



## Pharmacology I NURS 109 Course Syllabus\_rev 08 14 2021

### Basic Course Information

Semester:	<b>FALL 2021</b>	Instructor Name:	<b>Julie Kunath MS APRN AGPCNP-BC ACCNS-AG CCRN-CMC</b>
Course Title & #:	<b>Pharmacology I NURS 109</b>	Email:	<b>Julie.kunath@imperial.edu</b>
CRN #:	<b>10385</b>	Webpage (optional):	<b>CANVAS</b>
Classroom:	<b>ONL-ZM</b>	Office #:	<b>Available via Zoom, Pronto, Text</b>
Class Dates:	<b>August 16 – December 11, 2021</b>	Office Hours:	<b>Tues 0830-0930, Weds 0530-0600, Thurs 1500-1700, Fri 0700-0730</b>
Class Days:	<b>ONL-ZM Monday</b>	Office Phone #:	<b>(760) 355 - 6422</b>
Class Times:	ONL-ZM 12:00pm	Emergency Contact:	<b>Nursing Office (760) 355 - 6348</b>
Units:	<b>1</b>	Class Format:	ONL-ZM

### Course Description

This course provides an introduction to the principles of pharmacology, including: pharmacokinetics, pharmacodynamics, medication interactions and potential adverse medication reactions. Emphasis will be placed on life span issues, gene therapy, medication errors, substance abuse, immunizations and OTC, herbal and dietary medications. Focus will be on nursing actions and rationale for the concepts and medications covered.

### Course Prerequisite(s) and/or Corequisite(s)

Prerequisite: Admission to the Associate Degree Nursing Program

Corequisite: NURS 107 Fundamentals

### Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Differentiate the principles of pharmacology, pharmacodynamic, pharmacokinetics, pharmacogenetics, therapeutics, legal, ethical, and cultural influences to medication utilization by passing the final with 78% or better. (ILO 1,2,4)

### Course Objectives

Upon satisfactory completion of the course, students will be able to:

1. Apply principles of pharmacology, pharmacokinetics, pharmacodynamics and drug administration including adverse drug effects and medication errors to medication therapy.
2. Understand the legal and ethical implications, with historical and current drug regulation, substance abuse and psychosocial, gender and cultural influences to medication utilization and administration.

3. Apply principles of pharmacotherapy in the dimensions of the pediatric, geriatric, pregnant and lactating patient.
4. Recognize the major classifications of medications, common medications within each classification, their side effects, and contraindications.
5. Discuss nursing implications and concepts of safety when performing medication administration.

### Textbooks & Other Resources or Links

- Ernstmeyer, K. and Christman, E. (Eds.). (2020). *Open RN Nursing Pharmacology* by [Chippewa Valley Technical College](#) licensed under [CC BY 4.0](#).
  - **ISBN 13: 978-1-73491-411-5.** (Print copy is **not required**) (If you do purchase a print copy, it should cost less than \$50.)
  - **(Required)** Courseware we are using with the textbook (FlexEd) costs \$25
    - Access and create account through the link in Canvas. If it asks if you want to **create a username/password**, make sure to select yes and create them. This will ensure that you can access the courseware outside of the canvas course – important for future semesters.
    - FlexEd Courseware N109 Course ID: **604f609acc3ce2a657e34fb9**
- Velarde, G. (2019, May 20). [Pharmacology Notes: Nursing Implications for Clinical Practice](#). OER Commons. (Supplemental)
- **(Required)** Shadow Health N109 PIN# **0970-4581-5921-6828** (<http://app.shadowhealth.com/enrollments/new>) Cost is <\$110
- RN Pharmacology for Nursing. ATI nursing education. (Content Mastery Series: Review Module)
- ATI: Pharmacology Made Easy (online within ATI package)

### Course Requirements and Instructional Methods

*[Describe course activities, assignments, tests, homework, etc.]*

#### **A. Hours**

NURS 109 is a 1.0 unit theory course. Synchronous sessions will be held once a week for one hour. A minimum requirement of 2 – 3 hours of class preparation will be expected each week.

#### **B. Assignments:**

Reading, videos, internet resources, and writing assignments are required. Students will be expected to read, understand, and critique information from college level textbooks, nursing journals, or equivalent. Additional reading assignments will be required to supplement textbook material. Writing assignments will reflect the objectives listed and may include, but not be limited to, short essays, posters, and/or professional papers. Outside assignments including but not limited to nursing lectures, independent exercises, and online learning activities may be assigned and are required.

