Course Outline

EXSCI2002 FUNCTIONAL ANATOMY

Title: FUNCTIONAL ANATOMY

Code: EXSCI2002

Formerly: HM616

School / Division: School of Health Sciences

Level: Advanced

Pre-requisites: (EXSCI1101 or EXSCI1102 or HM515 or HM519)

Co-requisites: Nil

Exclusions: (HM616)

Progress Units: 10

ASCED Code: 10913

Objectives:

After successfully completing this course, students should be able to:

Knowledge:

- define and describe the musculo-skeletal system of the human body
- discuss the effects of age, exercise and injury on anatomical structures
- identify key points in exercise safety
- define the role of posture in sport and everyday living
- discuss the role of body proportions on sport performance and talent identification
- interpret EMG data
- describe the relationship of sensory information to movement

Skills:

- incorporate new knowledge and ideas with existing knowledge and personal experience
- locate and identify selected anatomical features
- study effectively, both independently and in groups
- measure anthropometrical dimensions and interpret the results within the context of sport, physical education and work place applications
- prescribe exercises that are safe and relevant to particular muscle groups
- observe and develop techniques in kinesiological analysis

Values:

- recognise the value of Functional Anatomy in the study of human movement
- appreciate the complexity and diversity of structure in the human body
- appreciate the role of a teacher or human movement specialist in prescribing safe

exercises
- respect the sensitivities of others, especially in cadaver work

Content:

Topics may include:

- Bone structure and remodelling
- Soft tissue structures
- Muscle structure and mechanics
- Flexibility
- Anthropometry and somatotyping
- The spine
- Posture
- Talent Identification
- Exercise analysis
- Lower limb mechanics
- Upper limb mechanics

Learning Tasks & Assessment:

Learning Task	Assessment	Weighting
Attendance at practical laboratory sessions and completion of a laboratory manual	Practical exam	15-25%
Attendance at lectures and review of lecture notes and study guide.	Mid Semester Theory Exam	25-35%
Attendance at lectures and review of lecture notes and study guide.	Final Theory exam	45-55%

Adopted Reference Style:

APA

Handbook Summary:

This course enables students to perform movement analyses; understand the workings of muscles and joints; to understand the relevance of kinanthropometry to Human Movement; and to understand the importance of good posture and ergonomic considerations. The content includes the ultrastructure of ligaments, tendons, muscles; the effects of age and exercise on the body; posture; flexibility; functional anatomy of the upper and lower extremities; and principles of safe exercise prescription.