

**ITT Technical Institute**

**ME2635**

**Medication Administration**

**Onsite and Online Course**

# **SYLLABUS**

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**Credit hours:** 4.5

**Contact/Instructional hours:** 56 (34 Theory Hours, 22 Lab Hours)

**Prerequisite(s) and/or Corequisite(s):**

Prerequisites: MA1210 College Mathematics I or equivalent, ME1431 Clinical Medical Assisting or equivalent

**Course Description:**

This course introduces medication administration, and appropriate uses, common side effects, and classification of commonly used drugs. Topics include prescription requirements, medication preparation and administration, dosage calculation, allergy testing, and laws regulating medications.

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## WHERE DOES THIS COURSE BELONG?

This course is required for the Associate Degree in Medical Assisting and Administration and is one of the Core Courses.

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## CATALOG COURSE DESCRIPTION

This course introduces medication administration, and appropriate uses, common side effects, and classification of commonly used drugs. Topics include prescription requirements, medication preparation and administration, dosage calculation, allergy testing and laws regulating medications.

## MAJOR INSTRUCTIONAL AREAS

- Key Principles of Pharmacology
- Medication Effects on Major Body Systems
- Laws Regulating Medications and Medication Administration
- Medication Administration
- Common Side Effects of Medications
- Life threatening side effects of medications

## COURSE LEARNING OBJECTIVES

This course has the following instructional objectives:

1. Explain key principles of pharmacology.
2. Describe medication effects on major body systems.
3. Explain laws regulating medications and medication administration.
4. Identify classifications of commonly used medications.
5. Calculate medication dosages accurately.
6. Prepare and administer medications safely.
7. Categorize common side effects of medications.
8. Outline appropriate actions for life threatening side effects of medications.

## MODULE 1: INTRODUCTION TO PHARMACOLOGY

### COURSE LEARNING OBJECTIVES COVERED

- Explain key principles of pharmacology.
- Explain laws regulating medications and medication administration.
- Identify classifications of commonly used medications.
- Categorize common side effects of medications.
- Outline appropriate actions for life-threatening side effects of medications.

### TOPICS COVERED

- Basic Principles of Pharmacology
- Drug Allergy, Abuse, and Poisoning or Overdose

MODULE LEARNING ACTIVITIES	GRADE D	Out-Of-Class Time
<b>Reading:</b> Raffa, R., Rawls, S., & Beyzarov, E., Chapters 1 and 14, and Proctor, D., & Adams, A., Chapter 33.	No	6 hrs
<b>Lesson:</b> Study the lesson for this module.	No	1 hr
<b>Exercise:</b> Submit the exercise titled "Legal Ramification of Medication Management."	Yes	3 hrs
<b>Lab:</b> Complete the lab titled "Basics of Medication Administration."	Yes	NA
<b>Quiz:</b> Prepare for Quiz 1.	No	2 hrs

Total Out-Of-Class Activities: 12 Hours

## MODULE 2: MEDS: PAIN, NERVOUS & CARDIOVASCULAR ISSUES

### COURSE LEARNING OBJECTIVES COVERED

- Describe medication effects on major body systems.
- Identify classifications of commonly used medications.
- Calculate medication dosages accurately.
- Prepare and administer medications safely.
- Categorize common side effects of medications.
- Outline appropriate actions for life-threatening side effects of medications.

### TOPICS COVERED

- Drugs Used to Affect the Autonomic and Somatic Nervous Systems
- Drugs Used in Disorders of the Central Nervous System and Treatment of Pain
- Drugs Used in Disorders of the Cardiovascular System
- Pharmacology Math

MODULE LEARNING ACTIVITIES	GRADE D	Out-Of-Class Time
<b>Reading:</b> Raffa, R., Rawls, S., & Beyzarov, E., Chapters 2, 3, and 4, and Proctor, D., & Adams, A., Chapter 34.	No	9 hrs
<b>Lesson:</b> Study the lesson for this module.	No	2 hrs
<b>Exercise 1:</b> Submit the exercise titled "Sleeping Aids Brochure."	Yes	4 hrs
<b>Lab:</b> Complete the lab titled "Medication Preparation and Math Calculations & Dosages Practice Calculations."	Yes	NA
<b>Quiz:</b> Take Quiz 1.	Yes	NA
<b>Exercise 2:</b> Submit the exercise titled "Math Review."	Yes	2.5 hrs
<b>Quiz:</b> Prepare for Quiz 2.	No	2 hrs

Total Out-Of-Class Activities: 19.5 Hours

### MODULE 3: MEDS: ENDOCRINE & GI ISSUES

#### COURSE LEARNING OBJECTIVES COVERED

- Describe medication effects on major body systems.
- Calculate medication dosages accurately.
- Prepare and administer medications safely.

