Course Change Proposal
Form A

Academic Group (College): Health and Human Services
Academic Organization (Department): Physical Therapy
Date: 2/8/2011

Type of Course Proposal:
New ___ Change _x__ Deletion ___

Department Chair:
Dr. McGinity

Submitted by:
Dr. Barakatt

Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes ___ No _x_

For Catalog Copy: Yes _x__ No ___

CCE (Extension): Yes ___ No _x_

Semester Effective:
Fall _X__ Spring __, 2012__

This course replaces experimental course Subject Area (prefix) and Catalog Nbr (course number):

If changing an existing course, should new version be considered a repeat of the original version? If so, the same Course ID will be maintained. If not, a new Course ID will be assigned. Note: In PeopleSoft terminology, the Course ID is the unique system identifier, not the Catalog Nbr.

Yes ___ No ___

Change from:
Subject Area (prefix) & Catalog Nbr (course no.): PT 222
Title: Research Methods in Physical Therapy II
Units: 1

Change to:
Subject Area (prefix) & Catalog Nbr (course no.): PT 622
Title: Evidence Informed Practice II
Units: 3

JUSTIFICATION:

This course is being changed as part of the curriculum changes with the new DPT program required for continued accreditation for the program. The course has been upgraded to reflect the expectations in a doctoral program.

NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy. See http://www.csus.edu/umanual/acad.htm - Guidelines for Catalog Course Description

Designed to build upon the research design and data analysis topics covered in PT 602. Emphasis will be placed on evidence based methodologies currently used in the physical therapy literature evaluating the effectiveness of interventions, the validity of outcome measures, the validity of diagnostic measures, and the identification of prognostic measures. Open to Physical Therapy majors only.

Note:

Prerequisite:
BIO 633 Human Gross Anatomy for Physical Therapists
PT 600 Pathokinesiology
PT 608 PT/Patient/Professional Interactions
PT 630 Pathophysiology
PT 602 Evidence Informed Practice I

Enforced at Registration: Yes _x__ No ___

Corequisite:
PT 604 Principles of Human Movement
PT 606 Therapeutic Measurements and Techniques
PT 614 Neuroscience for Physical Therapists
PT 618 Foundations for Patient Management
PT 620 Physical Therapy Interventions I

Enforced at Registration: Yes _x__ No ___

Graded: Letter _x__ Credit/No Credit ___
Instructor Approval Required? Yes _x__ No ___

Course Classification (e.g., lecture, lab, seminar, discussion): Lecture C-02
Title for CMS (not more than 30 characters)
Evidence Informed Practice II

Cross Listed? Yes _x__ No ___
If yes, do they meet together and fulfill the same requirement, and what is the other course.
<table>
<thead>
<tr>
<th>How Many Times Can This Course be Taken for Credit?</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can the course be taken for Credit more than once during the same term? Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
FOR NEW COURSE PROPOSALS OR SUBSTANTIVE CHANGES ONLY:

Description of the Expected Learning Outcomes: Describe outcomes using the following format: "Students will be able to: 1), 2), etc." See the example at http://www.csus.edu/acafl/example.htm

All course objectives reference the overall educational goals and outcomes of the Department of Physical Therapy.

At the conclusion of this course, the student is expected to be able to:

**Goal 2.0:** Demonstrate Professional Behaviors
2.5 Demonstrate entry level generic abilities, including:
   2.5.1 Professional accountability and commitment to learning.
   2.5.1.1 Appropriately completing and promptly turning in assignments.
   2.5.3 Effective use of constructive feedback.
   2.5.3.1 Adequately revise assignment based on feedback provide
   2.5.4 Effective use of time and resources.
   2.5.4.1 Effectively work with colleagues on scholarly activities

