

**San José State University
CHHS/Dept. of Kinesiology
KIN 157, Physiological Assessment, Spring 2022**

Lecture

Instructor: Peggy Plato, Ph.D.

Office Location: SPX 174

Email: Peggy.Plato@sjsu.edu

Office Hours (online): Tuesdays: 10:00 am – 12:00 pm
<https://sjsu.zoom.us/j/88636508030?pwd=UC8xNXZ5VmNvT0pQY1h1OUUwdmd1QT09>
 Drop in via Zoom; other times available by appointment

Class Days/Time: Tuesdays 12:30-1:20 pm (lecture)
 Lab: See table below

Classroom: Online for lecture, YUH 233 for labs (see p. 10)

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

Labs

	12:30-2:20 MW Section 5	2:30-4:20 MW Section 6	1:30-3:20 TR Section 3	3:30-5:20 TR Section 4	10:30-12:20 TR Section 2
Instructor	Peggy Plato, Ph.D.	Marcos Cepin, M.A.			Alev Dietrich, M.A.
Office Location	SPX 174	SPX 170			SPX 170
Email	Peggy.Plato@sjsu.edu	Marcos.Cepin@sjsu.edu			Alev.Dietrich@sjsu.edu
Office Hours	Tuesdays 10:00-12:00 at https://sjsu.zoom.us/j/88636508030?pwd=UC8xNXZ5VmNvT0pQY1h1OUUwdmd1QT09	Mondays & Wednesdays 1:00-2:15 pm at https://sjsu.zoom.us/j/81500295023?pwd=VERkVVh3RVNWK1IEbk1GUnNNZkV6QT09			Tuesdays & Thursdays 4:00-5:00 pm at https://sjsu.zoom.us/j/8362141360 (please make an appointment using Canvas calendar function for a 15-min time slot)

Course Description

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

Class Format

Lectures are scheduled online – these are **synchronous** class meetings (12:30-1:20 pm Tuesdays). Labs are scheduled in-person. Students are expected to be online during the lectures and in-person during the labs. If this format must be changed due to COVID-19, students will be notified via email and/or announcements posted on Canvas. For safety reasons, there may be some labs in which students will not collect their individual data, but will be provided data to analyze. All students and instructors **MUST** follow the SJSU COVID-19 guidelines. Currently, all individuals on campus must wear a mask indoors unless in a private office with the door closed. Masks and personal protective equipment (PPE) will be supplied by the university, although students and instructors may also provide their own PPE.

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 administering physiological assessments including using laboratory instruments, interpreting results and, when appropriate, implementing 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 to assess 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 enhance physiological functioning and/or performance.
- (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.

Methods

- (1) Lecture/discussion
- (2) Demonstration
- (3) Observation
- (4) Assigned readings
- (5) Laboratory experience – when possible, emphasis on hands-on practice to develop competency

Course Content

- (1) Physical activity assessment – questionnaires, pedometers
- (2) Health & fitness assessment – Polar Body Age, Cholestech
- (3) Joint range of motion assessment – goniometer
- (4) Posture assessment – posture grid & plumb lines
- (5) Strength & power assessment – Humac norm, hand dynamometers
- (6) Balance assessment – Biodex, field tests (e.g., Y-balance test, BESS, Berg balance scale, Fullerton advanced balance scale)
- (7) Anthropometry & body composition assessment
 - (a) Height, weight, circumferences, diameters - stadiometer, physician's scale, tape measures, anthropometers
 - (b) Skinfold measurements – skinfold calipers
 - (c) Bioelectrical impedance analysis – Omron, Tanita scale, Biodynamics 4-electrode BIA, Seca mBCA
 - (d) Hydrostatic weighing
 - (e) Air displacement plethysmography (Bod Pod)
 - (f) Dual-energy X-ray absorptiometry (DXA)
- (8) Pulmonary function
 - (a) Spirometry - static and dynamic lung volumes – spirometers, metabolic cart
 - (b) Environmental conditions
- (9) Miscellaneous topics
 - (a) Equipment calibration & operation
 - (b) Selection of tests
 - (c) Equipment specifications

Required Materials

- Assigned readings and video links are posted on Canvas
- Laboratory data sheets are posted on Canvas
- Calculator

Library Liaison

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

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 the Office of Graduate and Undergraduate Programs' [Syllabus Information web page](http://www.sjsu.edu/gup/syllabusinfo/) at <http://www.sjsu.edu/gup/syllabusinfo/>

Academic Integrity

Instances of academic dishonesty will not be tolerated. Cheating on exams or plagiarism (presenting the work of another as your own, or the use of another person's ideas without giving proper credit) will result in a failing grade and sanctions by the University. "Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development." All assignments are to be completed by the individual student unless otherwise specified. Carefully read the information on quizzes and the final exam.

