

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

**KIN273: Evidence Based Research in the Practice of
Therapeutic Modalities**

Spring 2013

Instructor:	Masaaki Tsuruike PhD, ATC
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Office Hours:	MR: 1:30pm-3:30pm All other times, by appointment only.
Class Days/Time:	<u>Wednesday: 7:00 pm – 8:50 pm</u>
Prerequisites:	None listed; however it is recommended that you have at least completed an undergraduate course in Therapeutic Modalities and at least one graduate level Evidence Based Medicine/ Research course (i.e., KIN268).

COURSE DESCRIPTION:

This is a 2-credit graduate course designed to critically examine current practices in therapeutic modalities with regard to the healing rehabilitation processes. The course will take a multidisciplinary approach, incorporating scientific (research) and philosophical bases. The efficacy of traditional and non-traditional therapeutic modalities for use in clinical practice will be discussed. The descending pathways will be also discussed to understand the control of pain perception and rehabilitation approaches. The course is intended to provide the student with the information necessary to perform prudent clinical applications of therapeutic 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 law that governs therapeutic modalities.
2. To achieve better results from the numerous therapeutic methods designed to facilitate the healing and strengthening of collagenous tissue.
3. To increase one's knowledge of neurophysiology, especially descending pathways that control our postural balance as well as upper and lower extremities.
4. To review physiological and biomechanical effects, indications and contraindications, clinical use and proper techniques for the application of common therapeutic modalities employed in the healing and rehabilitation processes.
5. To better understand the biomechanical, neurophysiological and metabolic changes that occurs during the use of therapeutic modalities.
6. To use critical thought and scientific evidence to make sound decisions regarding the application of therapeutic modalities.
7. To critically think about the application of therapeutic modalities and related principles across diverse populations.

RECOMMENDED TEXTBOOKS:

1. Denegar CR, Saliba E & Saliba S. Therapeutic Modalities for Musculoskeletal Injuries (third edition). Human Kinetics (Champaign, IL), ISBN 978-0-7360-5582-6, copyright 2010.
2. Knight KL & Draper DO. Therapeutic Modalities: The art and science. Lippencott Williams & Wilins (Baltimore, MD), ISBN 978-0-7817-5744-7, copyright 2008.
3. Law MC & MacDermid J. Evidence-Based Rehabilitation: A Guide to Practice (second edition). Slack Publishers (Thorofare, NJ), ISBN 978-1-55643-768-8, copyright 2008.
4. Selected reading to be provided by the instructor.

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 EVALUATION:

The course is based on a point scale (650 total points). The breakdown is as follows:

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

ABSTRACTS (160 points): You will read and critically review 4 peer-reviewed journal articles pertinent to EBR and current modalities concepts (the articles must be written after 2005 and 2 of the 4 must be systematic reviews/meta-analyses). From each article, you will synthesize and “abstract” based on the guidelines below. Each abstract will be worth 40 points and must be turned in via dropbox on Canvas on its due date in order to receive credit. Late abstracts will not be accepted unless prior arrangements have been made with the instructor. [PLO 1, 2, 4: SLO: 1-5]

<u>Abstract#:</u>	<u>Due Date</u>
1	Wed, Feb 13
2	Wed, Mar 13
3	Wed, Apr 17
4	Wed, May 8

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.
3. 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.
4. Papers must be typed using 12-point font, either Times New Roman or Calibri, and single-spaced. Margins should be 1” on all sides. Do not include a title page. Simply write your last name on the upper right hand corner.
5. The abstract should be formatted in APA format.

CURRENT TOPICS DISCUSSION (100 pts – SLO1, 2 3-7): You will choose a current technique relative to traditional therapeutic modalities as part of a management strategy for a specific injury. Some examples of specific injury are: hamstring strain, bursitis, tendinitis, low back pain or acute ankle sprain. You will assemble a set of reading materials, which could be part of your abstracts and distribute them to the class the week prior to your discussion. You will construct a set of discussion questions, activities, etc. The discussion should last a minimum of 45 minutes. You may use any combination of methods to drive

your discussion (lecture, power point, video, written activities, etc.), but ultimately the discussion should result in actual classroom dialogue. You are also expected to demonstrate the technique and protocols of the modality you pick up and explain physiological implications as well as the specific indication and potential contraindications. Your peer will evaluate your presentation, which may not reflect to your points.

ACTIVITIES (20 pts): 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. [SLO 1-7]

MIDTERM EXAM (100 pts): There will be a *cumulative* midterm exam covering all materials (lectures, labs, discussions, readings, etc.) to date from ALL units discussed including the healing process and descending pathways during the course of the spring semester. The date and format of the midterm exam are to be determined [PLO 1-5: SLO 2 and 3]

TAKE-HOME EXAM (100 pts): There will be one take-home exam covering materials (lectures, labs, discussions, readings, presentations, etc.) from ALL units discussed, relative to current therapeutic modalities during the course of the spring semester. The date and format of the final exam are to be determined. [PLO 1-5; SLO 1, 2, 3-7]

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 calendar](http://www.sjsu.edu/academic_programs/calendars/academic_calendar/) web page located at http://www.sjsu.edu/academic_programs/calendars/academic_calendar/. 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/>. Assignments and Grading Policy

University Policies

Academic integrity

Students should know that the University's [Academic Integrity Policy](http://sa.sjsu.edu/judicial_affairs/faculty_and_staff/academic_integrity/index.html) 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](http://www.sa.sjsu.edu/judicial_affairs/index.html) 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](http://www.drc.sjsu.edu/) (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](http://www.sjsu.edu/larc/) 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](http://www.sjsu.edu/writingcenter/about/staff/) 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](http://www.sjsu.edu/muse/peermentor/) is located at <http://www.sjsu.edu/muse/peermentor/>

KIN273: EBR in the Practice of Therapeutic Modalities

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.

Week	Date	Tentative Topics
1	1/23	Introduction. Healing Process, Pain
2	1/30	Inflammation, Connective Tissue
3	2/6	Neurotransmitters, Pain Control, Non-steroidal Anti-inflammatory Drugs
4	2/13	Descending pathways
5	2/20	Neuromuscular Control of Movement
6	2/27	Postural Control, Voluntary Movements
7	3/6	Midterm Exam
8	3/13	Infrared Spectrum: Cryo- & Thermotherapies and Modafications
9	3/20	Fire Cupping & Non-Traditional Manual Therapy
10	3/27	<i>NO CLASS: SPRING BREAK</i>
11	4/3	Traditional Therapy Techniques: Ultrasound, Light Therapy, Laser Treatment
12	4/10	Manual Therapy: Técnica Gavilán I
13	4/17	Manual Therapy: Técnica Gavilán II
14	4/24	Visiting TEAM CLINIC Performance Centre
15	5/1	Traditional Therapy Techniques: Electrotherapy Treatment
16	5/8	TBA/ Open Lab Time