



MA-777: PHARMACOLOGY FOR MEDICAL ASSISTANTS

Effective Term

Fall 2025

BOT Approval Date

01/11/2024

Discipline

MA - Medical Assisting

Course Number

777

Course Title

Pharmacology for Medical Assistants

Short Title

MA Pharmacology

Credit Status (CB 04)

D - Credit - Degree applicable

Units**Lecture Units**

3.50

Total Units

3.5

Hours**Lecture Contact Hours**

56-63

Out of Class Hours Lecture

112-126

Total Contact Hours

56 - 63

Total Out of Class Hours

112 - 126

Total Student Learning Hours

168 - 189

Distance Education

Yes

Distance Education**Distance Education Type**

Both Fully Online and Hybrid Online

Fully Online Delivery Requirements:

- a. Students must be notified via the college schedule of classes and the syllabus for the class if proctored tests are required for this course
- b. Any planned face-to-face meetings, such as an orientation or study session, must be optional

c. The MSJC curriculum committee requires the use of accessible, asynchronous discussion as a component of every fully online course

Are you using publisher content?

No

Regular Substantive Interaction

Instructor-to-student, student-to-student, and student-to-content contact shall be distributed in a manner that will ensure regular substantive interaction (RSI) is maintained not only weekly but also for the duration of the course. Instructor interactions should be equivalent in time, quality and consistency to the engagement students would receive in a face-to-face course—for example, through announcements, discussion participation, personalized feedback, video messages, or other instructional communications. Instructors are expected to be responsive to student inquiries within a 24-72 hour time frame excluding holidays. RSI will be maintained through a variety of methods:

- Orientation - Students must be oriented to the online and face-to-face portions at the start of the course.
- Announcements - Announcements using the course management system must be posted at least weekly to keep students current on course events, due dates, materials, etc.
- Discussion Forums - Content-related discussion forums within the designated CMS will include appropriate instructor participation and will be initiated and maintained, with timely feedback provided. Instructors are required to monitor the discussions and related activities to provide guidance and direction. Open-ended discussion boards may be used to further learning and interaction.
- MSJC Communication – Instructor will use MSJC-administered communication tools (such as email or the designated CMS communication tools) to regularly communicate with and provide ease of access to students.
- Timely Feedback - Timely feedback on student work will be provided by the instructor, which may include comments and/or rubrics, within the Grades area of the designated CMS.
- Scheduled Meetings – Hybrid and synchronous courses will meet at regularly scheduled times.

ADA Compliance - All course interactions and content must be designed with accessibility in mind and meet ADA requirements.

Catalog Description

This course provides the academic knowledge and competency skills that medical assistants need to accurately and safely administer medication to patients in a clinical setting. Course content includes dosage calculation, drug sources, legislation, drug classification and action, parenteral and non-parenteral drug administration and the effect of medications on body systems.

Attach Supporting Documents

Labor Market for Medical Assistants 2018 19 (1).pdf
Minutes the CTE Business Advisory Committee Meeting.docx

Requisites

Recommended Preparation

Recommended Preparation (note that students can enroll in the class even if they haven't take the recommended course)

BIOL-100

AH-105

Codes

TOP Code (CB 03)

1208.10* - *Clinical Medical Assisting

CIP Code

26.1099 - Pharmacology and Toxicology, Other.

Repeatability Code

No

Grading Option

Letter grade OR P/NP

Learning Objectives

Learning Objectives

Learning Objective

1. Calculate dosage of medication including metric system conversion, unit measurement, and calculation for adult and child dosages.

2. Apply pharmacology principles to understanding classes of drugs, drug actions, desired effects and adverse reactions.
3. Discuss the federal laws related to controlled substances and the medical assistant's role in administering controlled substances.
4. Categorize drugs according to preparation and therapeutic action.
5. Evaluate the use of universal precaution and standard precaution in the administration of parenteral and nonparenteral drugs.
6. Differentiate between drug action, usual dosage and adverse reaction of selected drugs used to treat diseases in various body systems.
7. Examine the cultural differences in the use of narcotic drugs.
8. Validate the complicated effect of drug on the treatment regimen of older adults.
9. Evaluate the parts of a prescription and trace the journey of an E-Script.
10. Assess the effect of culture, socioeconomic status and access to medication on treatment outcome.

