

San José State University
School/Department
KIN 272-01, Evidence Based Research in the Practice of
Therapeutic Exercise, Fall, 2015

Course and Contact Information

Instructor:	Masaaki Tsuruike, PhD, ATC
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Office Hours:	M: 5:00 – 6:00 pm T: 3:00 – 4:00 pm All other times by appointment only.
Class Days/Time:	M: 7:00 pm – 9:45 pm
Classroom:	YUH 128
Prerequisites:	Students must be ATC or equivalent

Canvas

Course materials can be found on the Canvas learning management system course website. You are responsible for regularly checking with the messaging system through the Canvas to learn of any updates.

Course Description

This is a graduate course designed to those who passed the Board of Certification, ATC and admitted to the Graduate Athletic Training Education Program. The course is also designed to critically examine current practices in therapeutic exercise and rehabilitation-specific interventions with regard to athletic injuries. The course will take a multidisciplinary approach, incorporating scientific (*research*) and philosophical bases. The course is intended to provide the student with the information necessary to perform prudent clinical applications of therapeutic exercise programs and athletic rehabilitation-specific interventions.

Department of Kinesiology Graduate Program Learning Outcomes

Upon completion of the Master's degree program in the Department of Kinesiology, students should be able to:

1. Demonstrate the ability to conduct and critique research using theoretical and applied knowledge.
2. Interpret and apply research findings to a variety of disciplines within Kinesiology.
3. Effectively communicate essential theories, scientific applications, and ethical considerations in each student's Kinesiology program concentration.
4. Interpret and apply research findings through acquired skills in order to become agents of change to address issues in Kinesiology through the application of knowledge and research.

Graduate Athletic Training Education Program Learning Outcomes (GATEPLO)

The mission of the Graduate Athletic Training Program is to enhance the mastery of athletic training discipline through a sound theoretical and research base, as well as diversity of thought and experiences. The Graduate Athletic Training Education Program seeks to:

1. Develop critical and independent thinkers
2. Facilitate and promote community interaction/aid in sports medicine
3. Foster scholarly and research activities
4. Develop exemplary athletic training professionals
5. Enhance and augment athletic training skills through evidence based exploration

Course Learning Outcomes (CLO)

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

1. Modify better results from the numerous therapeutic methods designed to facilitate the physical re-conditioning after injury and strength of collagenous tissues.
2. Apply physiological and biomechanical effects, indications and contraindications, clinical use and proper techniques to the common treatment/exercise techniques employed in the rehabilitation process.
3. Evaluate critical thought and scientific evidence to make sound decisions regarding the application of interventions and exercises.
4. Effectively communicate the application of knowledge with patients regarding the updated scientific base of therapeutic exercises.

Required Texts/Readings

Textbook / Readings

Selected readings to be provided by the instructor. All readings will be posted on Canvas.

Course Requirements and Assignments

SJSU classes are designed such that in order to be successful, it is expected that students will spend a minimum of forty-five (45) hours for each unit of credit (normally three hours per unit per week), including preparing for class, participating in course activities, completing assignments, and so on. More details about student workload can be found in [University Policy S12-3](http://www.sjsu.edu/senate/docs/S12-3.pdf) at <http://www.sjsu.edu/senate/docs/S12-3.pdf>.

Each student will be required to:

1. Read the articles selected in each of the topics to discuss proficiency in using numerous psychomotor skills to rehabilitate various anatomical and supportive structures.
2. Actively participate in class discussions, presentations and hands-on exercises.
3. Select an injury and describe its detailed rehabilitative process, utilizing supportive literature of sound results and outcomes.
4. Present the aforementioned rehabilitation program and demonstrate the techniques (exercise, interventions, etc.) to the class.
5. Critically review selected literature.