#### TOPICS COVERED

- Drugs Used in Disorders of the Endocrine System
- Drugs Used in Disorders of the Gastrointestinal System
- Common Disease by Body System
- Math Calculations and Dosages

MODULE LEARNING ACTIVITIES	GRADE D	Out-Of- Class Time
<b>Reading:</b> Raffa, R., Rawls, S., & Beyzarov, E., Chapters 5 and 6, and Proctor, D., & Adams, A., Chapters 34 and 35 (pp. 674-684).	No	7 hrs
<b>Lesson:</b> Study the lesson for this module.	No	2 hrs
<b>Exercise 1:</b> Submit the exercise titled "Converting Doses Between Measurement Systems"	Yes	3.5 hrs
<b>Lab:</b> Complete the lab titled "Oral Medication Administration and Dosage Calculations Practice."	Yes	NA
<b>Quiz:</b> Take Quiz 2.	Yes	NA
<b>Exercise 2:</b> Submit the exercise titled "Anorectal Preparations Poster."	Yes	3 hrs

Total Out-Of-Class Activities: 15.5 Hours

## MODULE 4: MEDS: RESPIRATORY & REPRODUCTIVE ISSUES

### COURSE LEARNING OBJECTIVES COVERED

- Describe medication effects on major body systems.
- Identify classifications of commonly used medications.
- Calculate medication dosages accurately.
- Prepare and administer medications safely.
- Categorize common side effects of medications.
- Outline appropriate actions for life-threatening side effects of medications.

### TOPICS COVERED

- Drugs Used in Disorders of the Respiratory System
- Drugs Used in Disorders of the Reproductive System
- Math Calculations and Dosages
- Administering Medications

MODULE LEARNING ACTIVITIES	GRADE D	Out-Of-Class Time
<b>Reading:</b> Raffa, R., Rawls, S., & Beyzarov, E., Chapters 7 and 8, and Proctor, D., & Adams, A., Chapters 34 and 35 (pp. 685-706).	No	7 hrs
<b>Lesson:</b> Study the lesson for this module.	No	2 hrs
<b>Exercise 1:</b> Submit the exercise titled "Albuterol Worksheet."	Yes	3 hrs
<b>Exercise 2:</b> Submit the exercise titled "Calculations of Oral Medications."	Yes	2.5 hrs
<b>Lab:</b> Complete the lab titled "Oral and Parenteral Medication Administration and Dosage Calculation Practice."	Yes	NA
<b>Quiz:</b> Prepare for Quiz 3.	No	2 hrs

Total Out-Of-Class Activities: 16.5 Hours

## MODULE 5: MEDS: RENAL, NEOPLASTIC & INFECTIOUS ISSUES

### COURSE LEARNING OBJECTIVES COVERED

- Describe medication effects on major body systems.
- Identify classifications of commonly used medications.
- Calculate medication dosages accurately.
- Prepare and administer medications safely.
- Categorize common side effects of medications.
- Outline appropriate actions for life-threatening side effects of medications.

### TOPICS COVERED

- Drugs Used to Affect Renal Function
- Drugs Used in Infectious Disease
- Drugs Used in Neoplastic Disorders
- Math Calculations and Dosages
- Administering Medications