Dropping and Adding

According to University policy, dropping this course after Feb. 7 is permissible for serious and compelling reasons beyond the student's control. Additional information is available at: <http://www.sjsu.edu/aars/policies/latedrops/policy/>. The last day to add is Feb. 14; however, students who receive add codes should use them within 24 hours or the space and add code may be given to another student.

Recording in Class

"Common courtesy and professional behavior dictate that you notify individuals when you are recording them. You must obtain the instructor's permission to make audio or video recordings in this class. Such permission allows the recordings to be used for your private, study purposes only. The recordings are the intellectual property of the instructor; you have not been given any rights to reproduce or distribute the material." Recording any students during class activities requires permission of those individuals as well as permission from the instructor. Zoom lecture sessions may be recorded by the instructor and posted on Canvas.

Course Materials

"Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his or her approval." You may not publicly share or upload instructor-generated material for this course, such as exam or quiz questions, lecture notes, or hand-outs, without instructor consent. **You may not download, or take photos or screen shots of any exam or quiz question.** Doing so is a violation of the Academic Integrity Policy.

Expectations and Grading Policy

[Academic Policy S12-3](http://www.sjsu.edu/senate/S12-3.htm) at <http://www.sjsu.edu/senate/S12-3.htm> has defined expected student workload, applied to this course, as follows:

“Success in this course is based on the expectation that students will spend, for each unit of credit, a minimum of 45 hours over the length of the course . . . for instruction or preparation/studying or course-related activities.” **This is equivalent to 9 hours/week, including online class meetings and in-person labs.**

Note: [University Policy F69-24](http://www.sjsu.edu/senate/docs/F69-24.pdf) at <http://www.sjsu.edu/senate/docs/F69-24.pdf> states, “Students should attend all meetings of their classes, not only because they are responsible for material discussed therein, but because active participation is frequently essential to insure maximum benefit for all members of the class. Attendance per se shall not be used as a criterion for grading.”

Note: “All students have the right, within a reasonable time, to know their academic scores, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades.” See [University Policy F13-1](http://www.sjsu.edu/senate/docs/F13-1.pdf) at <http://www.sjsu.edu/senate/docs/F13-1.pdf> for more details.

Class Format

Lectures will be pre-recorded and posted on Canvas. Students should view the lecture BEFORE the scheduled lecture session. During the 12:30-1:20 pm Tuesday lecture session, there will be a brief review of the topic (approx. 15-30 min) and students are encouraged to ask questions or seek clarification. Scheduled quizzes will open on Canvas at 1:30 pm on Tuesdays and close at 1:30 pm on the following Wednesday; thus, there is a 24-hour window to complete each quiz.

New labs are introduced on the Tuesday following the lecture in the TR afternoon labs, on the Wednesday following the lecture in the MW labs, and on the Thursday following the lecture in the TR morning lab – see lab schedules at the end of the syllabus.

Assignment of Grades

A plus = 97-100%	A = 93-96%	A minus = 90-92%
B plus = 87-89%	B = 83-86%	B minus = 80-82%
C plus = 77-79%	C = 73-76%	C minus = 70-72%
D plus = 67-69%	D = 63-66%	D minus = 60-62%
	F = 0-59%	

EVALUATION

Component	KIN PLO	CLO	% Earned	X	Points Possible	Points
Physical Activity Lab	1,4	1,4,7	85%	X	4	3.40
Health & Fitness Lab	1,4	1,4,7	95%	x	4	3.80
Joint ROM-Goniometry Lab	1,4	1,4,7	88%	x	4	3.52
Posture Lab	1,4	1,4,7	95%	x	4	3.80
Strength & Power Lab	1,4	1,4,7	83%	x	4	3.32
Balance Lab	1,4	1,4,7	91%	x	4	3.64
Anthropometric Lab	1,4	1,4,7	85%	x	4	3.40
Skinfold Lab	1,4	1,4,7	77%	x	4	3.08
BIA Lab	1,4	1,4,7	94%	x	4	3.76
Hydrostatic Lab	1,4	1,4,7	90%	x	4	3.60
Bod Pod & DXA Lab	1,4	1,4,7	95%	x	4	3.80
Spirometry Lab	1,4	1,4,7	82%	x	4	3.28
Assessment Project	1,2,4	1,4,5,6,7	83%	x	12	9.96
Competencies	1,4	1,2	95%	x	10	9.50
Quizzes	1,5	1,3,4,6	Avg = 82%	x	15	12.30
Final Exam	1,2,5	1,3,4,5,6,7	84%	x	15	12.60
TOTAL						86.76 B plus
0.5 and above rounded up; below 0.5 rounded down						

Your laboratory instructor will assign 70% of the points in the class. The lecture instructor will assign 30% of the points in the class (quizzes and final exam).