EVALUATION & GRADING

- Midterm Exam: 30%
- Short Quizzes: 20%
- Research Design: 15%
- Rehabilitation Protocol: 15%
- Final Exam: 18%
- Activity: 2%

The course is based on a percentage scale (100%). The breakdown is as follows:

A: 100 - 93%	A-: 92.9 - 90%		
B+: 89.9 - 87%	B: 86.9 - 83%	B-: 82.9 - 80%	
C+: 79.9 - 77%	C: 76.9 - 73%	C-: 72.9 - 70%	
D+: 69.9 - 67%	D: 66.9 - 63%	D-: 62.9 - 60%	F: <60%

SHORT QUIZZES (20% / 40 pts [10 pts x 4]):

Four short quizzes (10 multiple questions each) will be given through the Canvas (online) after the topics discussed: 1) shoulder, 2) core stability, 3) muscle stretch (flexibility) and strain, 4) eccentric contraction, 5) calf, hamstring, ankle and foot. All questions will be asked based on the reading assignments (articles) posted on the canvas. (CLO 4)

Mid EXAM (30%):

The mid exam will cover all materials (lectures, labs, discussions, readings, etc.) to date from ALL units discussed up to the topic of sidestep and landing. The date and format of the midterm exam are to be determined. (CLO 1-4)

Tentative Date**Oct 26****Final EXAM (18%):**

The final exam will cover all materials (lectures, labs, discussions, readings, etc.) to date from ALL units discussed after the midterm exam. The date and format of the midterm exam are to be determined. (CLO 1-4)

Date**Dec 14****RESEARCH DESIGN (15%):**

You will search 5 peer-reviewed articles pertinent to current therapeutic exercise concepts. *All articles will be related to the exercise in which you are most interested like a pretended research project.* The project can be designed as either of longitudinal study, which is pre- and post-training effect, or cross-sectional study, which is a comparison of multiple groups or interventions. Then, you will develop two paragraphs with the 5 articles you searched like the introduction of paper. The first paragraph explains the background of your project, what we have known pertinent to the project topic (20 pts), whereas the second paragraph explains the statement of problem, hypothesis based on the background, and the purpose of study, the extent to which you will identify (10 pts). (CLO 2, 3)

The first paragraph consists of 400 words with double spaced. The second paragraph may be described with 4 sentences, and the purpose of study can be developed with two to threefold.

Due Date: 11/16**REHABILITATION PROTOCOL (15%):**

This class emphasizes the areas of the shoulder, core stability exercise, and lower extremity (hip, knee, ankle, and foot,) exercise. This assignment is like clinical practice rather than scholarly activity. Two rehabilitation protocol assignments will include:

1) Type of exercises***2) Exercise intensity******3) Repetitions and sets (or exercise volume)******4) Rational***

(1) The first rehabilitation protocol will be individually completed. You will explain the rehabilitation protocol *including at least one graph, table or diagram* which helps your patient understand the aims of exercises and short- and long-goal outcomes as well. The topic of assignment will be given in the class. Each of the assignments will be written within one page. (20 pts) (CLO 1, 4)

(2) *The 2nd assignment will be completed with a partner* in the class (20 pts). The students are also required to present the assignment with your partner using PowerPoint with several slides (no more than 8 slides,) in the class for 20 min including questions and answers (Nov 23, 30, and Dec 7)

1st Assignment Paper Due Date: 10/12

2nd Assignment Paper (with partner) Due Date: 11/30

ACTIVITIES (2%):

Most of the class will be divided into two sections: lecture and hands-on exercise. All students are expected to actively participate in hands-on exercise work-out. Because the class is conducted once a week (2 and 3/4 hours each), your absence more than two times will affect your activity points. One (1) % are deducted for one missing class. Students who consider missing the class due to their clinical duties, such as covering your team's game or travelling with your team, may make up the class absence to submit the assignment given by the instructor only if a student asks at least a week prior to the class he or she misses. No more than two assignments are given to make up in the course. (CLO 5)

Classroom Protocol

- All students in the class must be required to set a silent mode for your cell phone. Students are allowed to use your PC in the class. However, you are not allowed to access any other unnecessary internets or emails.
- No food and drinks are allowed in the class, except for water.
- The class will have a break for 5 to 10 min, depending on the topics discussed in the first half lecture session. All students may use this break for refreshments.
- All students are required to wear training clothes and shoes for the second half hands-on exercise.

