

KNES 593.76: Applied Exercise Physiology – Practical Experience Spring 2012

Course Outline

Instructor: Rosemary Neil Room: HPL

Phone:403.220.3416Days:As requiredEmail:neil@ucalgary.caTime:As requiredOffice:KNB103ACourse Website:Blackboard

Office By appointment

Hours:

Course Description:

An opportunity for students to gain personalized, applied research and/or work experience in kinesiology or related fields

This course is designed to develop the student's knowledge base and practical experience in the area of applied exercise physiology. The student will be exposed to and assist with a variety of applied exercise physiological testing protocols as well as scientific training and monitoring with athletes both in a laboratory and field setting. An applied research project will be assigned to enhance the student's learning experience and understanding.

Course Objectives:

- 1. To assist with physiological testing and monitoring involving a high performance population.
- To examine a number of advanced exercise testing and monitoring protocols including but not limited to: critical power, incremental lactate protocols, VO₂ max, noninvasive cardiac output, heart rate variability and anthropometry used with high performance athletes.
- 3. To establish the skills necessary to calibrate and maintain basic exercise physiology laboratory equipment: TrueOne2400 Metabolic Measurement Cart, Cycle Ergometers, and various biochemistry analyzers.
- 4. To develop the skills necessary to assist with a research project.

Required Reading Materials:

Reading material will be provided

Contacting the Instructor:

Students requiring assistance are encouraged to speak with their instructor during class or office hours. Should you wish to meet with the instructor outside of office hours, please phone or email the instructor to make an appointment.

Email, while commonly used, does limit the effectiveness of communications and may not be the best way for instructors to answer student questions. Therefore, the instructor may request a telephone call or personal meeting. Your instructor will inform you as to his/her expectations about emails.

Students will be required to attend a weekly meeting with the instructor.

Grading Scale:

This course is not graded. It is a credit/fail distinction.

Evaluation of Course Content:

Course Evaluation

To receive credit a student must meet <u>all</u> of the following requirements:

- 1. Fulfill the commitment of 60 practical hours in the applied exercise physiology lab as assigned and submit a log book documenting tasks and responsibilities conducted.
- 2. Completion of both the mid-point and final evaluations see appendix A & B.
- 3. Complete and submit a Final Report.
- 4. Completion of two assignments.
- 5. Presentation of research project.

Successful completion of these requirements will result in credit for the course.

Additional Course Information:

A minimum of 60 hours contact time must be completed during the course of the semester. Scheduling various each week and is determined at a weekly meeting but a minimum commitment of 10hrs per week is expected. The student's availability will be taken into consideration.

Course prerequisites:

- 1. KNES 373 (completed or taken concurrently with practicum)
- 2. WHMIS certification
- 3. Hepatitis B vaccination or in process of getting vaccinated
- 4. CPR and First Aid is an asset.
- 5. KNES 479 is an asset
- 6. CSEP Certified Personal Trainer (CPT) is an asset

Course Content:

Dates	Details
May 9 th	Overview of course expectations and research project
May 10	Calibration of equipment, biohazard training and testing equipment preparation
Week of:	
May 14 th	National Alpine Skiing Testing: Testing: anthropometry, incremental lactate protocols, critical power and isokinetic (Biodex) testing
	Project preparation
May 21 th	Research project data collection Week 1
	Assist with scheduled testing
May 28 th	Long Track Speedskating
	Critical power testing
	Hemoglobin mass determination

	Research project data collection Week 2
June 1 st Due Date	Assignment 1: Threshold determination
June 4 th	Completion of mid-point evaluation
	Biathlon Development Athlete Testing Treadmill incremental lactate
	Research project data collection Week 3
June 11 th	Training Interventions: Hyperoxia
	Assist with other scheduled testing
	Research project data collection Week 4
June 15 th Due Date	Assignment 2: Critical Power
June 18 th	Training Interventions: Hyperoxia
	Assist with other scheduled testing
	Research project data analysis
June 25 th	Project Presentation
	Final evaluation
June 28 th Due Date	Final Report

