

KIN 187 COURSE SYLLABUS

FALL 2017

**SAN JOSÉ STATE UNIVERSITY
DEPARTMENT OF KINESIOLOGY**

Course Number: KIN 187**Course Title:** Clinical Exercise Physiology**Course Credit:** 3 credits**Class Time and Location:** Monday and Wednesday 10:30 – 11:45 am, SPX 163**Course Instructor:**

Areum Jensen, Ph.D.

Office: SPX 175

Office hours: Monday and Wednesday 9:00 – 10:15am, OR by appointment

E-mail: areum.jensen@sjsu.edu

Prerequisites: KIN 70 & KIN 155 (or equivalent courses) with grades of C- or better. (Note: GE Math, Introductory Chemistry, and Human Physiology are prerequisites for KIN 155)

Required Materials:

1. Moore, G.E., Durstine, J.L., & Painter P.L. (2016). ACSM's exercise management for persons with chronic diseases and disabilities (4th ed.). Champaign, IL: Human Kinetics.
2. ACSM's guidelines for exercise testing and prescription. (9th edition, 2013). Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins.
3. Canvas

Students can access course-related materials including syllabus, lecture notes, announcement, assignments, and research articles, etc. From the SJSU home page you can easily find the Canvas entry page. Announcement will be posted on Canvas and should be checked on a regular basis.

Course Description:

Physiological principles applied to the prevention, management, and treatment of chronic health conditions. Focus on the pathophysiology, acute response to exercise, chronic training effects, and development of appropriate conditioning and training programs for chronic conditions.

Student Learning Objectives (SLOs): Upon successful completion of the course requirements, the student will be able to:

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| SLO#1 | Evaluate the capacities and limitations for physical activity in clinical populations, taking into consideration disease processes and methods to assess functional capacity. |
| SLO#2 | Identify commonly used medications for specific clinical conditions and their effects on exercise capacity. |
| SLO#3 | Apply concepts of exercise physiology (e.g., acute and chronic physiological responses of the neuromuscular, bioenergetic, and cardiorespiratory systems) to the development of comprehensive conditioning programs for individuals with chronic conditions. |
| SLO#4 | Develop and modify programs to coincide with the limitations and capacities of individuals with chronic conditions. |
| SLO#5 | Sensitively identify and explain other individual differences that should be taken into consideration when designing exercise programs for diverse populations. |
| SLO#6 | Identify and explain the effects of muscle fatigue, overtraining, environmental factors, nutrition, and ergogenic aids on exercise programming for individuals with chronic conditions. |

Course Content

1. Disease processes and management
2. Effects of chronic diseases or special conditions on the acute response to exercise

3. Effects of chronic diseases or special conditions on adaptations to training
4. Interaction of exercise with selected medications
5. Recommendations for exercise testing and exercise programming
7. Factors that may impact exercise programming (e.g., muscle fatigue, environmental factors, nutritional status)
8. Diverse populations will include the following: Children and adolescents, Pregnancy and postpartum, Older individuals
9. Chronic diseases/conditions and disabilities include the following: Obesity, Hypertension, Dyslipidemia, Coronary artery disease and other cardiac conditions, Pulmonary diseases, Diabetes, Cancer, Arthritis and other joint disorders, Osteoporosis, Low back pain

Grading:

1. **Exams (Total 55%, 15% Midterm 1, 20% Midterm 2, 20% Final, SLO#1, 2, 3, 4, 6):** Exam questions will be based on assigned readings, lectures, and class discussions. Exams may include multiple choice, true-false, matching, and short answer questions and problems. Exams will be given on the dates scheduled. Make-up exams will be permitted ONLY in cases of serious illness or emergencies with proof of document, and requests for make-up exams will be evaluated on an individual basis. The student is responsible for notifying the instructor and arranging a make-up date prior to the exam. The exam must be completed before the next class meeting.

Final Exam: According to Academic Senate policy S06-4 a time period is set aside at the end of each semester for a formal examination period. All classes are expected to meet during the final examination period whether an examination is given or not. The final examination schedule is published each semester in the Class Schedule.

<http://info.sjsu.edu/web-dbgen/narr/static/catalog/final-exam-schedule-fall.html>

2. **Quizzes (15%, SLO#1, 2, 3, 4, 6):** You will have “open book” online quiz on Canvas due every Monday at 6am. In addition, “NO open book” in class quizzes will be given randomly during lecture. There will be NO make-up quizzes for both online and in class.
3. **Written Assignment (20%, SLO#1, 4, 5):** There are two journal clubs throughout the semester. You will write a summary of your assigned reading article as well as others from your group. In addition, there are two case study program design reports. All written work **MUST** be typed, **single spaced**, and proofread. (Check for grammar, spelling, and syntax). Points will be deducted for late assignments. More detailed information will be given in class.
4. **Oral Presentation (10%, SLO#1,4,5,6):** There is one group oral presentation at the end of the semester. More information will be given in class.

Grading Details	
Percentage (%)	Points
Midterm 1 (15%)	150
Midterm 2 (20%)	200
Final (20%)	200
Online and in class Quiz (15%)	150
Assignment (20%):	200
- Journal club summary (4%, 4%)	(80)
- Case study program design report (5%, 7%)	(120)
Oral presentation (10%):	100
Total (100%)	1000

Final Letter Grade:	(%)
A+ : 97 – 100	
A : 93– 96.9	C : 73 – 76.9
A- : 90 – 92.9	C- : 70 – 72.9
B+ : 87 – 89.9	D+ : 67 – 69.9
B : 83 – 86.9	D : 63 – 66.9
B- : 80 – 82.9	D- : 60 – 62.9
C+ : 77 – 79.9	F : < 59.9

University Policies

Per University Policy S16-9, university-wide policy information relevant to all courses, such as academic integrity, accommodations, etc. will be available on Office of Graduate and Undergraduate Programs' Syllabus Information web page at <http://www.sjsu.edu/gup/syllabusinfo/>

Library Liaison:

The KIN library liaison is Adriana Poo (Adriana.poo@sjsu.edu), (408) 808-2019.

Important date:

Last day to drop a class: **Wednesday, September 6** without an Entry on Student Permanent Record

Last day to add courses and register late: **Wednesday, September 13**

Enrollment Census Date: **Thursday, September 21** After this date, Adds will not be included in the Chancellor's Enrollment Report

KIN 187. Course Schedule (can be modified)

DATE	TOPIC	CHAPTER	ASSIGNMENTS
W, Aug 23 rd	Introduction & course overview		
M, Aug 28 th	Benefits and risks of physical activity	CDD: Prefaces, Chaps. 1, 2 <i>Guide: Chaps. 1, 2, 3</i>	Canvas Quiz 1: by 6am Personal essay due in class
W, Aug 30 th	Screening/Clinical exercise testing/programing	CDD: Chap. 3 <i>Guide: Chaps. 2, 3, 5, 6</i>	
M, Sep 4 th	LABOR DAY : NO CLASS		Tutorial due on Canvas
W, Sep 6 th	Screening/Clinical exercise testing/programing	CDD: Chap. 3 <i>Guide: Chaps. 2, 3, 5, 6</i>	
M, Sep 11 th	Jeopardy competition		Canvas Quiz 2
W, Sep 13 th	Chronic conditions associated with physical inactivity	CDD: Chap. 6 <i>Guide: Chap. 10</i>	
M, Sep 18 th	Hypertension/dyslipidemia/ obesity/metabolic syndrome		Canvas Quiz 3
W, Sep 20 th	<i>Exercise Is Medicine Seminar Series "Type 1 Diabetes and The Effect of Exercise"</i>	<i>10am-12pm Location to be announced</i>	
M, Sep 25 th	Metabolic disease: Diabetes	<i>Guide: Chap. 10 Management of Hyperglycemia in Type 2 Diabetes</i>	Canvas Quiz 4
W, Sep 27 th	Cardiovascular Disease: Cardiac: Arrhythmias	CDD: Chaps. 10, 11	
M, Oct 2 nd	Catch up and review		Canvas Quiz 5
W, Oct 4 th	Midterm Exam #1		
M, Oct 9 th	Cardiovascular Disease: Chronic heart failure (CAD & MI), Stroke	CDD: Chap. 25 My Stroke of Insight: Jill Bolte Taylor, Ph.D.	Canvas Quiz 6
W, Oct 11 th	Cardiovascular Disease: Chronic heart failure (CAD & MI), Stroke	CDD: Chap. 25 My Stroke of Insight: Jill Bolte Taylor, Ph.D.	

M, Oct 16 th	Pulmonary Diseases	CDD: Chap. 16 <i>Guide: Chap. 10</i> COPD Essentials National Asthma Control Initiative	Canvas Quiz 7
W, Oct 18 th	Journal club 1 Practice case study: Guide		Read assigned articles
M, Oct 23 rd	Pulmonary Diseases	CDD: Chap. 16 <i>Guide: Chap. 10</i>	Canvas Quiz 8
W, Oct 25 th	Cancer	CDD: Chap. 8 <i>Guide: Chap. 10</i>	Due: JC summary 1
M, Oct 30 th	Neuromuscular condition: Spinal cord injuries	CDD: Chap. 25 <i>Guide: Chap. 10</i>	Canvas Quiz 9
W, Nov 1 st	Midterm Exam #2	CVD, Pulmonary, Cancer 5 JC articles	
M, Nov 6 th	Neuromuscular condition: Cerebral palsy	CDD: Chap. 27 <i>Guide: Chap. 10</i>	Canvas Quiz 10 Due: Case study report 1
W, Nov 8 th	Case study		
M, Nov 13 th	PA for Children and Adolescents Children with autism spectrum disorder	CDD: <i>Guide: Chap. 8</i> Youth Resistance Training: Updated Position Statement	Canvas Quiz 11
W, Nov 15 th	Older Adults, Osteoporosis, Arthritis	CDD: Chap. 6 <i>Guide: Chap. 8, 10</i>	Read assigned articles
M, Nov 20 th	Journal club 2		Canvas Quiz 12
W, Nov 22 nd	Thanksgiving : NO CLASS		
M, Nov 27 th	Arthritis Lower Back Pain	CDD: Chap. 6 <i>Guide: Chap. 10</i>	Canvas Quiz 13
W, Nov 29 th	Catch up and review		Due: JC summary 2
M, Dec 4 th	Presentation		
W, Dec 6 th	Presentation		
M, Dec 11 th	Presentation & Final review		Due: Case study report 2
F, Dec 15 th 9:45-12pm	FINAL EXAM scheduled by the University Academic Calendar	Old material from midterm 1 & 2, AND New material	