

SAN JUAN COLLEGE

SURG 244 Pharmacology and Anesthesia Section Name Section Credit Hours Credits
Syllabus

Section-specific Course Description:

Course Level Objectives

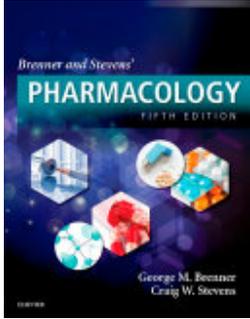
This course introduces students to the ethics, language, techniques and instrumentation in the profession of Surgical Assisting. At the end of this course, students will be able to:

1. Discuss the two main subdivisions of Pharmacology.
2. Compare the mechanisms of drug action and dose response relationship.
3. List the sources of drugs.
4. Identify the primary routes of administrations, and topical administration produces a localized effect at the site of administration.
5. Explain the passive diffusion across cell membranes or between cells.
6. Review Drug metabolism and it's phases.
7. Understand a loading dose calculation.
8. Identify a drugs ability initiate a response and Agonists.
9. Compare and Contrast Competitive and Noncompetitive antagonists.
10. Explain the process of drug development.
11. Discuss the FDA regulations, manufacturing and the Controlled Substance Act.
12. Classify toxic agents and treatment drugs.
13. Discuss Drugs that alter nervous system function affecting neurotransmitters or receptors.
14. Review the pharmacological properties, clinical use and adverse effects.
15. Classify Adrenoceptors Agonists and effects on different body systems.
16. List the four classes of antihypertensive drugs.
17. Discuss angiotensin and ACE inhibitors.

18. Review the benefits of and Antianginal drug Vasodilators.
19. Understand drug for Heart Failure.
20. Identify diuretics inhibition of reabsorption of sodium from the nephron.
21. Describe the Pathophysiology of dysrhythmias and mechanisms maintaining normal sinus rhythm.
22. Review the lifestyle changes and drug therapy reducing, reoccurrence of coronary artery disease.
23. Identify Drugs used in the prevention and treatment of thromboembolic disorders.
24. Describe Pharmacologic properties and uses of minerals, vitamins, and hematopoietic growth factors.
25. Review general mechanisms by which drugs alter CNS activities and processes.
26. Describe the pharmacologic properties of Benzodiazepines, Barbiturates, and other sedative-hypnotic and anxiolytic drugs.
27. Discuss Seizures and Antiepileptic drugs.
28. Analyze Local and General Anesthetics.
29. Identify the relief of pain by opioid, and the neural pathways in the CNS.
30. Discuss the drug treatment for Neurodegenerative diseases.
31. Explain medical, legal and social problems of drug abuse.
32. Review autacoids and drugs that influence their effects.
33. Discuss Pharmacology and clinical use of drug for common respiratory conditions.
34. Describe drugs used in the management of gastrointestinal disease.
35. Discuss the drugs for headache disorders.
36. Describe the pharmacologic properties of nonsteroidal anti-inflammatory drugs.
37. Identify the Principles of Antimicrobial Chemotherapy.
38. Discuss classes of antibacterial drugs used in treating infections.
39. Understand the drugs use to treat Tuberculosis Mycobacterium.
40. Review Antifungal drugs and treatment of infections.
41. Discuss the common usage of Antiviral drugs.
42. Discuss the commonly used antiparasitic agents and treatment of infections.
43. Classify Anticancer and Immunomodulating drugs.

Summarize the specific uses of antibiotics. *

Required Texts and/or Materials



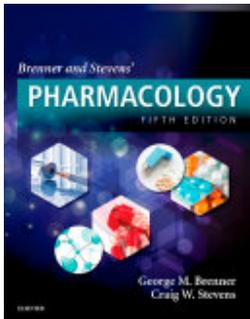
Brenner and Stevens' Pharmacology E-Book

9780323391726

George M. Brenner, Craig W. Stevens

Elsevier Health Sciences

2017-09-28



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Required Technology and Software

- Canvas
- Chrome, Safari, or Firefox

Course Requirements

Students will do the following activities:

1. Have required textbooks and workbooks, packets, lab supplies listed under required textbooks.
2. Complete and submit written assignments by announced due dates.
3. Take all examinations and quizzes on the dates administered. Make up exams will be given only under certain circumstances with a reduction in the grade by 10%.
4. Practice procedures and perform demonstrations satisfactorily.
5. Participate in class and lab discussions and activities.
6. Maintain proper appearance and professional dress.
7. Maintain professional behavior
8. Meet specific objectives for each laboratory experience consistently.
9. Follow safety procedures and guidelines.