**Plagiarism and cheating policies noted in the student handbook and IVC policies will be strictly enforced. Students are expected to develop original work for this course.**

Schedule may change at the discretion of the instructor, taking into account the progress of students with the materials. Any change will be announced in class or via email through Canvas. **Students are held responsible for all materials covered in the syllabus and for any changes that are announced in class, sent by email or announced through Canvas.**

It is recommended that if a grade falls below 82% that the student arrange to meet with the faculty member. Faculty can be reached in person (limited), by email, by Zoom appt or during office hours via Zoom to discuss grades or other classroom matters.

The student is responsible for withdrawing (W) from the class before the deadline as outlined on your registration forms. **Failure to pass this class will affect your ability to progress to the next semester.** Students failing or withdrawing must complete a Petition to Re-Enter.

### Course Grading Based on Course Objectives

Students must maintain a “C” average grade as determined by the scale below:

**A = 93-100%**

**B = 85-92%**

**C = 78-84%**

**F = Below 78%**

Grades will not be “rounded”. To advance to the next semester, a “C” or better is required in this course and the co-requisite courses. **The course grade will be computed as follows: 10% from homework/assignments, 10% from quizzes (in class, take-home, or online), 45% will come from an average of the three exams prior to the final exam, and 35% of the course grade will come from the final exam.**

<b>Homework/assignments/ATI</b>	<b>10%</b>	
<b>Quizzes</b>	<b>10%</b>	
<b>Exam 1</b>	<b>15%</b>	
<b>Exam 2</b>	<b>15%</b>	
<b>Exam 3</b>	<b>15%</b>	
<b>Final Exam</b>	<b>35%</b>	
<b>Total</b>	<b>100%</b>	

**All of the following must be attained to successfully pass this course:**

- Theory (exams) grade** must have a **total equivalent of 78% or greater.** This requirement must be met in order to progress to the Final Exam.
- Final Theory Exam score** must be passed at a **78% or greater.**
- Total grade calculation** must be passed at a **78% or greater.**
- Attendance** requirements as noted below **must be met.**

Testing will include no more than 3 examinations in addition to written, demonstration, and oral assignments, and a final examination. Pop quizzes may be included. **EXCEPT FOR UNDER EXTREME CIRCUMSTANCES, THERE WILL BE NO MAKE-UPS FOR TESTS OR QUIZZES MISSED DUE TO ABSENCE.**

## Online Zoom Meetings

### How am I expected to act in an online “classroom” (especially Zoom)?

Attending a virtual meeting can be a challenge when there are many students on one conference call. Participating in such meetings may count as class attendance, but disruptive behavior may also result in you not being admitted to future meetings. Follow the tips below for best results:

#### 1) Be RESPECTFUL

a. Written, verbal, and non-verbal communications should be respectful and focused on learning topics of the class.

#### 2) Find a QUIET LOCATION & SILENCE YOUR PHONE (if zooming)

a. People walking around and pets barking can be a distraction.

#### 3) EAT AT A DIFFERENT TIME.

a. Crunching food or chugging drinks is distracting for others.

b. Synchronous zoom times are set in advance so reserve meals for outside class meetings.

#### 4) ADJUST YOUR LIGHTING SO THAT OTHERS CAN SEE YOU

a. It is hard to see you in dim lighting so find a location with light.

b. If your back is to a bright window, you will be what is called “backlit” and not only is it hard on the eyes (glare) but you look like a silhouette.

#### 5) POSITION THE CAMERA SO THAT YOUR FACE AND EYES ARE SHOWING

a. If you are using the camera, show your face; it helps others see your non-verbal cues.

b. You may be at home, but meeting in pajamas or shirtless is not appropriate so dress suitably. Comb your hair, clean your teeth, fix your clothes, etc. before your meeting time to show self-respect and respect for others.

#### 6) Be READY TO LEARN AND PAY ATTENTION

a. Catch up on other emails or other work later.

b. Silence your phone and put it away during Zoom classes.

c. Turn off TV, radios to reduce background noise.

#### 7) USE YOUR MUTE BUTTON WHEN IN LOUD PLACES OR FOR DISTRACTIONS

a. Pets barking, children crying, sneezing, coughing, etc. can happen unexpectedly. It’s best if you conference in a private space, but if you can’t find a quiet place, when noises arise **MUTE** your laptop.

#### 8) REMEMBER TO UNMUTE WHEN SPEAKING

a. Follow your instructor’s directions about using the “**raise hand**” icon or chat function to be recognized and to speak, but make sure you have unmuted your device.

b. Do not speak when someone else is speaking.

