



College of the Mainland

**MDCA 1448-103HY**  
**Pharmacology and Administration of Medication**  
**Spring 2021**  
**Thursday 9:30am – 12:30pm**

**Instructor Information:** Darlene Alexander A.A.S., CMA, RMA

**Office hours and location:** COM League City Campus Rm #106, Virtual

**Required Textbook:** Medical Assisting, Both, Whicker, and Wyman Seventh Edition, McGraw-Hill Publisher. ISBN: ISBN: 979-1-259-60854-4

**Required Textbook:** Student Workbook for Use with Medical Assisting, Booth, Whicker, and Wyman, Seventh Edition, McGraw-Hill Publisher. ISBN: 979+1-260-47702-3

**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.

**Course Description:** Introduction in 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 and MDCA 1302) with a “C” or better to enroll in this class. Students must have completed the free Online Learners Workshop (required for IN or HY courses). For more details visit; <http://online.com.edu/olw>

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

**Student Learning Outcomes:**

1. Students completing MDCA 1448 will be able prepare, administer, and document oral and percutaneous medications.
2. Students completing MDCA 1448 will be able to correctly calculate drug dosage for administration by standard routes for adult and pediatric patients.

3. Students completing MDCA 1448 will be able to demonstrate inventory handling and storage.
4. Students completing MDCA 1148 will be able to adhere to governmental health care guidelines and biohazard protocols.

### **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 administrations.
- 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 a powdered medication for administration.
- Charting medications.

### **Entry Level Competencies for the Medical Assistant taken from the 2015 Standards and Guidelines for the Medical Assisting Educational Programs:**

This course includes the following competencies: (C-Cognitive, P-Psychomotor, A-Affective)

#### **Knowledge Based:**

- 1.C.11- Identify the classification of medications including: A. Indications for use. B. Desired Effects. C. Side Effects. D. Adverse Reactions.
- 1.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.
- II.C.6- Analyze healthcare results as reported in A. Graphs. B. Tables.
- III.C.5- Define the principles of standard precautions.
- III.C.6- Define personal protective equipment (PPE) for A. All body fluids, secretions, and excretions. B. Blood. C. Non-intact Skin. D. Mucus Membranes.
- 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.
- I.P.4- Verify the rules of medication administration: A. Right Patient. B. Right Medication. C. Right Does. 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.
- II.A.1- Reassure a patient of the accuracy of the test results.
- III.A.1- Recognize the implications for failure to comply with the CDC (center for disease control) regulations in health care settings.
- IV.A.1- Show awareness of patient's concern regarding a dietary change.

**Performance Objectives:**

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:

**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.**

**Goals/Content/Competencies**

1. Administer an oral medication.
2. Administer an ophthalmic medication.
3. Administer and optic medication.
4. Administer a nasal medication.
5. Administer a rectal medication.
6. Administer a topical/transdermal.
7. Administer medication (vapor or gas) by inhalation.
8. Administer mediation 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 emergency relative to patient care and their response to treatments.
20. Maintain confidentiality
21. Practice within the scope of education training and personal capabilities.

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

**Minimum passing score for each performance objective is 90%. Skills checklist are provided in the student workbook. It is the student's responsibility to produce the master skill sheet upon final check off.**

**Clinical Learning Experience Requirements:**

In order 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 wrist watch. No dangling chains, necklaces, or earrings are allowed. Conservative earlobe earring (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 work station.

**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 contact.
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 accident are to be reported immediately to the instructor.
7. OSHA guidelines for occupational exposure to blood borne pathogen standards must be observed.

**Course Outline:****Pharmacology Spring 2021**

<b>Date</b>	<b>Lecture/Online</b>	<b>Homework</b>	<b>Due Date</b>
1/14/2021- 1/28/21	Ch. 51 Principles of Pharmacology	Workbook Homework Video Exercise Chapter Assignment EMR	To be announced
1/28/2019 – 2/4/21	Ch.52 Dose Calculations	Chapter Assignment Chapter Interactive Exercise EMR	To be announced
1/31/2021	Drug Cards Project Overview		Mar 3
3/8/2021	Mid-Term Exam		
3/25/2021	Ch.53 Medication Administration	Workbook Homework Video Exercise EHR Exercise	
4/1/21	Lab Procedure 53-1	Administering Oral Medication	
4/8/21	Lab Procedure 53-2	Administering Buccal or Sublingual Drugs	
4/15/21	Lab Procedure 53-3	Drawing from an Ampule	
4/22/21	Lab Procedure 53-4	Reconstituting a Drug for Injection	
4/29/21	Lab Procedure 53-5	Giving an Intradermal Injection	

