

KIN 157 COURSE SYLLABUS

FALL 2018

**SAN JOSÉ STATE UNIVERSITY  
DEPARTMENT OF KINESIOLOGY**

**Course Number:**

KIN 157-01 (Lecture), 02, 03, 04 (Laboratory)

**Course Title:**

Physiological Assessment

**Course Credit:**

3 credits

	<b>Section 01 (lec) and 02 (lab)</b>	<b>Section 03 (lab)</b>	<b>Section 04 (lab)</b>
<b>Classroom</b>	SPX 160 (lec) YUH 233 (lab)	YUH 233	YUH 233
<b>Class time</b>	M 9:30-10:20am (lec) MW 10:30-12:20pm (lab)	MW 12:30-2:20pm	TTh 2:30-4:20pm
<b>Instructor</b>	<b>Areum Jensen, Ph.D.</b>	<b>Stephanie Rosales, B.S.</b>	<b>Linda Wilkin, Ph.D.</b>
<b>Office</b>	SPX 175	TBA	SPX 156
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<b>Office hours</b>	T 12-1:15pm, AND W 9:00-10:15am, OR by appointment	By appointment	T 9:00 – 10:00am OR by appointment

**Prerequisites:** Chem 30A, GE Math, Biol 66, KIN 70 (C- or better), KIN 155 (C- or better)

**Course Description:**

Use of exercise physiology instrumentation to assess physiological characteristics of human performance, interpret results, and implement corrective strategies, when appropriate.

**Kinesiology Undergraduate Major Program Learning Outcomes (KIN PLOs)**

At the end of a Bachelor of Science degree program in the Department of Kinesiology, students should be able to:

- 1) explain, identify, and/or demonstrate the theoretical and/or scientific principles that can be used to address issues or problems in the sub-disciplines in kinesiology.
- 2) effectively communicate in writing (clear, concise, and coherent) on topics in kinesiology.
- 3) effectively communicate through an oral presentation (clear, concise, and coherent) on topics in kinesiology.
- 4) utilize their experiences across a variety of health-related and skill-based activities to inform their scholarship and practice in the sub-disciplines in kinesiology.
- 5) identify and analyze social justice and equity issues related to kinesiology for diverse populations.

**Course Goal**

Students will develop competency in using laboratory instruments to perform physiological assessments, interpret results and, when appropriate, implement appropriate corrective strategies.

**Course Learning Outcomes (CLOs)**

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

- 1) demonstrate knowledge and use of instruments and procedures utilized in the assessment of physiological functioning.
- 2) demonstrate proficiency in administering selected physiological tests.
- 3) demonstrate knowledge of the underlying principles, benefits, and limitations of selected physiological tests.

- 4) interpret and explain test results.
- 5) explain and apply corrective strategies to address impairments and muscular imbalances.
- 6) demonstrate sensitivity to age, gender, cultural, and other individual differences as they relate to the physiological assessment of human performance and application of corrective strategies.
- 7) demonstrate critical thinking and problem solving skills.

### Course Content

- 1) Anthropometry & body composition
  - (a) Height, weight, circumferences, bone diameters
  - (b) Bioelectrical impedance analysis (BIA)
  - (c) Skinfold measurements
  - (d) Hydrostatic weighing
  - (e) Air displacement plethysmography (Bod Pod)
  - (f) Dual-energy X-ray absorptiometry (DXA)
- 2) Pulmonary function
  - (a) Spirometry - static and dynamic lung volumes
  - (b) Environmental conditions
- 3) Muscular strength, endurance, & power assessment (e.g., 1 RM, Humac norm)
- 4) Flexibility assessment – Joint range of motion (goniometer), etc
- 5) Posture assessment
- 6) Balance assessment – Biodex, field tests (e.g., Y-balance test, BESS, Berg balance scale, Fullerton advanced balance scale)
- 7) Health screening – Trifit, Cholestech
- 8) Physical activity assessment
- 9) Miscellaneous topics
  - (a) Equipment calibration & operation
  - (b) Selection of tests
  - (c) Equipment specifications
  - (d) Analysis & interpretation of results

### Required Materials:

1. Heyward, V. H., & Wagner, D. R. (2004). *Applied body composition assessment* (2<sup>nd</sup> ed.). Champaign, IL: Human Kinetics. ISBN: 978-0-7360-4630-5
2. Canvas  
Students can access course-related materials including syllabus, lecture notes, “lab material”, 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.