#### 9) REMAIN FOCUSED AND PARTICIPATE IN THE MEETING

a. Engage in the meeting. Look at the camera. Listen to instruction. Answer questions when asked.

b. Do not use the Zoom meeting to meet with your peers or put on a “show” for them.

#### 10) PAUSE YOUR VIDEO IF MOVING OR DOING SOMETHING DISTRACTING

a. In case emergencies happen and you need to leave the room or get up and move about, stop your zoom video.



## IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit <http://www.imperial.edu/studentresources> or click the heart icon in Canvas.

## Anticipated Class Schedule/Calendar

**\*\*\*Tentative, subject to change without prior notice\*\*\***

Reading and assignments due before class are to be completed so that you may be an active participant in synchronous meeting opportunities and class activities.

Date/ Week	Topics	Reading: Nursing Pharmacology and/or Pharm Notes for Clinical	Assignments & Recommendations:
<b>FALL 2021</b>			
<b>Week 1 August 16 - 20</b>	Review of Syllabus Review on accessing resources within Canvas.  Tips to Succeed in Pharm	<b>Chapter 1: <u>Kinetics &amp; Dynamics</u> 1.1 Pharmacology Basics Introduction 1.2 Pharmacokinetics 1.3 Absorption 1.4 Distribution 1.5 Metabolism 1.6 Excretion</b>	<b>Complete Canvas assignments as instructed.</b>
<b>Week 2 August 23 - 27</b>	Pharmacology Basics  Pharmacokinetics/ Pharmacodynamics	<b>1.7 Pharmacodynamics 1.8 Medication Types 1.9 Examining Effect 1.10 Medication Safety 1.11 Preparing for Administration Learning Activities</b>	<b>Complete Canvas assignments as instructed.</b>
<b>Week 3 August 30 – September 3, 2021</b>	Drug/Food Interactions  Professional and Legal considerations in Pharmacology	<b><u>Chapter II: Legal/Ethical</u> 2.1 Legal/Ethical Intro 2.2 Ethical &amp; Professional... 2.3 Legal Foundations 2.4 Cultural &amp; Social Determinants</b>	CA BRN CA State Statues, Nurse Practice Act & BON CA Practice Act: Standards of Practice Rules of Conduct CA state nurse practice act CA State Law Regarding Controlled Substance CURES  <b>Online Review Canvas Quiz</b>
<b>Week 4 09/06/2021</b>	<b>EXAM 1: All content from weeks 1 - 3</b>		<b>Exams will be scheduled in Canvas using a monitoring</b>



<b>Holiday</b> <b>September 7 - 10, 2021</b>			<b>program.</b>
<b>Week 5</b> <b>Sept 13 - 17</b>	<b>Adverse Drug Reactions</b> <ul style="list-style-type: none"> <li>• Medication Guides</li> <li>• Black Box Warnings</li> </ul> <b>Medication Errors</b>	<b>Ch 2:</b> <b>2.5 Preventing Med Errors</b>  <b>Pharm Notes for Clinical: Introduction</b> <b>pages iv-ix</b>	Group Assignment: ADR or Med Error Example  ISMP  FDA
<b>Week 6</b> <b>Sept 20 - 24</b>	<b>Pharmacology of Drug Abuse</b>  <b>Alcohol Effects on Body Systems</b>  <b>Heroin, Oxycodone &amp; other Opioids</b>  <b>Nicotine and Smoking</b>	<b>Pharm Notes:</b>  <b>Unit D: CNS Pharmacology</b> <b>-Substance Abuse</b>  <b>:Withdrawal/Abstinence-Maintenance Agents</b>  <b>:Alcoholism Treatment</b>  <b>:Narcotic Addiction Agents</b>  <b>:Nicotine/Smoking Cessation</b>	<b>Group Assignment:</b>
<b>Week 7</b> <b>Sept 27 - Oct 1</b>	<b>Basic Considerations During Pregnancy</b>  <b>Pediatric Patients</b>		Review Effects of Teratogens at various stages of development of fetus
<b>Week 8</b> <b>Oct 4 - 8</b>	<b>EXAM 2</b>		
<b>Week 9</b> <b>Oct 11 - 15</b>	<b>Drug Therapy in Older Adults</b>		Review physiological changes in older adults  <b>FDA website</b>
<b>Week 10</b> <b>Oct 18 - 22</b>	<b>Variation in Drug Responses</b>		Group Assignment: Find examples of natural/herbal remedies used locally.



