San José State University
Department of Kinesiology
Graduate Athletic Training Education Program

KIN272: Evidence Based Research in the Practice of Therapeutic Exercise

Fall 2012

Instructor: Masaaki Tsuruike, PhD, ATC
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Telephone: (408) 924-3030
Email: masaaki.tsuruike@sjsu.edu
Office Hours: M: 11:30 pm-1:00 pm
T: 3:00-5:00 pm
W: 5:00-7:00 pm
All other times, by appointment only.
Class Days/Time: M: 7:00 pm – 9:45 pm
Classroom: SPX 075
Prerequisites: Students must be ATC or equivalent

COURSE DESCRIPTION:
This is a graduate course designed to critically examine current practices in therapeutic exercise and rehabilitation-specific modalities with regard to the rehabilitation process. 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 rehabilitation-specific modalities.

KIN PROGRAM LEARNING OBJECTIVES:
1. Ability to interpret and apply evidence-based research to clinical and/or professional settings.
2. Apply and be receptive to the broad concept of cultural competence and diversity as related to social justice and equity issues.
3. Promote and model efficient movement and a holistic and sustainable approach to health and wellness across the life-span.
4. Develop and apply critical thinking and creativity through an interdisciplinary approach.
5. Become agents of change through the development of leadership skills to include community interaction and service.

STUDENT LEARNING OBJECTIVES:
The overall purpose of this course will be to help students achieve an understanding of the evidence based medicine as it pertains to therapeutic modalities. Specific objectives are as follows:

1. To gain further understanding of the physical laws which govern therapeutic rehabilitation.

2. To achieve better results from the numerous therapeutic methods designed to facilitate the healing and strength of collagenous tissue.

3. To review physiological and biomechanical effects, indications and contraindications, clinical use and proper techniques for the application of common treatment/exercise techniques employed in the rehabilitation process.

4. To use critical thought and scientific evidence to make sound decisions regarding the application of modalities and exercises.

5. To critically think about the application of evidence to make sound decisions regarding the application of modalities and exercises.

REQUIRED TEXTBOOK:


RECOMMENDED TEXTBOOKS:


LIBRARY LIAISON:
The Department of Kinesiology library liaison is Peggy Cabrera. She can be reached at peggy.cabrera@sjsu.edu or (408) 808-2034.

COURSE REQUIREMENTS:

Each student will be required to:

1. Demonstrate proficiency in using numerous psychomotor skills to rehabilitate various anatomical and supportive structures.

2. Play an active role in classroom discussions, presentations and laboratory 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, modalities, etc.) to the class.
5. Critically review selected literature.

COURSE EVALUATION:

The course is based on a point scale (320 total points). The breakdown is as follows:

- A 91-100%
- A- 90%
- B+ 88-89%
- B 81-87%
- B- 80%
- C+ 79%
- C 72-78%
- C- 70%

ABSTRACTS (100 pts – SLO 1, 3-6): You will read and critically review 20 peer-review journal articles pertinent to current rehabilitation concepts. All articles will be related to your research project. From each article, you will generate an “abstract” based on the NATA guidelines. Each abstract must be turned electronically in by 11:59 PM on its due date in order to receive credit. Late abstracts will not be accepted unless prior arrangements have been made with the instructor.

<table>
<thead>
<tr>
<th>Critical Review #</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>1st 5 articles</td>
<td>MON, SEPT 24</td>
</tr>
<tr>
<td>2nd 5 articles</td>
<td>MON, OCT 15</td>
</tr>
<tr>
<td>3rd 5 articles</td>
<td>MON, NOV 5</td>
</tr>
<tr>
<td>4th 5 articles</td>
<td>MON, NOV 26</td>
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</tbody>
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Abstract Guidelines:
1. Articles must be selected from current scientific, peer-reviewed sources and you must submit a hard copy of the article with your abstract.
2. Your abstract is limited to 500 words with title and headings. Please paste the word count at the bottom of the page.
3. The abstract should be formatted in accordance with the NATA’s guidelines for submission.
4. DO NOT COPY the original abstract for the article. I would suggest you do NOT look at the abstract at all. Instead, read the article, analyze it and synthesize the findings as if they were your own.
5. Papers must be typed using 12-pint font, either Times New Roman or Calibri, and single-spaced. Margins should be 1” on all sides. Please include a title page with the article’s title, course number, due date, student name and email address.
6. At the top of the actual abstract, please type the title of the article in bold print. On the next line indent 3 paces and type the authors’ names followed by a colon, the lab and institution they represent, and the institution’s city.

