

**2016-2017**

**COURSE:** MA 136 Anatomy and Pathology I

**COURSE DESCRIPTION:** This course includes the study of the basic structures and functions of the human body including organization of the body, integumentary, skeletal, muscular, circulatory, and respiratory systems. It is also designed to examine the various body systems, diseases and disorders affecting them.

**LEARNING OUTCOME:** Upon successful completion of this course, the student will be able to describe structural organization of the human body, identify body systems, and describe: body planes, directional terms, quadrants, body cavities, list major organs in each body system, identify the anatomical location of major organs in each body system and describe the normal function of each body system. The student will also be able to identify and analyze common pathology relating to each body system.

**INSTRUCTOR:** Larin Albertson, CMA (AAMA)

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**DURATION:** 84 Clock Hours

3 Semester Credits

**SEMESTER:** FALL 2016 (8/18/16 – 12/16/16) MWF 10:00AM ROOM 110A

**REQUIRED TEXT:** Medical Assisting Administrative & Clinical Competencies, 8<sup>th</sup> edition, Michelle Blesi, \$145.00, ISBN: 978-1-305-11070-0, Publisher: Cengage Learning

Student Workbook: Medical Assisting Administrative and Clinical Competencies, 8<sup>th</sup> edition, Michelle Blesi, \$129.00, ISBN: 978-1-305-11085-4, Publisher: Cengage Learning

### **UNITS OF INSTRUCTION**

136 1 Anatomic Descriptors and Fundamental Body Structure (Chapter 9)

136 2 The Integumentary System (Chapter 12)

136 3 The Skeletal System (Chapter 13)

136 4 The Muscular System (Chapter 14)

136 5 The Respiratory System (Chapter 15)

136 6 The Cardiovascular System (Chapter 16)

### **STUDENT LEARNING OUTCOMES**

**By successfully completing this course, students will:**

MA 136 1

1. Spell and define, using the glossary, all the Words to Know in this chapter.
2. Describe the structural organization of the human body.
3. Apply various medical terms to anatomical directional references on the human body.
4. Describe body planes, directional terms, quadrants, and body cavities.
5. Locate the eight body cavities on an illustration.
6. List major organ(s) located with each body cavity.

7. Identify the regions of the abdomen.
8. Describe the basic characteristics of the cell.
9. Explain the condition of hemostasis and what happens when it is not maintained.
10. Explain what happens when a mutation occurs.
11. Name the patterns of inheritance and explain how they affect a trait.
12. Describe the six ways molecules pass through cell membranes.
13. Identify common pathology related to the following genetic conditions: cleft lip, cleft palate, Down Syndrome, spina bifida, Klinefelter's syndrome, talipes, and Turner's syndrome including signs, symptoms, and etiology.
14. Analyze pathology for the following genetic conditions: cleft lip, cleft palate, Down Syndrome, spina bifida, Klinefelter's syndrome, talipes, and Turner's syndrome including diagnostic measures and treatment modalities.
15. Compare structure and function of congenital and genetic disorders across the life span.
16. Identify the three systems that interact in cystic fibrosis.
17. Explain DNA "fingerprinting."
18. Describe the four main types of body tissues.
19. Identify the body systems.

#### MA 136 2

1. Spell and define, using the glossary, all the Words to Know in this chapter.
2. Describe the integumentary system.
3. List the major organs of the integumentary system and describe their functions.
4. Explain how the skin regulates body temperature.
5. Describe how the body cools its surface.
6. Name the three layers of skin tissue and the characteristic structures of each layer.
7. Describe the process that causes wrinkles.
8. Explain what causes a suntan to develop.
9. Describe the distinguishing features of basal cell and squamous cell carcinoma lesions.
10. Identify the ABCDE rules and other warning signs of melanoma and the factors that contribute to its development.
11. Explain what causes blushing, birthmarks, moles, and albinism.
12. Identify common pathology related to the integumentary system including signs, symptoms, and etiology.
13. Analyze pathology for the integumentary system including diagnostic measures and treatment modalities.
14. Discuss how the skin changes with age.
15. Identify the body systems that interact with Lyme disease.