	<b>Complementary &amp; Alternative Tx</b>		National Center for Complementary Medicine...
<b>Week 11</b> Oct 25 - 29	<b>In Class Debate: Vaccinations</b>  Immune System Basics  Immunizations	<b>Pharm Notes:</b> <b>Unit F: Immune System Pharmacology</b>  -A&P/Patho Review  :Immune System Responses -Drug Classes:A-T-A-T - <b>Immune System Modulators</b>  :Immunization Agents :Vaccines :Immunoglobulins	<b>Develop Immunization reference card/Table for clinical use. (cdc site)</b>  Vaccine Debate  <b>Flash Cards for Vaccines</b>
<b>Week 12</b> Nov 1 - 5	<b>EXAM 3</b>		
<b>Week 13</b> Nov 8 - 12	<b>Neuropharmacology:</b> <ul style="list-style-type: none"> <li>Basic Mechanisms of Action</li> <li>Synaptic Transmission Steps &amp; Drug Effects</li> </ul> <b>Autonomic Nervous System (ANS)</b> <ul style="list-style-type: none"> <li>Parasympathetic Nervous System</li> <li>Sympathetic Nervous System</li> <li>Feedback Regulation</li> </ul> <b>Peripheral Nervous System (PNS)</b> <ul style="list-style-type: none"> <li>Cholinergic &amp; Adrenergic Receptors</li> <li>Specificity</li> </ul>	<b>Chapter 4: Autonomic Nervous System (ANS)</b> <b>4.1 ANS Introduction</b> <b>4.2 ANS Basics ***</b> <b>4.3 Using Nursing Process</b> <b>4.4 ANS Med Classes &amp; Nursing Considerations</b> <b>4.5 Nicotine Receptor Agonists</b> <b>4.6 Muscarinic Receptor Agonists</b> <b>4.7 Muscarinic Antagonists</b> <b>4.8 Alpha-1 Agonists</b> <b>4.9 Alpha-1 Antagonists</b> <b>4.10 Alpha-2 Antagonists</b> <b>4.11 Beta-1 Agonists</b> <b>4.12 Beta-1 Antagonists</b> <b>4.13 Beta-2 Agonists</b> <b>4.14 Beta-2 Antagonists</b> <b>4.15 Alpha &amp; Beta Receptor Agonists (catecholamines)</b>  <b>Pharm Notes:</b> <b>Unit A: Autonomic Nervous System (ANS) Pharmacology (entire unit)</b> -A&P/Patho Review :Adrenergics :Adrenergic-blockers :cholinergics	<b>Assignment: Create Diagram/Cheat Sheet incorporating receptors/drugs</b>  ATI Pharm Made Easy:  Drug Class Comparisons



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		<b>:Cholinergic-blockers</b>	
<b>Week 14</b> <b>Nov 15 - 19</b>	Headache Medications	Pharm Notes:  <b>Unit D: CNS Pharmacology</b> <b>:Antimigraine Agents</b>	ATI Pharm Made Easy:
<b>Nov 22 - 26</b> <b>Holiday Week</b> <b>No Classes</b>			
<b>Week 15</b> <b>Nov 28 - Dec 3</b>	Opioid/Non-opioids Pain Management in CA  Anesthetic and Anesthesia Malignant Hyperthermia Inhalation Anesthetics Intravenous Anesthetics	<b>Chapter X: Analgesic &amp; Musculoskeletal</b> <b>10.1 Analgesics &amp; Musculoskeletal Intro</b> <b>10.2 Review of Basic Concepts</b> <b>10.4 Nursing Process</b> <b>10.5 Analgesic &amp; Musculoskeletal Meds</b> <b>10.6 Non-Opioid Analgesics **</b> <b>10.7 Opioid Analgesics &amp; Antagonists *</b> <b>10.8 Adjuvant Analgesics</b> <b>10.9 Antigout</b> <b>10.10 Anesthetics</b> <b>10.11 Learning Activities</b>  Pharm Notes: <b>Unit D: CNS Pharmacology</b> <b>:Neuromuscular Blockers</b> <b>Pain Management</b> <b>-Anesthetics</b> <b>:Local</b> <b>:General</b> <b>-Analgesics</b> <b>:Opioid Agonists/Narcotics</b> <b>:Opioid Agonists/Antagonists</b> <b>:Nonsteroidal</b> <b>Antiinflammatory Drugs (NSAIDs)</b> <b>Nonopioids/Nonnarcotics</b> <b>:Opioid-Nonopioid</b> <b>Combinations</b>	ATI Pharm Made Easy:
<b>Week 16</b> <b>Dec 6 - 10</b>	<b>FINAL EXAM:</b>		

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