Labs & Assessment Project

Guidelines and forms are posted on Canvas. Due dates are posted on your lab Canvas site. All labs and the project should be submitted on Canvas by 11:59 pm on the due date. Most work must be typed; however, if hand-written work is accepted, it must be neatly done. Remember to proofread and check for completeness before turning in.

Due Date	Received	Grade Lowered
Monday	Tuesday or Wednesday	1 grade step (e.g., B plus to B)
	Thursday or Friday	2 grade steps (e.g., B plus to B minus)
	Sat. through following Monday	1 full grade (e.g., B plus to C plus)
Tuesday	Wednesday or Thursday	1 grade step (e.g., B plus to B)
	Friday or Saturday	2 grade steps (e.g., B plus to B minus)
	Sun. through following Tuesday	1 full grade (e.g., B plus to C plus)
Wednesday	Thursday or Friday	1 grade step (e.g., B plus to B)
	Saturday or Sunday	2 grade steps (e.g., B plus to B minus)
	Mon. through following Wed.	1 full grade (e.g., B plus to C plus)
Thursday	Friday or Saturday	1 grade step (e.g., B plus to B)
	Sunday or Monday	2 grade steps (e.g., B plus to B minus)
	Tues. through following Thurs.	1 full grade (e.g., B plus to C plus)
Students must speak with the instructor regarding assignments that are over 1 week late.		

Competencies

Students will demonstrate competency in performing the following measurements:

- Height (1%)
- Weight (1%)
- Circumferences (2%)
- Diameters (2%)
- Skinfolds (2%)
- Joint range of motion (2%)

Grading on competency tests:

A (95%) = excellent technique (performed smoothly & with confidence), accurate results

B (85%) = good technique, minor corrections needed

F (50%) = poor or weak technique, significant errors, questionable data

0 points = did not attempt competency

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. The last day to complete all competencies is listed on the laboratory schedule. On the last day, a maximum of one competency may be attempted. There is ample time to complete competencies before the last day.

Quizzes & Final Exam

- Quizzes and the final exam will cover theoretical background, use of equipment, data collection and interpretation, as well as corrective techniques. Once you start the quiz or final exam, there is a time limit to complete the quiz or exam. All quizzes and the final exam will be completed on Canvas. There is a 24 hour window to complete quizzes. The final exam will be completed during the scheduled final exam time block – if you start late, you will not be given additional time. Make-ups are permitted only for illness and emergency (TRULY EXTRAORDINARY CIRCUMSTANCES). The student is responsible for notifying the instructor and making arrangements at the earliest possible time. All requests for make-up exams will be evaluated on an individual basis.
- Questions may include true-false, multiple choice, short answer, problems, and calculations. There are 13 quizzes; the lowest 2 quiz scores will be dropped.
- You should be able to answer all questions without referring to your personal notes or material uploaded on the course Canvas sites. However, you MAY refer to these materials. It is recommended that you complete as many questions as possible before referring to these materials, and then you may look up answers you're unsure of within the time limit.
 - **These are materials you MAY access during quizzes and the final exam:** Materials uploaded to the KIN 157 Canvas lecture and lab sites and your personal notes. A study guide will be provided by Dr. Plato for the final exam.
 - **These are materials you may NOT access during quizzes and the final exam:** Notes or study guides developed by others (e.g., other students) or developed in combination with others and shared, other people, or other web sites. You may not text, email, phone, or consult with others or access other web sites. Doing so is a violation of the University Academic Integrity Policy. Faculty are expected to report infractions to the office of Student Conduct and Ethical Development and appropriate sanctions will be taken. If you are unsure

of which materials are permitted and which are not, ask Dr. Plato before starting the quiz or exam.