#### MA 136 3

1. Spell and define, using the glossary, all the Words to Know in this chapter.
2. Name the two divisions of the skeletal system and the bone groups in each division.
3. Identify the anatomical location of the major organs in the skeletal system.
4. Describe the structure of the long bones.
5. Explain how long bones grow.
6. Identify the elements that make up bone tissue.

7. Identify the major organs of the skeletal system.
8. Describe the normal function of the skeletal system.
9. Name the divisions of the spinal column and the number of vertebrae in each division.
10. Describe fontanelles and explain why they are essential.
11. Describe the structure of the rib cage and its primary function.
12. Identify three kinds of synovial joints and give examples of each.
13. List the parts of a synovial joint and identify the purpose of each part.
14. Name the seven types of fractures and the characteristics of each.
15. Outline the treatment of a fracture.
16. Describe the healing process of a fracture.
17. Define the term fatty embolus, explaining its origin and what might occur.
18. List situations predisposing to amputation.
19. Define the phantom limb sensation.
20. Analyze pathology for the skeletal system including diagnostic measures and treatment modalities.
21. Explain why the symptoms of carpal tunnel syndrome occur.
22. Name the three types of spinal curvatures, describing their physical characteristics.
23. Identify common pathology related to the skeletal system including signs, symptoms, and etiology.
24. Compare structure and function of the skeletal system across the life span.
25. Identify the body systems involved with rheumatoid arthritis.

#### MA 136 4

1. Spell and define, using the glossary, all the Words to Know in this chapter.
2. Explain how muscular activity increases body heat.
3. Describe the normal function of the muscular system.
4. Name and describe the three types of muscular tissue and the purpose of each.
5. Describe the purpose of a muscle team and give an example.
6. Explain what muscle tone means.
7. Describe the structure and function of a tendon and identify the body's strongest tendon.
8. Explain the terms origin and insertion.
9. Describe a muscle sheath and a bursa and the purpose of each.
10. Identify the muscles of respiration and describe how their function results in breathing.
11. Identify the major skeletal muscles of the body.
12. Identify the anatomical location of the major muscles in the muscular system.
13. Describe the smooth muscle action of peristalsis.
14. Explain the structure and function of a sphincter.
15. Identify common pathology related to the muscular system including signs, symptoms, and etiology.
16. Analyze pathology for the muscular system including diagnostic measures and treatment modalities.
17. Compare the structure and function of the muscular system across the life span.
18. Identify the body systems involved with fibromyalgia.

#### MA 136 5

1. Spell and define, using the glossary, all the Words to Know in this chapter.
2. Describe the source and importance of oxygen.
3. Trace the path of oxygen to an internal cell.
4. List the major organs in the respiratory system.

5. Identify the anatomical location of the major organs in the respiratory system.
6. Describe the normal structure and function of the nose, pharynx, epiglottis, larynx, bronchus, bronchiole, and alveolus.
7. Explain how voice sounds are produced.
8. Differentiate between external and internal respiration.
9. Describe the structure and function of the pleural coverings of the lungs and chest cavity.
10. Describe the relationship of the diaphragm and brain to breathing.
11. Describe five normal occurrences that alter breathing patterns and explain why they occur.
12. Analyze pathology for the respiratory system including diagnostic measures and treatment modalities.
13. Explain the role of surfactant in the lungs.
14. Differentiate between perfusion and ventilation scans.
15. Identify common pathology related to the respiratory system including signs, symptoms and etiology.
16. Compare structure and function of the human body across the life span.
17. Describe the age-related changes occurring with asthma.
18. Identify the body systems involved with COPD.

#### MA 136 6

1. Spell and define, using the glossary, all the Words to Know in this chapter.
2. List the major organs in the circulatory system.
3. Identify the anatomical location of major organs in the circulatory system.
4. Describe the normal function of the circulatory system.
5. Differentiate between pulmonary, systemic, and portal circulation.
6. Describe the heart sounds, including the actions producing the sounds and where they can be auscultated.
7. Locate the pacemaker, explain its action, and tell how the heart rate is influenced by the body.
8. Explain how the cardiac conditions of heart block and fibrillation relate to the pacemaker.
9. Explain the purpose of an artificial pacemaker and how it functions.
10. Name the five types of blood vessels and their purpose and structure.
11. Describe the function of a capillary bed.
12. Trace the pathway of blood through the pulmonary and systemic circulation.
13. Name the components of whole blood and the role of each.
14. Describe the clotting process.
15. Name the blood types and explain their importance to recipients of transfusions.
16. Explain the importance of the Rh factor in pregnancy and transfusions.
17. Analyze pathology for circulatory system including diagnostic measures and treatment modalities.
18. Identify common pathology related to the circulatory system including signs, symptoms, and etiology.
19. Explain the purpose of collateral circulation.
20. Identify the system relationships with congestive heart failure.
21. Compare structure and function of the circulatory system across the life span.

