

Oakland University
School of Health Sciences
Physical Therapy Program
Critical Inquiry I – PT6881
Winter Semester 2018

Course Description: This introductory course in Critical Inquiry will introduce students to evidence-based practice, research principles, and the research process, with an emphasis on physical therapy clinical research. Students will learn how to retrieve and critically appraise clinical studies in preparation for both evidence-based clinical practice and for clinical research.

Credit Hours: 3

Instructor: Beth Black, PT, DSc
Office: Room 3170, Human Health Building

Office Hours: Tuesday 12:00 - 2:00, Friday 11:00 - 12:00

Phone: 248-364-8694

E-mail: bblack@oakland.edu

Note: Must use your "oakland.edu" e-mail address when sending e-mails pertaining to this course.

Course information:

Day: Tuesdays

Time: 8:30-11:30 am

Location: 5036 Human Health Building

Clock Hours (lecture and on-line): 42 clock hours
(3 web, 39 classroom)

Schedule: See attached

Course Pre-requisites: Admission to DPT program

Learning Outcomes:

Upon completion of this course, the student will be able to:

1. Explain the importance of clinical research in ensuring best practice in physical therapy. (Assessment: Test)
2. Discuss the integration of patient values with research evidence and clinical judgment in evidence-based practice (Assessment: Test)
3. Identify the steps of evidence-based practice. (Assessment: Test)
4. Identify key data bases physical therapists can use to retrieve relevant studies for both evidence-based practice and for clinical research. (Assessment: Precision Search assignment)
5. Differentiate between the goals and process used to retrieve relevant studies for evidence-based practice versus clinical research. (Assessment: Test)

6. Demonstrate the ability to perform a computerized search of the professional literature using key data bases to retrieve relevant studies to answer a clinical question. (Assessment: Precision Search Assignment, Critical Appraisal Assignment)
7. Describe major types of research designs and the appropriate designs for different clinical questions. (Assessment: Test)
8. Describe issues related to measurement, including reliability, validity, sensitivity and specificity. (Assessment: Test)
9. Explain the principles of research ethics. (Assessment: Research Ethics CITI Training assignment)
10. Describe commonly used parametric and non-parametric statistical tests and their interpretation. (Assessment: Test)
11. Demonstrate the ability to critically appraise individual research studies. (Assessment: Critical Appraisal Assignment)
12. Demonstrate the ability to find evidence-based clinical practice guidelines to support best practice. (Assessment: Precision Search Assignment)
13. Describe the steps of the research process. (Assessment: Test)
14. Display professional behavior in the classroom and in other settings (based on the Generic Abilities, UWM, 1996)

Outline of Content:

This course will introduce students to evidence-based practice, general research principles, and the research process. Students will learn how to efficiently search a variety of data bases to retrieve studies relevant to a clinical practice question or a clinical research question. This course will cover research designs and methodology, principles of measurement, ethics and basic statistical analyses. Following the assignment of a research topic, students will critically appraise two clinical studies on the topic.

Description of teaching methods and learning experiences:

Combination of lecture, discussion, small group exercises, and web-based instruction.

Methods of student evaluation/grading:

Test #1: 20%: Short answer, paragraph, some multiple choice

Test #2: 20%: Short answer, paragraph, some multiple choice

Class Participation: 5%*

Homework assignments (3):

Precision Search Assignment: 10%

Research Ethics CITI Training Assignment: 10%

Qualitative Research Assignment: 10%

Critical Appraisal assignment due April 17, 2018: 25%

***Full marks for participation require prompt attendance in class, participation in class discussions and in-class small group exercises and professional behavior. Students are expected to be present and punctual for class. In case of illness or emergency, call B. Black at 248-364-8694 prior to class. It is the student's responsibility to obtain missed information.**

Critical Appraisal Assignment:

You will critically appraise 2 research studies related to the research topic you will be working on with your research advisor over the next two years.

Step 1: Meet with your research advisor to determine what topic the advisor would like you to search for and review for this assignment.

Step 2: Conduct a thorough search of the literature using multiple data bases and appropriate search terms to find two relevant research studies. The studies must be published in peer-reviewed journals. Fill out the Critical Appraisal Literature Search sheet that will be reviewed in class and posted on Moodle.

Step 3: Before proceeding with your critical appraisal of the two studies, ensure your advisor agrees that these two studies are appropriate studies for you to review.

Step 4: After receiving your research advisor's approval for these two studies, you will critically appraise each study using the appropriate critical appraisal sheets for the specific design of the study. The critical appraisal sheets for you to use will be reviewed in class and posted on Moodle.

Step 5: Submission: you will submit:

- Critical Appraisal Literature Search sheet
- A scanned copy of each study with the critical appraisal sheet appended to the study

You must submit this critical appraisal assignment electronically on Moodle by midnight April 17, 2018.