Learning Outcome Information

Course Learning Outcomes

Learning Outcome

1. Students will demonstrate knowledge of the metric system use to accurately calculate dosage according to kilogram per body weight.
2. Students will evaluate the significance and clinical implication of the Control Substances Act.
3. Students will assess the factors that affect drug dosages administered to patients.
4. Students will categorize drugs according to preparation and therapeutic action and identify the main classes of medicines according to state law.
5. Students will inspect the parts of a prescription and indicate the benefits of e-prescribing.
6. Students will validate the essential medication guidelines.
7. Students will demonstrate engagement in inclusive, respectful conversation with others.
8. Students will distinguish between narcotic and nonnarcotic analgesic medications and determine how cultural may impact the abuse of these medications.
9. Students will critique the provider-patient relationship in terms of diversity, inclusion and determine its impact on patient compliance.
10. Students will identify drugs used to treat specific disease states and evaluate the use versus side effects.

Program Learning Outcomes

Learning Outcome

1. Demonstrate knowledge of medical law, ethics and confidentiality in the performance of medical assisting duties.
2. Perform administrative and clinical tasks required in the medical office to the professional standard of medical assisting.
3. Demonstrate knowledge of California law and regulations of medical assistants.

Institutional Learning Outcomes

Communication: The student will effectively express and exchange ideas through listening, speaking, reading, writing, visual works, and other modes of interpersonal expression.

Critical Thinking: The student will analyze problems, gather and synthesize relevant information, evaluate ideas, information, and evaluate alternative points of view to create, innovate and implement effective solutions.

Cultural Awareness and Humility: The student will demonstrate knowledge of and sensitivity toward individuals of diverse ethnicity, age, gender, sexual orientation, and religious affiliations, as well as toward those individuals with diverse abilities and socio-economic classes to respectfully interact with individuals of diverse perspectives, beliefs and values while being mindful of the limitation of their own cultural frameworks.

Information and Technology Literacy: The student will access, interpret, evaluate, and apply relevant information sources and digital media effectively, and in an ethical and legal manner.

Scientific Awareness: The student will apply the scientific method of inquiry to assess potential solutions for real-life challenges by employing science-based knowledge and methodologies in daily life.

Social Awareness: The student will recognize and analyze the interconnectedness of global, national, and local concerns, analyzing cultural, political, social, and environmental issues from multiple perspectives and appreciate similarities and differences among cultures.

Civic

Personal
and Professional Responsibility

Content

Course Lecture Content

1. Mathematics and Dosage Calculation
 - a. Numerals and Fractions
 - i. Roman Numerals System of Writing Numbers
 - ii. Placement rules for Roman Numerals
 - b. Decimal Fractions
 - i. Adding Fractions
 - ii. Subtracting Fractions
 - iii. Multiplying Fractions
 - iv. Dividing Fractions
 - v. Reducing Common Fractions to the Lowest Terms
 - vi. Reducing Common Improper Fractions to the Lowest Terms
 - vii. Decimal Fractions
 - viii. Mathematical Operations with Decimals
 - ix. Rules for decimals when Writing Drug Doses
 - c. Ratio and Proportion
 - i. Important use of Ratios and Proportions
 - d. The Metric System
 - i. The Metric System Guidelines
 - ii. Fundamental Units
 - iii. Proportional Method for Converting Metric Equivalents
 - iv. Calculating Dosage according to Kilogram of Body Weight
 - e. Calculating Adult Dosage: Oral and Parenteral Forms
 - i. The Oral and Parenteral Routes of Administration
 - ii. Weight and Volume
 - iii. Calculating Adult Dosage using the Formula Method
 - iv. How to calculate Unit Dosage
 - f. Calculating Children's Dosage
 - i. Guidelines for Administering Pediatric Medications
 - ii. Calculating Children's Dosages
2. Introduction To Pharmacology
 - a. Drug Sources, Schedules, and Dosages
 - i. Drugs Use
 1. Therapeutic
 2. Diagnostic
 3. Curative
 4. Replacement
 5. Preventative or Prophylactic
 - ii. Drug Names
 1. Chemical Name
 2. Generic Name
 3. Trade or Brand Name
 - iii. Sources of Drugs
 1. Plants
 2. Minerals
 3. Animals
 4. Synthetic
 5. Genetically Engineered Pharmaceutical and Biologics
 - iv. Drug Legislation