	Lab Procedure 53-6	Giving Subcutaneous Injection	
	Lab Procedure 53-7	Giving Intramuscular Injection	
	Lab Procedure 53-12	Administering Rectal Medication.	
4/15/2021	Ch. 55 Nutrition and Health	Discussion: Case Study Video Exercise Chapter Assignment	
4/22/21	Procedure 55-1	Teaching Patients How to Read Food Labels	
4/29/21	Procedure 55-2	Alerting Patients with Food Allergies to the Dangers of Common Foods	
5/6/2021	Lab Procedures	Complete Skills	
5/13/2021	Final Exam		

**\*This Schedule is subject to change at the discretion of the instructor.**

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

**Attendance Policy:** Students are expected to attend every class and to be on time. Students who are late more than 15 minutes late may be counted absent by the instructor. If an absence occurs, it is mandatory for the student to call my office (409-933-8644) and leave a reason for the absence. A student may be dropped for non-attendance after 2 absences. Leaving the class early (before being released by the instructor) will result in an absence. More than 2 absences would prohibit students from successful completion of this course (Instructors Judgment). Attendance will be checked daily by instructor. College of the Mainland recommends logging into Blackboard 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 graded activities 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.

**Late Work:** Late work is defined as work not turned in when a student is present in class. Late work may be turned in with ten points off for each day the work is late up to an average of 70% or 3 days. All class work is due on the day it is given. 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. Determination of Course Grade/Detailed Grading Formula (methods of evaluation to be employed to include a variety of means to evaluate student performance):

**Make-Up Policy:** Students that cannot complete assignments on time must contact the instructor. 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 in order for the test to be considered for an additional attempt. The percentage of each activity will weight in the final grade, regardless if the student participates in the activity or test. Keep in mind, you must contact the instructor and make arrangement for submission. Do not expect the instructor to remind you.

**Tardiness Policy:** Students who are late more than 5 minutes may be counted Tardy by the instructor. Three tardies will equal one absence. Failure to interact with course content via Blackboard as indicated on the Course Schedule and module overview pages in Blackboard can likewise negatively impact a student' final course grade. Unless arranged by the instructor BEFORE the due date, a late submission will be given a score of zero.

**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 only permitted to withdraw six times during their college career by State law. The last day to withdraw for the 1<sup>st</sup> 8-week session is October 7<sup>th</sup>, November 23<sup>rd</sup> for 16 week courses and December 3<sup>rd</sup> for the 2<sup>nd</sup> 8 week session.

**Weekly Quizzes: Please Note** –The week begins on Monday and ends Sunday at midnight. Therefore, weekly quizzes should be submitted no later than Sunday of the week in which information: they appear on the calendar. Late work may not be accepted unless individuals' arrangements have been made with me prior to the due date and time. I will e-mail you if I make any adjustments to the calendar.

**Course Communication Policy:** I check my e-mail and course mailbox and discussion areas daily Monday through Friday. For any course related questions please email me through blackboard. I will respond to your phone call and e-mails within 24 hours or less. However, I may not always be able to respond to e-mails sent over the weekend until Monday Morning. I will communicate changes in or new assignments within 48 hours. When leaving a message or e-mail please state your name and student id.

**FN Grading:** The FN grade is issued in cases of *failure due to a lack of attendance*, as determined by the instructor. The FN 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 FN grade is at the discretion of the instructor.

**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 the appropriate discipline action.

**Class Activities:** Course topics, are introduced and discussed during classroom sessions. Additional group exercises and workbook activities are conducted throughout the class meetings.

General, 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 you 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 ins 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 the Blackboard 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 Blackboard 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 provided in the Rubric menu link. Use it to guide you in your posts and replies. Instructor feedback will be provided individually on each discussion through your My Grades tool.

**Grading Formula:** 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:

**Please note:** A grade of 75% or above is required to passing any subject area with a “C”.

**Grading Scale:**

- 90.0% to 100% = A
- 80.0% to 89.99% = B
- 75.0% to 79.99 % = C
- 70.0% to 74.99 % = D
- 0% to 70% (0-1000 points) = F

Assignments	10%
Attendance/Lab Participation	15%
Drug Card Project	10%
Test (Mid-Term = 20 %, Final = 30%)	50%
Quizzes	15%
Total	100%

**Final Grade Breakdown:** In order for me to meet “grade due” deadlines, I must have all work submitted to me by the deadlines noted on the calendar. Absolutely, no late submittals of work can



be accepted. Furthermore, I do not give extra-credit assignments in this course. Final grades will be assigned according to the following scale:

**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://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.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.* [https://build.com.edu/uploads/sitecontent/files/student-services/Student\\_Handbook\\_2019-2020v5.pdf](https://build.com.edu/uploads/sitecontent/files/student-services/Student_Handbook_2019-2020v5.pdf)

**Early Warning Program:** The Student Success Center at College of the Mainland has implemented an Early Alert Program because student success and retention is 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.

