

POSTGRADUATE COURSES
Fall 2015

RCMS

Course Title: Anatomy and Physiology for CSE

Course Code CSE-885

Credit Hours: 3-0

Pre Requisites: NA

Course Objectives: This course is designed to provide biomedical engineering students with a comprehensive understanding of the human anatomy and principles of human physiology. It covers a broad range of topics, from cellular physiology to the physiology of organs and organ systems. Course Description: The course includes units devoted to the study of human anatomy, membrane solute transport, nerve and muscle functions, functions of the autonomic nervous system, cardiovascular system as well as renal, respiratory, gastrointestinal and endocrine systems. Instructional activities include lectures and case presentations.

Detailed Contents:

Anatomy (Week 1 – 6)

o Regional anatomy

- Upper limb
- Lower limb
- Head and neck
- Abdomen
- Thorax
- Pelvis
- Brain (in these regions emphasis will be on the bones forming region along with the muscular attachment and supply and the clinical importance of each)

Histology (Week 7 – 12)

- Bones
- Blood

- Muscles
- Epithelial linings of human body

□ Physiology (Week 13 – 17)

- Musculoskeletal System Cardiovascular System
- Central and Peripheral Nervous System
- Respiratory System
- Gastrointestinal System
- Hepatobiliary System
- Renal System

Learning Objectives: Students will learn how to evaluate scientific research that forms the basis of our understanding of human anatomy and physiology, and gain an appreciation for what remains to be discovered. Students will also gain experience in problem solving, interpreting data, communicating verbally and in writing with others. They will also learn developing information literacy skills, using technology and third party platform (computational sciences). They would develop an understanding of exploring how the knowledge of anatomy and physiology can be applied to real world health challenges

Text/Ref Books:

Gray anatomy by Henry Gray and H.V. Carter, October 1st 1995, Barnes & Noble Books, ISBN: 0517223651

Human physiology by Lauralee Sherwood, 7th ed; 2010, Cengage Learning
ISBN:13.978-0-495-39184-5

Time Schedule: Fall Semester 2015

Name and Qualification of faculty conducting course: