

KIN 187 COURSE SYLLABUS

FALL 2018

**SAN JOSÉ STATE UNIVERSITY  
DEPARTMENT OF KINESIOLOGY**

**Course Number:** KIN 187-02**Course Title:** Clinical Exercise Physiology**Course Credit:** 3 credits**Class Time and Location:** Tuesday and Thursday 1:30 – 2:45 am, SPX 163**Course Instructor:**

Areum Jensen, Ph.D.

Office: SPX 175

Office hours: Tuesday 12-1:15pm, 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 (4<sup>th</sup> ed.). Champaign, IL: Human Kinetics.
2. ACSM's guidelines for exercise testing and prescription. (10<sup>th</sup> edition, 2017). 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 50%, 20% Midterm, 30% 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 (20%, SLO#1, 2, 3, 4, 6):** You will have “open book” online quiz on Canvas due every Tuesday 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. **Journal Club Article Assignment (5%, SLO#1, 4, 5):** You will present and write a summary of your assigned reading article as well as others from your group.
4. **Case Study Report Assignment (15%, SLO#1, 4, 5):** 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.
5. **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 (20%)	200
Final (30%)	300
Online and in class Quiz (20%)	200
Assignment (5%):	
- Journal club summary	50
Case study (25%):	250
- Program design report I (5%)	(50)
- Program design report II (10%)	(100)
- Oral presentation (10%):	(100)
<b>Total (100%)</b>	<b>1000</b>

Final Letter Grade:	(%)
A+ : 97 – 100	C+ : 77 – 79.9
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
	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](mailto:Adriana.poo@sjsu.edu)), (408) 808-2019.

**Important date:**

Last day to drop a class without "W" grade: **Friday, August 31** without an Entry on Student Permanent Record

Last day to add courses and register late: **Monday, September 10**

Enrollment Census Date: **Tuesday, September 18**. 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
<b>T,</b> <b>Aug 21<sup>st</sup></b>	Introduction & Course overview		
<b>Th,</b> <b>Aug 23<sup>rd</sup></b>	Benefits and risks of physical activity	CDD: Prefaces, Chaps. 1, 2 <i>Guide: Chaps. 1, 2, 3</i>	
<b>T,</b> <b>Aug 28<sup>th</sup></b>	Screening/clinical exercise testing/programing	CDD: Chap. 3 <i>Guide: Chaps. 2, 3, 5, 6</i>	DUE 7am: Practice Canvas Quiz 0 DUE in class: Personal essay
<b>Th,</b> <b>Aug 30<sup>th</sup></b>	Screening/clinical exercise testing/programing	CDD: Chap. 3 <i>Guide: Chaps. 2, 3, 5, 6</i>	Tutorial due on Canvas
<b>T,</b> <b>Sep 4<sup>th</sup></b>	Chronic conditions associated with physical inactivity	CDD: Chap. 6 <i>Guide: Chap. 10</i>	Canvas Quiz 1
<b>Th,</b> <b>Sep 6<sup>th</sup></b>	Exercise is Medicine Seminar Series II : Breast Cancer and the Effect of Exercise	<i>The Dr. Martin Luther King Jr. Library Room 22 5 10am-2pm</i>	
<b>T,</b> <b>Sep 11<sup>th</sup></b>	Hypertension/dyslipidemia/ obesity/metabolic syndrome		Canvas Quiz 2
<b>Th,</b> <b>Sep 13<sup>th</sup></b>	<b>Jeopardy competition</b>		
<b>T,</b> <b>Sep 18<sup>th</sup></b>	Metabolic disease: Diabetes	<i>Guide: Chap. 10</i> Management of Hyperglycemia in Type 2 Diabetes	Canvas Quiz 3
<b>Th,</b> <b>Sep 20<sup>th</sup></b>	Metabolic disease: Diabetes	<i>Guide: Chap. 10</i> Management of Hyperglycemia in Type 2 Diabetes	
<b>T,</b> <b>Sep 25<sup>th</sup></b>	Cardiovascular Disease: Cardiac: Arrhythmias	CDD: Chaps. 10, 11	Canvas Quiz 4
<b>Th,</b> <b>Sep 27<sup>th</sup></b>	Cardiovascular Disease: Chronic heart failure (CAD)	CDD: Chap. 25	
<b>T,</b> <b>Oct 2<sup>nd</sup></b>	Cardiovascular Disease: Chronic heart failure (MI)	CDD: Chap. 25	Canvas Quiz 5
<b>Th,</b> <b>Oct 4<sup>th</sup></b>	Cardiovascular Disease: Stroke	CDD: Chap. 25	

		My Stroke of Insight: Jill Bolte Taylor, Ph.D.	
<b>T, Oct 9<sup>th</sup></b>	<i>Catch up and review</i>		Canvas Quiz 6
<b>Th, Oct 11<sup>th</sup></b>	<b>CONFERENCE: NO CLASS</b>		
<b>T, Oct 16<sup>th</sup></b>	<b>Midterm Exam</b>		
<b>Th, Oct 18<sup>th</sup></b>	Pulmonary Diseases	CDD: Chap. 16 <i>Guide: Chap. 10</i> COPD Essentials National Asthma Control Initiative	Canvas Quiz 7
<b>T, Oct 23<sup>rd</sup></b>	Pulmonary Diseases (continued) Cancer	CDD: Chap. 8 <i>Guide: Chap. 10</i>	Canvas Quiz 8
<b>Th, Oct 25<sup>th</sup></b>	Cancer	CDD: Chap. 8 <i>Guide: Chap. 10</i>	
<b>T, Oct 30<sup>th</sup></b>	Neuromuscular condition: Spinal cord injuries	CDD: Chap. 25 <i>Guide: Chap. 10</i>	Canvas Quiz 9
<b>Th, Nov 1<sup>st</sup></b>	Neuromuscular condition: Cerebral palsy	CDD: Chap. 27 <i>Guide: Chap. 10</i>	
<b>T, Nov 6<sup>th</sup></b>	PA for Children and Adolescents	CDD: <i>Guide: Chap. 8</i> Youth Resistance Training: Updated Position Statement	Canvas Quiz 10 <b>Due: Case study report 1</b>
<b>Th, Nov 8<sup>th</sup></b>	<b>Case study discussion</b>		
<b>T, Nov 13<sup>th</sup></b>	Children with autism spectrum disorder		Canvas Quiz 11
<b>Th, Nov 15<sup>th</sup></b>	Older Adults Osteoporosis	CDD: Chap. 6 <i>Guide: Chap. 8, 10</i>	
<b>T, Nov 18<sup>th</sup></b>	Arthritis Lower Back Pain	CDD: Chap. 6 <i>Guide: Chap. 10</i>	Canvas Quiz 12
<b>W-Th, Nov 21-22</b>	<b>THANKSGIVING: NO CLASS</b>		
<b>T, Nov 27<sup>th</sup></b>	<b>Journal club 1</b>		Canvas Quiz 13
<b>Th, Nov 29<sup>th</sup></b>	<b>Journal club 2</b>		
<b>T, Dec 4<sup>th</sup></b>	<b>Presentation</b>		<b>Due: JC summary 2</b>
<b>Th, Dec 6<sup>th</sup></b>	<b>Presentation</b>		
<b>Mon, Dec 10<sup>th</sup></b>	<b>Presentation</b>		
<b>Th Dec 13<sup>th</sup></b>	<b>FINAL EXAM 12:15pm-2:30pm</b>		<b>Due: Final case study report</b>