SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO

SAULT
COLLEGE

COURSE OUTLINE

COURSE TITLE:	Applied Exercise Physiology II		
CODE NO. :	FIT206	**SEMESTER:**	3
PROGRAM:	Fitness and Health Promotion		
AUTHOR:	Lisa Maidra, Tania Hazlett		
INSTRUCTOR:	Lisa Maidra		
DATE:	Sept. 2016	**PREVIOUS OUTLINE DATED:**	Sept. 15
APPROVED:	*"Marilyn King"*		*June, 2016*
	CHAIR, HEALTH PROGRAMS		**DATE**
TOTAL CREDITS:	3		
PREREQUISITE(S):	FIT155		
HOURS/WEEK:	3		

I. COURSE DESCRIPTION:

This course is the second part of a two part series (Applied Exercise Physiology I and II). This course applies concepts learned in Applied Exercise Physiology I to how various environments, including hot, cold and altitude, affect exercise and sport. It also applies concepts to how participation in exercise and sport affects various age groups and both genders. How ergogenic aids and common medications affect exercise will also be examined.

II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

Upon successful completion of this course, the student will demonstrate the ability to:

1. **Apply knowledge of physiological adaptations that take place within the human body while exercising during exposure to various environments, including altitude and hot and cold temperatures.**

    - Describe how the body regulates body temperature when exposed to extreme heat
    - Describe the physiological responses to exercising in the heat
    - Identify the health risks and symptoms of heat-related illnesses during exercise in the heat
    - Apply and explain current research practices regarding safe programming considerations when exercising in the heat
    - Describe how the body regulates body temperature when exposed to extreme cold
    - Describe the physiological responses to exercising in the heat
    - Identify the health risks and symptoms of cold-related illnesses during exercise in the cold
    - Apply and explain current research practices regarding safe programming considerations when exercising in the cold
    - Describe the environmental conditions at altitude
    - Describe the physiological responses to exercising at altitude
    - Identify the health risks and symptoms of altitude-related illnesses
    - Apply and explain current research practices regarding safe programming considerations when exercising at altitude

2. **Apply knowledge of exercise considerations and physiological differences between age groups and genders during sport and exercise.**
    - Discuss physiological responses in children and adolescents compared with adults and older adults
    - Discuss special issues that affect different age groups during exercise and explore safe practices to deal with the identified special issues
    - Differentiate the physiological differences in males and females
    - Discuss special issues that affect males and females during exercise and explore safe practices to deal with the identified special issues

3. **Apply knowledge of how different ergogenic aids affect physiological adaptations that take place within the human body during exercise**
    - Identify the trainer's role in recommending ergogenic aids for sport performance to their clients
    - Describe and explain the research process to identify products that have ergogenic properties
    - Differentiate between nutritional, pharmacological, physiological, mechanical, and psychological aids
    - Describe the physiological adaptations that occur while taking/using popular ergogenic aids
    - Describe what the World Anti-Doping Code is and how athletes must comply
    - Discuss the harm and consequences of using prohibited substances and techniques

4. **Apply knowledge of how different medications affect physiological adaptations that take place within the human body during exercise**
    - Discuss how different medications can affect how our physiological systems respond during exercise
    - Identify when it is appropriate to refer, continue exercise, or stop exercise based on client medication intake

5. **Apply knowledge of how different activities affect individual differences in performance and body composition and how nutrition choices affect individual performance in different sports.**
    - Discuss how body composition affects performance in sport and exercise
    - Discuss safe coaching techniques regarding weight standards
    - Discuss how different nutritional choices may contribute to or inhibit increased performance

6. **Demonstrate the ability to research and debate common issues in the field of exercise physiology to ultimately provide safe and accurate information to clients.**
    - Research a topic of interest in the field of exercise physiology and explain the findings using appropriate references
    - Debate a current issue in the field of exercise physiology and utilize appropriate references

III. TOPICS:

1. Exercise in the Heat
2. Exercise in the Cold
3. Exercise at Altitude
4. Age and sex considerations during sport and exercise
5. Body Composition in Exercise and Sport
6. Nutritional Support for Exercise and Sport
7. Ergogenic Aids in Exercise and Sport I
8. Ergogenic Aids in Exercise and Sport II
9. Common Medications
10. Electrocardiography
11. Special Topics in Exercise Science

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

Physiology of Sport and Exercise 6th edition
(purchased in Semester 2 for Fit155)

V. EVALUATION PROCESS/GRADING SYSTEM:

2 Written Exams (20% each) – 40%
Assignment 1 (ergogenic aid debate) – 10%
Assignment 2 (research presentation) – 20%
Weekly Learning Activities – 30%

Note: Missed Tests and Late Assignments
If you miss a written test/quiz, you must call/email your instructor **BEFORE** the test to explain your absence. Only medical emergencies and extreme circumstances will warrant the opportunity to write the missed test at a later date. Official supporting documentation, such as a physician's certificate, may be required as confirmation of your illness. Arrangements with your instructor must be made as soon as you resume attendance at Sault College. Failure to comply with this policy will result in a zero grade for the missed test.

Written assignments must be submitted on the date and time specified. If the student is unable to do so, the teacher must be notified 24 hours prior to the due date and time. Failure to request an extension or requesting an extension later than 24 hours prior to the due date, will result in a zero grade for the assignment. For example; if the due date is on September 16, anything submitted after the 16th, will be counted as 0 grade. Similarly, if the assignment is due on September 16th by 5pm, anything submitted after 5pm will be considered late and will receive a 0 grade. 1% per day of extension (with permission) will be deducted from the assignment for up to three academic days. For example, if an assignment has been granted a three day extension, there will be a 1% penalty each day it is late (total of 3%).

The request for an extension does not necessarily result in an extension. The final decision to permit an extension resides with the professor. The professor may choose to discuss the situation with the coordinator and/or dean of the program.

In the event of extenuating circumstances (i.e. death, acute illness, disaster, etc.) where the extension could not be anticipated and which precludes the student from submitting the assignment on the due date an extension will be granted without penalty. The student is obliged to notify the teacher within 24 hours of the due date and collaborate on a date of submission. Appropriate documentation may be requested by the teacher to validate the extenuating circumstances.

Please see additional expectations for this course on your course syllabus.

Instructor's Name: Lisa Maidra
Instructor's Phone #: 759-2554, Ext. 2629
Instructor's email: lisa.maidra@saultcollege.ca

The following semester grades will be assigned to students in post-secondary courses:

Grade	Definition	Grade Point Equivalent
A+	90 – 100%	4.00
A	80 – 89%	
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 – 59%	1.00
F (Fail)	49% and below	0.00

CR (Credit)	Credit for diploma requirements has been awarded.
S	Satisfactory achievement in field /clinical placement or non-graded subject area.
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.
NR	Grade not reported to Registrar's office.
W	Student has withdrawn from the course without academic penalty.

If a faculty member determines that a student is at risk of not being academically successful, the faculty member may confidentially provide that student's name to Student Services in an effort to help with the student's success. Students wishing to restrict the sharing of such information should make their wishes known to the coordinator or faculty member.

VI. SPECIAL NOTES:

Attendance:
Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

OFC Certification:
To be considered an ideal candidate for the OFC Group Fitness and Personal Fitness Trainer Certification, students must obtain a minimum overall grade of 75%.

VII. COURSE OUTLINE ADDENDUM:

The provisions contained in the addendum located in D2L and on the portal form part of this course outline.