**Goal 4.0:** Demonstrate Scholarship
4.1 Apply basic principles of statistics and research methodologies within the practice of physical therapy.
   4.1.1 Formulate and reevaluate positions based on the best available evidence.
   4.1.1.1 Evaluate the validity of diagnostic tests and outcome measures used in physical therapy examination and evaluation.
   4.1.1.2 Evaluate the prognostic usefulness of clinical prediction rules.
   4.1.1.3 Evaluate the effectiveness of physical therapy treatment interventions by asking and answering PICO format questions utilizing evidence in the physical therapy literature.
   4.1.3 Evaluate the efficacy and efficiency of physical therapy procedural interventions.
   4.1.3.1 Rank the strength of evidence based on a study’s research design utilized to address a research question.
   4.1.3.2 Rank the strength of evidence of treatment effectiveness research articles utilizing the PEDro physical therapy evidence-based practice website’s strength of study design criteria.
   4.1.3.3 Recognize the characteristics, strengths and limitations of randomized control trials, cohort studies, case control studies, cross-sectional studies, single subject designs and case studies.
   4.1.3.4 Interpret the findings of systematic reviews and meta-analyses.
   4.1.4 Critically evaluate and interpret professional literature as it pertains to practice, research, and education.
   4.1.4.1 Recognize and interpret the statistical methods utilized to formulate and evaluated clinical prediction rules.
   4.1.4.2 Recognize the various methods utilized to assess the validity of an outcome measure
   4.1.4.3 Recognize and interpret the statistical methods utilized to evaluate the validity of diagnostic tests.
   4.1.4.4 Recognize and interpret the statistical methods utilized in evaluating the effectiveness of physical therapy treatment interventions including, but not limited to risk ratios, odds ratios, and number needed to treat.
   4.1.5 Utilize contemporary technology consistently to access evidence.
   4.1.5.1 Utilize the PEDro physical therapy evidence-based practice website, PubMed, Hooked on Evidence, Open Door, Google Scholar and other database search engines to access the evidence associated with physical therapy practice.
   4.2 Contribute to the body of knowledge of physical therapy.
   4.2.1 Participate in, plan, and/or conduct clinical, basic, or applied research.
   4.2.1.1 Recognizing and understanding laws and regulations pertaining to the protection of human subjects who participate in research projects.
   4.2.2 Disseminate the results of scholarly activities.
   4.2.2.1 Produce an evidence based answer to a PICO question in a format acceptable to be published on the student created website PTPICO.com.
   4.2.3.1

**Assessment Strategies:** A description of the assessment strategies (e.g., portfolios, examinations, performances, pre-and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above:

<table>
<thead>
<tr>
<th>Assessment Category</th>
<th>Weight (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article Critiques (6)</td>
<td>20%</td>
</tr>
<tr>
<td>Quizzes (2)</td>
<td>15%</td>
</tr>
<tr>
<td>Safety of Human Subjects Tutorial/Certification</td>
<td>5%</td>
</tr>
<tr>
<td>Evidence Based Physical Therapy Project</td>
<td>20%</td>
</tr>
<tr>
<td>Midterm</td>
<td>20%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>20%</td>
</tr>
</tbody>
</table>
For whom is this course being developed?
Majors in the Dept. __ Majors of other Depts. ___ Minors in the Dept. ___ General Education ___ Other ___

Is this course required in a degree program (major, minor, graduate degree, certificate)? Yes ___ No ___
If yes, identify program(s): DPT

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer facilities, faculty, etc.)? Yes ___ No ___
If yes, attach a description of resources needed and verify that resources are available.

Indicate which department or programs will be affected by the proposed course (if any). ___________ Physical Therapy ___________

The Department Chair’s signature below indicates that affected programs have been sent a copy of this proposal form.

Approvals: If proposed change, new course or deletion is approved, sign and date below. If not approved, forward without signing to
the next reviewing authority, and attach an explanatory memorandum to the original copy.

Signatures: __________________________ Date ___________

Department Chair: __________________________ 8-16-11

College Dean or Associate Dean: ____________ 7-16-11

CPSP (for school personnel courses ONLY)

Associate Vice President
and Dean for Academic Programs

Distribution: Academic Affairs (original), Department Chair and College Dean. Dean’s office to send original after approval to
Academic Affairs, at mail zip 6016. An electronic copy must also be sent.