**COGNITIVE OBJECTIVES:** I.C.1. Describe structural organization of the human body

I.C.2. Identify body systems

I.C.3. Describe: body planes, directional terms, quadrants/regions, body cavities

I.C.4. List major organs in each body system

I.C.5. Identify the anatomical location of major organs in each body system

I.C.6. Compare structure and function of the human body across the life span

I.C.7. Describe the normal function of each body system

I.C.8. Identify common pathology related to each body system including: signs, symptoms, etiology

I.C.9. Analyze pathology for each body system including: diagnostic measures, treatment modalities

**METHODS OF INSTRUCTION:** Lectures, class discussions, workbook, projects and assignments.

**ATTENDANCE:** Absences can seriously affect grades. Students will be allowed to miss a maximum of 4 (four) class periods. Students are responsible for all information missed while absent from class. This includes any changes to the schedule that might occur.

**MAKE UP POLICY:** Make up work procedures addressed in the MA Program Policy Manual.

#### **Student Responsibility for Student Handbook Information**

As a student, you are responsible for the information in the LATI handbook. Lake Area Technical Institute reserves the right to change regulations and policies as necessary. Information relating to the withdrawal of a course, class conduct, plagiarism, inclement weather can all be located in the student handbook.

**ACADEMIC INTEGRITY:** Students' Responsibilities: Students are responsible for their own behaviors and are expected to maintain stated standards of academic honesty. Students share the responsibility with the faculty for maintaining an environment that supports academic honesty and discourages plagiarism or cheating.

**Faculty and Administrator Responsibilities:** Faculty are responsible for creating a classroom and testing environment that discourages cheating, confronts suspected violators and insures fair treatment of all students. Administrators also share the responsibility for developing an environment that discourages academic dishonesty. If a student is participating in academic dishonesty, he/she may be dismissed from the course or otherwise disciplined.

**CAREER COUNSELING:** Guidance is available for students when investigating career choices or in reaffirming the choice already made.

**PERSONAL COUNSELING:** Knowing that student life can be stressful, Lake Area Tech provides personal on-campus counseling for either school-related or non-school-related issues. At times, referral to another counseling service may be warranted. Check with the on-campus counseling staff if you have concerns you need to discuss. Specific referrals for drug and alcohol-related issues will be made by on-campus counselors.

**AMERICANS WITH DISABILITIES ACT:** Students are entitled to 'reasonable accommodations' under provisions of the Americans with Disabilities Act. Those in need of such accommodations should notify the instructor and make appropriate arrangements with the Office of Disability Services, Educational Services/Library.

**STUDENT TUTORING:** The Educational Services Center staff and peer tutors provide tutoring for all courses. If you are a student in need of help in any of your classes, please contact the Educational Services Coordinator located in the LATI library.

**PERSONAL OBJECTIVES:**

- Attend class session
- Prepare for class session
- Complete assignments by due date
- Demonstrate a high level of responsibility
- Display respect for other members of the class
- Participate in class discussions and projects

**COMPLETION STANDARDS:** The student will pass the course with a minimum of 80% on the overall grade of the course.

**EVALUATION AND GRADING:** Evaluation is directly related to the performance objectives. Performance is measured by written examinations, assignments, competencies, and/or quizzes.

**STUDENT EVALUATION:** The assessment and grading of student performance in this course is based on the following activities:

90% written examinations  
10% workbook assignments

**GRADING SCALE:** 100% - 94% = A  
93% - 87% = B  
86% - 80% = C  
79% or below = F

**\*\*Without my permission, you do not have the authority to record ANY of my class, its class members, or any content expressed here.**

**\*\*The instructor has the right to change any and all material on this syllabus at any time.**



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