Exercise Physiology Laboratory

HHP 431

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Taught by:

Kathe A. Gabel, PhD, RD, CSSD

Department of Health and Human Performance

College of Allied Health Professions

Spring, 2011

MONTANA STATE UNIVERSITY BILLINGS

MSU – Billings
College of Allied Health Professions
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Course Rubric & Title:	HHP 431 Exercise Physiology Laboratory
Instructor:	Kathe A. Gabel, PhD, RD, CSSD
Graduate Lab Instructor:	Christopher Jackson, ATC M.S. Graduate Student
Office Hours:	PE 117, Tuesday and Thursday, 1:00 – 4:00 p.m.
Lab Hours:	PE 12, 7:30 a.m. Tuesday, Wednesday and Thursday
Lactate Research:	PE 12, 7:30 a.m. Friday
Phone:	406-657-2927
E-mail:	kgabel@msubillings.edu
Required Lab Packet:	Gabel, K.A., (Spring, 2011) *Course Materials for HHP 431*.
Catalog Description:	HHP 431 Exercise Physiology, 1 cr. Co- or pre- requisite: HHP 430 Exercise Physiology
Lab Goals:	Upon successful course completion, you will be able to:

1. demonstrate knowledge & comprehension of physiological principles of human movement.
2. demonstrate professional and critical thinking in the application of exercise physiology principles in laboratory and field settings.

Lab Content: Most lab topics, but not all, are organized to correspond to the lectures.

Lab Policies: Your conduct is to be consistent with the Code of Student Conduct in the current MSU-B Student Handbook.

A student will fail the course if he or she participates in academic dishonesty, i.e. cheating, plagiarism, dishonesty, inappropriate use of electronic devices, or any violation of expectations listed in the MSU-B Student Handbook.

At this level of your education, you are expected to demonstrate professionalism in all behavior, i.e. respect for others, presentation & completion of projects, respect for diverse opinions, depth of inquiry, punctuality and participation in class discussions and activities.

Lab Attendance: Attendance to each lab is expected. Make-up labs are not available.

Lab Accommodations: If you have a documented disability, please contact the office of Disability Support Services (657-2283) during the first week of the course. They can assist you.

Course Evaluation: Grades will be assigned according to the following criteria

Grade	**Percent**	**Points**
A	93 – 100	186 - 200
A-	90 – 92	180 - 185
B+	87 – 89	174 - 179
B	83 – 86	166 - 173
B-	80 – 82	160 - 165
C+	77 – 79	154 - 159
C	73 – 76	146 - 153
C-	70 – 72	140 - 145
D+	67 – 69	134 - 139
D	63 – 66	126 - 133
D-	60 – 62	120 - 125
F	<60	<120

Your grade performance is determined by scores earned on laboratory reports, research participation, and the final skill and knowledge assessment.

Except for holidays, lab reports are due every Monday at 5:00 p.m.
For Monday holidays, labs are due on Tuesday at class time, i.e. 8:40 a.m.

Protocol – Participation in Human Performance Laboratory Activities
Acknowledgement of Personal Responsibility

Prior to participating in the lab activities in the Human Performance Laboratory at MSU-Billings,
I, _____(your legal name), agree to the following by initialing each acknowledgement, assumption, and release.

_____ acknowledge that I participate in each lab activity to learn, but can discontinue any activity if experiencing pain or not participate if unsafe for a documented medical condition.

_____ acknowledge that I can discontinue lab activity if experiencing pain or unusual discomfort without prejudice by the graduate teaching assistant or professor.

_____ acknowledge that I have honestly completed the PAR-Q and have met the criteria for participation in lab activities.

_____ acknowledge that I understand that lab participation may involve risk of injury or potential economic loss from injury.

_____ assume any and all risk of personal injuries to myself, including medical or hospital bills, permanent or partial disability, death, and damage to my property, caused by or arising from my participation in an lab activity.

_____ release, waive, discharge, and relinquish MSU-Billings and their representatives from any claim against them arising from my participation in lab activities.

_____ warrant that I am in good health and have no physical condition that would prevent me from participating in the lab activities as listed in the HHP 431 lab manual or revised labs.