**ADA Statement:** Any student with a documented disability needing academic accommodations is requested to contact Holly Bankston at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). The Office of Services for Students with Disabilities is located in the Student Success Center.

**Classroom Conduct Policy:** College of the Mainland requires that students enrolled at COM be familiar with the Standards of Student Conduct, which can be found in the on-line Student Handbook. <http://www.com.edu/student-services/student-handbook.php>. Students are expected to be familiar with and abide by the Student Code of Conduct. Any violations of the Code of Conduct will result in a referral to the Dean of Students and may result in dismissal from this class.

**Cell Phone Use:** Cell phone use is **strictly prohibited** during any lab/class session. 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 out of the classroom. Due to cheating in the past, we cannot allow any wireless devices to be on during the tests. In an emergency, you may be reached by: contacting Campus Police at 409-933-8403.

**Classroom Behavior:** Students are expected to conduct themselves a mature adult observing all college rules and classroom etiquette. Disruptive behavior will not be tolerated in the classroom. 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 of your fellow students and instructor, you will turn off you 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 a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations.

### **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 Office of Student Conduct for the appropriate discipline action.

### **Online Policies:**

Netiquette: When communicating via the online mechanism of this course, it is important to remember those communications are conducted in a public forum and should reflect a level of professionalism reflective of that forum. At a minimum such communications should be respectful of others and use appropriate writing mechanics (spelling, grammar, etc.) For more information, go to: <http://www.studygs.net/netiquette.htm>

Technology Requirements: Mozilla Firefox is the recommended Blackboard browser and can be downloaded at <http://mozilla.org/en-US/firefox/new/> . Other software, required plug-ins or applications can be found at [http://com.parature.com/ics/support/default.asp?deptID=15028&\\_referrer=](http://com.parature.com/ics/support/default.asp?deptID=15028&_referrer=) .

**Troubleshooting Technical Issues:** If during the course of the semester you have technical issues with Blackboard refer to the technical Support folder under Helpful Links (menu link). You can review how-to videos or submit a ticket. For problems encountered with McGraw-Hill Connect material, please refer to the FAQs (menu link). If the problems continue and you find that your computer source, you can always use the computers in the Innovations lab to complete your assignments. The Innovations Lab, located in the Technical Vocational Building, is open Monday through Thursday, 7:30am to 7:30pm and Fridays 7:30am until 2:00pm. The Library also has computers for students use. For more information on the COM computer labs visit: <http://www.com.edu/computer-labs/>

If you have trouble completing a gradable task that was caused by a system-wide COM network or Blackboard outage, you will need to Submit a Ticket to Blackboard. Blackboard Support will verify the details of the system-wide outage and how it impacted your work in Blackboard.

Routine monthly Blackboard Maintenance is noted on Blackboard.

**Concerns/Questions Statement:** 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 Frieze, Allied Health Careers Chair Person at 409-933-8414 / [kfrieze@com.edu](mailto:kfrieze@com.edu) .

**Counseling Statement:** Any student that is needing counseling services is requested to please contact Holly Bankston in the student success center at 409-933-8520 or [hbankston@com.edu](mailto:hbankston@com.edu). Counseling services are available on campus in the student center for free and students can also email [counseling@com.edu](mailto:counseling@com.edu) to setup their appointment. Appointments are strongly encouraged; however some concerns may be addressed on a walk-in basis.

**COVID-19 Statement:** All students, faculty and staff are expected to familiarize themselves with materials and information contained on the College of the Mainland's Coronavirus Information site at [www.com.edu/coronavirus](http://www.com.edu/coronavirus).. Students are required to watch a training [video](#), complete the [self-screening](#), and acknowledge the safety guidance at: [www.com.edu/selfscreen](http://www.com.edu/selfscreen). In addition, students, faculty, and staff must perform a [self-screening](#) prior to each campus visit. Finally, students, faculty, or staff which have had symptoms of COVID-19, received a positive test for COVID-19, or have had close contact with an individual infected with COVID-19 must complete the [self-report tool](#).

#### **Success Tips for Students:**

- Read all assignments and understand requirements for completing assignment prior to coming to class.
- **Three Prior to Me:** The MA faculty encourages students to problem-solve, work as a team as well as utilize available resources. In order 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 you text book. Instructors will question you regarding what research methods you utilized to locate information on your own. 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.

**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.

**ACKNOWLEDGEMENT OF RECEIPT:**

I, \_\_\_\_\_, acknowledge that I have received the syllabus for MDCA 1448 for Medical Assistants, and that my instructor has reviewed it with me.

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**Signature of Student**

**Date**

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**Signature of Witness**

**Date**