Craig Kielburger High School
EXERCISE SCIENCE
COURSE OUTLINE 2014

Grade: 12
Course Type: University
Ministry Code: PSE4U **Credit Value:** 1
Teacher: Mr. Houldcroft
Location: Portable 3 / Science lab/ Gym/ Weightroom/ Track

Textbook and Student Workbook: Exercise Science: An Introduction to Health and Physical Education. Temertzoglou/Challen

This course focuses on the study of human movement and of systems, factors and principles involved in human movement. Students will learn about the effects of physical activity on health and performance, the evolution of physical activity and sports, and the factors that influence an individual's participation in physical activity.
Learning will be facilitated through the application of the theory through activities such as labs, field trips and portfolio assignments.
This course is designed to pique intellectual curiosity and to apply analytical and critical thought to concepts related to human movement and well-being. In addition, this course aims to foster enthusiasm for an active and healthy lifestyle and emphasize the importance of effective lifestyle practices.

CURRICULUM EXPECTATIONS/ KEY LEARNINGS:
There are seven key learnings that have been identified for Exercise Science. These are the things that are most important for the students to take away from the course:

1. describe the structure and function of the human body and of the physiological principles relating to human performance
2. use biomechanical principles to analyze and improve movement
3. demonstrate an understanding of the ways in which nutrition and training principles affect human performance
4. demonstrate an understanding of individual differences in performance, growth and development
5. use the principles of motor learning to analyze or teach a skill
6. investigate the evolution of physical activity and sport
7. analyze the relationship of society and culture to sports and physical activity

UNITS OF STUDY:

ANATOMY AND PHYSIOLOGY (Sections 1 - 8)
- Anatomical Terminology
- Function of Muscular and Skeletal Systems
- Cardiorespiratory System and Energy Production

HUMAN PERFORMANCE (Sections 9 - 11)
- Nutrition and Ergogenic Aids

(Sections 12 - 16)
- Training Principles and Technology
- Biomechanics

MOTOR DEVELOPMENT (Sections 17 - 18)
- Growth and Development

(Sections 19 - 22)
- Motor Learning

EVOLUTION OF PHYSICAL ACTIVITY and SPORTS Participation (Sections 23 -27) ** throughout the year
- Historical Development and Influences
- Issues in Physical Activity and Sport

RELATIONSHIP of SOCIETY and CULTURE to PHYSICAL ACTIVITY and SPORT (Sections 28 - 32)
- Sport as a Big Business
- Societal and Cultural Factors that
- Influence Physical Activity and Sport

Field Trip (Options)
- MacMaster University High Performance Center
- University of Toronto Anatomy Lab
-University of Waterloo Kinesiology Lab
- Toronto Raptors and Big Business and Sport

ASSESSMENT and EVALUATION:
Students will be given numerous and varied opportunities to demonstrate their achievement of the expectations across these four categories: knowledge and understanding, thinking and inquiry, communication and application.

The final grade for each course will be determined as follows:

· **70% TERM WORK**

KNOWLEDGE/ UNDERSTANDING – 14% **(**Emphasizes the ability to recall factual information, recognize fundamental concepts and the foundational skills of the subject/discipline.)	**THINKING – 14%** (Emphasizes the thinking skills used in thinking processes to demonstrate the students' understanding of information they have processed.)	**COMMUNICATION – 21%** Emphasizes the clear, precise and effective use of oral, written and visual language to communicate the student's understanding of information and ideas	**APPLICATION – 21%** Emphasizes the application and integration of skills, processes and techniques to produce evidence of the student's understanding.
Tests Quizzes Assignments Research Projects Worksheets	Journal Oral Presentation Research Projects	Worksheets Oral Assignments Oral Presentations Lab Reports	Worksheets Nutrition Analysis Lab Reports Tests Design Project Peer Teaching

· **30% FINAL SUMMATIVE EVALUATION** at or towards the end of the course that will consider students' knowledge in all areas of the course

PORTFOLIO / CONFERENCE 10%	**FINAL EXAM 20%**
Collection of student work from 4 main focus areas: · Human Performance (e.g., nutrition, physiological principles, biomechanics) · Motor Development (e.g., growth and development, motor learning) · Physical Activity and Sport The portfolio may be used as the foundation of evidence for a student led conference to demonstrate key learnings	Should reflect many of the key learnings for the course as well as reflect the weighting of the categories. Exam will include: · Multiple Choice · Short Answer, essay questions, case studies