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1. OSHA
 2. FDA
 3. DEA
 - v. Controlled Substances
 1. Control Substances Act (CSA) 1970
 2. Controlled Substances
 3. Addition
 4. Abuse
 5. Narcotics
 6. Drug Schedules
 - a. Schedule I, II, III, IV, V.
 - b. Record Keeping Requirements
 - c. Required Records
 - d. Prescription Records
 - e. Security
 - f. DEA Number Verification
 - g. Valid DEA Registration Number for Practitioners
 - h. Electronic Verification of Prescriber's DEA Number
 7. Drug Dosage
 - a. Age
 - b. Gender
 - c. Other Factors
 8. Drug Dose Terminology
 - a. Initial Dose
 - b. Average Dose
 - c. Loading Dose
 - d. Maintenance Dose
 - e. Minimum Dose
 - f. Maximum Dose
 - g. Therapeutic Dose
 - h. Divided Dose
 - i. Unit Dose
 - j. Cumulative Dose
 - k. Lethal Dose
 - l. Toxic Dose
 - b. Forms of Drugs
 - i. Liquid Preparations
 1. Emulsions
 2. Solutions
 3. Mixtures and Suspensions
 4. Syrups
 5. Elixirs
 6. Tinctures
 7. Spirits
 8. Fluid Extracts
 9. Lotions
 10. Liniments
 11. Sprays
 12. Aerosols
 - ii. Solid and Semisolid Preparations
 1. Tablets
 - a. Enteric Coated Tablets
 - b. Buccal Tablets
 - c. Sublingual Tablets
 - d. Layered Tablets

- e. Scored Tablets
 - f. Chewable Tablets
 - g. Effervescent Tablets
 - h. Vaginal Tablets
- 2. Capsules
- 3. Caplets
- 4. GelCaps
- 5. Troches or Lozenges
- 6. Suppositories
- 7. Ointment
- 8. Creams
- iii. Other Drug Delivery System
 - 1. Transdermal System
 - 2. Ocular Therapeutic System
 - 3. Implantable Devices
 - 4. Fast-Dissolving Drug Delivery System
- iv. Routes of Administration
 - 1. Subcutaneous
 - 2. Intramuscular
 - 3. Intradermal
 - 4. Intravenous
 - 5. Intra-articular
- v. Fundamental Action of Drugs
 - 1. Selective Action
 - a. Stimulant
 - b. Depressant
 - 2. Agonist
 - 3. Antagonist
 - 4. Location Action
 - 5. Remote Action
 - 6. Specific Action
 - 7. Synergistic Action
 - 8. Systemic Action
- vi. Four Basic Stages of Drug's Life in the Body
 - 1. Absorption
 - 2. Distribution
 - 3. Metabolism
 - 4. Excretion
- c. The Medication Order
 - i. Prescription
 - 1. Parts of the Prescription
 - ii. E-Prescribing
 - 1. Benefits of E-Prescribing
 - iii. Prescription Refill
 - iv. Other Types of Prescription Order
 - 1. Verbal Order
 - 2. Telephone Order
 - 3. PRN Order
 - 4. Routine Order
 - 5. Single Order
 - 6. Stat Order
 - v. The Medication Label
 - 1. Understanding the Medication Label
 - 2. Warning Labels
 - vi. Abbreviations and their Meanings

- d. Medication Administration Essentials
 - i. The Six Rights of Proper Drug Administration
 - 1. Right Patient
 - 2. Right Drug
 - 3. Right dose
 - 4. Right Route
 - 5. Right Time
 - 6. Right Documentation
 - ii. Essential Medication Guidelines
 - iii. Universal Precaution
 - iv. Standard Precaution
 - v. Safe Storage of Medication
 - vi. Emergency Medications
 - vii. Emergency Supplies and Equipment
 - viii. Documentation of Drug Administration
 - ix. Medication Error
 - x. Reactions to Medications
- e. Administration of Non-parenteral Medications
 - i. Administration of Oral Medication
 - 1. Equipment and Supplies
 - 2. Preparation and delivery of Oral Medications
 - 3. Preparing and Administering a Crushed Medicine
 - ii. Administration of Ophthalmic Medication
 - iii. Administration of Otic Medication
 - iv. Administration of Nasal Medication
 - v. Administration Rectal Medication
 - vi. Transdermal Delivery System
 - vii. Administration of Drugs by Inhalation
 - viii. Administration of oxygen
 - ix. Methods of Oxygen Deliver
 - 1. Nasal Cannula
 - 2. Masks
 - 3. Oxygen Safety Precautions
 - x. Administering Drugs by Local Application
 - 1. Application to Skin
 - 2. Application to Body Cavity
- f. Parenteral Equipment and Supplies
 - i. Vials
 - ii. Syringes
 - 1. Parts of a Syringe
 - 2. Classification of Syringes
 - 3. Disposable Syringes
 - 4. Non-disposable Syringes
 - 5. Combination Disposable /Non-disposable Cartridge-Injection Syringes
 - iii. Preventing Needlestick Injuries in HealthCare Settings
 - 1. Safety Device Designs
 - 2. NIOSHA Recommendations for Healthcare Workers
 - iv. Measuring medication in a Syringe
 - 1. Reading the Syringe
 - v. Hypodermic Needles
 - 1. Parts of a Needle
 - 2. Selecting the Appropriate Syringe and Needle
 - vi. Preparing Equipment and Supplies
 - vii. Using Filter Straw to remove Medication from an Ampule
 - viii. Mixing two Medications in one Syringe Needle Unit
- g. Administration of Parenteral Medications