### Grading:

1. **Written Final Exam (20%, KIN PLO 1,2,5 and CLO 1,3,4,5,6,7):** Exam questions will be based on assigned readings, lectures, laboratory, and class discussions. Exam may include multiple choice, true-false, matching, and short answer questions and problems. Exam 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.  
**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/static/catalog/final-exam-schedule-fall.html>

2. **Quizzes (20%, KIN PLO 1 and CLO 1,3):** You will have “open book” online quiz on Canvas due every Monday at 7am. In addition, “NO open book” in class quiz will be given as scheduled during lecture (See class schedule on page 4-7). There will be NO make-up quiz for both online and in class.
3. **Lab write ups (45%, KIN PLO 1,4 and CLO 1,3):** Guidelines and forms are posted on Canvas. Refer to the class schedule for due dates. Written work must be typed or neatly hand-written. Remember to proofread and check for completeness before turning in.
4. **Competency test (10%, KIN PLO 1,4 and CLO 1,2):** Students will demonstrate competency on the following: measuring height, weight, circumferences, diameters, skinfolds, and joint range of motion. Grading on competency tests are A (10%), B (8.5%), F (3%), no attempt (0%). Students earning less than an A grade will receive feedback and may, after further practice, retake the competency on another day. If a student does not attempt a competency by the first deadline date, the score may be lowered one letter grade for each week, or part of a week, that the deadline is missed.
5. **Participation, Professionalism, and Care of Equipment (5%, KIN PLO 4 and CLO 1):** This is a professional preparation course. Students are expected to:
  - Be fully prepared; actively and enthusiastically participate in all laboratory sessions and class discussions.
    - ✓ Read assigned material and lab instructions BEFORE class. (Lecture and lab time will be used to present material and help students master techniques. Students are directed to the syllabus and course reader for answers to many of their procedural questions.)
    - ✓ Bring textbook, calculator, lab printouts and other necessary supplies to class.
    - ✓ Dress appropriately for scheduled activities.
  - Participate in demonstrations and data collection.
  - PRACTICE, PRACTICE, PRACTICE techniques. Use your class time effectively! Ask for guidance from instructor if having difficulty mastering a technique.
  - Complete assignments on time.
  - Use equipment properly; clean and put away all equipment before leaving lab area.
  - Keep lab clean. No food or drinks are allowed in the lab, except water.
  - Maintain lab security (lock lab if leaving for even 1 min).

Students who consistently demonstrate professionalism, as described above, WILL be able to complete all lab assignments in a timely manner. Students who choose not to use laboratory time effectively may not complete all assignments, and should not expect the instructor to ensure that they do. In a lab-intensive class, if you fall behind it may be impossible to catch up.

The most effective class results when EACH class member makes an INDIVIDUAL COMMITMENT to be an active participant in the teaching/learning process. Individual contributions and differing viewpoints will be appreciated and respected. Students are responsible for material presented and announcements made in each class. Students who miss class (a rare occurrence!) are responsible for obtaining material from another student BEFORE seeing the instructor about content missed.

Grading Details	
Percentage (%)	Points
Written Final exam (20%)	200
Online and in class Quiz (20%)	200
Lab turn ins (45%)	450
Competency test (10%)	100
Participation, professionalism, care of equipment (5%)	50
<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](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

