



MDCA 1448-103-HY
Pharmacology and Administration of Medication
Summer 2025
Thurs day 8:00am – 12:00pm

Instructor Information: Ashley Rivera A.A.S., CMA, arivera2@com.edu,
Office 409-933-8231

Student hours and location: Friday 12pm - 2pm STEAMS Bldg. Rm 235

Required Textbook: Medical Assisting, Both, Whicker, and Wyman 8th Edition, McGraw-Hill
Publisher. ISBN: 978-1-259-60859-9

Required Textbook: Student Workbook for Use with Medical Assisting, Booth, Whicker, and
Wyman, 8th Edition, McGraw-Hill Publisher. ISBN: 978-1-259-47702-3

Course Description: Introduction to concepts and application of pharmacological principles.
Focuses on drug classification, principles, and procedures of medication administration, systems,
and conversions, calculation of drug problems, and medico-legal responsibilities of medical
assistant.

Course Prerequisite: Students must have passed MDCA 1309, MDCA 1302, MDCA 1305 and
MDCA 1443 with a “C” (75%) or better to enroll in this class

Course Requirements: This is a Hybrid (HY) type course that requires classroom attendance (on
campus) and online participation through Brightspace. For the online portion of the course, you are
required to log into Brightspace for a minimum of 3 hours per week. You will also be required to
wear a uniform consisting of grape-colored scrubs and appropriate shoes.

To successfully complete MDCA 1448, the student is responsible for the following:

1. Adhere to the attendance policy.
2. Complete all assignments as designated in the course outline and/or schedule.
3. Pass all written quizzes and exams with a minimum grade of 75%.
4. Complete lab skills with a minimum grade of 90%.
5. Adhere to Dress Code

Determination of Course Grade/Detailed Grading Formula (methods of evaluation to be employed to include a variety of means to evaluate student performance): As a student you are required to complete all lessons, assignments, and test as part of each course within the program. Your semester grade will be comprised of:

Grading Scale:

| | | |
|------------------------------|-----|--------------------|
| Homework/Assignments | 10% | A = 90.0% to 100% |
| Attendance/Lab Participation | 15% | B = 80.0% to 89.9% |
| Drug Card Project | 15% | C = 75.0% to 79.9% |
| Tests | 25% | D = 70% to 74.9% |
| Nutrition Project | 5% | F = 0 to 70% |
| Final | 30% | |
| Total | 100 | |

Please note: A student must receive a “C” (75%) or better.” If a student receives a grade of a “D”, or “F” for the same MDCA course on two occasions, the student will not be eligible to continue in the Medical Assistant Program”.

The Medical Assisting program uses a competency-based evaluation process that provides the students with three attempts to pass. If the student completes competency on their first attempt, the student will earn a grade of 100%. If the student completes on their second attempt, the student will earn a grade of 90%. If the student completes on their third attempt, the student will earn a grade of 80%. Should the competency not be passed with an 80% or higher, the student will be required to repeat the course. Competency evaluations are averaged at the end of term for the student's final grade. A student must receive a “C” (75%) or better.” If a student receives a grade of a “D”, or “F” for the same MDCA course on two occasions, the student will not be eligible to continue in the Medical Assistant Program

Make-Up Policy: Students that cannot complete assignments on time must contact the instructor prior to the due date. Parameters for make-up work will be made at the discretion of the instructor and may not be an option, depending on the circumstances. Furthermore, students that cannot take an exam within the allotted time must contact the instructor prior to the due date for the test to be *considered* for an additional attempt. The percentage of each activity would weigh in the final grade, regardless of if the student participated in the activity or test. Keep in mind, you must contact the instructor and make arrangements for submission BEFORE the due date, a late submission will be given a score of zero. **Do not expect the instructor to remind you!**

Late Work: All class work is due on the day it is given unless otherwise specified by instructor. Any class assignment not turned in on time will be considered late. All homework assignments are due on the assigned day – no exceptions! Homework assignments not turned in the next class day will be given a grade of zero.