9/10/2008
1. Rank the following types of evidence found in the literature concerning the effectiveness of physical therapy treatment with 1 = providing the strongest evidence and 6 = providing the weakest evidence:

   ______ Systematic Review of Case Control Studies

   ______ Systematic Review of Randomized Clinical

   ______ Systematic Review of Cohort Studies

   ______ Study with a Randomized Control Trial Design

   ______ Study with a Case Control Design

   ______ Study with a Cohort Design

2. An organizational method of formulating a question concerning the effectiveness of physical therapy treatment for a specific patient problem is to ask the question in the P.I.C.O. format. What do the letters in this format stand for?

3. T   F  A meta-analysis is a systematic review in which the data from multiple studies are re-examined on the individual subject level or on the study's aggregate findings level.
Rafael wants to figure out if more than 40 pitches thrown per day over a 4-week period by a little league pitcher is a risk factor for anterior shoulder subluxations. So Rafael had all the little league coaches in the greater Sacramento area call him when one of their pitchers suffered an anterior shoulder subluxation. To recruit a control group, Rafael asked two Sacramento area little league pitchers without shoulder problems to join the study for each little league pitcher that was enrolled with an anteriorly subluxed shoulder. Rafael then asked all the subjects how many pitches they had thrown per day over the last 4-weeks. The distribution of the data that Rafael gathered is reported below.

<table>
<thead>
<tr>
<th>Pitch Count</th>
<th>Shoulder Status</th>
<th>Anterior Subluxed Shoulder</th>
<th>No Anterior Subluxed Shoulder</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥40 / day</td>
<td></td>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>&lt;40 / day</td>
<td></td>
<td>50</td>
<td>190</td>
</tr>
</tbody>
</table>

4. What is the outcome variable in this design?

5. Identify the “risk factor” being assessed.

6. What type of study is being described?
   A. Case Control Study
   B. Cohort Study
   C. Cross Sectional Study
   D. Randomized Clinical Trial
   E. None of the above

7. Compute the odds of having an anterior shoulder subluxation given having a high pitch count (≥ 40 pitches / day).

8. Compute the odds of having an anterior shoulder subluxation given not having a high pitch count (< 40 pitches / day).

9. Compute the odds ratio of having an anterior shoulder subluxation with a high pitching count versus a low pitch count.
10. Suppose the computed odds ratio has a 95% CI of 10 to 78. What would you conclude about the odds ratio value?

11. State the meaning of this particular odds ratio value (i.e. what the value means in the situation described).

Susan McGinty is trying to figure out if GRE scores are good predictors of physical therapy students’ success in passing the California Physical Therapy Licensing Examination. She obtained the GRE scores of 320 physical therapy students prior to starting their course of study in a physical therapy professional program. Susan then obtained the passing status of all the physical therapy students after they completed the California Physical Therapy Licensing Examination. The following data was collected:

<table>
<thead>
<tr>
<th>GRE Score</th>
<th>Exam Results</th>
<th>Did Not Pass</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥480</td>
<td>Pass</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>&lt;480</td>
<td></td>
<td>90</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td></td>
<td>320</td>
</tr>
</tbody>
</table>

12. Compute the sensitivity, specificity, and likelihood ratios of passing the examination based on the listed GRE cutoff (both LR+ and LR-)

13. Given the expected pass rate (pre-test probability) of the California Physical Therapy Licensing Examination is 72%, what would the post-test probability of students passing the examination be if their GRE score was ≥ 480.

14. Given the expected pass rate (pre-test probability) of the California Physical Therapy Licensing Examination is 72%, what would the post-test probability of students passing the examination be if their GRE score was < 480.
15. Yes  No  Should Susan consider physical therapy applicants’ GRE scores when deciding on whether to accept the applicants into the physical therapy professional program?

16. T  F  Case-controls studies are more prone to recall bias than prospective cohort studies.

17. T  F  A cohort study is the type of observational investigation that you would want to perform when the disorder under study rarely occurs.

18. T  F  A cohort study is the least expensive type of observational study.

19. Which of the following is an advantage of performing a cohort study as compared to a randomized control study? (Circle all that apply.)