### 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 157-01, 02, and 03. Course Schedule (can be modified)

DATE	TOPIC	CHAP	ASSIGNMENTS DEADLINES
Wed, Aug 22 <sup>nd</sup>	Lab 0: <i>Introduction &amp; Course overview</i>		
Mon, Aug 27 <sup>th</sup>	<i>Lec: Body composition assessment</i> Lab 1: Anthropometric measurement (height, weight, circumferences, diameters)	Chap 1,5	Due 7am: Canvas QUIZ 0 (practice quiz) Due in class: Personal essay
Wed, Aug 29 <sup>th</sup>	Lab 1: (continued)		
Mon, Sep 3 <sup>rd</sup>	<b>LABOR DAY: NO CLASS</b>		
Wed, Sep 5 <sup>th</sup>	Lab 1: (continued)		Due in lab: Comp (Ht/Wt)
Mon, Sep 10 <sup>th</sup>	<i>Lec: BIA</i> Lab 1: (continued) Lab 2: Bioelectrical impedance	Chap 6,10	Due 7am: Canvas QUIZ 1
Wed, Sep 12 <sup>th</sup>	Lab 2: (continued)		<b><u>DUE Lab 1. Anthropometric measures</u></b>
Mon, Sep 17 <sup>th</sup>	<i>Lec: Skinfolds</i> <i>In class quiz 1. Anthropometric &amp; BIA</i> Lab 2: (continued) Lab 3: Skinfolds measurement	Chap 3	Due 7am: Canvas QUIZ 2 Due in lab: Comp (circ)
Wed, Sep 19 <sup>th</sup>	Lab 3: (continued)	Chap 2,4	<b><u>DUE Lab 2. BIA</u></b>
Mon, Sep 24 <sup>th</sup>	<i>Lec: Hydrostatic weighing</i> <i>In class quiz 2. Skinfolds</i> Lab 3: (continued) Lab 4: Hydrostatic weighing		Due 7am: Canvas QUIZ 3
Wed, Sep 26 <sup>th</sup>	Lab 3&4: (continued)	Chap 1,3	Due in lab: Comp (dia)
Mon, Oct 1 <sup>st</sup>	<i>Lec: Air displacement plethysmography</i> <i>In class quiz 3. Hydrostatic weighing</i> Lab 4: (continued) Lab 5: Air displacement plethysmography (BodPod)		Due 7am: Canvas QUIZ 4 <b><u>DUE Lab 3. Skinfolds</u></b>
Wed, Oct 3 <sup>rd</sup>	Lab 4&5: (continued)	Chap 3	
Mon, Oct 8 <sup>th</sup>	<i>Lec: Dual energy X-ray absorptiometry</i> <i>In class quiz 4. ADP</i> Lab 4&5: (continued) Lab 6: DXA		Due 7am: Canvas QUIZ 5

<b>Wed, Oct 10<sup>th</sup></b>	Lab 5&6: (continued)	Chap 3	Due: Comp (Skinfold) <b><u>DUE Lab 4. Hydrostatic weighing</u></b>
<b>Mon, Oct 15<sup>th</sup></b>	<b><i>Lec: Pulmonary function test</i></b> <b><i>In class quiz 5. DXA</i></b> Lab 5&6: (continued) Lab 7: Pulmonary function test		Due 7am: Canvas QUIZ 6
<b>Wed, Oct 17<sup>th</sup></b>	Lab 6&7: (continued)		<b><u>DUE Lab 5. Air displacement plethysmography</u></b> <b><u>DUE Lab Summary</u></b>
<b>Mon, Oct 22<sup>nd</sup></b>	<b><i>Lec: Muscular strength &amp; endurance</i></b> <b><i>In class quiz 6. Pulmonary function</i></b> Lab 7: (continued) Lab 8: Muscular strength & endurance		Due 7am: Canvas QUIZ 7
<b>Wed, Oct 24<sup>th</sup></b>	Lab 7&8: (continued)		
<b>Mon, Oct 29<sup>th</sup></b>	<b><i>Lec: Flexibility</i></b> <b><i>In class quiz 7. Muscular strength &amp; endurance</i></b> Lab 7&8: (continued) Lab 9: Flexibility		Due 7am: Canvas QUIZ 8
<b>Wed, Oct 31<sup>st</sup></b>	Lab 8&9: (continued)		<b><u>DUE Lab 7. Pulmonary test</u></b> Due: Comp (ROM)
<b>Mon, Nov 5<sup>th</sup></b>	<b><i>Lec: Balance &amp; Posture</i></b> <b><i>In class quiz 8. Flexibility</i></b> Lab 8&9: (continued) Lab 10&11: Balance & Posture		Due 7am: Canvas QUIZ 9
<b>Wed, Nov 7<sup>th</sup></b>	Lab 9,10,&11: (continued)		<b><u>DUE Lab 8. Muscular strength &amp; endurance</u></b>
<b>Mon, Nov 12<sup>th</sup></b>	<b>VETERAN'S DAY: NO CLASS</b>		
<b>Wed, Nov 14<sup>th</sup></b>	Lab 10 & 11: (continued)		<b><u>DUE Lab 9. Flexibility</u></b>
<b>Mon, Nov 19<sup>th</sup></b>	<b><i>Lec: Health screening (Trifit &amp; Cholesterol test)</i></b> <b><i>In class quiz 10. Posture</i></b> Lab 11: (continued) Lab 12: Trifit & Cholesterol test		<b><u>DUE Lab 10. Balance</u></b> Due 7am: Canvas QUIZ 10
<b>Wed, Nov 21<sup>st</sup></b>	<b>THANKSGIVING: NO CLASS</b>		
<b>Mon, Nov 26<sup>th</sup></b>	<b><i>Lec: PA assessment</i></b> <b><i>In class quiz 11. Health screening</i></b> Lab 11&12: (continued) Lab 13: PA assessment		Due 7am: Canvas QUIZ 11
<b>Wed, Nov 28<sup>th</sup></b>	Lab 12,&13: (continued)		<b><u>DUE Lab 11. Posture</u></b>
<b>Mon, Dec 3<sup>rd</sup></b>	<b><i>Lec: Jeopardy competition</i></b> Lab: 12&13		Due 7am: Canvas QUIZ 12
<b>Wed, Dec 5<sup>th</sup></b>	Lab: Competency testing		<b><u>DUE Lab 12 &amp; 13. Cholesterol test and PA assessment</u></b>
<b>Mon, Dec 10<sup>th</sup></b>	<b><i>Lec: Review</i></b> Lab: Last day for competency testing		
<b>F Dec 14<sup>th</sup></b>	<b>FINAL EXAM STARTS AT 7:15am – 9:30am</b>		