****Exam make-ups will not be allowed unless the instructor is notified before the time of the exam and arrangements were made****

Attendance Policy: Students are expected to attend every class and to be on time. Students who are more than 5 minutes late may be counted absent by the instructor. If an absence occurs, it is mandatory for the student to call my office (409-933-8231) or email and leave a reason for the absence. A student may be dropped for non-attendance after 3 absences. Leaving the class early (before being released by the instructor) will result in an absence. More than three (3) absences would prohibit students from successful completion of this course (Instructors' Judgment).

Attendance will be checked daily by the instructor. Students are expected to attend all lectures. Any student who has missed any class time will be required to make up the hours by appointment with the instructor prior to the next class day. Absences will be excused after the third absence if the student has a valid Dr's note. If the student fails to make up the required hours, the student will be withdrawn from the program by the program director. It's recommended to log into Brightspace courses at least 2 or 3 times a week to read content and complete graded activities. It is the responsibility of the student to maintain the pace of the course recommended in the Course Schedule and to submit all grades activated before or by its due date. Students not logging into the course 2 to 3 times a week can be dropped at the instructor's discretion. To take the RMA exam, you must have 720 Instructional and 200 Clinical hours.

Communicating with your instructor: ALL electronic communication with the instructor must be through your COM email. Due to FERPA restrictions, faculty cannot share any information about performance in the class through other electronic means or email at arivera2@com.edu.

Student Learning Outcomes:

| SLO | Learning Outcomes | Maps to Core Objective | Assess by Activity |
|----------------|--|--------------------------|--------------------|
| SLO #1: | Perform routine maintenance of administrative and clinical equipment. | Communication Skills | Skills Lab |
| SLO #2: | Identify and properly utilize office machines, computerized systems, and medical software. | Critical Thinking Skills | Quizzes |
| SLO #3: | Demonstrate knowledge on medical office business management procedures. | Communication Skills | Assignments |

Academic Dishonesty: Any incident of academic policy will be dealt with in accordance with college policy and Student Handbook. Academic dishonesty – such as cheating on exams is an extremely serious offense and will result in a **grade of zero** on that exam and the student will be referred to the Office of Student Conduct for appropriate discipline action.

Student Concerns: If you have any questions or concerns about any aspect of this course, please contact me using the contact information previously provided. If, after discussing your concern with me, you continue to have questions, please contact Kay Carrier, Allied Health Careers Chairperson at 409-933-8414 / kcarrier3@com.edu.

Course Outline:

Pharmacology

| Dates | Lecture/Online | Gradable Activities | Due Date |
|--------------|--|---|-----------------|
| June 5th | <i>Chapter 55 Nutrition and Health</i> Nutrition project assignment | Lab handouts | TBA |
| June 12th | Chapter 55 Test review | Lab handouts Nutrition project due | TBA |
| June 19th | <i>Chapter 51 Principles of Pharmacology</i> | Chapter 55 Test Lab handouts | TBA |
| June 26th | <i>Chapter 53 Medication Administration</i> | Lab handouts Drug card assignment | TBA |
| July 3rd | Chapter 51/53 | Lab scenarios-Brandy Lab handouts | TBA |
| July 10th | Chapter 51/53 Test Review | Lab scenarios-partners Lab handouts | TBA |
| July 17th | Ch 51/53 Lab skills review <i>Chapter 52 Dosage Calculation</i> | Chapter 51/53 Test Drug cards due Lab skills-handouts | TBA |
| July 24th | <i>Chapter 52</i> | Chapter 53 Skills check offs Lab handouts | TBA |
| July 31st | Final review | Lab handouts | TBA |
| Aug 7th | FINAL | FINAL | Aug 7th |

This Schedule is subject to change at the discretion of the instructor, and students will be notified via announcements on D2L*

****Textbook assignments will be assigned in class****

Entry Level Competencies for the Medical Assistant taken from the 2022 Standards and Guidelines for the Medical Assisting Educational Programs:

This course includes the following competencies: (Cognitive, Psychomotor, Affective)

Knowledge Based:

