

<b>Subject Title</b>	<b>: EXERCISE PHYSIOLOGY</b>
<b>Subject Code</b>	<b>: FIT3202-E</b>
<b>Credit Points</b>	<b>: 3.0 (Theory)</b>
<b>Teaching Hours</b>	<b>: 2100 Minutes/35 Hours</b>
<b>Subject Type</b>	<b>: Elective</b>
<b>Semester</b>	<b>: 3 &amp; 4</b>

### **Subject Description:**

The focus of this subject is to study the physiological response of the human body towards exercise and physical activity. It will be emphasized on the functioning of the cardiovascular, musculoskeletal, respiratory and nervous systems.

### **Objective:**

The objective of this subject is that students will gain knowledge about the physiological response of the human body to exercise and understand the effect of exercise on various systems of the human body.

### **Subject Content:**

- Introduction to exercise physiology, neuromuscular control to movement, neuromuscular adaptation to exercise, hormonal regulation, metabolic adaptation to exercise.
- Interstitial fluid: interstitial control of the body, composition of interstitial fluid.
- Homeostasis, steady state.
- Bioenergy and energy metabolism during exercise and sports, aerobic and anaerobic metabolism, aerobic and anaerobic sports: intensity and duration.
- Functional relationship between cardiorespiratory system, body fluids and nervous system
- Energy – biological energy cycle, ATP synthesis and production.
- Thermoregulation – the role of the hypothalamus on thermoregulation, maintenance of body temperature.
- Principles of exercise and FITT.
- Effects of acute & chronic exercises.
- Oxygen/CO<sub>2</sub> transport – O<sub>2</sub> debt.
- Effects of exercise on muscle strength, power, endurance, B.M.R. respiratory quotient, hormonal and metabolic effects – respiratory and cardiac conditioning.
- Training – fatigue and recovery.
- Fitness-related to age, gender & body type.
- Exercise physiology – effect of exercise in various systems – musculoskeletal, neuromuscular, cardiovascular, respiratory system.
- Physiological effects of exercise on body systems – muscular system, endocrinesystem, cardio-respiratory system, nervous system.