

# HS M15: PHARMACOLOGY

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**Originator**

clee

**Co-Contributor(s)****Name(s)**

Walia, Katina (kwalia)

**College**

Moorpark College

**Discipline (CB01A)**

HS - Health Sciences

**Course Number (CB01B)**

M15

**Course Title (CB02)**

Pharmacology

**Banner/Short Title**

Pharmacology

**Credit Type**

Credit

**Start Term**

Fall 2023

**Co-listed (Same-as) Course(s)**

NS M20

**Taxonomy of Programs (TOP) Code (CB03)**

1230.10 - \*Registered Nursing

**SAM Priority Code (CB09)**

C - Clearly Occupational

**Control Number**

CCC000624728

**Primary Minimum Qualification**

NURSING

**Department**

Nursing (1120)

**Division**

MC ANCT, ATZ, EATM, Health &amp; Life Sciences

**Catalog Course Description**

Establishes a foundation for understanding future developments in drug therapy and for administering drugs efficiently and safely. Identifies pharmacology principles, basic pharmacological terminology and concepts, drug categories and their uses, drug mechanisms of action, as well as drug dosages, drug forms, routes of administration, and common generic and trade name medications. Applies drug information and mathematical calculations performed in clinical settings.

**Additional Catalog Notes**

Provider approved by the California Board of Registered Nursing, provider number CEP 02811 for 45 contact hours.

**Taxonomy of Programs (TOP) Code (CB03)**

1201.00 - \*Health Occupations, General

**Course Credit Status (CB04)**

D (Credit - Degree Applicable)

**Course Transfer Status (CB05) (select one only)**

B (Transferable to CSU only)

**Course Basic Skills Status (CB08)**

N - The Course is Not a Basic Skills Course

**SAM Priority Code (CB09)**

C - Clearly Occupational

**Course Cooperative Work Experience Education Status (CB10)**

N - Is Not Part of a Cooperative Work Experience Education Program

**Course Classification Status (CB11)**

Y - Credit Course

**Educational Assistance Class Instruction (Approved Special Class) (CB13)**

N - The Course is Not an Approved Special Class

**Course Prior to Transfer Level (CB21)**

Y - Not Applicable

**Course Noncredit Category (CB22)**

Y - Credit Course

**Funding Agency Category (CB23)**

Y - Not Applicable (Funding Not Used)

**Course Program Status (CB24)**

2 - Not Program Applicable

**General Education Status (CB25)**

Y - Not Applicable

**Support Course Status (CB26)**

N - Course is not a support course

**Field trips**

Will not be required

**Grading method**

(L) Letter Graded

**Alternate grading methods**

(O) Student Option- Letter/Pass

(P) Pass/No Pass Grading

**Does this course require an instructional materials fee?**

No

**Repeatable for Credit**

No

**Is this course part of a family?**

No

## Units and Hours

**Carnegie Unit Override**

No

## In-Class

**Lecture**

**Minimum Contact/In-Class Lecture Hours**

52.5

**Maximum Contact/In-Class Lecture Hours**

52.5

**Activity**

**Laboratory**

## Total in-Class

**Total in-Class**

**Total Minimum Contact/In-Class Hours**

52.5

**Total Maximum Contact/In-Class Hours**

52.5

## Outside-of-Class

**Internship/Cooperative Work Experience**

**Paid**

**Unpaid**

## Total Outside-of-Class

**Total Outside-of-Class**

**Minimum Outside-of-Class Hours**

105

**Maximum Outside-of-Class Hours**

105

## Total Student Learning

**Total Student Learning**

**Total Minimum Student Learning Hours**

157.5

**Total Maximum Student Learning Hours**

157.5

**Minimum Units (CB07)**

3

**Maximum Units (CB06)**

3

**Advisories on Recommended Preparation**

ANAT M01 and PHSO M01, or ANPH M01

**Requisite Justification****Requisite Type**

Recommended Preparation

**Requisite**

ANAT M01, PHSO M01, or ANPH M01

**Requisite Description**

Other (specify)

**Specify Other Requisite Description**

This course addresses how drugs affect the physiologic processes of the human body. An understanding of the physiologic processes of the human body gained through ANAT M01, PHSO M01, or ANPH M01 would support the student's success in this course.