For all other forms of research, see the NATA website at: [http://www.natafoundation.org/free-communications/free-communications-call-for-abstracts/peer-reviewed-track-instructions](http://www.natafoundation.org/free-communications/free-communications-call-for-abstracts/peer-reviewed-track-instructions)
TAKE-HOME EXAM (200 pts): There will be two take-home exams covering all materials (lectures, labs, discussions, readings, etc.) to date from ALL units discussed during the course of the spring semester. The date and format of the midterm exam are to be determined [PLO 1, 2, 4; SLO: 1, 3, 4, 5].

<table>
<thead>
<tr>
<th>Take-Home Exam</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>1</td>
<td>Oct 8</td>
</tr>
<tr>
<td>2</td>
<td>Nov 19</td>
</tr>
</tbody>
</table>

ACTIVITIES (20 pts – SLO1-6): Because the class is open once a week, your absences more than two times will affect your activity points. Five (5) points are deducted for one missing class. Students who consider missing the class due to their clinical duties, such as covering their team’s game, may make up the class attendance for submitting the assignment given by the instructor only if the students ask at least a week prior to the class you are absent. No more than two assignments are given to make up in the course.

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 section at http://info.sjsu.edu/static/catalog/policies.html. Add/drop deadlines can be found on the current academic calendar web page located at http://www.sjsu.edu/academic_programs/calendars/academic_calendar/. The Late Drop Policy is available at http://www.sjsu.edu/aars/policies/late_drops/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 at http://www.sjsu.edu/advising/. Assignments and Grading Policy

University Policies

Academic integrity

Students should know that the University’s Academic Integrity Policy is available at http://sa.sjsu.edu/judicial_affairs/faculty_and_staff/academic_integrity/index.html. Your own commitment to learning, as evidenced by your enrollment at San Jose State University and the University’s integrity policy, require 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 is available at http://www.sa.sjsu.edu/judicial_affairs/index.html.

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. For this class, all assignments are to be completed by the individual student unless otherwise specified. If you would like to include in your assignment any material you have submitted, or plan to submit for another class, please note that SJSU’s Academic Policy F06-1 requires approval of instructors.
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 requires that students with disabilities requesting accommodations must register with the Disability Resource Center (DRC) at http://www.drc.sjsu.edu/ to establish a record of their disability.

Student Technology Resources (Optional)

Computer labs for student use are available in the Academic Success Center located on the 1st floor of Clark Hall and on the 2nd floor of the Student Union. Additional computer labs may be available in your department/college. Computers are also available in the Martin Luther King Library.

A wide variety of audio-visual equipment is available for student checkout from Media Services located in IRC 112. These items include digital and VHS camcorders, VHS and Beta video players, 16 mm, slide, overhead, DVD, CD, and audiotape players, sound systems, wireless microphones, projection screens and monitors.

Learning Assistance Resource Center (Optional)

The Learning Assistance Resource Center (LARC) is located in Room 600 in the Student Services Center. It is designed to assist students in the development of their full academic potential and to motivate them to become self-directed learners. The center provides support services, such as skills assessment, individual or group tutorials, subject advising, learning assistance, summer academic preparation and basic skills development. The LARC website is located at http://www.sjsu.edu/larc/.

SJSU Writing Center (Optional)

The SJSU Writing Center is located in Room 126 in Clark Hall. It is staffed by professional instructors and upper-division or graduate-level writing specialists from each of the seven SJSU colleges. Our writing specialists have met a rigorous GPA requirement, and they are well trained to assist all students at all levels within all disciplines to become better writers. The Writing Center website is located at http://www.sjsu.edu/writingcenter/about/staff/.

Peer Mentor Center (Optional)

The Peer Mentor Center is located on the 1st floor of Clark Hall in the Academic Success Center. The Peer Mentor Center is staffed with Peer Mentors who excel in helping students manage university life, tackling problems that range from academic challenges to interpersonal struggles. On the road to graduation, Peer Mentors are navigators, offering “roadside assistance” to peers who feel a bit lost or simply need help mapping out the locations of campus resources. Peer Mentor services are free and available on a drop-in
basis, no reservation required. The Peer Mentor Center website is located at http://www.sjsu.edu/muse/peermentor/

Format For Basic Research Abstracts

The Title of your Abstract Bolded and in Title Case

[3 spaces] Doe JT*, Public JQ†: *First Author’s Institution Name, †Second Author’s Institution.