- I.C.11 Identify the classification of medications including: (a). Indications for use. (b) Desired Effects. (c) Side Effects. (d) Adverse Reactions.
- I.C.12 Identify quality assurance practices in health care.
- II.C.1. Demonstrate knowledge of basic math computations.
- II.C.2. Apply mathematical computations to solve equations.
- II.C.3. Define basic units of measurement in: (a) The metric system. (b) The household system.
- II.C.4 Convert among measurement systems.
- II.C.5. Identify abbreviations and symbols used in calculation medications dosages.
- III.C.5. Define the principles of standard precautions.
- III.C.6. Define personal protective equipment (PPE)
- IV.C.1. Describe dietary nutrients including (a) Carbohydrates. (b) Fats. (c) Protein. (d) Minerals. (e) Electrolytes. (f) Vitamins, (g) Fibers. (h) Water.
- IV.C.2. Define the functions of dietary supplements.
- IV.C.3. Identify the special dietary needs for (a) Weight control. (b) Diabetes (c) cardiovascular disease, (d) Hypertension. (e) Cancer. (f) Lactose Sensitivity. (g) Gluten-free. (h) Food Allergies.

II.C Applied Mathematics

- II.C.1. Demonstrate knowledge of basic math computations
- II.C.2. Apply mathematical computations to solve equations.
- II.C.3. Define basic units of measurement in a. the metric system b. the household system.
- II.C.4. Convert among measurement systems.
- II.C.5. Identify abbreviations and symbols used in calculating medication dosages.
- II.C.6. Analyze healthcare results as reported in a. graphs; b. tables

IV.C Nutrition

- IV.C.1. Describe dietary nutrients including: a. carbohydrates; b. fat; c. protein; d. minerals; e. electrolytes; f. vitamins; g. fiber; h. water
- IV.C.2. Define the function of dietary supplements
- IV.C.3. Identify the special dietary needs for: a. weight control; b. diabetes; c. cardiovascular disease; d. hypertension; e. cancer; f. lactose sensitivity; g. gluten-free; h. food allergies
- I.P.4. Verify the rules of medication administration: (a) Right Patient. (b) Right Medication. (c) Right Dose. (d) Right Route. (e) Right time. (f) Right Documentation.
- I.P.5. Select proper sites for administering parental medication.
- I.P.6. Administer oral medications.
- I.P.7. Administer parenteral (excluding IV) medications.

- II.P.1. Calculate proper dosages of medication for administration.
- IV.P.1. Instruct a patient regarding a dietary change related to a patient's special dietary needs.
- X.P.3. Document patient care accurately in the medical record
- A.2. Reassure a patient.
- A.3. Demonstrate empathy for patient's concern.

Institutional Policies and Guidelines

Grade Appeal Process: Concerns about the accuracy of grades should first be discussed with the instructor. A request for a change of grade is a formal request and must be made within six months of the grade assignment. Directions for filing an appeal can be found in the student handbook https://www.com.edu/student-services/docs/Student_Handbook_2024-2025_v2.pdf. *An appeal will not be considered because of general dissatisfaction with a grade, penalty, or outcome of a course. Disagreement with the instructor's professional judgment of the quality of the student's work and performance is also not an admissible basis for a grade appeal.*

Academic Success & Support Services: The College of the Mainland is committed to providing students with the necessary support and tools for success in their college career. Support is offered through our Tutoring Services, Library, Counseling, and through Student Services. Please discuss any concerns with your faculty or an advisor.

ADA Statement: Any student with a documented disability needing academic accommodations is requested to contact Kimberly Lachney, Student Accessibility Services Coordinator Phone: 409-933-8919 Email: AccessibilityServices@com.edu Location: COM Doyle Family Administration Building, Student Success Center

Textbook Purchasing Statement: A student attending College of the Mainland is not under any obligation to purchase a textbook from the college-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.

Withdrawal Policy: Students may withdraw from this course for any reason prior to the last eligible day for a "W" grade. Before withdrawing students should speak with the instructor and consult an advisor. Students are permitted to withdraw only six times during their college career by state law. The last date to withdraw from the 1st 8-week session is February 26th. The last date to withdraw from the 16-week session is April 21st. The last date to withdraw for the 2nd 8-week session is April 30th.

F_N Grading: The F_N grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The F_N grade may be issued for cases in which the student ceases or fails to attend class, submit assignments, or participate in required capacities, and for which the student has failed to withdraw. The issuing of the F_N grade is at the discretion of the instructor. The last date of attendance should be documented for submission of an F_N grade.

Early Warning Program: The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention are very important to us. I have been asked to refer students to the program throughout the semester if they are having difficulty completing assignments or have poor attendance. If you are referred to the Early Alert Program, you will be contacted by someone in the Student Success Center who will schedule a meeting with you to see what assistance they can offer in order for you to meet your academic goals.

Resources to Help with Stress: If you are experiencing stress or anxiety about your daily living needs including food, housing or just feel you could benefit from free resources to help you through a difficult time, please click here <https://www.com.edu/community-resource-center/>. College of the Mainland has partnered with free community resources to help you stay on track with your schoolwork, by addressing life issues that get in the way of doing your best in school. All services are private and confidential. You may also contact the Dean of Students office at deanofstudents@com.edu or communityresources@com.edu.

Nondiscrimination Statement: The College District prohibits discrimination, including harassment, against any individual on the basis of race, color, religion, national origin, age, veteran status, disability, sex, sexual orientation, gender (including gender identity and gender expression), or any other basis prohibited by law. Retaliation against anyone involved in the complaint process is a violation of the College District policy.

Tardiness Policy: Class starts at 8:00 and students arriving 5 minutes late results in a tardy. You must communicate with your instructor before class starts by email or voice mail if you will be late. After 10 minutes all tardies will equal one absence. Failure to interact with course content via Brightspace/D2L as indicated on the Course Schedule and module overview pages in Brightspace/D2L can likewise negatively impact a student's final course grade. Unless arranged by the instructor BEFORE the due date, a late submission will be given a score of zero. Once the class is closed it WILL NOT be reopened.

Cell Phone Use: Cell phone use is strictly prohibited during any lab/class session unless otherwise specified by instructor. Please keep in "silent" mode during lectures and be respectful of instructors and other students. Should you need to answer the call, please do so outside of the classroom. Due to cheating in the past, we cannot allow any wireless devices to be on during the tests and all phones will need to be put on instructors' desk prior to starting exam. Failure to comply will result in dismissal of class for that day.

Use of Camera and/or Recording Devices: As a student active in the learning community of this course, it is your responsibility to be respectful of the learning atmosphere in your classroom. **To show respect for your fellow students and instructor, you will turn off your phone and other electronic devices and will not use these devices in the classroom unless you receive permission from the instructor.** Use of recording devices, including camera phones and tape recorders, is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. Students with disabilities who need to

use a recording device as reasonable accommodation should contact the Office for Students with Disabilities for information regarding assistance.

Class Activities: Course topics are introduced and discussed during classroom sessions. Additional group exercises and workbook activities are conducted throughout the class meetings. Generally, ongoing feedback for assessments and assignments will be conducted before and after the assigned due dates.

Online Activities: Any quiz, exam, or learn smart assignment will be hosted online on the publisher's server – McGraw Hill Connect, however, access to assessments and learn smart assignments are conducted through links in Blackboard. Only access the quizzes, exams, and learn smart assignments through the links provided in each learning module. Feedback on your assessments can be reviewed after each quiz or exam, or exam is completed. Each learn smart assignment provides feedback as you proceed through the material. Practice assessments are also available in Connect for each Chapter. Ongoing feedback is important for you to assess your progress in the course and to determine if your approach to learning the material is effective.

- **Case Study:** Assignments will be provided in Brightspace/D2L learning modules. Download and save the word document and edit your response. Your completed document will be uploaded in the assignment link. A case Study rubric is provided in the rubric menu link. Use it to guide you in the completion of your document. Instructors' feedback will be provided individually on your submission through your My Grades tool.
- **Discussions:** are conducted on Brightspace/D2L through the Discussions tool. The forum will help foster connections with your fellow classmates and will contribute to the sense of community (online). The discussion post will also supplement your mastery of the content and strength your communication and writing skills. A discussions rubric is provided in the Rubric menu link. Use it to guide you in your posts and replies. Instructor feedback will be provided individually for each discussion through your My Grades tool.

Plagiarism: The practice of taking someone else's work or ideas and passing them off as one's own. Plagiarism is a very serious offense. Plagiarism includes paraphrasing someone else's words without giving proper citation, copying directly from a website and pasting it into your paper, using someone else's words without quotation marks. Any assignment containing any plagiarized material will receive a **grade of zero** and the student will be referred to the Office of Student Conduct for appropriate discipline action. In this course you may not use AI for any assignment in any way, shape, or form. Use of AI will be treated as plagiarism.

Use of Artificial Intelligence (AI): Any assignment containing material generated by Artificial Intelligence (AI) will receive a **grade of zero** and the student will be referred to the Office of Student Conduct for appropriate disciplinary action.

Chain of Command: Students will follow the chain of command (immediate faculty member, director, department chair dean). Failure to do so will prolong any time limits that have been in place.

Required Study Time: Outside study, apart from regular classroom work, is required to successfully complete the required course assignments. The amount of time will vary according to the individual student's abilities. Students are responsible for reading any study materials issued by their instructors.

Professionalism: Success in one's career is almost as dependent on professional behavior as on one's academic knowledge and abilities. Therefore, students are expected to exhibit professional behavior in the classroom as well as all activities with this course. Professional behavior includes:

- **Attends class is punctual-** The student attends every class period, arrives on time for class activities or informs the instructor in a timely manner of unavoidable situations that cause the student to be late or miss class.
- **Dependable-** the student meets assignment deadlines and follows through to completion of responsibilities.
- **Effective interpersonal and team skills-** The student relates well to people, shows respect to others, deals tactfully and effectively with others, influences as opposed to directs, provides constructive critics without altering others, negotiates or mediates when appropriate, exhibits openness to new ideas, and demonstrates a positive attitude.
- **Effective communication skills-** The student listens, speaks using correct grammar and without excess fillers. Example: Umm, you know, and like.
- **Ethical Conduct-** The student maintains honesty, integrity, and confidentiality of patient provider, fellow student, and college information.

Behavioral Responsibilities of Students is a critical aspect of the medical assisting program. Professional behavior is mandated for all students while in class or clinicals. Unprofessional behavior or conduct will NOT be tolerated in this program. Infractions of the College of the Mainland Medical Assisting Program will lead to suspension from class/clinical and/or dismissal from the program. Instructors will document any and all unprofessional behavior/conduct on a College of the Mainland Instructor's warning form.

Performance Objectives: *A skill competency checklist is provided to each student at the beginning of the program. The instructor upon completion of the skill must sign it. All skills checklists become a part of the student's permanent file.*

In a skills laboratory, a simulation of a job-like environment, the student will demonstrate the correct procedure for the following without referring to resource materials. To perform these activities, the student will need a person to function in the role of a patient. The student is expected to perform each procedure with 100% proficiency. In efficient, safe, ethical, and legal manner the student will:

Content/Competencies

1. Administer oral medication.
2. Administer ophthalmic medication.
3. Administer and otic medication.
4. Administer nasal medication.

5. Administer rectal medication.
6. Administer a topical/transdermal.
7. Administer medication (vapor or gas) by inhalation.
8. Administer medication from a vial.
9. Administer medication from an ampule.
10. Demonstrate diluting powder medication in single dose vial.
11. Administer and demonstrate mixing and diluting of medication.
12. Administer medication by subcutaneous injection.
13. Administer medication by intramuscular injection.
14. Administer medication by intradermal injection.
15. Administer, interpret, and record results of the basic types of skin test.
16. Demonstrate methods for patient teaching as related to medication administration.
17. Demonstrate method for refills/charting.
18. Create and maintain medication and immunization records.
19. Recognized and response to emergencies relative to patient care and their response to treatments.
20. Maintain confidentiality.
21. Practice within the scope of education training and personal capabilities.