**Level of Scrutiny/Justification**

Content review

**Student Learning Outcomes (CSLOs)**

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

- |   |  |
|---|--|
| 1 | calculates medication dosages correctly for currently available drugs.         |
| 2 | demonstrate understanding of safe administration of pharmaceutical medication. |

**Course Objectives**

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

- |    |   |
|----|---|
| 1  | describe the theories of drug action.   |
| 2  | describe the principles of pharmacodynamics and pharmacokinetics.                                     |
| 3  | define pharmacological terminology.   |
| 4  | identify dosages forms in which drugs are manufactured.   |
| 5  | identify routes of administration.  |
| 6  | identify and describe the therapeutic action of commonly prescribed drug categories.                  |
| 7  | identify units of measure for drug dosages and calculate doses.                                       |
| 8  | define drug abbreviations   |
| 9  | identify a drug's category from its given name.   |
| 10 | identify several common drugs within a given drug category.   |
| 11 | identify the diseases or conditions that a given drug is used to treat or prevent.                    |
| 12 | identify several drugs used to treat a given common disease.  |
| 13 | demonstrate techniques of obtaining accurate drug information from drug reference in a timely manner. |
| 14 | apply knowledge of drugs to the analysis of health care records.                                      |
| 15 | identify common side effects of drugs and drug categories.  |

**Course Content****Lecture/Course Content**

25% Introduction to drug usage

1. Terminology, names, abbreviations, calculations
2. Drug references and accurate drug information
3. Analysis of health care records

15% Pharmacodynamics, pharmacokinetics, and mechanisms of drug action

60% Therapeutic action of commonly prescribed drugs for common diseases including drug categories, drug side effects, drug interactions:

1. Autonomic nervous system and medications that stimulate/block nerves
2. General and local anesthetics, analgesics, antipyretics and narcotic agents
3. Psychoactive drugs
4. Anticonvulsants, anti-Parkinsonism drugs, and skeletal muscle relaxants
5. Cardiovascular drugs and heart disease
6. Diuretics, antihypertensive drugs, and drugs affecting the blood
7. Intravenous fluids and oral parenteral nutrition
8. Drugs affecting the Respiratory system
9. Anti-infective drugs
10. Drugs affecting the gastrointestinal system
11. Hormones and synthetic substitutes
12. Antihistamine, anti-neoplastic drugs, and vitamins

### Laboratory or Activity Content

n/a

### Methods of Evaluation

**Which of these methods will students use to demonstrate proficiency in the subject matter of this course? (Check all that apply):**

Written expression  
Problem solving exercises

**Methods of Evaluation may include, but are not limited to, the following typical classroom assessment techniques/required assignments (check as many as are deemed appropriate):**

Computational homework  
Group projects  
Individual projects  
Objective exams  
Problem-solving exams  
Quizzes  
Reports/papers  
Research papers  
Skills demonstrations  
Classroom Discussion

### Instructional Methodology

**Specify the methods of instruction that may be employed in this course**

Class activities  
Class discussions  
Distance Education  
Group discussions  
Internet research  
Lecture  
Small group activities  
Other (specify)

**Specify other method of instruction**

medication calculation demonstration

**Describe specific examples of the methods the instructor will use:**

PowerPoint presentation and lecture on the therapeutic actions of commonly prescribed drug classes.

### Representative Course Assignments

#### Writing Assignments

Describe, in layperson's terms, the patient counseling a client should receive regarding a drug of the student's choosing. Describe usage, expected results, side effects, and when to call the prescriber.

Contrast the purposes and usage of current drug therapies.

Describe, in writing, a commonly prescribed drug's classification and its relevant core drug knowledge (pharmacokinetics, pharmacodynamics, contraindications and precautions, adverse effects).

### Critical Thinking Assignments

Evaluate an assessment of a case study of a patient, determining the presence of side or adverse effects from drugs commonly used to treat a given disease or condition such as diabetes mellitus type 2.

Analyze a case study patient's drug regime for potential drug interactions.

Prepare an analytic report on current drug therapies.

### Reading Assignments

Assigned reading from the required text about pharmacokinetics in preparation for an exam.

Read peer-reviewed journal articles about current drug therapies for a common medical diagnoses such as hypertension and summarize the article for sharing in a discussion.