MODULE LEARNING ACTIVITIES	GRADE D	Out-Of-Class Time
<b>Reading:</b> Raffa, R., Rawls, S., & Beyzarov, E., Chapters 9, 10, and 11, and Proctor, D., & Adams, A., Chapters 34 and 35 (pp. 707-712).	No	8 hrs
<b>Lesson:</b> Study the lesson for this module.	No	2 hrs
<b>Exercise 1:</b> Submit the exercise titled "Patient Teaching Checklist."	Yes	4 hrs
<b>Exercise 2:</b> Submit the exercise titled "Calculations of Parenteral Medications."	Yes	1.5 hrs
<b>Lab:</b> Complete the lab titled "Intramuscular Injections and Dosage Calculation Practice."	Yes	NA
<b>Quiz:</b> Take Quiz 3.	Yes	NA
<b>Final Exam:</b> Prepare for the final exam.	No	5 hrs

Total Out-Of-Class Activities: 20.5 Hours

## MODULE 6: MEDS: SKIN DISORDERS & VITAMINS

### COURSE LEARNING OBJECTIVES COVERED

- Explain key principles of pharmacology.
- Describe medication effects on major body systems.
- Explain laws regulating medications and medication administration.
- Identify classifications of commonly used medications.
- Calculate medication dosages accurately.
- Prepare and administer medications safely.
- Categorize common side effects of medications.
- Outline appropriate actions for life-threatening side effects of medications.

### TOPICS COVERED

- Drugs Used for Skin Disorders
- Vitamins: Deficiencies and Drug Interactions
- Math Calculations and Dosages
- Administering Medications

MODULE LEARNING ACTIVITIES	GRADE D	Out-Of-Class Time
<b>Reading:</b> Raffa, R., Rawls, S., & Beyzarov, E., Chapters 12 and 13, and Proctor, D., & Adams, A., Chapter 34.	No	2 hrs
<b>Lesson:</b> Study the lesson for this module.	No	2 hrs
<b>Exercise:</b> Submit the exercise titled "Practice Calculations of Medications."	No	2 hrs
<b>Lab:</b> Complete the lab titled "Math Calculations & Dosages Practice Calculations and Final Procedure Demos."	Yes	NA
<b>Final Exam:</b> Take the final exam.	Yes	NA

Total Out-Of-Class Activities: 6 Hours

## EVALUATION AND GRADING

### EVALUATION CRITERIA

The graded assignments will be evaluated using the following weighted categories:

CATEGORY	WEIGHT
Exercise	10%
Lab	20%
Quiz	35%
Final Exam	35%
TOTAL	100%

### GRADE CONVERSION

The final grades will be calculated from the percentages earned in the course, as follows:

GRADE	PERCENTAGE
A (4.0)	90-100%
B+ (3.5)	85-89%
B (3.0)	80-84%
C+ (2.5)	75-79%
C (2.0)	70-74%
D+ (1.5)	65-69%
D (1.0)	60-64%
F (0.0)	<60%

## LEARNING MATERIALS AND REFERENCES

### REQUIRED RESOURCES

#### COMPLETE TEXTBOOK PACKAGE

- Raffa, R., Rawls, S., & Beyzarov, E. (2014). *Netter's illustrated pharmacology updated edition*. Philadelphia, PA: Elsevier.

#### OTHER REQUIRED RESOURCES

- Proctor, D., & Adams, A. (2014). *Kinn's The medical assistant: An applied learning approach (12th ed.)*. St. Louis, MO: Elsevier.

### RECOMMENDED RESOURCES

- Professional Associations
  - American Association of Medical Assistants (AAMA)  
<http://www.aama-ntl.org/>
  - The American Registry of Medical Assistants (ARMA)  
<http://arma-cert.org/aboutarma>
  - Clinical Medical Assistant Certification (CCMA)  
<http://www.nhanow.com/clinical-medical-assistant.aspx>
- ITT Tech Virtual Library (accessed via Student Portal | <https://studentportal.itt-tech.edu>)
  - Basic Search
    - Boyd, C. (2013). *Calculation skills for nurses*. Chichester, West Sussex, UK: John Wiley & Sons, Ltd.
    - Brassington, C., & Goretti, C. (2011). *MA notes: Medical assistant's pocket guide (2nd ed.)*. Philadelphia, PA: F. A. Davis Co.
    - Balaban, N., & Bobick, J. (2008). *The handy anatomy answer book*. Detroit, MI: Visible Ink Press.
    - Eagle, S. (2009). *The professional medical assistant: An integrated, teamwork-based approach*. Philadelphia, PA: F.A. Davis Co.
    - Fuqua, T., & Zonderman, J. (2009). *Medical assisting PDQ*. Edinburgh, UK: Elsevier Saunders.

