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Syllabus for Clinical Exercise Physiology (KINE 4700)

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California State University, San Bernardino
Department of Kinesiology, College of Natural Sciences
KINE 4700, Clinical Exercise Physiology, Fall 2020

Course and Instructor Information

Instructor:
Office Location:
Telephone:
Email:
Office Hours:
Class Days/Time:
Seminar Room:
Laboratory Room:

Course Web Site

<http://blackboard.csusb.edu> To access the website for notes, announcements, discussion items, and grades, go to the website and log in using your student I.D. and password.

Catalog Description

KINE 4700. Clinical Exercise Physiology.

4 Units.

Prerequisites: KINE 3800
Exercise Physiology

Course Description

This is an advanced undergraduate course in Clinical Exercise Physiology designed to provide students with an understanding of recent advances in exercise physiology for “clinical” populations. Particular emphasis is placed on the acute and chronic responses to exercise in patients at risk for or having cardiac, pulmonary, metabolic and other diseases. Specific topics addressed include: pathophysiology of disease processes, clinical assessment of disease severity, fitness testing, and exercise rehabilitation in clinical populations. Students should have completed KINE 481 Exercise Physiology before enrolling in this course.

Student Learning Outcomes/Objectives

Upon successful completion of this course, students will be able to:

Learning Outcome (LO).

LO 1: Understand the scope, epidemiology and terminology related to these same important clinical diseases, disorders, and conditions with special attention to cardiovascular, metabolic pulmonary, orthopedic, immunological, and neurological conditions.

LO 2: To understand the physiology, pathophysiology and complications related to these same important clinical diseases, disorders, and conditions.

LO 3: To understand the clinical considerations of these same conditions including signs, symptoms and risk factors, diagnostic and laboratory evaluations graded exercise testing, and treatment.

LO 4: To understand the exercise considerations that need to be made with regard to these same conditions including the risks of exercise with disease, the exercise responses to the disease and related medications, the prescription of exercise specific to the disease, and the benefits of physical activity and exercise training on the disease.

Required Texts/Readings

Required Textbook

Title: ACSM's Clinical Exercise Physiology – 1st Edition
Author: Walter R. Thompson
ISBN: 978-1496387806
Copyright Year: 2019
Publisher: Wolters Kluwer
(Available in the CSUSB Bookstore)

Recommended Textbook

Title: ACSM's Exercise Management for Persons with Chronic Diseases and Disabilities
Author: Geoffrey E. Moore, J. Larry Durstine, Patricia L. Painter
ISBN: 978-0736074339
Copyright Year: 2009
Publisher: Human Kinetics
(Available in the CSUSB Bookstore)

Supplemental Learning Resources

Students will supplement their learning with resources from Khan Academy, CSUSB EIM on-campus, and pre-recorded clinical setting videos.

Other Equipment

Bring a scientific calculator for participation, quizzes, and exams. Other devices (e.g., graphing calculators, mobile phones, tablets, etc.) will not be permitted during quizzes and exams. Green Scantron forms (882-E) are required. You will need exercise attire (e.g., t-shirt, shorts, active footwear) during relevant lab activities.

Other Equipment

Students who are enrolled in activity courses or any course that requires physical activity as part of the course curriculum should bring a source of water of every class meeting.

Grading Policy

Exams: Three (3) exams will be administered throughout the term. Each exam will cover topics prior to that day, and students will have 100 minutes to complete it. Students must be present to take the exam; there will be no make-up dates for any exams.

Quizzes: Five (5) quizzes will be administered via blackboard throughout the quarter. Each quiz will cover topics prior to that week. Students will be responsible for completing all quizzes by specified due date.

Chronic Disease Presentation: Each student will be assigned a topic within the clinical exercise physiology scope (e.g., acute coronary syndrome, myocardial infarction, valvular disease, heart failure, stable angina, COPD, pulmonary hypertension, muscular dystrophy, multiple sclerosis, etc.) and provide the etiology, pathophysiology, and symptomatology of each disease. Furthermore, students will be required to provide disease specific consideration for cardiorespiratory and resistance exercise. Lastly, students will create an infographic summarizing 3 peer reviewed exercise related research articles.

In-class Assignments/Participation: This class requires active participation; each student is expected to participate and engage in class discussion. In-class assignments are used to supplement learning. Attendance is important, if a student is not present they will not receive credit or will they be allowed to make up in class assignments.