Final Report Component

The following can be used as a guideline for your report:

- Mission, goals and objectives of the project
 - Why you chose this placement
 - o Personal goals
 - o Description of the population served or program participants
- Testimonials from directors, staff or participants
- Challenges and surprises
 - o stressors/stress management techniques
 - o what you need to work on in the future
- Personal discoveries strengths, values, preferences, weaknesses, biases, etc.
 - o Virtues that were brought to bear (e.g., honesty, dedication, compassion)
- New knowledge, insights or skills that were acquired
 - o communication skills; yours and those of your co-workers
 - o professionalism; yours and your employer(s)
 - o record keeping
 - o time management
 - o how you functioned as a team
 - insights gained regarding relationships between academic training and professional experience
 - o your future within the "people" industry is this for you or not?

Reports should be no longer than six, double-spaced pages.

Supplementary Course Information In accordance with the University of Calgary Calendar

Academic Accommodation Awareness Information: It is the student's responsibility to request academic accommodation. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the commencement of this course. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation.

Plagiarism/Cheating/ Other Academic Misconduct: (see Calendar) A <u>single</u> offence of cheating, plagiarism, or other academic misconduct is a serious act that will not be tolerated in the Faculty of Kinesiology. Penalties for such acts will be determined by the Dean and may result in a failing grade, probation, suspension, or expulsion. Any student who is uncertain if an action falls into this category should consult the instructor and/or the Calendar.

Midterm Exam Policy:

The Faculty of Kinesiology policy is that all students are expected to write midterm exams on the dates listed on the course outline. Special accommodation may be granted by the instructor in <u>exceptional circumstances only</u> which include illness, participation in athletic events (varsity, national or international), domestic affliction, and religious conviction. It is the student's responsibility to supply proper documentation and/or notification <u>prior</u> to the originally scheduled midterm to support their circumstance. Personal travel plans and arrangements are <u>not</u> valid reasons for requesting a special accommodation for a midterm exam. Failure to comply with this policy will result in a grade of zero for the midterm and possible failure in the course.

FOIP Policy:

Please note that the University is under the jurisdiction of the provincial Freedom of Information and Protection of Privacy (FOIP) Act. Please refer to the website for details: http://www.ucalgary.ca/secretariat/privacy

Internet and Electronic Communication Device Information: Any surfing of the Internet during lectures that is not directly related to the class discussion is distracting and strictly forbidden. Additionally, the use of any electronic devices (e.g., cellular phones, Blackberrys) for e-mailing, texting, etc. is strictly prohibited. Please turn OFF your phone before the beginning of each lecture.

Instructors have the authority, at the discretion of the dean of their faculty, to require that specific course assignments, term papers and academic exercises be submitted in an electronic format. Instructors cannot require that multiple copies of an assignment be submitted.

Emergency Evacuation/Assembly Points: For classes in the Kinesiology buildings Primary assembly point is the MacEwan Student Centre - North Courtyard and the Alternate assembly point is University Theatres Lobby

Safewalk Information:

Safewalk volunteers walk people safely to their destination on campus (including Health Sciences, Children's Hospital, McMahon Stadium, and University LRT station). This service is free and available to students, staff and campus visitors. Call 403-220-5333 (24 hours a day/7 days a week/365 days a year).

Student's Union:

The Kinesiology Representative is Calindy Ramsden - E-mail: kinesrep@su.ucalgary.ca.