University Policies

General Expectations, Rights and Responsibilities of the Student

As members of the academic community, students accept both the rights and responsibilities incumbent upon all members of the institution. Students are encouraged to familiarize themselves with SJSU's policies and practices pertaining to the procedures to follow if and when questions or concerns about a class arises. See University Policy S90-5 at <http://www.sjsu.edu/senate/docs/S90-5.pdf>. More detailed information on a variety of related topics is available in the SJSU catalog, at <http://info.sjsu.edu/web-dbgen/narr/catalog/rec-12234.12506.html>. In general, it is recommended that students begin by seeking clarification or discussing concerns with their instructor. If such conversation is not possible, or if it does not serve to address the issue, it is recommended that the student contact the Department Chair as a next step.

Dropping and Adding

Students are responsible for understanding the policies and procedures about add/drop, grade forgiveness, etc. Refer to the current semester's [Catalog Policies](http://info.sjsu.edu/static/catalog/policies.html) section at <http://info.sjsu.edu/static/catalog/policies.html>. Add/drop deadlines can be found on the current academic year calendars document on the [Academic Calendars webpage](http://www.sjsu.edu/provost/services/academic_calendars/) at http://www.sjsu.edu/provost/services/academic_calendars/. The [Late Drop Policy](http://www.sjsu.edu/aars/policies/latedrops/policy/) is available at <http://www.sjsu.edu/aars/policies/latedrops/policy/>. Students should be aware of the current deadlines and penalties for dropping classes.

Information about the latest changes and news is available at the [Advising Hub](http://www.sjsu.edu/advising/) at <http://www.sjsu.edu/advising/>.

Consent for Recording of Class and Public Sharing of Instructor Material

[University Policy S12-7](http://www.sjsu.edu/senate/docs/S12-7.pdf), <http://www.sjsu.edu/senate/docs/S12-7.pdf>, requires students to obtain instructor's permission to record the course and the following items to be included in the syllabus:

- “Common courtesy and professional behavior dictate that you notify someone when you are recording him/her. 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.”
 - It is suggested that the greensheet include the instructor's process for granting permission, whether in writing or orally and whether for the whole semester or on a class by class basis.
 - In classes where active participation of students or guests may be on the recording, permission of those students or guests should be obtained as well.
- “Course material developed by the instructor is the intellectual property of the instructor and cannot be shared publicly without his/her approval. You may not publicly share or upload instructor generated material for this course such as exam questions, lecture notes, or homework solutions without instructor consent.”

Academic integrity

Your commitment, as a student, to learning is evidenced by your enrollment at San Jose State University. 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> requires you to be honest in all your academic course work. Faculty members are required to report all infractions to the office of Student Conduct and Ethical Development. The [Student Conduct and Ethical Development website](http://www.sjsu.edu/studentconduct/) is available at <http://www.sjsu.edu/studentconduct/>.

Campus Policy in Compliance with the American Disabilities Act

If you need course adaptations or accommodations because of a disability, or if you need to make special arrangements in case the building must be evacuated, please make an appointment

with me as soon as possible, or see me during office hours. [Presidential Directive 97-03](http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf) at http://www.sjsu.edu/president/docs/directives/PD_1997-03.pdf requires that students with disabilities requesting accommodations must register with the [Accessible Education Center](http://www.sjsu.edu/aec) (AEC) at <http://www.sjsu.edu/aec> to establish a record of their disability.