Laboratory Reports: Students will be responsible for completing lab reports for each lab. Reports should include a cover page with rubric for grading. Reports are to be submitted in APA format, Times New Roman, 12 inch font. All lab reports must be submitted by hand at the beginning of class. Submission even one minute late will be subject to a 10% deduction in total score. Submission past the end of class will not be accepted and will result in a zero.

Assignments	Points		% of Grade	Grading Scale			
In-class Assignments/Participation	125	125	12.5%		+		-
Exams (2)	100	200	20%	A	1000 - 930		929 - 900
Final Exam	200	200	20%	B	899 - 870	869 - 830	829 - 800
Quizzes (5)	25	125	12.5%	C	799 - 770	769 - 730	729 - 700
Chronic Disease Presentation	200	200	20%	D	699 - 670	669 - 630	629 - 600
Laboratory Reports	50	150	15%	F	≤ 500		

Note on Grading Policy: Learning is an active process and the student is responsible for his or her own experience. Due to limited class meetings per term, the course must proceed as scheduled. Any work not submitted by the due date as a result of an absence—including medical, university-related, family-related, or personal reasons—will not be excused. There will be no make-up dates for any of the items listed above. No work will be accepted after the due date. If an emergency arises, you must notify the instructor prior to each due date.

University Policies

Americans with Disabilities Act (ADA) (Accessibility) Statement:

It is the policy of California State University, San Bernardino to make reasonable accommodations for qualified students with disabilities, in accordance with the Americans with Disabilities Act (ADA). If you are in need of an accommodation for a disability in order to participate in this class, please contact Services to Students with Disabilities at UH-183, (909) 537-5238.

California State University, San Bernardino Diversity Statement:

California State University, San Bernardino (CSUSB) seeks a campus climate that welcomes, celebrates, and promotes respect for the entire variety of human experience. In our commitment to diversity, we welcome people from all backgrounds and we seek to include knowledge and values from many cultures in the curriculum and extra-curricular life of the campus community.

University Policies on Course Withdrawal, Cheating and Plagiarism:

Cheating and Plagiarism will not be tolerated and will result in failing grade for the assignment/exam. See Academic Regulations and Procedures in the University Bulletin of Courses for the University policies on course withdrawal, cheating, and plagiarism.

Department Professional Standards and Expectations of Students:

The Kinesiology Department at California State University, San Bernardino strives for optimal student success during their academic programs and in prospective jobs and/or post-graduate degree programs. We as a department have high ethical and professional standards that help promote an environment where all individuals have the opportunity to succeed academically, professionally, and personally. We expect these

standards to be followed on campus and in the classroom and at any external events or schools where you are representing CSUSB's Kinesiology Department. Some of these standards include: accountability of attending class on time and coming prepared, having respect for your peer and instructors, taking responsibility for your actions or lack of actions, practicing academic integrity, communicating appropriately via email in a professional manner (i.e., address professors correctly, identify what class you are in, use professional language), and strive to improve verbal professional communication with peers and instructors. More specific standards and expectations can be found on the Kinesiology Department website, <http://kine.csusb.edu/mission>.

Dropping and Adding:

You are responsible for understanding the policies and procedures about add/drops, academic renewal, etc. ([see CSUSB Bulletin](#)).

Course Schedule
Lecture Schedule
 (Note: subject to change)

Week	Day	Topic
1	1	Introduction: History of CEP; Across the Lifespan
	2	Across the Lifespan
Lab		
2	1	Across the Lifespan cont.
	2	Persons with Comorbidities
Lab		
3	1	CARDIOVASCULAR DISEASE Endothelia Function; Atherosclerosis
	2	Atherosclerosis cont.
Lab		
4	1	Acute Coronary Syndrome
	2	Hypertension
Lab		
5	1	Heart Failure
	2	Stroke
Lab		
6	1	Revascularization, Cardiac Rehab
	2	Exam 1
Lab		
7	1	Diabetes
	2	Obesity; Dyslipidemia
Lab		
8	1	Obstructive Pulmonary Disease
	2	Non-Obstructive Pulmonary Disease
Lab		
9	1	Musculoskeletal
	2	Musculoskeletal cont.
Lab		
10	1	Musculoskeletal
	2	Exam 2
Lab		
11	1	Physical Sensory Intellectual Impairment
	2	Physical Sensory Intellectual Impairment
Lab		
12	1	Physical Sensory Intellectual Impairment
	2	Mental & Behavior Health
Lab		
13	1	Mental & Behavior Health
	2	Cancer
Lab		

14	1	Cancer
	2	Presentations
Lab		
15	1	Presentations
	2	Presentations
Lab		
16		Final Examn