Appendix A Mid-Point Evaluation

Student's Name:						
Supervisor's Nam	e:					
Date of Evaluatio	n:					
Please check the appi	ropriate box in each s	ection.				
		INTEREST	IN WORK			
☐ High interest in job. Very enthusiastic.	☐More than average amount of interest and enthusiasm for job.	☐ Satisfactory amount of interest and enthusiasm for job.	☐ Interest fluctuates. Occasionally enthusiastic.	☐ Little interest or enthusiasm for job.	☐ Not applicable.	
		INITIA	ATIVE			
☐ Self-Starter. Asks for new jobs. Looks for work.	☐ Acts voluntarily in most matters.	☐ Acts voluntarily in routine matters.	☐ Relies on others. Must be told frequently what to do.	☐ Usually waits to be told what to do next.	☐ Not applicable.	
		ORGANIZATION	AND PLANNING			
☐ Does an excellent job of planning and organization.	☐ Usually organizes work well.	☐ Does normal amount of planning and organizing.	☐ More often than not fails to organize and plan work effectively.	☐ Consistently fails to organize and plan work effectively.	☐ Not applicable.	
		ABILITY 1	O LEARN			
☐ Exceptionally quick.	☐ Quick to learn.	☐ Average	☐ Slow to learn.	☐ Very slow to learn.	☐ Not applicable.	
		QUALITY	OF WORK			
☐ Very thorough in performing work. Errors very few, if any.	☐ Usually thorough. Good work. Few errors.	☐ Work usually passes review. Has normal amount of errors.	☐ More than average amount of errors for a trainee.	☐ Work usually done in careless manner. Make errors often.	☐ Not applicable.	
		QUANTITY	OF WORK			
☐ Highly productive in comparison to other students.	☐ More than expected in comparison with other students.	☐ Expected amount of productivity for students.	☐ Less than expected in comparison with other students.	☐ Very low in comparison with other students.	☐ Not applicable.	
JUDGEMENT						
☐ Exceptionally good. Decisions based on thorough analysis.	☐ Uses good common sense. Usually make good decisions.	☐ Judgment usually good in routine situations.	☐ Judgment often undependable.	☐ Poor judgment. Jumps to conclusions without sufficient knowledge.	☐ Not applicable.	
DEPENDABILITY						
☐ Can always be depended upon in any situation.	☐ Can usually be depended upon in most situations.	☐ Can be depended upon in routine situations.	☐ Somewhat unreliable, needs above average checking.	☐ Unreliable.	☐ Not applicable.	

RELATIONS WITH OTHERS					
☐ Always works in harmony with others. An excellent team worker.	☐ Congenial and helpful. Works well with associates.	☐ Most relations with others are harmonious under normal circumstances.	☐ Difficult to work with at times. Sometimes antagonizes others.	☐ Frequently quarrelsome and causes friction.	☐ Not applicable.
		CREA [*]	ΓΙVΙΤΥ		
☐ Continually seeks new and better ways of doing things; is extremely innovative.	☐ Frequently suggests new ways of doing things; is very imaginative.	☐ Has average amount of imagination; has reasonable amount of new ideas.	☐ Occasionally comes up with a new idea.	☐ Rarely has a new idea, is not very imaginative.	☐ Not applicable.
		сомми	NICATION		
WRITTEN Expression	☐ Exceptional	☐ Very good	☐ Good	☐ Satisfactory	☐ Unsatisfactory
ORAL Expression	☐ Exceptional	☐ Very good	☐ Good	☐ Satisfactory	☐ Unsatisfactory
ACCEPTANCE OF CRITICISM AND SUGGESTIONS				GROOMING	
☐ Appreciative or willing ☐ Resentful or		or reluctant	☐ Appropriate	☐ Inappropriate	
ATTENDANCE PUNCTUALITY					
	ATTEN	DANCE		PUNCT	UALITY
☐ Re	ATTEN		egular	PUNCT ☐ Regular	UALITY
	egular				☐ Irregular
				☐ Regular	☐ Irregular
MAJOR S	egular		AR	☐ Regular	☐ Irregular
MAJOR S	egular		1.	☐ Regular	☐ Irregular
1. 2.	STRENGTHS		1. 2.	☐ Regular	☐ Irregular
1. 2. 3.	Egular ETRENGTHS ERMANCE		1. 2. 3.	☐ Regular	□ Irregular EMENT

COMMENTS

Appendix B

Final Evaluation Confidential		
Student's Name:		_
Supervisor's Name:		_
Date of Evaluation:		_
Overall Performance and Outcome which learning objectives were met		ts/tasks assigned and degree to
Suggestions for development:		
(*Student's Signature)	Date	
(Instructor's Signature)	 Date	