- The grade you **EARN** should reflect **YOUR** knowledge and skills, **NOT** the knowledge and skills of others. **Carefully read the [University Academic Integrity Policy S07-2](http://www.sjsu.edu/senate/docs/S07-2.pdf) at <http://www.sjsu.edu/senate/docs/S07-2.pdf> Earning your college degree is important -- think carefully before jeopardizing your degree!**

Professionalism

This is a professional preparation course. Students are expected to:

- Be fully prepared; arrive on time, and actively and enthusiastically participate in all lecture and laboratory activities.
 - Read the assigned material and view the pre-recorded lecture before the online lecture class. Read the lab instructions BEFORE your lab class. Lab time will be used to present material and help students master techniques. Students are directed to this course syllabus and materials posted on Canvas for many of their procedural questions.
 - Bring required materials to class, including printed data sheets or an electronic device to record laboratory data.
 - Dress appropriately for scheduled laboratory activities.
- Participate in demonstrations and data collection.
- Enthusiastically serve as a client for others.
- PRACTICE, PRACTICE, PRACTICE techniques. Use your lab time effectively! Ask for guidance from instructor if having difficulty mastering a technique.
- Complete labs and assignments on time -- upload to Canvas before the due date and 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 covered beverages. If your beverage container sweats and leaves water on tables, you must clean it up. With the current mask mandate, you may briefly remove your mask to take a drink and then promptly replace your mask.

Everyone has a responsibility for helping to ensure a physically and emotionally safe learning environment. SJSU COVID-19 guidelines must be followed. Currently, masks are required indoors except when in a private office with the door closed. Masks must fully cover the nose, mouth, and chin. SJSU COVID-19 guidelines may change during the semester – they may become more or less restrictive. If they are less restrictive, masks may still be required during laboratory activities in which there is close contact with others. If guidelines become less restrictive, some individuals may choose to continue wearing masks for personal reasons (e.g., health concerns or contact with individuals who are not eligible for vaccination).

If you are not feeling well, stay home! Notify your instructor who will make every effort to provide reasonable accommodations. However, reasonable accommodations do not include offering the lab in multiple formats, such as online and in-person.

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.

Important: A recent message (January 12, 2022) from Interim SJSU President Steve Perez indicates that due to the community Omicron positivity rate, both the lecture and lab portions of KIN 157 will be online (synchronous) through Feb. 11. Current guidelines are to begin in-person labs on Feb. 14. If the date to begin in-person instruction is extended beyond Feb. 14, students may need to purchase a goniometer, inexpensive plastic skinfold caliper, and measuring tape. Cost of these supplies should be \$20 or less. Students will be notified and updated on in-person vs. online instruction by the university and the KIN 157 instructors.

Proposed Lecture Schedule

Schedule is subject to change with fair notice. Changes will be announced in class, sent via my.sjsu, and/or posted on Canvas.

All readings are posted on Canvas in each **LAB** module.

Date	Topics
Tues., Feb. 1	Physical Activity Assessment
Tues., Feb. 8	Health & Fitness Assessment Quiz 1: Physical Activity Assessment
Tues., Feb. 15	Flexibility & Joint Range of Motion Quiz 2: Health & Fitness Assessment
Tues., Feb. 22	Posture Assessment Quiz 3: Flexibility & Joint ROM
Tues., Mar. 1	Strength & Power Assessment Quiz 4: Posture Assessment
Tues., Mar. 8	Balance Assessment Quiz 5: Strength & Power Assessment
Tues., Mar. 15	Body Composition Assessment & Anthropometric Measurements (Height, Weight, Circumferences, Diameters) Quiz 6: Balance Assessment
Tues., Mar. 22	Skinfolds Quiz 7: Body Composition Assessment & Anthropometric Measurements
Tues., Apr. 5	Bioelectric Impedance Analysis (BIA) Quiz 8: Skinfolds
Tues., Apr. 12	Hydrostatic Weighing Quiz 9: BIA
Tues., Apr. 19	Air Displacement Plethysmography (ADP or Bod Pod) & DXA Quiz 10: Hydrostatic Weighing

Date	Topics
Tues., Apr. 26	Weight Management Quiz 11: Bod Pod & DXA
Tues., May 3	Pulmonary Function & Spirometry Quiz 12: Weight Management
Tues., May 10	Review Quiz 13: Pulmonary Function & Spirometry
Thurs., May 19 12:15-2:30 pm	FINAL EXAM

Proposed Lab Schedule (MW Labs)
Dates are when the topic is first introduced

**** Labs are due at 11:59 pm on Tuesdays – see Canvas for specific due dates for each lab ****

Date	Lab
Wed., Jan. 26	No Lab
Mon., Jan. 31	Introduction & Class Overview
Wed., Feb. 2	Physical Activity Assessment
Mon., Feb. 7	
Wed., Feb. 9	Health & Fitness Assessment
Mon., Feb. 14	
Wed., Feb. 16	Flexibility & Joint ROM
Mon., Feb. 21	
Wed., Feb. 23	Posture Assessment
Mon., Feb. 28	
Wed., Mar. 2	Strength & Power Assessment
Mon., Mar. 7	CT: Goniometry
Wed., Mar. 9	Balance Assessment
Mon., Mar. 14	
Wed., Mar. 16	Anthropometric Measurements (Height, Weight, Circumferences, Diameters)