   A. You can reduce bias through the randomization process.
   B. You can eliminate any question concerning the temporal sequence of occurrence between exposure and outcome.
   C. It is not always ethical to randomize subjects to an exposure suspected of causing a disorder.
   D. It is a lot easier and less expensive to study disorders that rarely occur.
   E. It is easier to a study disorder with a long latency period (takes a long time to develop the disease following exposure to the risk factor) using a cohort study.

20. Which of the following criteria does not contribute to the evidence for establishing causality between a risk factor and an outcome? (Circle all that apply.)

   A. A strong association found between a risk factor and an outcome
   B. There is a plausible biological explanation for the risk factor causing the outcome
   C. The risk factor is associated with a multitude of outcomes besides the one in question
   D. Multiple studies have found a relationship between the risk factor and the outcome
   E. No temporal ambiguity exists between exposure to the risk factor and acquiring the outcome

21. T  F  In a cross-sectional study, the “cases” exposure to risk factors is determined prior to the “cases” actually acquiring the disorder.

22. T  F  All that you know about the anterior drawer test for knee stability (which tests the integrity of the anterior cruciate ligament) is that the test has high specificity. If a patient tests positive for the anterior draw test, you can conclude that they are likely to have a torn anterior cruciate ligament.
Pre-Test Probability (%)  Likelihood Ratio  Post-Test Probability (%)
A trainer wanted to evaluate the effectiveness of post-training stretching on DOMS in runners, so he had 100 runners stretch after running, and 100 runners not stretch after running. The outcome measure used to determine if the runners experienced DOMS was a numeric rating scale from 0 to 10, where 0 was no soreness noted and 10 was the worst soreness imaginable. A score of 2 or less on the numeric rating scale was considered a successful outcome. If a runner scored 3 or more then the outcome was considered unsuccessful.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Stretch</th>
<th>Unsuccessful Outcome</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>Stretch</td>
<td>65</td>
<td>100</td>
</tr>
<tr>
<td>No Stretch</td>
<td>33</td>
<td>67</td>
<td>100</td>
</tr>
</tbody>
</table>

What is the Experimental Event Rate (EER)?

What is the Control Event Rate (CER)?

What is the Risk Ratio?

If the 95% confidence interval for Relative Risk (RR) was found to be [1.1, 4.7], what would you conclude about the statistical significance of the RR?

What is your conclusion regarding patients being treated with stretching versus without stretching based on the RR?

What is the Absolute Risk Increase (ARI) for runners not having DOMS who stretch after running?
How would you interpret the value of the ARI?

What is the NNT for patients not having DOMS if they stretch?

How would you interpret the value of the NNT?

What are the odds of a Good Outcome given the runners stretch after a run?

What are the odds of a Good Outcome given the runners don’t stretch after a run?

What is the odds ratio?

If the 95% confidence interval for OR was found to be [2.1, 6.8], what would you conclude about the statistical significance of the OR?

What would you conclude concerning the OR?
A hospital was evaluating the effectiveness of a compression boot on patients with lower limb edema. Patient outcomes were measured by limb circumference measurements. If the limb circumference decreased by 15% or more, the patient was thought to have a successful outcome; any decrease less that 15% was considered a poor outcome. Girth measurements on 405 patients measured using the boot were compared to 1047 patients measured and treated for LE edema prior to the hospital using the boot. The following data was created:

<table>
<thead>
<tr>
<th>Treatment</th>
<th>boot Outcome</th>
<th>Good Outcome</th>
<th>Row Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>171</td>
<td>234</td>
<td>405</td>
</tr>
<tr>
<td>pre-boot</td>
<td>619</td>
<td>428</td>
<td>1047</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1452</td>
</tr>
</tbody>
</table>

What is the Experimental Event Rate (EER) in this situation?

What is the Control Event Rate (CER) in this situation?

What is the Risk Ratio (RR) in this situation?

If the 95% confidence interval for RR was found to be [.52, .89], what would you conclude about the statistical significance of the RR?