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- i. Advantages and Disadvantages of Parenteral Route
 - ii. Preparing the Patient for an Injection
 - iii. Patient Assessment
 - iv. Site Selection
 - v. Basic Guidelines for Administering and Injection
 - vi. Z-Tract Method of Intramuscular Injection
 - vii. Insulin Injections -Special Considerations
 - viii. Principles of Intravenous (IV) Therapy
 - 1. Advantages and Disadvantages of IV Therapy
 - h. Allergy: An Overview
 - i. Appearance of Symptoms
 - ii. Insect Stings
 - iii. Allergic Rhinitis
 - iv. Diagnostic Allergy Tests
 - v. Treatment
 - 1. Avoidance of Allergens
 - 2. Drug Therapy
 - 3. Immunotherapy
3. Medications, Supplements, and Drug Abuse.
- a. Antibiotic Agents
 - i. Infectious Diseases
 - ii. Treatment of Infectious Diseases
 - iii. Adverse Reactions
 - iv. Major Antibiotic Groupings
 - v. Adverse Reactions
 - vi. Hypersensitivity
 - vii. Organ Toxicity
 - viii. Superinfection
 - ix. Overuse of antibiotics
 - b. Major Antibiotic Groupings
 - i. Penicillins
 - ii. Penicillinase-Resistant Penicillin
 - iii. Cephalosporins
 - iv. Carbapenems
 - v. Tetracyclines
 - vi. Aminoglycosides
 - vii. Quinolones
 - viii. Macrolides
 - 1. Ketolides
 - 2. Erythromycin
 - 3. Azithromycin
 - 4. Clarithromycin
 - ix. Monobactams
 - 1. Aztreonam
 - x. Oxazolidinones
 - xi. Streptogramins
 - c. Antiseptics and Disinfectants
 - d. Antifungal, Antiviral and Immunizing Agents
 - i. Antifungal Agents
 - 1. Uses
 - 2. Contraindications
 - 3. Adverse Reactions
 - 4. Dosage and Route
 - e. Antiviral Agents

- i. Uses
 - ii. Contraindications
 - iii. Adverse Reactions
 - iv. Dosage and Route
- f. Neuraminidase Inhibitors
 - i. Uses
 - ii. Contraindications
 - iii. Adverse Reactions
 - iv. Dosage and Route
- g. Antiretroviral Agents
 - i. Uses
 - ii. Contraindications
 - iii. Adverse Reactions
 - iv. Dosage and Route
- h. Immunization
 - i. General Recommendation for Immunization
 - ii. Immunobiologics
 - iii. Immunizing Agents
 - iv. Route and Site Selection
 - v. Hypersensitivity to Vaccine Components
 - vi. Altered Immunocompetence
 - 1. Antineoplastic Agents
- i. Chemotherapy with Antineoplastic Agents
 - i. How Chemotherapy Works
 - ii. The Cell Cycle
 - iii. Toxicities and Adverse Reactions
 - iv. Patient Evaluation
 - v. Care of Chemotherapy Patients
 - vi. Classification of Antineoplastic Agents
 - 1. Alkylating Agents
 - 2. Nitrosoureas
 - 3. Antimetabolites
 - 4. Antitumor Antibiotics
 - 5. Mitotic Inhibitors
 - 6. Combination Chemotherapy
 - 7. Targeted Therapies
 - 8. Differentiating Agents
 - vii. Hormone Therapy
 - viii. Other forms of Treatment for Cancer
 - 1. Surgery
 - 2. Radiation Therapy
 - 3. Immunotherapy
 - 4. Photodynamic Therapy
- j. Vitamins, Minerals, and Herbals
 - i. Dietary Guidelines for Americans
 - ii. MyPLATE and the Five Food Groups
 - iii. Vitamins
 - iv. Minerals
 - v. Herbals and Supplements
- k. Psychotropic Agents
 - i. Antianxiety Agents
 - ii. Antidepressant Agents
 - 1. Clinical Depression Test
 - 2. Classification of Antidepressant Agents

