

COURSE OUTLINE

Anatomy and Physiology for Massage Therapy

Course Description: MT138. Anatomy and Physiology for Massage Therapy. 4 hours credit. This course will enable the student to meet the specific needs of the massage therapy program. Basic principles in structure and function of the human body systems are studied in relation to massage therapy. Through the use of computer software the student will obtain a three-dimensional understanding of the systems.

Course Relevance: Understanding how the body functions and how different parts of the body integrate will enhance the student's knowledge of how various diseases affect specific functions. In addition, it will identify those conditions in which massage therapy may not be appropriate.

Required Materials:

Textbook: Premkumar, K. (2004). *The massage connection: Anatomy and physiology*. (2nd ed.). Baltimore, MD: Lippincott Williams & Wilkins.

Learning Outcomes: The intention is for the student to be able to:

1. Apply the concepts of anatomy and physiology to massage therapy in major systems of the body
2. Discuss the indications and contraindications of massage with each of the major body systems
3. Apply the anatomy and physiology content to his/her related practice

Primary Learning PACT Skills that will be DEVELOPED and/or documented in this course:

Through the student involvement in this course, he/she will develop his/her ability in the following primary PACT skill areas:

1. Problem solving
 - Through the analysis of case studies, the student will develop problem solving skills.
2. Speaking skills
 - Through a variety of group assignments, the student will develop speaking skills to apply in his/her practice.

Secondary skills (developed but not documented):

- Health management
- Computer literacy
- Internet use
- Critical thinking

Major Summative Assessment Task(s):

These learning outcomes and primary Learning PACT skills will be demonstrated by:

1. A presentation explaining the benefits and contraindications of massage therapy on a specific body system. The presentation will demonstrate the student's ability to communicate the ability to educate his/her client.

Course Content:

- I. Themes – Key recurring concepts that run throughout this course:
 - A. Applying anatomy concepts to massage therapy
 - B. Applying physiology concepts to massage therapy
- II. Issues – Key issues that will be addressed in this course: areas of conflict that must be understood in order to achieve the intended outcome:
 - A. Identifying indications to massage therapy
 - B. Identifying contraindications to massage therapy
 - C. Identifying conditions that need to be referred to alternative health care providers
- III. Concepts – Key concepts that must be understood to address the issues:
 - A. Anatomy and physiology
 - B. Developmental theories
 - C. Therapeutic massage as health care management
- IV. Skills / Competencies – Actions that are essential to achieve the course outcomes:
 - A. Comprehension of course philosophies, principles and theories in relation to massage therapy
 - B. Application of course philosophies, principles and theories in relation to massage therapy

Learning Units:

- I. Cells and Tissues in the Body
 - A. Describe the structure of a cell and the functions of each organelle
 - B. Classify tissue and describe the structure and function of each type
 - C. Identify locations where each tissue type may be found
 - D. Differentiate between skeletal, cardiac, and smooth muscle
 - E. Describe the effects of aging on tissue
 - F. Describe the possible effects of massage on tissue
- II. The Integumentary System
 - A. List the functions of the integumentary system
 - B. Identify the layers of the skin and accessory structures
 - C. Identify the locations of superficial and deep fascia
 - D. Define inflammation and list the common causes
 - E. Describe the effects of hot and cold applications on the skin
 - F. Describe the effects of aging
 - G. Describe the possible effects of massage on the integumentary system
- III. The Skeletal System
 - A. List the functions of the bone
 - B. Describe the role of calcium and how it is regulated