What is your conclusion regarding patients being treated with the boot versus without the boot based on the RR?

What is the Absolute Risk Reduction (ARR) for patients using the boot?

How would you interpret the ARR value?
What is the NNT for patients using the boot?

How would you interpret the NNT value?

What are the odds of a Bad Outcome given the patient receives treatment with the boot?

What are the odds of a Bad Outcome given the patient does not receive treatment with the boot?

What is the odds ratio?

If the 95% confidence interval for OR was found to be [0.11, 0.69], what would you conclude about the statistical significance of the OR?

How would you interpret the OR value?
CALIFORNIA STATE UNIVERSITY, SACRAMENTO
College of Health and Human Services
Department of Physical Therapy

PT622 – Evidence Informed Practice II

Spring

COURSE CREDIT: 3 units

INSTRUCTOR: TBA

LOCATION: TBA

TIME: TBA.

COURSE DESCRIPTION:
Designed to build upon the research design and data analysis topics covered in PT 602.
Emphasis will be placed on evidence based methodologies currently used in the physical therapy
literature evaluating the effectiveness of interventions, the validity of outcome measures, the
validity of diagnostic measures, and the identification of prognostic measures. Open to Physical
Therapy majors only.

PREREQUISITES:
BIO 633 Human Gross Anatomy for Physical Therapists
PT 600 Pathokinesiology
PT 608 PT/Patient/Professional Interactions
PT 630 Pathophysiology
PT 602 Evidence Informed Practice I

CO-REQUISITES:
PT 604 Principles of Human Movement
PT 606 Therapeutic Measurements and Techniques
PT 614 Neuroscience for Physical Therapists
PT 618 Foundations for Patient Management
PT 620 Physical Therapy Interventions I

REQUIRED TEXTS:
Jewel DV, Guide to Evidence-Based Physical Therapy Practice, Second Edition, Jones and
Bartlett, 2011

OPTIONAL TEXT:
2008.

ADDITIONAL RESOURCES:
Evidence-Based Practice website - http://www.cebm.utoronto.ca/glossary/
Selected articles to be identified for students in class as required.
COURSE OBJECTIVES:

All course objectives reference the overall educational goals and outcomes of the Department of Physical Therapy.

At the completion of this course, the student is expected to be able to:

Goal 2.0: Demonstrate Professional Behaviors

2.5 Demonstrate entry level generic abilities, including:
   2.5.1 Professional accountability and commitment to learning.
      2.5.1.1 Appropriately completing and promptly turning in assignments.
   2.5.3 Effective use of constructive feedback.
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Goal 4.0: Demonstrate Scholarship

4.1 Apply basic principles of statistics and research methodologies within the practice of physical therapy.
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      4.1.3.1 Rank the strength of evidence based on a study’s research design utilized to address a research question.
      4.1.3.2 Rank the strength of evidence of treatment effectiveness research articles utilizing the PEDro physical therapy evidence-based practice website’s strength of study design criteria.
      4.1.3.3 Recognize the characteristics, strengths and limitations of randomized control trials, cohort studies, case control studies, cross-sectional studies, single subject designs and case studies.
      4.1.3.4 Interpret the findings of systematic reviews and meta-analyses.
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4.1.5.1 Utilize the PEDro physical therapy evidence-based practice website, PubMed, Hooked on Evidence, Open Door, Google Scholar and other database search engines to access the evidence associated with physical therapy practice.

4.2 Contribute to the body of knowledge of physical therapy.
   4.2.1 Participate in, plan, and/or conduct clinical, basic, or applied research.
   4.2.1.1 Recognizing and understanding laws and regulations pertaining to the protection of human subjects who participate in research projects
   4.2.2 Disseminate the results of scholarly activities.
   4.2.2.1 Produce an evidence based answer to a PICO question in a format acceptable to be published on the student created website PTPICO.com.