**KIN 157-03. Course Schedule (can be modified)**

DATE	TOPIC	CHAP	ASSIGNMENTS DEADLINES
T, Aug 21 <sup>st</sup>	Lab 0: <i>Introduction &amp; Course overview</i>		
Th, Aug 23 <sup>rd</sup>	Lab 1: Anthropometric measurement (height, weight, circumferences, diameters)	Chap 1,5	Due MON 7am: Canvas QUIZ 0 (practice quiz) Due in MON class: Personal essay
T, Aug 28 <sup>th</sup>	Lab 1: (continued)		
Th, Aug 30 <sup>th</sup>	Lab 1: (continued)		
Mon, Sep 3 <sup>rd</sup>	<b>LABOR DAY: NO CLASS</b>		
T, Sep 4 <sup>th</sup>	Lab 1: (continued)		Due in lab: Comp (Ht/Wt)
Th, Sep 6 <sup>th</sup>	Lab 2: Bioelectrical impedance		
T, Sep 11 <sup>th</sup>	<i>MON Lec: BIA</i> Lab 1&2: (continued)	Chap 6,10	Due MON 7am: Canvas QUIZ 1
Th, Sep 13 <sup>th</sup>	Lab 2: (continued)		<b><u>DUE Lab 1. Anthropometric measures</u></b>
T, Sep 18 <sup>th</sup>	<i>MON Lec: Skinfolds</i> <i>In class quiz 1. Anthropometric &amp; BIA</i> Lab 2: (continued) Lab 3: Skinfolds measurement	Chap 3	Due MON 7am: Canvas QUIZ 2 Due in lab: Comp (circ)
Th, Sep 20 <sup>th</sup>	Lab 3: (continued)	Chap 2,4	<b><u>DUE Lab 2. BIA</u></b>
T, Sep 25 <sup>th</sup>	<i>MON Lec: Hydrostatic weighing</i> <i>In class quiz 2. Skinfolds</i> Lab 3: (continued) Lab 4: Hydrostatic weighing		Due MON 7am: Canvas QUIZ 3
Th, Sep 27 <sup>th</sup>	Lab 3&4: (continued)	Chap 1,3	Due in lab: Comp (dia)
T, Oct 2 <sup>nd</sup>	<i>MON Lec: Air displacement plethysmography</i> <i>In class quiz 3. Hydrostatic weighing</i> Lab 4: (continued) Lab 5: Air displacement plethysmography (BodPod)		Due MON 7am: Canvas QUIZ 4 <b><u>DUE Lab 3. Skinfolds</u></b>
Th, Oct 4 <sup>th</sup>	Lab 4&5: (continued)	Chap 3	
T, Oct 9 <sup>th</sup>	<i>MON Lec: Dual energy X-ray absorptiometry</i> <i>In class quiz 4. ADP</i> Lab 4&5: (continued) Lab 6: DXA		Due MON 7am: Canvas QUIZ 5
Th, Oct 11 <sup>th</sup>	Lab 5&6: (continued)	Chap 3	Due: Comp (Skinfold) <b><u>DUE Lab 4. Hydrostatic weighing</u></b>
T, Oct 16 <sup>th</sup>	<i>MON Lec: Pulmonary function test</i> <i>In class quiz 5. DXA</i> Lab 5&6: (continued) Lab 7: Pulmonary function test		Due MON 7am: Canvas QUIZ 6
Th, Oct 18 <sup>th</sup>	Lab 6&7: (continued)		<b><u>DUE Lab 5. Air displacement plethysmography</u></b> <b><u>DUE Lab Summary</u></b>
T, Oct 23 <sup>rd</sup>	<i>MON Lec: Muscular strength &amp; endurance</i> <i>In class quiz 6. Pulmonary function</i>		Due MON 7am: Canvas QUIZ 7

