

Program	BS Physical Education	Course Code	PE-301	Credit Hours	02
Course Title	Anatomy and Physiology (Theory)				
Course Introduction					
This course comprehensively studies human anatomy and physiology, focusing on its application in sports science and physical education. Emphasis is placed on understanding the structure, function, and integration of body systems relevant to physical activity, exercise, and sports performance.					
Learning Outcomes					
On the completion of the course, the students will:					
<ul style="list-style-type: none"> • Identify and describe the human body's anatomical structures and physiological processes. • Explain the relationship between anatomical structures and their functions in movement and exercise. • Apply knowledge of anatomy and physiology to analyze and improve sports performance. • Understand the physiological responses and adaptations to exercise and physical activity. • Demonstrate proficiency in anatomical terminology, body planes, and movements. • Integrate anatomical and physiological principles in coaching and exercise programming. • Discuss the implications of anatomy and physiology in injury prevention and rehabilitation. 					
Course Content					Assignments/Readings
Week 1-2	Introduction to Anatomy and Physiology <ul style="list-style-type: none"> • Overview of human body systems • Anatomical terminology and body planes • Introduction to physiological processes 				From Books and Class Lectures
Week 3-4	Skeletal System <ul style="list-style-type: none"> • Structure and function of bones • Joint types and movements • Bone development and remodelling 				From Books and Class Lectures
Week 5-6	Muscular System <ul style="list-style-type: none"> • Muscle tissue types and structure • Muscle contraction mechanisms • Role of muscles in movement and exercise 				From Books and Class Lectures
Week 7-8	Cardiovascular System <ul style="list-style-type: none"> • Heart anatomy and function • Blood vessels and circulation • Cardiovascular responses to exercise. 				From Books and Class Lectures

Week 9-10	Respiratory System <ul style="list-style-type: none"> Anatomy of the respiratory system Mechanics of breathing Respiratory adaptations to exercise 	From Books and Class Lectures
Week 11-12	Nervous System <ul style="list-style-type: none"> Structure and function of neurons Central and peripheral nervous systems Neuromuscular control and coordination 	From Books and Class Lectures
Week 13-14	Endocrine System <ul style="list-style-type: none"> Endocrine glands and hormones Regulation of metabolism and energy balance Hormonal responses to exercise. 	From Books and Class Lectures
Week 15-16	Integration and Application <ul style="list-style-type: none"> Integration of anatomical and physiological principles Application in sports performance and exercise prescription Practical sessions: Anatomy lab exercises and demonstrations 	From Books and Class Lectures

Textbooks and Reading Material

Textbooks

- Colville, T. P., & Bassert, J. M. (2015). Clinical anatomy and physiology for veterinary technicians (3rd ed.). Mosby.
- Cross, R., & Dawson, B. (2014). Sports Anatomy and Physiology (2nd ed.). Routledge.
- Marieb, E. N., & Hoehn, K. N. (2018). Essentials of human anatomy & physiology (12th ed.). Pearson.
- Marieb, E. N., & Smith, L. A. (2018). Human Anatomy & Physiology Laboratory Manual (12th ed.). Pearson.
- Ody, E., & Norris, M. A. (2017). Anatomy & physiology for dummies (3rd ed.). For Dummies.

Suggested Readings

- Journals:** Journal of Anatomy, Journal of Physiology, Sports Medicine
- Websites:** Anatomy and Physiology Online Resources, Visible Body, Human Anatomy Atlas
- Videos:** Anatomy and physiology tutorials, dissection demonstrations