TEACHING STRATEGIES AND LEARNING ACTIVITIES:
1. Lectures, demonstrations and discussion led by instructor
2. Homework assignments utilizing SacCT
3. Research article critiques
4. Examples from the text books
5. Practice problems performed in class and independently (answers provided)
6. Formulation of a treatment effectiveness question using the PICO format
7. Literature search to access evidence in the physical therapy literature
8. Writing assignment concerning evidence based treatment effectiveness topic
9. Independent website tutorial with website administered competency examination on the protection of human research subjects

GRADING PROCEDURES:
Grading:
A  = 94-100%  C  = 73-76%
A- = 90-93%   C- = 70-72%
B+ = 87-89%   D+ = 67-69%
B  = 83-86%   D  = 63-66%
B- = 80-82%   D- = 60-62%
C+ = 77-79%   F  = 59% & below

Article Critiques (6)          20%
Quizzes (2)                    15%
Safety of Human Subjects Tutorial/Certification 5%
Evidence Based Physical Therapy Project 20%
Midterm 20%
Final Examination 20%

Article critiques will be graded on content, presentation, and clarity. The article to be reviewed will be provided to students.

Attendance: Daily attendance and timeliness is expected. Courtesy and professional responsibility requires notification of the instructor for any absence in advance. Students are responsible for any missed work and may be required to complete make-up assignments. Examinations and quizzes cannot be taken early. A 10% deduction in the total score will be applied to any quiz or examination that is taken late.
**Behavioral expectations:** Students are responsible for appropriate behaviors as defined by the generic abilities. Failure to comply with behavioral expectations during class may result in a student first being warned that behavior is inappropriate, then, if inappropriate behavior continues, a student may be asked to leave a class. Repeated failure to comply with behavioral expectations can lead to failure in the course. Cell phones and beepers should be off or silent (set to vibration mode) during the class. No text messaging is permitted in class.

**Special accommodations:** During the course of the year, some students may utilize prearranged accommodations. If you are a student with a learning disability, physical disability, or other special needs, please let me know as soon as possible if you need special accommodation. These kinds of confidential discussions are best handled during my office hours or by special appointment. You can expect confidentiality and cooperation regarding any circumstances and needs that have been verified through the Office of Services to Students with Disabilities (SSWD).

**MAJOR ASSIGNMENTS:**

*The Safety of Human Subjects Certification:* This is an independent activity that is performed on the internet. You go to the following web site to complete the tutorial and receive the certificate.

http://phrp.nihtraining.com/users/login.php

The web site address above takes you to the NIH Human Subjects tutorial. Register as a new user, and record your login information somewhere. Follow the instructions for completing the tutorial and printing out a certificate of completion. This certificate is due by the Friday of semester week #15.

*The PICO Project:* For this project students will formulate a PICO question concerning physical therapy treatment effectiveness and conduct a literature search to find evidence to answer the question. Students will work in pairs. Students may wish to complete this project in conjunction with another course or revise a previously addressed topic (see instructor concerning the latter). This project will involve choosing a diagnosis commonly treated in a physical therapy clinic and assessing the effectiveness of a specified treatment for the problem based on the physical therapy literature. Guidelines for formatting this project are available on WebCT. Correctly formatting the project product will be weighted as 50% of the grade on this project. See the PTPICO.com website for PICO projects that students have previously completed.
**TENTATIVE SCHEDULE:**