Read and verify understanding of San Juan College, Surgical First Assist Student Handbook.

Other Classroom Policies and Expectations

Students are expected to conduct themselves in an ethical and professional manner at all times. All academic assignments, including papers, tests, or other assignments, are to be the work of the individual student. The following are examples of unethical or unprofessional behavior:

- Plagiarism
- Unprofessional behavior in communication with faculty and staff
- Completing an assignment for another student in part or in whole

Consequences

Any student who acts in an unethical manner will receive a failing grade. Any second academic incident or unprofessional communication with staff or faculty can result administrative termination from the Institute. Students who were withdrawn due to poor student conduct may not be reconsidered to re-enroll.

Grading

Final grades are calculated based on the following...

Here is a sample of one formatting option:

What does it mean to weight a grade? When grades are weighted, some assignments (e.g. Final Exam) or categories of assignments (e.g. Quizzes) count more than others.

Why not just assign more points to the things that are harder? In a perfect world this would work. However, there is far more flexibility in weighting grades. If an instructor decides that quizzes should make up 25% of the total points in a course, it doesn't matter whether there is 1 quiz, 5 quizzes or, heaven forbid, 50 quizzes. The total points earned for the quizzes still makes up 25% of the final grade. If an instructor decides to increase or decrease the workload based on the particular needs of any group of students, weighted grades make that easy. In a scenario where grades are weighted by category and the number of assignments in a category changes, no changes to the course points or course guide would be necessary. If, on the other hand, the point system was used, and a change to the course assignments is needed, the total points for the class would change and the course guide would need to be updated.

How are the points for a weighted item calculated? Multiply each score over the total points possible by the weight. For example, the midterm is worth 100 points. If you earned 90/100 the calculation would be $.25(90/100)=.225$. Expressed as a percent, you earned 22.5%

Grading Scale:

A = 90% or higher
B = 80–89
C = 70–79
D = 60–69
F = 59 or below.

Course Time Commitment

Students should expect to spend 18-24 hours or more per week for course work of class to be successful in this program.

Canvas Participation and Expectations

Because assignments and notifications are posted in Canvas, you should check into Canvas daily Monday-Friday. Majority of communications will be through Canvas email unless other wise specified.

Participation and Attendance Policy

1. Attendance to didactic and lab is an integral part of student learning. When a student misses more than three days of didactic and lab then this interferes with the student's ability to understand the material. Attendance will be documented thoroughly and if a student has an unexcused absence then this could adversely affect the grade for the course.

2. Tardy attendance is disruptive not only to the instructor, but to peers. Please be ready to begin class at the designated time

1 Unexcused Absence-----Counseling

2 Unexcused Absences-----Verbal Warning

3 Unexcused Absences-----Written Warning

After 3 Unexcused Absences Student Will Be Dropped From Course

Instructor Response Times & Regular Interaction Expectations

Students I will answer email and phone calls daily (Monday-Friday) but expect that in some circumstances it may take up to 72 hours to get a response. Scheduled assignments will be graded by the end of each week.

Key Dates to Remember

Course Schedule

Assignments & Academic Calendar

DAY	Topic/Content	SSCC
Week 1 Chapter 1-5	<p>Lecture Video Canvas</p> <p>Read Chapter 1-5</p> <p>Chapter 1 Introduction to Pharmacology</p> <p>Chapter 2 Pharmacokinetics</p> <p>Chapter 3 Pharmacodynamics</p> <p>Chapter 4 Drug Development and Safety</p> <p>Chapter 5 Toxicology and the Treatment of Poisoning</p> <p>Discussion</p> <p>Quiz Chapters 1-5 Open Thursday 11:59 Close Sunday 11:59</p> <ol style="list-style-type: none">1. Discuss Drug absorption, distribution, metabolism, and excretion.2. Review Pharmacokinetics, single dose, continuous dose, and multiple dose.3. Identify the nature of drug receptors.4. Review receptor interactions, and dose response relationships.5. Discuss Drug Development, Laws and Regulations.6. Review Adverse effects, interactions of drugs.7. Identify factors affecting drug safety and efficacy.8. Discuss Toxicology and the treatment of poisoning.	
Week2 Chapter 6-9	<p>Lecture Video Canvas</p> <p>Read Chapter 6-9</p> <p>Chapter 6 Peripheral Neuropharmacology and Acetylcholine agonists</p> <p>Chapter 7 Acetylcholine Receptor Antagonists</p>	