This document relieves MSU-Billings and others from liability for personal injury, wrongful death and property damage caused by negligence. I have read this document, and sign it voluntarily.

_____ _____ _____
Printed Name Your signature Date

Consent to Participate in HHP 431 Research

You are asked to participate in a study for the project *Undergraduate Research integrated into the Classroom to Investigate the Effects of High Carbohydrate Intake on Concentrations of Lactate and Blood Glucose Before, During, and Post-Exercise in Trained Young Adults*.

This is a project approved and funded by Montana State University-Billings, as part of the RACE grant program for faculty. Your participation is voluntary, although reports and time associated with the research are required portions of HHP 431 – Exercise Physiology Laboratory.

The study is designed to test the effect of a high carbohydrate food item on blood glucose and lactate levels during a graduated test protocol on a cycle ergometer. As you participate in this study, you will be asked to perform the following activities:

a. After fasting or ingestion of a high carbohydrate food item, volunteer participants will exercise on the cycle ergometer until volitional exhaustion.

b. Volunteer participants will allow blood sampling (obtained by application of a lancet to a fingertip) before, during, and post-exercise.

c. Research technicians will be involved testing the exercise protocols, timing of procedures, collecting and analyzing data.

d. Research technicians will learn how to appropriately prepare the skin; load the glucose and lactate meters; obtain a viable fingertip blood sample; read, record, and interpret results.

Time for participation for this research project is scheduled for an hour at 7:30 a.m. on Fridays of selected weeks. Procedures will take place in HHP 12, the Exercise Physiology Laboratory.

Any personal information obtained during the study will be kept confidential and no information will be made public that identifies you as a participant. If any personal information and/or data are disclosed, it will be with your permission only. If you choose to participate, you may withdraw at any time without consequences. If you have any questions of concerns about this study, please visit with me.

I understand the procedures and activities described in this study. I will assume all risks when volunteering to participate in this study.

Printed name of Participant: _____

Signature of Participant: _____Date: _____

Signature of Researcher: _____Date: _____

Pictures taken during Summer 2010 Lactate Project

Alexa Turner, Kevin Morales, Aaron Duray, Evan Cook, Dr. Gabel

Justin Frank, Alexa Turner, Evan Cook, Dr. Gabel

Laboratory Schedule for Spring, 2011

		Possible	Earned
Jan. 14th, 7:30 a.m. – all Lab sections			**Orientation**
Week of Jan. 16th	Lab 1	15	_____
Lab 1 report due	Jan. 24th by 5:00 p.m.		
Week of Jan. 23rd	Lab 2	15	_____
Lab 2 report due	Jan. 31st by 5:00 p.m.		
Week of Jan. 30th	Lab 3	15	_____
Lab 3 report due	Feb. 7th by 5:00 p.m.		
Blue team – Lactate research – Friday – Feb. 4th			
Week of Feb. 6th	Lab 4	15	_____
Lab 4 report due	Feb. 14th by 5:00 p.m.		
Red team – Lactate research – Friday – Feb. 11th			
Week of Feb. 13th	Lab 5	15	_____
Lab 5 report due	Feb. 22nd by 8:40 a.m.		
Orange team – Lactate research – Friday – Feb. 18th			
Week of Feb. 20th	Lab 6	15	_____
Lab 6 report due	Feb. 28th by 5:00 p.m.		
Purple team – Lactate research – Friday – Feb. 25th			
Week of Feb. 27th	**Spring Break – Labs will not meet.**		
Week of March 6th	Lab 7	15	_____
Lab 7 report due	March 14th by 5:00 p.m.		

Week of March 13th	Lab 8	15	_____
Lab 8 report due	March 21st by 5:00 p.m.		
Week of March 20th	Lab 9	15	_____
Lab 9 report due	March 28th by 5:00 p.m.		
		Subtotal	_____*/135*

Week of March 27th Skills/Knowledge Assessment

Week of April 3rd Skills/Knowledge Assessment

Week of April 10th Skills/Knowledge Assessment

Skills/Knowledge Assessment	40	_____
Lactate/Glucose Research activities	25	_____
Total	200 points	_____/ 200 = _____%