- 3. Selective Serotonin Reuptake Inhibitors
- 4. Serotonin-norepinephrine Reuptake Inhibitors
- l. Antimanic Agents
- m. Antipsychotic Agents
- n. Substance Abuse
 - i. Most Commonly Used Addictive Drugs
 - ii. Marijuana
 - iii. Nicotine
 - iv. Club Drugs and Inhalants
 - v. Amphetamines
 - vi. Methamphetamines
 - vii. Cocaine
 - viii. Opiates
 - ix. Phencyclidine
 - x. Lysergic Acid Diethylamide
 - xi. Recognizing Substance Abuse
 - xii. Substance Abuse in the Workplace
- 4. Effect of Medications on Body
 - a. Medication used for musculoskeletal disorders
 - i. Anti-inflammatory Drugs
 - ii. Corticosteroids
 - iii. Nonsteroidal Anti-Inflammatory Drugs
 - iv. Disease-Modifying Anti-rheumatic Drugs
 - v. Antitumor Necrosis Factor Drugs
 - vi. Agent used to treat Osteoporosis
 - vii. Agents Used to Treat Gout
 - viii. Skeletal Muscle Relaxants
 - b. Medication used for gastrointestinal disorders
 - i. Antiulcer Agent
 - ii. Mucosal Protective Medication
 - iii. Agents used for Inflammatory Bowel Disease
 - iv. Laxative
 - v. Antidiarrheal Agents
 - vi. Anthelmintics
 - vii. Antiprotozoal Agents
 - viii. Antiemetics
 - ix. Emetics
 - c. Medication used for cardiovascular disorders'
 - i. Antiarrhythmic Agents
 - ii. Vasopressor and Vasodilators
 - iii. Antihypertensive Agents
 - iv. Drugs that Affect the Blood
 - 1. Heparin
 - 2. Warfarin Sodium (Coumadin)
 - 3. Antiplatelet Drugs
 - 4. Thrombolytic Agents
 - 5. Hematinic Agents
 - 6. Agents Used in Treating Megaloblastic Anemias
 - a. Folic Acid
 - b. Cyanocobalamin
 - c. Epoetic Alfa
 - 7. Drugs that Affect Cholesterol
 - a. Antihyperlipidemic Agents
 - d. Medications that affect the respiratory system

- i. Antihistamines
- ii. Decongestants
- iii. Antitussives
- iv. Expectorants and mucolytics
 - 1. Expectorants
 - 2. Bronchodilators
 - 3. Leukotriene Receptor Antagonists (Blockers)
 - 4. Glucocorticoids
- e. Diuretics and medications use for urinary system disorders
 - i. Diuretics
 - 1. Thiazide Diuretics
 - 2. Loop Diuretics
 - 3. Potassium-sparing Diuretics
 - 4. Osmotic Diuretics
 - a. Carbonic anhydrase Inhibitor Diuretics
 - b. Urinary Tract Antibacterial
 - c. Urinary Tract Antiseptics
 - f. Medications used in treatment of endocrine disorders
 - i. Drugs Used in Thyroid Disorders
 - 1. Thyroid Hormones
 - 2. Antithyroid Hormones
 - 3. The Parathyroids
 - ii. The Adrenals
 - iii. The Pancreas
 - 1. Insulin
 - 2. Oral Antidiabetic (Hypoglycemic) Agents
 - 3. Hyperglycemic Agents
 - g. Medications that affect the nervous system
 - i. Analgesics
 - 1. Narcotic Analgesics
 - 2. Narcotic Antagonists
 - ii. Analgesic-Antipyretics
 - iii. Sedatives and Hypnotics
 - iv. Anti-parkinsonian Drugs
 - v. Alzheimer's Disease
 - vi. Anticonvulsants
 - vii. Anesthetics
 - viii. Ophthalmic Drugs
 - ix. Drugs Used in Vertigo, Motion Sickness, and Vomiting
 - h. Medications that affect the reproductive system
 - i. Estrogens
 - ii. Progesterone
 - 1. Progestins
 - iii. Hormone Replacement Therapy
 - iv. Birth Control
 - 1. The NuvaRing
 - 2. The Birth Control Patch
 - 3. Depo-Prevera
 - 4. The Female Condom
 - 5. Oral Contraceptives
 - 6. Male Hormones
 - a. Androgens
 - 7. Erectile Dysfunction
 - a. Sildenafil Citrate (Viagra)
 - 8. Drugs Used During Labor and Delivery
 - a. Uterine Stimulants

