing religious holidays that occur during periods when classes are scheduled. Students are encouraged to arrange with their instructors to make up work missed as a result of religious observance, and instructors are asked to make every reasonable effort to accommodate such requests.

IV. WASHINGTON UNIVERSITY ACADEMIC SUPPORT POLICIES

Accommodations based upon sexual assault: The University is committed to offering reasonable academic accommodations to students who are victims of sexual assault. Students are eligible for accommodation regardless of whether they seek criminal or disciplinary action. Depending on the specific nature of the allegation, such measures may include but are not limited to: implementation of a no-contact order, course/classroom assignment changes, and other academic support services and accommodations. If you need to request such accommodations, please direct your request to Kim Webb (kim_webb@wustl.edu), Director of the Relationship and Sexual Violence Prevention Center. Ms. Webb is a confidential resource; however, requests for accommodations will be shared with the appropriate University administration and faculty. The University will maintain as confidential any accommodations or protective measures provided to an individual student so long as it does not impair the ability to provide such measures.

If a student comes to me to discuss or disclose an instance of sexual assault, sex discrimination, sexual harassment, dating violence, domestic violence or stalking, or if I otherwise observe or become aware of such an allegation, I will keep the information as private as I can, but as a faculty member of Washington University, I am required to immediately report it to my Department Chair or Dean or directly to Ms. Jessica Kennedy, the University’s Title IX Director. If you would like to speak with directly Ms. Kennedy directly, she can be reached at (314) 935-3118, jw kennedy@wustl.edu, or by visiting the Title IX office in Umbrath Hall. Additionally, you can report incidents or complaints to the Office of Student Conduct and Community Standards or by contacting WUPD at (314) 935-5555 or your local law enforcement agency. See: Title IX

You can also speak confidentially and learn more about available resources at the Relationship and Sexual Violence Prevention Center by calling (314) 935-8761 or visiting the 4th floor of Seigle Hall. See: RSVP Center

Bias Reporting: The University has a process through which students, faculty, staff and community members who have experienced or witnessed incidents of bias, prejudice or discrimination against a student can report their experiences to the University’s Bias Report and Support System (BRSS) team. See: brss.wustl.edu

Mental Health: Mental Health Services’ professional staff members work with students to resolve personal and interpersonal difficulties, many of which can affect the academic experience. These include conflicts with or worry about friends or family, concerns about eating or drinking patterns, and feelings of anxiety and depression. See shs.wustl.edu/MentalHealth

Additional Issues or Concerns: If you feel that you need additional supports in order to be successful in your time at Brown, beyond the afore mentioned accommodations, please contact
Essie Rochman, Director of Student Affairs at erochman@wustl.edu. She can assist you in navigating a myriad of concerns. Her office is in Brown Hall, room 320.

V. TEXT/REQUIRED READINGS

On Reserve:


Supplemental readings will be provided as needed at least one week prior to the lecture in which it will be discussed.

VI. ORGANIZATION OF THE COURSE

The course involves a weekly two-hour lecture and discussion period. The first 20-30 minutes will be allocated to a quiz; the remainder of the class period will involve lecture and discussion. Attendance and completion of assigned readings are expected.

VII. ROLE/RESOURCES OF INSTRUCTOR AND STUDENTS

If you have a learning disability, sensory, or physical disability or other impairment, or if English is your second language, and you may need special assistance in lecture, reading assignments, and/or testing, please contact the instructor as soon as possible.

VIII. ASSIGNMENTS AND GRADING CRITERIA

There will be 14 weekly quizzes, each one covering material from the previous week. Each quiz will be worth 10 points, and may involve a combination of multiple choice and short answer questions. The student may drop two quizzes, so that the cumulative point total for the semester will be a maximum of 120 points. There will not be a cumulative final exam, and no make-up quizzes will be offered.

IX. COMPETENCY ALIGNMENT TO ASSIGNMENTS AND COURSE ACTIVITIES

<table>
<thead>
<tr>
<th>Graded Assignments</th>
<th>Competencies</th>
<th>Dimensions</th>
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<tbody>
<tr>
<td>Weekly Quizzes</td>
<td>C1, C2, C6, C7, C8, C9</td>
<td>Knowledge/Skills</td>
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<tr>
<td>Course Activities</td>
<td></td>
<td></td>
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<tr>
<td>Discussion topics</td>
<td>C1, C2, C6, C7, C8, C9</td>
<td>Knowledge/Skills/Assessment/Evaluation</td>
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X. **COURSE OUTLINE**

**INTRODUCTION TO PHARMACOLOGY**

Week 1 (1/18/18)  Introduction to Basic Pharmacology - Part I

Week 2 (1/25/18)  Quiz 1
                   Introduction to Basic Pharmacology - Part II
                   Reading: Hand-out, and Buelow, Chapter 1 (optional).