	<p>Chapter 8 Sympathetic Neurotransmission and Adrenoceptor Agonists. Chapter 9 Adrenoceptor Antagonists Quiz Chapter 6-9 Open Thursday 11:59 Close Sunday 11:59 Drug Research Paper Assigned</p> <ol style="list-style-type: none"> 1. Review anatomy and physiology of the Peripheral Nervous System, and neurotransmission sites. 2. Discuss Acetylcholine Receptors, and Agonists. 3. Discuss Muscarinic receptor antagonists. 4. Review drug affecting adrenergic neurotransmission. 5. Classify Alpha-Adrenoceptor/ Beta-Adrenoceptor antagonists 	
<p>Week 3 Chapter 10-17</p>	<p>Lecture Video Canvas Read Chapter 10, 11, 16, 17 Chapter 10 Antihypertensive Drugs Chapter 11 Antianginal Drug Chapter 16 Antithrombotic and Thrombolytic Drugs Chapter 17 Hematopoietic Drugs. Quiz Chapter 10, 11, 16, 17 Open Thursday 11:59 Close Sunday 11:59</p> <ol style="list-style-type: none"> 1. Discuss Hypertension, sympatholytic drugs, and vasodilators. 2. Review Mechanisms and effects of Antianginal drugs. 3. Discuss anticoagulant, antiplatelet drugs prevention and treatment of thromboembolic disorders. 4. Describe the pharmacologic properties and uses of minerals, vitamins and hematopoietic growth factors. 	
<p>Week 4 Chapter 19-25</p>	<p>Lecture Video Canvas Read Chapters 19, 21-23, 25 Chapter 19 Sedative-Hypnotic and Anxiolytic Drugs Chapter 21 Local and General Anesthetics Chapter 22 Psychotherapeutic Drugs Chapter 23 Opioid Analgesics and Antagonists Chapter 25 Drug Abuse Quiz Chapter 19, 21-23, 25 Open Thursday 11:59 Close Sunday 11:59</p>	<p>APPPM</p>

	<ol style="list-style-type: none"> 1. Review general anesthetics during surgery, and local anesthetics ester and amide types. 2. Discuss Schizophrenia and Antipsychotic drugs. 3. Identify Pain use of opioid analgesics, and Analgesic agents. 4. Review Drug abuse, depressants, and stimulants 	
Week 5 Chapter 26-30	Lecture Canvas Read Chapters 30, 37-38 Chapter 30 Drugs for Pain, Inflammation and Arthritic Disorders Chapter 37 Principles of Antimicrobial Chemotherapy Chapter 38 Inhibitors of Bacterial Cell Wall Synthesis Quiz Chapters 30, 37-38 Open Thursday 11:59 Close Sunday 11:59 <ol style="list-style-type: none"> 1. Review the use of NSAIDs for RA, OA, Gout and pain. 2. Discuss antimicrobial chemotherapy drugs 3. Review Microbial sensitivity and resistance, and prophylactic therapy. 	SICA
Week 6 Chapters 37--40	Lecture Video Canvas Read Chapters 39-41 Chapter 39 Inhibitors of Bacterial Protein Synthesis Chapter 40 Quinolones, Antifolate Drugs, and Other Agents Chapter 41 Antimycobacterial Drugs Quiz Chapter 39-41 Open Thursday 11:59 Close Sunday 11:59 Drug Research Paper Due <ol style="list-style-type: none"> 1. Discuss antibiotics that inhibit penicillin resistant bacteria. 2. Describe the sulfonamides and trimethoprim used in treating bacterial infections 3. Discuss the drugs used to treat tuberculosis and leprosy. 	SICA
Week 7 Chapters 41-45	Lecture Video Canvas Read Chapter 42-45 Chapter 42 Antifungal Drugs Chapter 43 Antiviral Drugs Chapter 44 Antiparasitic Drugs Chapter 45 Anticancer and Immunomodulating Drugs	SICA