	Lab 7: (continued) Lab 8: Muscular strength & endurance		
<b>Th, Oct 25<sup>th</sup></b>	Lab 7&8: (continued)		
<b>T, Oct 30<sup>th</sup></b>	<b>MON Lec: Flexibility</b> <b>In class quiz 7. Muscular strength &amp; endurance</b> Lab 7&8: (continued) Lab 9: Flexibility		Due MON 7am: Canvas QUIZ 8
<b>Th, Nov 1<sup>st</sup></b>	Lab 8&9: (continued)		<b><u>DUE Lab 7. Pulmonary test</u></b> Due: Comp (ROM)
<b>T, Nov 6<sup>th</sup></b>	<b>Lec: Balance &amp; Posture</b> <b>In class quiz 8. Flexibility</b> Lab 8&9: (continued) Lab 10&11: Balance & Posture		Due MON 7am: Canvas QUIZ 9
<b>Th, Nov 8<sup>th</sup></b>	Lab 9,10,&11: (continued)		<b><u>DUE Lab 8. Muscular strength &amp; endurance</u></b>
<b>Mon, Nov 12<sup>th</sup></b>	<b>VETERAN'S DAY: NO CLASS</b>		
<b>T, Nov 13<sup>th</sup></b>	Lab 10&11: (continued)		<b><u>DUE Lab 9. Flexibility</u></b>
<b>Th, Nov 15<sup>th</sup></b>	Lab 10&11: (continued)		
<b>T, Nov 18<sup>th</sup></b>	<b>MON Lec: Health screening (Trifit&amp;Cholesterol test)</b> <b>In class quiz 10. Posture</b> Lab 11: (continued) Lab 12: Trifit & Cholesterol test		<b><u>DUE Lab 10. Balance</u></b> Due MON 7am: Canvas QUIZ 10
<b>W-Th, Nov 21-22</b>	<b>THANKSGIVING: NO CLASS</b>		
<b>T, Nov 27<sup>th</sup></b>	<b>MON Lec: PA assessment</b> <b>In class quiz 11. Health screening</b> Lab 11&12: (continued) Lab 13: PA assessment		Due MON 7am: Canvas QUIZ 11
<b>Th, Nov 29<sup>th</sup></b>	Lab 12&13: (continued)		<b><u>DUE Lab 11. Posture</u></b>
<b>T, Dec 4<sup>th</sup></b>	<b>MON Lec: Jeopardy competition</b> Lab: 12&13		Due MON 7am: Canvas QUIZ 12
<b>Th, Dec 6<sup>th</sup></b>	Lab: Last day for competency testing		<b><u>DUE Lab 12 &amp; 13. Cholesterol test and PA assessment</u></b>
<b>Mon, Dec 10<sup>th</sup></b>	<b>MON Lec: Review</b>		
<b>F Dec 14<sup>th</sup></b>	<b>FINAL EXAM STARTS AT 7:15am – 9:30am</b>		