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| <b>COURSE</b> | Name      | : Anatomy and Physiology |
|               | Code      | : EE185544               |
|               | Credit(s) | : 2                      |
|               | Semester  | : (Elective Course)      |

**Description of Course**

Anatomy and Physiology course studies the basics of human body anatomy which include cell anatomy and physiology, tissue anatomy and physiology, neural network systems, biolytic activity in the brain, skeletal system, muscular tissue system, biolytic activity in muscles, cardiovascular system, activity biolytics in the heart, pulmonary system, and review of journals in applied physiology, biomechanics.

**Learning Outcomes****Knowledge**

(P02) Mastering engineering concepts and principles to develop the necessary procedures and strategies for systems analysis and design in the areas of power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

**Specific Skill**

(KK02) Being able to compose problem solving in engineering through depth and breadth of knowledge which adapts to changes in science and technology in power systems, control systems, multimedia telecommunications, electronics, intelligent multimedia network, or telematics.

**General Skill**

(KU07) Being able to improve the capacity of learning independently.

**Attitude**

(S09) Demonstrating attitude of responsibility on work in his/her field of expertise independently.

**Course Learning Outcomes****Knowledge**

Mastering the basic principles of cell anatomy and physiology to the human organ system to develop procedures and strategies needed for system analysis and design in the field of biomedical engineering.

**Specific Skill**

Able to develop solutions to biomedical engineering problems by deepening or expanding the anatomy and physiology of human organs.

**General Skill**

Able to improve the capacity of scientific learning anatomy and physiology of human organs independently.

**Attitude**

Demonstrate attitude of responsibility for work in the field of anatomy and physiology of human organs independently.

### Main Subjects

1. Scope of anatomy and physiology
2. Cell anatomy and physiology
3. Tissue anatomy and physiology
4. Nervous system
5. Skeletal system, muscular system
6. Cardiovascular system
7. Pulmonary system
8. Study journals in applied physiology, biomechanics

### Reference(s)

- [1] Wynn Kapit et. al., Anatomy coloring book, Benjamin Cumings Science Publishing, USA, 3rd Ed, 2002.
- [2] Wynn Kapit et. al., Physiology coloring book, Benjamin Cumings Science Publishing, USA, 2nd Ed, 2000.
- [3] Frederic H Martini et. al., Fundamentals of anatomy and physiology, Prentice Hall Intl. Inc., USA, 5th Ed, 2001.
- [4] Roger M Enoka, Neuromechanics of human movement, Human Kinetics, USA, 3rd Ed, 2002.

### Prerequisite(s)

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