### Skills Demonstrations

Demonstration of medication calculations using ratio proportion.

Demonstration of medication calculations using dimensional analysis.

### Problem-Solving and Other Assignments (if applicable)

Demonstrate medication calculations using either ratio proportion or dimensional analysis.

Analyze a case study patient's drug regime for potential drug interactions and make a prioritized list for a healthcare provider to review.

## Outside Assignments

### Representative Outside Assignments

Describe how federal laws govern the development, approval, and distribution of prescribed drug therapy by utilizing assigned readings and conducting internet research.

Investigate the pharmacologic and therapeutic actions of 5 drugs per week in drug reference resources.

Conduct library/internet research on the effects of common drugs on diseases and conditions.

## Articulation

### C-ID Descriptor Number

HIT 107X

### Status

Approved

### Equivalent Courses at 4 year institutions

University	Course ID	Course Title	Units
CSU Stanislaus	NURS 2860	Pharmacology in Nursing	3
CSU Sacramento	NURS 14	Pharmacology	2
CSU Bakersfield	NURS 2140 & 2150	Pharmacology I & II	1 & 1

### Comparable Courses within the VCCCD

NS V07 - Pharmacology

### Equivalent Courses at other CCCs

College	Course ID	Course Title	Units
Solano Community College	NURS 52	Pharmacology for Nursing	3
Coastline Community College	BIOL C200	Pharmacology	3
Saddleback College	N 160	Pharmacology for Nursing	3

**District General Education****A. Natural Sciences****B. Social and Behavioral Sciences****C. Humanities****D. Language and Rationality****E. Health and Physical Education/Kinesiology****F. Ethnic Studies/Gender Studies****Course is CSU transferable**

Yes

**CSU Baccalaureate List effective term:**

F 1995

**CSU GE-Breadth****Area A: English Language Communication and Critical Thinking****Area B: Scientific Inquiry and Quantitative Reasoning****Area C: Arts and Humanities****Area D: Social Sciences****Area E: Lifelong Learning and Self-Development****Area F: Ethnic Studies****CSU Graduation Requirement in U.S. History, Constitution and American Ideals:****IGETC****Area 1: English Communication****Area 2A: Mathematical Concepts & Quantitative Reasoning****Area 3: Arts and Humanities****Area 4: Social and Behavioral Sciences****Area 5: Physical and Biological Sciences****Area 6: Languages Other than English (LOTE)****Textbooks and Lab Manuals****Resource Type**

Textbook

**Description**Burchum, Jacqueline R., and Laura D. Rosenthal. *Lehne's Pharmacology for Nursing Care*. 11th ed., Elsevier, 2021.**Resource Type**

Textbook

**Description**

McCuiston, Linda E., et al. *Pharmacology: A Patient-Centered Nursing Process Approach*. 11th ed., Elsevier, 2021.

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**Resource Type**

Textbook

**Description**

Karch, Amy M. *Focus on Nursing Pharmacology*. 8th ed., Wolters Kluwer, 2019.

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**Library Resources**

**Assignments requiring library resources**

Research using the Library's print and online resources for papers and reports on such topics as how federal laws govern the development, approval, and distribution of prescribed drug therapy.

**Sufficient Library Resources exist**

Yes

**Example of Assignments Requiring Library Resources**

Summarize a peer-reviewed journal article about the effects of common drugs on diabetes mellitus type 2.  
Investigate the pharmacologic and therapeutic actions of 5 drugs per week in drug reference resources.

**Distance Education Addendum**

**Definitions**

**Distance Education Modalities**

Hybrid (1%–50% online)  
Hybrid (51%–99% online)  
100% online

**Faculty Certifications**

**Faculty assigned to teach Hybrid or Fully Online sections of this course will receive training in how to satisfy the Federal and state regulations governing regular effective/substantive contact for distance education. The training will include common elements in the district-supported learning management system (LMS), online teaching methods, regular effective/substantive contact, and best practices.**

Yes

**Faculty assigned to teach Hybrid or Fully Online sections of this course will meet with the EAC Alternate Media Specialist to ensure that the course content meets the required Federal and state accessibility standards for access by students with disabilities. Common areas for discussion include accessibility of PDF files, images, captioning of videos, Power Point presentations, math and scientific notation, and ensuring the use of style mark-up in Word documents.**

Yes

## Regular Effective/Substantive Contact

### Hybrid (1%–50% online) Modality:

Method of Instruction	Document typical activities or assignments for each method of instruction
Asynchronous Dialog (e.g., discussion board)	<p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics. Instructors will provide students with feedback on the content and quality of assignments and discussion posts.</p> <p>Additionally, instructors may engage students using the following communication activities available in the online classroom: contact students via e-mail within the course shell, by campus e-mail, and/or MyVCCCD.</p> <p>Instructors may involve students in active learning with the following activities:            students may complete homework and receive feedback through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; students may submit questions to the instructor by email or ask in person in a virtual classroom; instructor may create student groups or group activities using the online course.</p>
E-mail Other DE (e.g., recorded lectures)	<p>Contact with students by college or Canvas email.</p> <p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics.</p> <p>"Announcement" tool to remind students of important assignments and due dates; provide students with an online schedule of class events using the "calendar" tool in the online course shell.</p> <p>Instructors may involve students in active learning with the following activities:            students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes.</p>
Video Conferencing	<p>Lectures, study sessions.</p> <p>Instructors may involve students in active learning with the following activities:            students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; instructor may create student groups or group activities using the online course.</p>

**Hybrid (51%–99% online) Modality:**

<b>Method of Instruction</b>	<b>Document typical activities or assignments for each method of instruction</b>
Asynchronous Dialog (e.g., discussion board)	<p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics. Instructors will provide students with feedback on the content and quality of assignments and discussion posts.</p> <p>Additionally, instructors may engage students using the following communication activities available in the online classroom: contact students via e-mail within the course shell, by campus e-mail, and/or MyVCCCD.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may complete homework and receive feedback through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; students may submit questions to the instructor by email or ask in person in a virtual classroom; instructor may create student groups or group activities using the online course.</p>
E-mail	Contact with students by college or Canvas email.
Other DE (e.g., recorded lectures)	<p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics.</p> <p>"Announcement" tool to remind students of important assignments and due dates; provide students with an online schedule of class events using the "calendar" tool in the online course shell.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes.</p>
Video Conferencing	<p>Lectures, study sessions.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; instructor may create student groups or group activities using the online course.</p>

**100% online Modality:**

<b>Method of Instruction</b>	<b>Document typical activities or assignments for each method of instruction</b>
Asynchronous Dialog (e.g., discussion board)	<p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics. Instructors will provide students with feedback on the content and quality of assignments and discussion posts.</p> <p>Additionally, instructors may engage students using the following communication activities available in the online classroom: contact students via e-mail within the course shell, by campus e-mail, and/or MyVCCCD.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may complete homework and receive feedback through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; students may submit questions to the instructor by email or ask in person in a virtual classroom; instructor may create student groups or group activities using the online course.</p>
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Other DE (e.g., recorded lectures)	<p>Online instructors will provide lesson plans that require activities such as reading course material from a mandatory textbook and participating in discussion forums or chat room topics.</p> <p>"Announcement" tool to remind students of important assignments and due dates; provide students with an online schedule of class events using the "calendar" tool in the online course shell.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes.</p>
Video Conferencing	<p>Lectures, study sessions.</p> <p>Instructors may involve students in active learning with the following activities:</p> <p>students may view video lessons and/or text-based lessons corresponding to course content and learning objectives; students may complete homework through the online course, and/or using an interactive online homework system provided by a publishing company; students may engage in internet searches and Library online database resources on topics corresponding to course content and learning objectives; students may test their knowledge with interactive online quizzes; students may interact with the instructor and classmates using an online discussion forum to ask questions; instructor may create student groups or group activities using the online course.</p>

**Examinations**

**Hybrid (1%–50% online) Modality**

- On campus
- Online

**Hybrid (51%–99% online) Modality**

- On campus
- Online

**Primary Minimum Qualification**

HEALTH

**Review and Approval Dates**

**Department Chair**

11/29/2023

**Dean**

12/06/2022

**Technical Review**

02/16/2023

**Curriculum Committee**

02/21/2023

**DTRW-I**

04/13/2023

**Curriculum Committee**

MM/DD/YYYY

**Board**

05/09/2023

**Control Number**

CCC000624720

**DOE/accreditation approval date**

MM/DD/YYYY