	<p>Quiz Chapters 40-42 Open Thursday 11:59 Close Sunday 11:59</p> <ol style="list-style-type: none"> 1. Discuss fungal infections organisms, site of infection and treatments. 2. Compare drugs for herpesvirus infections, and drugs for HBV, HCV infections. 3. Classify antiparasitic agents and treatment of these infections. 4. Discuss principles of cancer therapy, and anticancer drugs. 	
Week 8 Finals	<p>Final 244 Cumulative Open Sunday 8am Close Wednesday 8am</p> <p>End surg 244</p>	

SCHEDULE IS SUBJECT TO CHANGE.

Program Handbook

Provided upon Acceptance into Program

Technical Support

Technical support is available through the San Juan College Help Desk 24/7/365. The help desk can be reached at 505-566-3266 or by creating a ticket at [San Juan College Help Desk](#).

For password reset and and Canvas support, visit the [Student Technology Guide](#) website.

Accessibility/Privacy Policies for all Technology Tools Used

[Accessibility/Privacy Policies for all Technology Tools Used](#)

Student Support

At San Juan College, we are committed to supporting your academic success and overall well-being. We recognize that college life can be challenging and stressful, impacting both learning and personal

health. We are here to help you succeed.

Academic Support and Resources

We provide a range of academic support services to help you stay on track on your educational journey. Free resources include tutoring, computer loans, life skills workshops, and so much more. Visit the [Academic Support and Resources](#) webpage to learn more about support and resources available through Academic Advising, the Tutoring Center, the Student Resource Center (formerly Student Achievement Center) and the Testing Center.

Student Support and Resources

If you or someone you know could benefit from counseling, accessibility services, career exploration, veteran transitional assistance, or any of our other support services, visit the [Student Support and Resources](#) webpage where you'll find detailed information about various resources available to you as an SJC student.

We encourage you to take advantage of these free resources to enhance your college experience and ensure your success.

College Policies and Resources for Current Students

The [Student Handbook](#) provides information on student support, student organizations, and student conduct policies at San Juan College.

The San Juan College catalog outlines the [Academic Policies](#) students need to know.

Healthy and Safe Practices for Being on Campus

We want a healthy and safe campus for students, faculty, staff, and guests.

Contagious diseases and your responsibility:

If you have COVID-19 symptoms, fever, flu or even the common cold, you should stay home. Do not come to campus if you are feeling sick. Contact your instructor about missing class (and review your instructor's policies on missed or late work). Being sick does not necessarily excuse you from completing your work on time.

Safety on campus and your responsibility:

If you are on campus and experience or witness an emergency, call 9-1-1 first and then the Department of Public Safety at 505-566-3333 (or just 3333 if calling from a campus phone).

When you are on campus, be aware of your surroundings. If you need an escort to your vehicle, call 505-566-4444 (DPS non-emergency line) or 505-215-3091 (officer on duty line).

The College will send information for campus emergencies through SJC AlertAware, email and the webpage. Stay informed and stay safe.

Inclement Weather Information

Students will receive notification of class delays and cancellations due to inclement weather via the SJC AlertAware and SJC student email. Face-to-face classes will not meet in person; however, students are advised to check with instructors about alternative meeting options, as some may choose to meet via zoom. Hybrid classes will meet as scheduled via zoom. For questions regarding your class delay or cancelation, please contact your instructor.

Online Course Fee

Online Courses - San Juan College requires all online courses to include some form of assessment to demonstrate the mastery of course objectives. This could include exams, capstone projects, e-portfolios, presentations, final papers or other appropriate assessments. The use of a proctoring platform, plagiarism detection software or other method to ensure that assessments are completed by the enrolled student is required.

A course fee of \$5.00 is assessed for all online courses at San Juan College to cover the cost of the above services. Students who are required to take a proctored exam and choose to use a physical testing center outside the SJC Testing Center or SJC Disability Services will be responsible for the cost of using that center.