The first two classes will lay the foundation upon which the semester will be built. We will identify key terms and concepts in pharmacology and pharmacokinetics, discuss drug development and regulation, compare different dosage forms and routes of drug administration, and become familiar with common pharmacy abbreviations.

**CARDIOVASCULAR DRUGS**

Week 3 (2/1/18):  Quiz 2
                   Autonomic Nervous System
                   Reading: Hand-out

Week 4 (2/8/18):  Quiz 3
                   Cardiovascular Drugs - Part I
                   Reading: Hand-out

In this section we will compare and contrast the functions of the sympathetic and parasympathetic nervous systems, and discuss how various drugs affect these systems. We will also discuss basic cardiovascular physiology, and the pharmacologic effects and clinical use of antihypertensives, cardiac glycosides, anticoagulants, and platelet inhibitors.

**RESPIRATORY SYSTEM DRUGS**

Week 5 (2/15/18): Quiz 4
                   Respiratory System Drugs
                   Reading: Hand-out

Discuss basic respiratory physiology, and the effects of bronchodilators, mucolytics, expectorants, antitussives, antihistamines, and decongestants (prescription and non-prescription agents). Review the role of corticosteroids in pulmonary diseases and its adverse effect profile.
CENTRAL NERVOUS SYSTEM DRUGS

Week 6 (2/22/18):  Quiz 5  
Anticonvulsants and Anti-Parkinsonian Drugs  
Reading:  Hand-out

Discussion of the different types of seizures, commonly used anticonvulsants, and a brief discussion of dopaminergic and anticholinergic drugs used to treat Parkinson's Disease.

Week 7 (3/1/18):  Quiz 6  
Antidepressants and Lithium  
Reading:  Hand-out, and Buelow, Chapter 2 (optional).

Briefly discuss the neurotransmitter theories of depression and bipolar disorder. Then we will focus on a comparison of the pharmacologic effects and side effect profiles of tricyclic antidepressants, selective serotonin reuptake inhibitors, new generation antidepressants, and MAO inhibitors. Drugs used to manage bipolar disorder will be discussed.

Week 8 (3/8/18):  Quiz 7  
Neuroleptics  
Reading:  Hand-out, and Buelow, Chapter 4 (optional).

Briefly discuss the neurotransmitter theory of schizophrenia, and compare low-potency, high-potency, and new generation neuroleptics.

Week 9 (3/15/18):  SPRING BREAK

Week 10 (3/22/18):  Quiz 8  
Sedatives/Hypnotics/Anxiolytics/Analgesics  
Reading:  Hand-out, and Buelow, Chapter 3, 5 (optional).

We will define "sedative" and "hypnotic", and discuss barbiturates, benzodiazepines, and other sedative-hypnotic agents. Discuss the adverse effects and interactions with all the sedative hypnotics. Compare and contrast the pharmacologic effects and indications for opioid and nonopioid analgesics.

Week 11 (3/29/18):  Quiz 9  
Drugs of Abuse  
Reading:  Hand-out
Discussion on the pharmacologic effects of alcohol, amphetamine, marijuana, cocaine, hallucinogens, and nicotine. Review agents that can minimize withdrawal symptoms.

**ANTI-INFECTIVES**

Week 12 (4/5/18): Quiz 10  
Drugs Used to Treat Tuberculosis, HIV, STD's  
Reading: Hand-out

This section will introduce the student to broad principles of infectious diseases and anti-infective chemotherapy, and then will focus on drugs used in the treatment of tuberculosis, human immunodeficiency virus (HIV), and sexually transmitted diseases.

**ENDOCRINE DRUGS**

Week 13 (4/12/18): Quiz 11  
Drugs Used to Treat Diabetes / Reproductive System Medications  
Reading: Hand-out

In the first part of class we will focus on drugs used to treat diabetes mellitus, including insulin, oral sulfonylureas, and newer oral agents. In the second part, we will compare the pharmacologic effects of estrogens, progestins, and androgens, and discuss the use of contraceptive drugs, infertility drugs, and post-menopausal hormone replacement therapy.

**OTHER TOPICS**

Week 14 (4/19/18): Quiz 12  
Over-the-Counter (OTC) Drugs / Geriatrics  
Reading: Hand-out

The first part of class will consist of a discussion of commonly used nonprescription medications, including cough and cold preparations, antacids, acid blockers, laxatives, and antidiarrheals. In the second part of class we will identify special considerations for drug use in the geriatric population, focusing on drugs known to commonly cause adverse events in this patient group.

Week 15 (4/26/18): Quiz 13  
Herbal Remedies  
Reading: Hand-out

This class will focus on botanical products used commonly by American consumers, including St. John's Wort, gingko, ginseng, garlic, and others.
Week 16 (5/3/18): Quiz 14