5. Diversity, Equity and Inclusion in Healthcare

- a. The impact of bias and stigma on:
 - i. Medical encounter
 - ii. Medical decision making
 - iii. Communication
 - iv. Quality of care
 - v. Clinical outcome
- b. The differential effect of bias and stigma based on
 - i. Gender
 - ii. Race
 - iii. Socioeconomic status
 - iv. Sexual orientation
- c. Reducing Healthcare Disparity
 - i. Make patient feel welcomed, respected, supported and valued
 - ii. Create equity in access, opportunity and treatment plan.
- d. Race/Ethnicity and Gender Difference in Drug Use and Abuse
 - i. The non-medical use of prescription drugs
 - ii. The vulnerable groups
 1. Patients
 2. Young People
 3. Women
 4. Older adults
 5. Health care professionals
 - iii. Cultural Patterns of Drug use
 1. Factors that contribute to drug related problems
 - a. Affluence
 - b. drug diffusion
 - c. urbanization
 - d. migration
 - e. cultural changes
 - f. Racial/Ethnic group differences in opioid and synthetic opioid
 - i. Prescribing practices and drug potency
 - ii. Prevalence of pain and approach to pain management
 - iii. Healthcare system structures
 - iv. Cultural difference and access to care

Methods of Instruction

Method

Lecture

Integration

PowerPoint lectures, complimented with accessible audio visual materials in the form of video clips will be used to present key concepts and procedures. Lecture notes will be embedded with critical thinking questions related to drug administration, and safety protocols. In each module, students will be asked to examine inherent cultural or personal biases and discuss ways to implement protocols to ensure equity and respect of all cultures in the workplace.

DE Adaptations for MOI

Using accessible tools in the course management system (CMS), lecture notes will be accompanied by voice over input from the instructor, accessible audio visual presentations and demonstrations by the instructor, of various techniques and skills used in the clinical/ pharmacy setting. The lecture materials will be presented via the course learning management system. Students will interact online, with the lectures notes by providing responses to critical thinking question in the lesson using the course management system.

Method

Discussion

Integration

Students engagement in class discussion and provide written response to assigned questions that will be evaluated by the instructor based on an established rubric.

Students will engage in small and large group discussion to synthesize and analyze lecture material and case studies that include, for example, stating the action, uses, type, usual dosage, adverse reaction, implication for patient care, patient education, and special consideration for selected drugs prescribed for pathologies of various body systems. Determine how patient centered care, which includes cultural diversity, inclusion, equity and culutral competence and affect health status and patient outcome.

DE Adaptations for MOI

Using the accessible tools, discussion can be accessed using the course management system (CMS). Students will engage in class discussion online, using discussion boards, and provide written response to assigned questions that will be evaluated by the instructor based on an established rubric. The rubric will evaluate the accuracy, relevancy, understanding and applicability of the material presented, to patient care.

Method

In-class Exercises

Integration

Case studies will be used to engage large and small group cooperative learning activities in discussing scenarios in drug prescription, effect, reaction and patient outcome.

In these case studies, students will examine cases of patients from different cultural background and pathologies and create solutions to the case studies that considers the patient's own cultural background, ideologies, belief system and methods of dealing with illnesses, treatments and even naturopathic modalities.

DE Adaptations for MOI

Using accessible tools in the course management system students will access discussion case studies via the discussion boards. Discussion boards are used to encourage dialogue and interactive exchange of ideas between students. Break out rooms are used to create a similar setting for interaction in a synchronous manner. Students are encourage to be mindful and respectful of each other's opinion, cultural difference and valued individual experience.

Break out rooms and discussions will be created as a safe place for students to share their opinions, and interject their cultural beliefs and practice as it relates to illness, treatment plans, testing, cure and healing.

Method

Film/video Viewing and Discussion

Integration

Accessible films and videos are used to demonstrate the delivery and administration of various types of medication parenterally and nonparenterally. Videos are carefully chosen to clinical staff of various cultural background, so that students can make cultural connections and feel included in the presented material. These video clips are accessible from the instructor material for the adopted textbook and are downloadable for student view.

DE Adaptations for MOI

Using the accessible tools in the course management system (CMS) students view videos individually and/or as a whole class group and discuss their opinions and insight via sychonous chat rooms or break out room format. These video clips are accessible from the instructor material for the adopted textbook and are downloadable to the course management system and made available to students in the course modules.

Method

Group Projects

Integration

Groups of students will select a body system and list the drugs used therapeutically to treat pathological conditions in that body system. Students will research the difference in cultural use of the traditonal medications and nontraditonal herbs and supplements to treat disease processes and explain the reason for the cultural differences. Students will also examine the need to adapt treatment plans and modes of delivery to different lifestyle and diverse genetic endowment that exist within the population.

DE Adaptations for MOI

Using the accessible tools in the course management system (CMS) students will meet online in their designated groups and discuss their findings in synchronous break out rooms and then join the main room to perform a whole group presentation.