The minimum passing score for each performance objective is 90%. Skills checklists will be given at each lab session. It is the student's responsibility to produce the master skills sheet upon final check-off.

****Upon Completion of the MDCA 1448 Pharmacology course the student is expected to perform the following tasks with 100% proficiency according to the checklists. Minimum passing score of 90% for each task****

Learning Goals:

The learning goals for this course include:

- Weights and measures.
- Drug calculations.
- Calculating dosages.
- Rules for conversion.
- Calculating pediatric dosages.
- Drug names.
- Regulations and standards.
- References.
- Legal classifications of drugs.
- Drug abuse.
- General classes of drugs.
- Routes and methods of drug administration.
- Frequently administered drugs.
- Side effects of medications.
- Drug interactions.
- Drug use during pregnancy.
- Reading and writing a prescription.

- Abbreviations used in pharmacology.
- Administration procedures.
- Equipment used for medication administration.
- Sites for intramuscular injection intradermal injection.
- Tuberculin skin test.
- Intravenous therapy.
- Immunizations
- Reconstituting powdered medication for administration.
- Charting medications.

Clinical Learning Experience Requirements:

To be eligible for the clinical learning experience, a student must successfully complete the course(s) with a minimum grade of 75% in the theory component and 90% in the lab skills component. The experience is in a hospital lab or a private clinical lab, as arranged by the MDCA Program Director.

Student Dress for Laboratory: A physical appearance communicates a strong impression about an individual. Hair combed neatly, fingernails cleaned, pressed clean uniform and an overall professional appearance conveys a commitment to cleanliness and infection control.

1. For safety purposes, students are expected to wear scrubs to laboratory classes. **(MANDATORY).**
2. Closed toe shoes (no sandals or canvas shoes) that are soft-soled, such as white leather-type tennis or similar shoes are strongly recommended.
3. Student's hair must be cleaned, neat, and conservative. The hair must be drawn back if longer than shoulder length or hanging in the face.
4. Fingernails must be kept clean and reasonable length of 1/8" above the fingertips.
5. Please limit jewelry to wedding rings and a wristwatch. No dangling chains, necklaces, or earrings are allowed. Conservative earlobe earrings (no more than one pair) 5mm in diameter are permitted.

Laboratory Safety:

Each student is responsible for his/her own work and for the cleaning of his/her workstation.

The following must be observed:

1. Eating or drinking will not be permitted in the laboratory. (That includes no gum chewing). Avoid putting objects in your mouth.
2. Do not attempt to adjust contact lenses in the lab.
3. Wash your hand before leaving the laboratory for any reason. Proper hand washing is essential. Hand washing is the single most important means of preventing the spread of infection. Hands must be washed before and after each patient contacts.

4. Disinfect work area thoroughly after each laboratory session.
5. Cover spills with paper towels, soak thoroughly with disinfectant and with 15 minutes before cleaning it up.
6. All accidents are to be reported immediately to the instructor.
7. OSHA guidelines for occupational exposure to blood borne pathogen standards must be observed.

Success Tips for Students:

- Read all assignments and understand requirements for completing assignment prior to coming to class. If you do not understand, ask questions!
- **Three Prior to Me:** The MA faculty encourages students to solve problems, work as a team as well as utilize available resources. To develop these skills, we will employ the “**Three Prior to Me**” process. This means that before you contact the instructor with a course-related question, you must have attempted to find the information in three other places. For instance, if you are unsure about the meaning of a term used in the course, you would attempt to locate this information in three places prior to asking the instructor. Hence, you might do a Google search for the term, ask a classmate, and refer to your textbook. This process is not meant to be a barrier to you, but instead to provide the following benefits:
 - Preparation for the workforce.
 - Increased research skills.
 - Instructors will have more time to provide feedback and interact with students.