Homework assignments due dates may be modified during the course of the semester

<table>
<thead>
<tr>
<th>Dates</th>
<th>Topics, Assignments, Quizzes, Exams</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1:</td>
<td>Types of Questions/Studies, Databases, Hierarchy of Evidence, Terms</td>
<td>Jewel - Chapters 1, 2, 3;</td>
</tr>
<tr>
<td>Week 2:</td>
<td>Study Designs and Statistical Tests Utilized for Treatment Effectiveness Studies – Randomized Control Trials</td>
<td>Jewel – Chapters 5, 8, 12</td>
</tr>
<tr>
<td>Week 3:</td>
<td>Study Designs and Statistical Tests Utilized for Treatment Effectiveness Studies – Cohort Studies and Cross-Sectional Studies <strong>Homework:</strong> Journal Article Worksheet #1 – Randomized Control Trial</td>
<td>Jewel - Chapters 5, 8, 12</td>
</tr>
<tr>
<td>Week 4:</td>
<td>Study Designs and Statistical Tests Utilized for Treatment Effectiveness Studies – Case Control Studies <strong>Quiz #1</strong></td>
<td>Jewel - Chapters 5, 8, 12</td>
</tr>
<tr>
<td>Week 5:</td>
<td>Formulating a PICO Question; Explanation of PICO assignment <strong>Homework:</strong> Journal Article Worksheet #2 – Case Control Design Interpreting systematic reviews and meta-analyses</td>
<td>Jewel – Chapter 3</td>
</tr>
<tr>
<td>Week 6:</td>
<td>Validity Testing of Clinical and Diagnostic Tests. <strong>Homework:</strong> Journal Article Worksheet #3 – Systematic Review</td>
<td>Jewel - Chapter 10</td>
</tr>
<tr>
<td>Week 7:</td>
<td>Validity Testing of Clinical and Diagnostic Tests.</td>
<td>Jewel - Chapter 10</td>
</tr>
<tr>
<td>Week 8:</td>
<td><strong>Midterm Examination</strong> <strong>Homework:</strong> Journal Article Worksheet #4 - Diagnostic Test Validity</td>
<td>Jewel - Chapter 10</td>
</tr>
<tr>
<td>Week 11:</td>
<td>Clinical Prediction Rule Validity <strong>Homework:</strong> Journal Article Worksheet #5 – Outcome Measure Validity</td>
<td>Jewel - Chapter 13</td>
</tr>
<tr>
<td>Week 12:</td>
<td>Validity of Prognostic Factors <strong>Quiz #2</strong></td>
<td>Jewel - Chapters 11</td>
</tr>
<tr>
<td>Week 13:</td>
<td><strong>Homework:</strong> Journal Article Worksheet #6 – Prognostic Test Validity PICO Project Development <strong>Thanksgiving Break</strong></td>
<td>Jewel - Chapters 11</td>
</tr>
<tr>
<td>Week 14:</td>
<td>PICO Project Development</td>
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<td>Week 15:</td>
<td>PICO Project Development <strong>Homework:</strong> PICO Project Due Course evaluations</td>
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<tr>
<td>Week 16:</td>
<td><strong>FINAL EXAMINATION</strong></td>
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**THE SCHEDULE AND CONTENT OF THE SYLLABUS ARE SUBJECT TO CHANGE AT THE DISCRETION OF THE INSTRUCTOR.**

STUDENTS SHOULD READ AND BECOME FAMILIAR WITH THE UNIVERSITY’S ACADEMIC HONESTY, POLICY & PROCEDURES WHICH CAN BE FOUND AT: www.csus.edu/admbus/umanual/UMA00150.htm The following are direct quotes from the first sections of that document:

“The principles of truth and honesty are recognized as fundamental to a community of scholars and teachers. California State University, Sacramento (CSUS) expects that both faculty and students will honor these principles, and in so doing, will protect the integrity of academic work and student grades. CSUS is a publicly-assisted institution legislatively empowered to certify competence and accomplishment in general and discrete categories of knowledge. The President and faculty of CSUS are therefore obligated not only to the world at large but also to California to guarantee that substantive knowledge is actually acquired and the ability to acquire it is actually demonstrated by those to whom they assign grades and whom they recommend for degrees. Academic dishonesty defrauds all those who depend upon the integrity of the University, its courses and its degrees. This fraud is accomplished to the extent that faculty, students or campus employees knowingly or unwittingly allow academic dishonesty to work its deception.”

“….Plagiarism is a form of cheating. At CSUS plagiarism is the use of distinctive ideas or works belonging to another person without providing adequate acknowledgement of that person’s contribution. Regardless of the means of appropriation, incorporation of another’s work into one’s own requires adequate identification and acknowledgement. Plagiarism is doubly unethical because it deprives the author of rightful credit and gives credit to someone who has not earned it. Acknowledgement is not necessary when the material used is common knowledge.”