Methods of Evaluation**Method**

Exams/Tests

Integration

Tests/quizzes and exams will be administered at the end of each module and/or major concept, and will include multiple choice questions and free response questions which will require critical analysis and synthesis of the information presented in the lecture material, textbook and audio visual presentations. These assessments will be graded by the instructor and feedback will be provided within 1 week of assignment completion.

DE Adaptations for MOE

Test, quizzes and exams will be offered online using the course management system (CMS) and will include multiple choice questions and free response questions. Examinations will be evaluated individually by the instructor, according to an established rubric and/or online grading system created in the CMS. Feedback will be provided within 1 week of the due date via the CMS grade book. Students may use accessible tools on the CMS to scheduled office hours for any query or clarification about their assignments.

Method

Class Participation

Integration

Students engagement in class discussion and provide written response to assigned questions will be evaluated by the instructor based on an established rubric. The rubric will evaluate student's knowledge of the presented material. The rubric will assess their understanding of how culture relates to their approach to patient care, their techniques in interacting with patients of various cultures, patient's response to medical personnel, and patient's compliance to provider's instructions.

DE Adaptations for MOE

Using the accessible tools in the course management system (CMS) students will engage in online discussion and provide written response to assigned questions via threaded discussion platform in the CMS. Feedback will be provided within 1 week of the due date via the CMS grade book. Students may use accessible tools on the CMS to scheduled office hours for any query or clarification about their assignments.

Method

Class Work

Integration

Students will reflect on their understanding and synthesis of lecture material, by responding to assigned questions and/or workbook exercises. Student's response to classwork assignments will be assessed by the instructor based on an established rubric. The rubric will evaluate the accuracy, relevancy, understanding and applicability of the material presented, to patient care, and timely, accurate reporting of laboratory results.

DE Adaptations for MOE

Using the accessible tools on the course management system (CMS) a list of questions will be posted online each week that corresponds to chapters of modules. Student will also use the accessible tools to respond to the questions and post their response online, by the end of the week. Individualized feedback will be provided within 1-2 weeks of the due date. Students may use scheduled office hours for any query or clarification about their assignments using the accessible tools in the CMS.

Method

Presentations

Integration

Students will participate in weekly discussions and present their response orally or in written form, to various questions, scenarios or safety issues related to the delivery/administration of medication to patients per clinician's order. The instructor will award points for participation in the discussion sessions.

DE Adaptations for MOE

Using the accessible tools in the course management system (CMS) students will engage in online discussion and provide written response to assigned questions that will be evaluated by the instructor based on an established rubric which includes levels of accuracy, completeness, coherence and relevance to the topic presented or question proposed. Students will share their findings via a discussion board where students can interact with each other. The instructor will award points for participation in the discussion sessions within 1-2 weeks of assignment completion.

Assignments

Assignment Type

Writing

In-class and/or outside of class

Outside of class

Formative or Summative

Summative

Assignment

Examine the racial disparity in pain assessment and pain treatment between Black and White patients in inpatient and out-patient care settings. How can this disparity affect treatment outcome and standard of patient care? Present your finding in a research paper to your peers. Assignment will be graded on an established rubric which evaluates the accuracy, cohesiveness and completeness of each assignment. Feedback will be provided within 1-2 weeks of the due date via CMS grade book. Scheduled online office hours using the accessible tools in the course management system (CMS) for any query or clarification about their assignments.

How assignment will be adapted in online format

Using the accessible tools in the course management system (CMS), prepare a summary of your finding to share online in break out groups. Assignment will be graded on an established rubric which evaluates the accuracy, cohesiveness and completeness of each assignment. Feedback will be provided within 1-2 weeks of the due date via CMS grade book. Scheduled online office hours using the accessible tools in the course management system (CMS) for any query or clarification about their assignments.

Assignment Type

Writing

In-class and/or outside of class

In-class

Formative or Summative

Formative

Assignment

Using weekly case studies assignment, determine the effect of medication on body systems and apply pharmacology principles to understanding classes of drugs, drug action, uses, contraindication, adverse reactions, dosage and route, patient education, and implication for patient care. Present your findings in small groups and have a representative from each group share with the entire class. Submit individual case study write-up to the instructor. The case study will be graded on an established rubric which examines each assignment for accuracy, cohesiveness and completeness of the assignment. Feedback will be provided within 1-2 weeks of the due date via CMS grade book. Scheduled office hours for any query or clarification about their assignments.

How assignment will be adapted in online format

Access case studies in the respective, accessible modules in the course management system (CMS). Use break out rooms in the CMS to discuss finding with your peers. Rejoin the class in the main room and discuss your finding with the class as a whole. Submit your report using the submission system in the CMS. The case study will be graded on an established rubric which examines each

assignment for accuracy, cohesiveness and completeness of the assignment. Feedback will be provided within 1-2 weeks of the due date via CMS grade book. Scheduled online office hours using the accessible tools in the course management system (CMS) for any query or clarification about their assignments.