Date	Lab
Mon., Mar. 21	
Wed., Mar. 23	Skinfolds
Mon., Apr. 4	CT: Height & Weight
Wed., Apr. 6	Bioelectric Impedance Analysis (BIA)
Mon., Apr. 11	CT: Circumferences or Diameters
Wed., Apr. 13	Hydrostatic Weighing
Mon., Apr. 18	CT: Skinfolds
Wed., Apr. 20	Bod Pod & DXA
Mon., Apr. 25	
Wed., Apr. 27	Due: Assessment Project
Mon., May 2	
Wed., May 4	Pulmonary Function & Spirometry
Mon., May 9	
Wed., May 11	
Mon., May 16	Last Day for Competency Testing

CT = Competency Test – **Deadline** for first attempt at the competency

Proposed Lab Schedule (TR 10:30-12:20 Lab)

Dates are when the topic is first introduced

**** Labs are due at 11:59 pm on Wednesdays – see Canvas for specific due dates for each lab ****

Date	Lab
Thurs., Jan. 27	No Lab
Tues., Feb. 1	Introduction & Class Overview
Thurs., Feb. 3	Physical Activity Assessment
Tues., Feb. 8	
Thurs., Feb. 10	Health & Fitness Assessment
Tues., Feb. 15	
Thurs., Feb. 17	Flexibility & Joint ROM
Tues., Feb. 22	
Thurs., Feb. 24	Posture Assessment
Tues., Mar. 1	
Thurs., Mar. 3	Strength & Power Assessment
Tues., Mar. 8	CT: Goniometry
Thurs., Mar. 10	Balance Assessment
Tues., Mar. 15	
Thurs., Mar. 17	Anthropometric Measurements (Height, Weight, Circumferences, Diameters)
Tues., Mar. 22	
Thurs., Mar. 24	Skinfolds
Tues., Apr. 5	CT: Height & Weight

Date	Lab
Thurs., Apr. 7	Bioelectric Impedance Analysis (BIA)
Tues., Apr. 12	CT: Circumferences or Diameters
Thurs., Apr. 14	Hydrostatic Weighing
Tues., Apr. 19	CT: Skinfolds
Thurs., Apr. 21	Bod Pod & DXA
Tues., Apr. 26	
Thurs., Apr. 28	DUE: Assessment Project
Tues., May 3	
Thurs., May 5	Pulmonary Function & Spirometry
Tues., May 10	
Thurs., May 12	Last Day for Competency Testing

CT = Competency Test – **Deadline** for first attempt at the competency

Proposed Lab Schedule (TR 1:30-3:20 & 3:30-5:20 Labs)

Dates are when the topic is first introduced

**** Labs are due at 11:59 pm on Mondays – see Canvas for specific due dates for each lab ****

Date	Lab
Thurs., Jan. 27	Introduction & Class Overview
Tues., Feb. 1	Physical Activity Assessment
Thurs., Feb. 3	
Tues., Feb. 8	Health & Fitness Assessment
Thurs., Feb. 10	
Tues., Feb. 15	Flexibility & Joint ROM
Thurs., Feb. 17	
Tues., Feb. 22	Posture Assessment
Thurs., Feb. 24	
Tues., Mar. 1	Strength & Power Assessment
Thurs., Mar. 3	CT: Goniometry
Tues., Mar. 8	Balance Assessment
Thurs., Mar. 10	
Tues., Mar. 15	Anthropometric Measurements (Height, Weight, Circumferences, Diameters)
Thurs., Mar. 17	
Tues., Mar. 22	Skinfolds
Thurs., Mar. 24	CT: Height & Weight
Tues., Apr. 5	Bioelectric Impedance Analysis (BIA)

Date	Lab
Thurs., Apr. 7	CT: Circumferences or Diameters
Tues., Apr. 12	Hydrostatic Weighing
Thurs., Apr. 14	CT: Skinfolds
Tues., Apr. 19	Bod Pod & DXA
Thurs., Apr. 21	
Tues., Apr. 26	DUE: Assessment Project
Thurs., Apr. 28	
Tues., May 3	Pulmonary Function & Spirometry
Thurs., May 5	
Tues., May 10	
Thurs., May 12	Last Day for Competency Testing

CT = Competency Test – **Deadline** for first attempt at the competency