- Hardy, K. (2011). *Medical assistant exam success: A Q & A review applying critical thinking to test taking*. Philadelphia, PA: F.A. Davis Co.
  - Hull, M. (2013). *Medical language: Terminology in context*. Philadelphia, PA: F. A. Davis Co.
  - Culp, J. (2014). *Jump-starting careers as medical assistants & certified nursing assistants*. New York, NY: Rosen Publishing Group, Inc.
  - Jones & Bartlett, L. (2012). *2012 Nurse's drug handbook*. Burlington, MA: Jones & Bartlett Learning.
  - Moses, K. P. (2013). *Atlas of clinical gross anatomy*. Philadelphia, PA: Elsevier/Saunders.
  - Rogers, K. A., & Scott, W. N. (2011). *Nurses! Test yourself in anatomy and physiology*. Berkshire, England: Open University Press.
  - Scanlon, V., & Sanders, T. (2007). *Essentials of anatomy and physiology (5th ed.)*. Philadelphia, PA: F.A. Davis Co.
  - Venes, D. (2013). *Taber's cyclopedic medical dictionary (22nd ed.)*. Philadelphia, PA: F.A. Davis Co.
  - AMT Events
  - Modern Healthcare
- Evolve Student Resources

Free study materials accompany many Elsevier textbooks. Your instructor may have set up a course on Evolve that contains these free materials. If your instructor has provided you with a course id and you need to enroll into this course, [Click Here](#).

You can also register for your textbook's resources. To locate and gain access to these materials follow the steps below.

1. Go to <http://evolve.elsevier.com> and click **Student View**.
2. On the **Catalog** tab, click the green **Evolve Resources** box.
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4. Click the desired title to review additional information.
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6. Request additional products by using the search box at the top right. Once you are finished, click the **Redeem/Checkout** button to continue.

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## INSTRUCTIONAL METHODS AND TEACHING STRATEGIES

The curriculum employs a variety of instructional methods that support the course objectives while fostering higher cognitive skills. These methods are designed to encourage and engage you in the learning process in order to maximize learning opportunities. The instructional methods include, but are not limited to, lectures, collaborative learning options, use of technology, and hands-on activities.

To implement the above-mentioned instructional methods, this course uses several teaching strategies, such as opinion-based discussions that enable you to analyze different topics related to medical office laboratory procedures. You can also use this discussion to share best practices, tips, and solutions with your classmates. The lessons focus on viewing, demonstrating, and practicing various medical laboratory procedures. Your progress will be regularly assessed through a variety of assessment tools including exercises, labs, quizzes, and final exam.

## OUT-OF-CLASS WORK

For purposes of defining an academic credit hour for Title IV funding purposes, ITT Technical Institute considers a quarter credit hour to be the equivalent of: (a) at least 10 clock hours of classroom activities and at least 20 clock hours of outside preparation; (b) at least 20 clock hours of laboratory activities; or (c) at least 30 clock hours of externship, practicum or clinical activities. ITT Technical Institute utilizes a “time-based option” for establishing out-of-class activities which would equate to two hours of out-of-class activities for every one hour of classroom time. The procedure for determining credit hours for Title IV funding purposes is to divide the total number of classroom, laboratory, externship, practicum, and clinical hours by the conversion ratios specified above. A clock hour is 50 minutes.

A credit hour is an artificial measurement of the amount of learning that can occur in a program course based on a specified amount of time spent on class activities and student preparation during the program course. In conformity with commonly accepted practice in higher education, ITT Technical Institute has institutionally established and determined that credit hours awarded for coursework in this program course (including out-of-class assignments and learning activities

described in the “Course Outline” section of this syllabus) are in accordance with the time-based option for awarding academic credit described in the immediately preceding paragraph.

### ACADEMIC INTEGRITY

All students must comply with the policies that regulate all forms of academic dishonesty or academic misconduct. For more information on the academic honesty policies, refer to the Student Handbook and the Course Catalog.

### INSTRUCTOR DETAILS

Instructor Name	
Office Hours	
Contact Details	

*(End of Syllabus)*