- C. List the different types of bones and give examples of each
 - D. Label the bones
 - E. List the various joint types and classify the different joints of the body
 - F. Describe the possible effects of massage on the skeletal system and joints
- IV. The Muscular System
- A. List the functions of muscle tissue
 - B. Outline the steps involved in muscle contraction
 - C. Compare and contrast skeletal, cardiac, and smooth muscle tissue
 - D. Identify and give the origin, insertion, and actions of major muscles related to the axial skeleton
 - E. Identify and give the origin, insertion, and actions of major muscles related to the appendicular skeleton
 - F. Group the muscles according to the movements they produce in the shoulder, elbow, wrist, hip, knee, ankle joints, and spine
 - G. Describe the effects of aging on the muscular system
 - H. Describe the effects of massage on the muscular system
- V. The Nervous System
- A. Classify the neurons according to structure and function
 - B. Explain how myelin sheaths are formed in the PNS and CNS
 - C. Classify sense organs
 - D. Describe the various types of pain: acute, chronic, visceral and referred
 - E. Define a dermatome
 - F. List the components of a reflex arc
 - G. List the major regions of the brain and describe their functions
 - H. List the motor, sensory, and association areas of the brain
 - I. Explain the formation, circulation, and function of the cerebrospinal fluid
 - J. Describe age-related changes in the nervous system
 - K. Describe the benefits of massage on the nervous system
 - L. Explain the role of massage on pain management
- VI. The Endocrine System
- A. List the functions of the endocrine system
 - B. Describe the chemical structure of hormones
 - C. Explain the modes of action and regulation of hormone levels
 - D. Identify positive and negative feedback mechanisms
 - E. Identify the location of the endocrine glands
 - F. Explain how the stress response is produced
 - G. Describe the changes that occur in the endocrine glands with aging
 - H. Explain the role of massage in stress
 - I. Describe the effects of massage on the endocrine system
- VII. The Reproductive System
- A. Identify organs and accessory structures of the male system
 - B. Describe the nervous and hormonal mechanisms that regulate the male

- reproductive functions
 - C. Identify organs and accessory structures of the female system
 - D. Describe the physiologic changes that occur during menopause
 - E. Describe age-related changes in the reproductive system
 - F. Describe the possible effects of massage on the reproductive system
- VIII. The Cardiovascular System
- A. Identify the composition of blood
 - B. Identify the typing systems
 - C. Define thrombosis and embolism
 - D. Label the components of the heart
 - E. Define stroke volume, cardiac output, venous return, blood pressure, systole, and diastole
 - F. Compare the structure and functions of the different types of blood vessels
 - G. Describe the cardiovascular changes that occur with aging
 - H. Describe the possible effects of massage on the cardiovascular system
- IX. The Lymphatic System
- A. Identify the components of lymph fluid
 - B. List the functions of the lymph system
 - C. Identify the major groups of lymph nodes and the regions they drain
 - D. Describe the effects of massage on the lymphatic system
 - E. Describe the specific massage techniques that are effective in reducing edema
 - F. Define immunity
 - G. Define autoimmune disease and list examples
 - H. Describe changes that occur in the lymphatic system and immunity with aging
 - I. Describe the effects of massage on immunity
- X. The Respiratory System
- A. List the functions of the respiratory system
 - B. Identify the components of the respiratory tract and describe the function(s) of each
 - C. Describe the physiological processes involved in the exchange of gases in external and internal respiration
 - D. Describe the effects of exercise, aging, and smoking on the respiratory system
 - E. Describe the effects of massage on the respiratory system
 - F. Explain the role of postural drainage before and during massage
 - G. Identify the special techniques uses in association with postural drainage
- XI. The Digestive System
- A. List the organs of the digestive system and their functions
 - B. Describe the process by which the movement of food occurs
 - C. Describe metabolic rate
 - D. Describe age-related changes in the digestive tract

E. Identify the possible effects of massage on the gastrointestinal system

XII. The Urinary System

A. Identify the anatomical components of the urinary system

B. Describe organization of the kidneys, ureters, urinary bladder and urethra

C. Explain the formation of urine

D. Describe the effects of aging on the anatomical components of the urinary system

E. Describe the effects of massage on the urinary system

Learning Activities:

Independent and collaborative learning activities will be assigned within and outside the college classroom to assist the student in achieving the intended learning outcomes. Examples of activities which contribute to the learning process include instructor lectures, audio-visual aids, group discussion, guest speakers, and skill practice.

Grade Determination:

Grade determinates may include the following: attendance, daily activity class participation, skill demonstration, and other methods of evaluation employed at the discretion of the individual instructor. These methods may be used individually or in combination by all instructors.