Assignment Type

Reading

In-class and/or outside of class

In-class

Outside of class

Formative or Summative

Formative

Assignment

Research the history of opioids in America and examine the opioid crisis and drug overdose deaths involving prescription opioids. Examine the role of healthcare professionals in the opioid crisis and determine what efforts can be employed to stem the flow and use of prescription opioids. Share your findings within small groups in the class.

How assignment will be adapted in online format

Locate the reading assignment within the accessible modules in the CMS. Using the database in the library and the internet, perform the reading assignment and present your finding in small break out room within the CMS platform.

Assignment Type

Reading

In-class and/or outside of class

Outside of class

Formative or Summative

Summative

Assignment

Research and define the following terms: Diversity, Inclusion, Cultural Awareness, Cultural Competency, Equity, Pluralism, Patient-Centred Patient Care, Quality Improvement, Quality Deliverance of Patient Care, Interprofessional Competency and Evidence-Based Medical Practice.

Design a workplace in healthcare that demonstrates cultural competency, workplace diversity and inclusion and an appreciation for diversity of thought. Discuss the challenges one might face in developing such a work environment. Determine the benefits, both to the provider/establishment and the patient, of creating such a workplace, given our diverse population.

How assignment will be adapted in online format

Locate the reading assignment within the accessible modules in the CMS. Using the database in the library and the internet, perform the reading assignment and present your finding in small break out room within the CMS platform.

Course Materials**Textbooks**

Essentials of Pharmacology for Health Professions, 9th Edition
Bruce Colbert; Ruth Woodrow; Adam James; Elizabeth Katrantha
ISBN-13: 9780357618301
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Class Size Information

Class Size

40

Class Size Category

A - Lecture/discussion 40

Diversity and Inclusion

Explain how diversity and inclusion(e.g., gender, culture/race, sexuality, etc.) is infused into the course.

Interactive discussions will be used to address legal, ethical, and cultural issues in pharmacology, including but not limited to, the use of narcotics, opioids, and the treatment regimen for various diseases.

Students research and define the following terms: Diversity, Inclusion, Cultural Awareness, Cultural Competency, Equity, Pluralism, Patient-Centred Patient Care, Quality Improvement, Quality Deliverance of Patient Care, Interprofessional Competency and Evidence-Based Medical Practice. Students use these terms to design a workplace in healthcare that demonstrates cultural competency, workplace diversity and inclusion and an appreciation for diversity of thought. Students discuss the challenges one might face in developing such a work environment. Students also determine the benefits, both to the provider/establishment and the patient, of creating such a workplace, given our diverse population.

Describe how assignments, instruction, evaluation, course content, and interactions are contextualized for diverse learners promoting an equitable course.

Lecture material is presented in various formats including direct instruction, group activities, audio visual recordings, and hands on activities that addresses student's learning styles. Assignments are presented in a written and oral format in order to optimize student's strength and preferred presentation style. Each week, the students will work in small groups to discuss the effect of prescribed medications on various body systems. This methodology is aimed at allowing students to interact and to connect personally and culturally with the material presented in the course.

Interactions

Explain how the course will incorporate student-to-student interaction.

Students will pair-share on issues related to content, procedures, methodologies and issues in health care and medication prescription. Students will clarify understanding of these concepts by pair-sharing interactions. Students will work in groups on selected topics, diseases, and types of medications used to mitigate these disease processes.

Explain how the course will incorporate instructor-to-student interaction.

The instructor will demonstrate proper dosage calculation and present the required mathematical concepts to accurately calculate dosage of medications which includes metric system conversion, units of measurements, calculation of adult and child dosage, oral, and parenteral forms. Students will be given assignments to demonstrate these skills. The instructor will evaluate students' performance of these skills and then assess the students skills development. The instructor will encourage the student to reflect on his/her own performance. The instructor will provide remediation when necessary.

Explain how the course will incorporate student-to-content interaction.

Students will use the content presented in classroom didactic instruction which includes watching accessible video to learn about the use of medications to manage and/or alleviate disease processes. Students will also participate in group discussions, case studies, and practice problems to safely prepare and administer medication to adults and pediatric patients.

Explain how the course will incorporate student-to-self interaction (metacognitive).

Self-assessment exercises are presented at the end of each unit and allow students to assess their understanding of each unit's content. Students will reflect on their performance, by writing a self evaluation of their performance and list common mistakes, strengths, and progress in the course.

Key: 3066