



Course Syllabus

Course Information

Course Title: Human Anatomy and Physiology I

Subject and Number: BSC 2085

Course Description: This course is the first part of a two-semester sequence in which students examine human anatomy and physiology through a systems approach based on the interaction between form and function, from the microscopic components of cells and tissues to the organismal level. Emphasis is placed on histology and the integumentary, skeletal, muscular, and nervous systems. Student learning outcomes: students will identify cell structures and describe their functions; students will distinguish tissues by structure, location in the body, and contrast their normal physiology; students will demonstrate an understanding of anatomical structure, organization of the body, cavities, planes, and directional terms; students will identify and describe structures of integumentary, skeletal, muscular, and nervous systems; students will interpret the functions of the integumentary, skeletal, muscular, and nervous systems; students will explain how the components of the human body maintain homeostasis; and students will analyze and interpret physiological data. Corequisite: BSC2085L

Class Number: LOREM IPSUM

Term and Year: LOREM IPSUM

Course Modality: [MDC Modalities](#)

Instructor Information

Name: LOREM IPSUM

Department and Campus: LOREM IPSUM

Office location: LOREM IPSUM

Office hours: *(communicate course office hours with students)*

Phone number: 123-456-7890

Email: LOREM IPSUM

Communication Policy: *(Faculty will establish protocols for communication with students)*

Required Textbook, Course Materials, and Technology

Required course materials: *(Textbook(s), library reserves, shark pack, and/or other required readings. Include ISBN Number and author(s))*

List optional/supplemental materials/OER: LOREM IPSUM

Technology & Technical Skill Requirements: *(Technology tools or equipment students need to complete this course are included)*

Grading Policy & Assessment Methods

List all activities, papers, quizzes, tests, etc. including grading scale used for final grade calculation. Relationships between the final grade and the learner's accumulated points or percentages/weights breakdown for each assessment or component of the course grade.

Include policy on late submissions.

For MDC Live and MDC Online courses, include policy regarding exams (e.g., ProctorU, Respondus Lockdown and Monitor, etc.)

If applicable, include guidelines for extra credit.

Incomplete Grades: [View the college's procedures for Incomplete Grades](#)

Miami Dade College Policies

Attendance Policy: *(Faculty include precise statements about illnesses/emergencies/ tardiness, missed assignments/make-up.)*

Students Rights and Responsibilities: *Policies addressing academic integrity and plagiarism, code of conduct, grade appeals, religious observations, services for students with special needs, student complaints, and other.*

[For more information, visit the Student's Rights and Responsibilities page](#)

Available Support Services & Resources

- [Tutoring Labs and Technology – Learning Resources](#)
- [Virtual Tutoring through Learning Resources or Smarthinking Online Tutoring](#)
- [ACCESS: A Comprehensive Center for Exceptional Student Services](#)
- [Advisement](#)
- [Password and Login Technical Support](#)
- [Technical Support for MDC Live and MDC Online Courses](#)
- [SMART Plan](#)

(Faculty select from the above if applicable and include additional course/campus specific resources)

Available Support Services & Resources

- [Public Safety - Services](#)
- [Hurricane and Other Natural Disasters](#): In the event of a hurricane or other disaster, the class follows the schedule established by the College for campus-based courses. Please visit the MDC website or call the MDC Hotline (305-237-7500) for situation updates.

Course Description

BSC2085 | Human Anatomy and Physiology I | 3 credits

This course is the first part of a two-semester sequence in which students examine human anatomy and physiology through a systems approach based on the interaction between form and function, from the microscopic components of cells and tissues to the organismal level. Emphasis is placed on histology and the integumentary, skeletal, muscular, and nervous systems. Student learning outcomes: students will identify cell structures and describe their functions; students will distinguish tissues by structure, location in the body, and contrast their normal physiology; students will demonstrate an understanding of anatomical structure, organization of the body, cavities, planes, and directional terms; students will identify and describe structures of integumentary, skeletal, muscular, and nervous systems; students will interpret the functions of the integumentary, skeletal, muscular, and nervous systems; students will explain how the components of the human body maintain homeostasis; and students will analyze and interpret physiological data. Corequisite: BSC2085L

Course Competencies

Competency 1:

The student will be able to understand the general structure and function of the human body by:

- Defining anatomy and physiology, and explaining how they are related.
- Defining homeostasis and its mechanisms, and explaining its importance for survival.
- Differentiating between positive and negative feedback control systems in humans.

Learning Outcomes

- Critical thinking

Competency 2:

The student will be able to describe how the body is organized by:

- Distinguishing the major anatomical regions of the human body by utilizing appropriate anatomical terminology.
- Applying directional terms, anatomical position, and body planes to locate organs and structures in the human body.
- Describing the locations of the major body cavities and the relationship of the organs in each cavity.

Learning Outcomes

- Critical thinking

Competency 3:

The student will be able to understand the basic knowledge of chemical principles as these apply to human structure and function by:

- Distinguishing between atoms, molecules, compounds and mixtures.
- Explaining the functions of water, acids, bases, electrolytes, pH and buffers.
- Differentiating among carbohydrates, lipids, proteins, nucleic acids, and their role in human metabolism.

Learning Outcomes

- Critical thinking

Competency 4:

The student will be able to understand the structure and function of cells and tissue types by:

- Identifying the major cellular organelles.
- Explaining how substances move into and out of cells.
- Describing how a cell divides.
- Distinguishing the four tissue types and membranes of the human body and their relationships to organs systems.
- Explaining the response to tissue injury and repair.

Learning Outcomes

- Critical thinking

Competency 5:

The student will be able to understand the integumentary system and its function by:

- Differentiating the structure and function of the skin layers and accessory structures.
- Interpreting the homeostatic imbalances of the integumentary system.

Learning Outcomes

- Critical thinking

Competency 6:

The student will be able to understand the skeletal system by:

- Describing the structure and function of osseous tissues.
- Explaining ossification and bone growth.
- Describing the classification and functions of the skeletal system.
- Explaining calcium metabolism to bone growth and remodeling.

- Describing the homeostatic imbalances of the skeletal system.

Learning Outcomes

- Critical thinking

Competency 7:

The student will be able to demonstrate knowledge of the structural and functional classification of joints by:

- Describing the structure and function of the clinically relevant joint types.
- Explaining joint structure to its function and movement.
- Explaining the homeostatic imbalances of joints.

Learning Outcomes

- Critical thinking

Competency 8:

The student will be able to understand the muscular system by:

- Distinguishing the structure and function of skeletal, cardiac, and smooth muscle.
- Explaining the major events that occur during skeletal muscle contraction how force is generated.
- Differentiating muscle metabolism in relation to structural type and physical activity.
- Explaining the homeostatic imbalances of the muscular system.

Learning Outcomes

- Critical thinking

Competency 9:

The student will be able to understand the basic structure and function of nervous tissue by:

- Describing the basic components and general functions of the nervous tissue.
- Comparing the structure and function of neurons and supporting cells.
- Explaining how nerve impulses are generated and transmitted.
- Differentiating the structure and function of the central and peripheral nervous systems.
- Describing the structure and functions of major regions of the brain and spinal cord.
- Contrasting the structure and function of the divisions of the autonomic nervous system.
- Explaining homeostatic imbalances of the nervous system.

Learning Outcomes

- Critical thinking

Competency 10:

The student will be able to understand the structure and function of the special senses by:

- Explaining how special sensory structures allow perception of those senses.
- Explaining the homeostatic imbalances of the special senses.

Learning Outcomes

- Critical thinking