SJSU Writing Center

The SJSU Writing Center is located in Clark Hall, Suite 126. All Writing Specialists have gone through a rigorous hiring process, and they are well trained to assist all students at all levels within all disciplines to become better writers. In addition to one-on-one tutoring services, the Writing Center also offers workshops every semester on a variety of writing topics. To make an appointment or to refer to the numerous online resources offered through the Writing Center, visit the [Writing Center website](http://www.sjsu.edu/writingcenter) at <http://www.sjsu.edu/writingcenter>. For additional resources and updated information, follow the Writing Center on Twitter and become a fan of the SJSU Writing Center on Facebook. (Note: You need to have a QR Reader to scan this code.)



SJSU Counseling Services

The SJSU Counseling Services is located on the corner of 7th Street and San Fernando Street, in Room 201, Administration Building. Professional psychologists, social workers, and counselors are available to provide consultations on issues of student mental health, campus climate or psychological and academic issues on an individual, couple, or group basis. To schedule an appointment or learn more information, visit [Counseling Services website](http://www.sjsu.edu/counseling) at <http://www.sjsu.edu/counseling>.

Course Schedule

Week	Date	Topics, Readings	Assignments Deadlines
1	8/24	Introduction to Therapeutic Exercise. <i>Readings: Progression and Resistance Training MSSE 689-708, 2009</i>	
2	8/31	Shoulder Exercise <i>Hands-on Exercise</i>	
3	9/7	Labor Day – Campus Closed	
4	9/14	Shoulder Exercise II <i>Hands-on Exercise</i>	
5	9/21	Upper Extremity Exercise Closed Kinetic Chain Exercise <i>Isokinetic Contractions</i>	Quiz 1
6	9/28	Core Stability Exercise (based on research papers) <i>Hands-on Exercise</i> <i>Readings: SportsMed 36:189-198, 2006; JSCR 21:979-985, 2007; MSSE 33:1889-1898, 2001; SCJ 32:33-46.2010; J Orthop Sports Phys Ther 38:228-237, 2008; BMC Musculoskeletal Disorders 7:75, 2006</i>	
7	10/5	Mulligan Concept and Techniques	
8	10/12	Core Stability Exercise II <i>Hands-on Exercise</i>	<i>1st Rehab Protocol Due</i>
9	10/19	Sidestepping and Landing regarding ACL Injury (based on research papers) <i>Hands-on Exercise</i> <i>Readings: Sports Med 44:815-832, 2014; JAT 46:376-385, 2011; Clinical Biomechanics 23:806-813, 2008; MSSE 45:1740-1748, 2013</i>	Quiz 2
10	10/26	Sidestepping and Landing regarding ACL Injury II will be given 75 min	<i>Midterm Exam (up to sidestepping and landing)</i>
11	11/2	Stretching on Performance <i>Hands-on Exercise</i> <i>Readings: MSSE 36:371-378; CSMR 179-185, 2014</i>	
12	11/9	Effect of Eccentric Contraction on Cross-Education	Quiz 3

Week	Date	Topics, Readings	Assignments Deadlines
		Strength <i>Hands-on Exercise</i> <i>Readings: JAT 49:582-589, 2014; Neuroscience 300:566-575, 2015; Sports Med 43:733-750, 2013</i>	
13	11/16	Elastic Tubing/Band <i>Hands-on Exercise</i> <i>Readings: Int J Sports Med 31:810-817, 2010; JSCR 23:2015-2024, 2009</i>	Quiz 4 <i>Research Design Due</i>
14	11/23	Calf and Hamstring Strain. Presentation I <i>Readings: Racket Sports CSMR 329-336, 2013; Phys Med Rehabil Clin N Am 20:161-173, 2009</i>	
15	11/30	Ankle Sprains Presentation II <i>Readings: JAT 48:528, 2013</i>	Quiz 5
16	12/7	Foot and Achilles Injury Presentation III	<i>2nd Rehab Protocol Due</i>
Final		Monday Dec 14	