San José State University  
Department of Kinesiology (CASA)  
KIN 272-01, Evidence Based Research in the Practice of Therapeutic Exercise, Fall, 2016  

Course and Contact Information  

Instructor: Masaaki Tsuruike, PhD, ATC  
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Email: masaaki.tsuruike@sjsu.edu  
Office Hours:  
M: 3:00 – 4:00 pm  
W: 3:00 – 4:00 pm  
All other times by appointment only.  
Class Days/Time: M: 7:00 pm – 9:45 pm  
Classroom: YUH 128 (/SPX153)  
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. Demonstrate better outcomes 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 including single and multiple segmental movements

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 review assignments are shown in the end of the syllabus.

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 at http://www.sjsu.edu/senate/docs/S12-3.pdf.

Each student will be required to:
1. Review 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 therapeutic exercises 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: 40%
- Multiple Quizzes: 10%
- Conceptual Framework for Therapeutic Exercise: 40%
- Final Exam: 10%

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>90%</td>
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<tr>
<td>A-</td>
<td>89% - 92%</td>
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<tr>
<td>B+</td>
<td>88% - 90%</td>
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<tr>
<td>B</td>
<td>87% - 89%</td>
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<tr>
<td>B-</td>
<td>86% - 87%</td>
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<tr>
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<tr>
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<tr>
<td>D-</td>
<td>66% - 66%</td>
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<tr>
<td>F</td>
<td>&lt;60%</td>
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MULTIPLE QUIZZES (10% / 20 pts):

One multiple quizzes (20 multiple questions) will be given on October 31 (tentatively.) The questions will cover the topics up to scapular and shoulder rehabilitation. This will help prepare for the midterm exam. All questions will be asked from all units discussed in class, which are based on review assignments posted on this syllabus. (CLO 4)
Mid EXAM (40%):
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
Nov 14

CONCEPTUAL FRAMEWORK FOR THERAPEUTIC EXERCISES (40%):
This is part of active learning for you to enhance your critical thinking in the field of athletic training. You will be randomly assigned to a group with 3 members or so to develop the conceptual framework for therapeutic exercise. Each of the four assignments will give groups a certain theme with some type of injury either of chronic or acute injury, such as chronic Achilles tendinitis, persistent low back pain, or grade I medial collateral ligament sprain. The conceptual framework must be developed with two kinds with three dimension. The three dimension, for instances, consist of three planes of movement in exercise, weight loads or intensity, and postural positions. The two kinds also consist of open kinetic chain and closed kinetic chain exercise. You will bring the exercises you have done for your injured athletes or seen for other athletic trainers, and discuss with your member to conclude the conceptual framework for the theme each time. In the end of the class, a member of the group will demonstrate some exercises with rationales. Also, each of the groups develop the report along with evidence based practice (research). (20 pts each). (CLO 2, 3)

*This conceptual framework assignments are important to enhance your active learning. All students are expected to actively participate in group discussion and hands-on exercise work-out. Your absence more than two times will affect your conceptual framework points. Students who consider missing the class due to their clinical duties, such as travelling with your team, may make up the class absence to submit the assignment individually only if a student asks at least a week prior to the class he or she misses. However, no more than three assignments are given to make up in this assignment. (CLO 5)

Final EXAM (10%):
Each of the students presents one research design from the standpoint of therapeutic exercises and turn in the final report. The presentation and report must be relevant to any of the materials discussed for the conceptual framework for therapeutic exercises. (CLO 1-4)

Date
Dec 19

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 only if you would like to take notes with the PC. However, you are not allowed to access any unnecessary internets or emails in the class. (You can access a phone call or email out of the classroom if necessary)
- No food and drinks are allowed in the laboratory, 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

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/
## Course Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics</th>
<th>Review Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>8/29</td>
<td>Introduction to Therapeutic Exercise.</td>
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<tr>
<td>2</td>
<td>9/5</td>
<td>Labor Day – Campus Closed</td>
<td></td>
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<tr>
<td>4</td>
<td>9/19</td>
<td>Mulligan Concept and Techniques</td>
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<tr>
<td>11</td>
<td>11/7</td>
<td>Conceptual Framework for Thera Exer</td>
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<tr>
<td>Week</td>
<td>Date</td>
<td>Topics</td>
<td>Review Assignments</td>
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<tr>
<td>12</td>
<td>11/14</td>
<td><strong>Midterm: up to stretching on overhead athletes</strong></td>
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<tr>
<td>13</td>
<td>11/21</td>
<td>Conceptual Framework for Thera Exer II</td>
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<td>11/28</td>
<td>Conceptual Framework for Thera Exer III</td>
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<td>12/5</td>
<td>Conceptual Framework for Thera Exer IV</td>
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<tr>
<td>16</td>
<td>12/12</td>
<td>Presentation and Summary</td>
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<tr>
<td>Final</td>
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<td>Monday Dec 14</td>
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**REFERENCE**

**Postural Balance**


**Chronic Ankle Instability**


Sidestepping and Landing for ACL Injury Prevention

Core Stability Exercise

Education for Lower Extremity Muscles

Scapular and Shoulder Rehabilitation

ROM Stretch of Shoulder