[Blank Line]

[Blank Line]

Context: Write a sentence or two summarizing the rationale for the study, providing a reason for the study question and/or uniqueness of study. Objective: State the precise objective(s) or question(s) addressed in the report, including a priori hypotheses if applicable. Design: Describe the overall study design of the project reported (e.g., randomized controlled trial, crossover trial, cohort or cross-sectional). Setting: Describe the environment in which the study was conducted to help readers understand the transferability of the findings, (e.g., patient clinic, research laboratory or field). Patients or Other Participants: Describe the underlying target population, selection procedures (e.g., population based sample, volunteer sample or convenience sample) and important aspects of the final subject pool (e.g., number, average age, weight, height and measures of variance, years of experience or gender). Appropriate sample size should be evident. Interventions: Interventions are the independent variables in the study. Describe the essential pieces of the experimental methods, types of materials, measurements and instrumentation utilized, data analysis procedures and statistical tests employed. Provide validity and reliability information on novel instrumentation. Main Outcome Measures: Clearly identify primary or critical dependent variables that support the primary objective(s) of the study. Indicate the statistical analysis employed to answer the primary research objective(s). Results: The main results of the study should be given. Comparative reports must* include descriptive data (e.g., proportions, means, rates, odds ratios or correlations), accompanying measures of dispersion (e.g., ranges, standard deviations or confidence intervals) and inferential statistical data. Results should be accompanied by the exact level of statistical significance. The P value should not exceed 3 digits to the right of decimal. When the exact significance is below P < .001, the exact significance should be reported as P < .001. Conclusions: Summarize or emphasize the new and important findings of the study. The conclusion must be consistent with the study objectives and results as reported and should be no more than three to four sentences. If possible, relate implications of the findings for clinical practice. Word Count: Limited to 450 words including headings.
### KIN272-01: EBR Practice of Therapeutic Exercise

***NOTE:*** The course outline of topics is tentative and subject to change with fair warning; we will cover topics as time permits and according to guest speaker availability. Once all guest speakers and facilities have confirmed, the instructor will issue a course schedule.***

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Tentative Topics</th>
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<tbody>
<tr>
<td>1</td>
<td>8/27</td>
<td>Introduction to Ther Ex;</td>
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<tr>
<td>2</td>
<td>9/3</td>
<td><strong>NO CLASS: LABOR DAY</strong></td>
</tr>
<tr>
<td>3</td>
<td>9/10</td>
<td>CKC exercises in the lower extremity</td>
</tr>
<tr>
<td>4</td>
<td>9/17</td>
<td>CKC exercises in the upper extremity</td>
</tr>
<tr>
<td>5</td>
<td>9/24</td>
<td>CKC exercises in the upper extremity</td>
</tr>
<tr>
<td>6</td>
<td>10/1</td>
<td>Therapeutic exercise for overhead shoulder I</td>
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<tr>
<td>7</td>
<td>10/8</td>
<td>Therapeutic exercise for overhead shoulder II</td>
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<tr>
<td>8</td>
<td>10/15</td>
<td>Therapeutic exercise for overhead shoulder III</td>
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<tr>
<td>9</td>
<td>10/22</td>
<td>Core stabilization Exercise I</td>
</tr>
<tr>
<td>10</td>
<td>10/29</td>
<td>Core stabilization Exercise II</td>
</tr>
<tr>
<td>11</td>
<td>11/5</td>
<td>Dynamic Neuromuscular Stabilization by Eitan Gelber, MA, ATC, CSCS</td>
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<tr>
<td>12</td>
<td>11/12</td>
<td><strong>NO CLASS: VETERAN’S DAY</strong></td>
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<tr>
<td>13</td>
<td>11/19</td>
<td>Mulligan Concept by Eitan Gelber, MA, ATC, CSCS</td>
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<tr>
<td>14</td>
<td>11/26</td>
<td>FMS I instructed by Hisashi Imura, MA, ATC, RKC</td>
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<tr>
<td>15</td>
<td>11/28</td>
<td>FMS II by Hisashi Imura, MA, ATC, RKC</td>
</tr>
<tr>
<td>16</td>
<td>12/3</td>
<td>Kettlebell Intervention and Breathing by Hisashi Imura, MA, ATC, RKC</td>
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<tr>
<td>17</td>
<td>12/10</td>
<td><strong>Open class: sharing ideas</strong></td>
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