Grading Scale:

GP Numerical	Letter	Percent		GP Numerical	Letter	Percent		GP Numerical	Letter	Percent
4.0	A	100 - 96		2.9	C	79		1.9	D	69
3.9	A	95		2.8	C	78		1.8	D	68
3.8	A	94		2.7	C	77		1.7	D	67
3.7	A	93 - 92		2.6	C	76		1.6	D	66
3.6	A	91 - 90		2.5	C	75		1.5	D	65
3.5	B	89		2.4	C	74		1.4	D	64
3.4	B	88		2.3	C	73		1.3	D	63
3.3	B	87 - 86		2.2	C	72		1.2	D	62
3.2	B	85 - 84		2.1	C	71		1.1	D	61
3.1	B	83 - 82		2.0	C	70		1.0	D	60
3.0	B	80-81						0.0	E	59 and below

Required reading:

1. Jewell DV. Guide to Evidence-Based Physical Therapist Practice, 4th ed. Burlington, MA. Jones & Bartlett Learning, 2017.

Studies will be loaded on Moodle for class exercises.

Resources: Julia Rodriguez, Kresge librarian is available for research consultations. E-mail: juliar@oakland.edu

Academic conduct:

Students are expected to adhere to the procedures for Academic Conduct described in the University Graduate Catalog. Please read and refer to the University Graduate Catalog, Policy on Academic Conduct. This policy states “All members of the academic community . . . are expected to practice and uphold standards of academic integrity and honesty. Academic integrity means representing oneself and ones work honestly. Misrepresentation is cheating since it means students are claiming credit for ideas or work not actually theirs and are thereby seeking a grade that is not actually earned.” Examples of cheating include “cheating on exams, using books and/or notes when not authorized to do so, copying from someone else’s work or ideas without giving that person credit . . . Both direct quotations and paraphrases must be documented. Even if students rephrase, condense, or select from another person’s work, the ideas are still the other person’s and failure to give credit constitutes plagiarism of another’s idea.” This policy will be applied in this and all courses in the Physical Therapy Program. Students found guilty of academic misconduct by the university will be subject university sanctions and to sanctions from the program by the Physical Therapy Promotion and Honors Committee including probation, suspension or dismissal.

Accommodations /Disability support services:

Any student with a documented disability needing academic accommodations is required to speak with the Office of Disability Support Services to make arrangements. The office is located in room 103A North Foundation Hall. For information or to make an appointment call 370-3266.

Emergency Preparedness:

All students are encouraged to become familiar with the Oakland University Emergency Preparedness Website, Policies and Procedures.

See: <http://www4.oakland.edu/?id=5410&sid=188> In particular, students are strongly encouraged to:

- 1) Take the 15-minute *Violence Prevention Training Course* available on the site
- 2) Sign up to receive text message alerts in the event of a major campus emergency by visiting the **Emergency Notification** Web site (Grizzly ID and valid OU e-mail address required)
- 3) Know how to contact the OUPD in the event of an emergency:
 - Call **911** from any campus phone

- Call (248) 370-3333 from a cell phone
- Text the dispatch office at **911@oakland.edu**
- E-mail the dispatch office at **911@oakland.edu**

4) Know how to **submit anonymous tips** online in non-emergency situations.

Class Cancellation: Check the Oakland University website, and local news media stations for notification of official closing/cancellation of classes.

Tentative* course schedule

January 9:

- Emergency preparedness
- Review of syllabus
- Introduction to Critical Inquiry I, II, III

- Evidence-based practice

- Searching the literature: databases and search strategies

- Required reading: Chapters 1, 2, 3
- **Homework assignment**: the Precision Search assignment will be explained at the end of the lecture and will be due January 16. Submit through Moodle by midnight January 16.

January 16:

- Presentation of research projects/advisors
- Anatomy of a research article:
 - the research question/hypothesis
 - the research design
 - the research subjects
 - the variables and measurement
- Required reading: Chapters 4,5,6,7

January 23:

- Anatomy of a research article continued:
 - Analysis, results, interpretation:
 - Descriptive versus inference
- Required reading: Chapters 7,8
- Lecture: Precision searching of the literature *Guest lecturer: Julia Rodriguez*, Associate Professor, Kresge Library will be giving you feedback about your precision searching assignments from **10-11:30**. *** Please bring your laptop computers to use for this session.

January 30:

- Appraising the evidence for a Clinical Measure for Diagnosis, Prognosis and Outcome
Required reading: Chapter 11,12

February 6:

- Appraising the evidence for an Intervention
Required reading: Chapter 13

February 13:

- **Test #1**
- Midterm course evaluation

February 20: No class: Winter Recess Week

February 27: Appraising the evidence about Self-report Outcome Measures

Required reading: Chapter 16

March 6: Ethics in research: See Moodle: this will be a web-based class, with a **homework assignment** to be submitted on Moodle by midnight March 13.

March 13: Appraising collections of evidence: Systematic Reviews and Clinical Practice Guidelines

Required reading: Chapters 17,18

March 20: Appraising Qualitative Research Studies: Guest lecture: Chris Stiller

Required reading: Chapter 19

Homework assignment: the Qualitative Research Assignment will be described and given out during class, due March 27

March 27: Presentation of Qualitative Research Assignments

April 3: Basic Statistics. *Guest lecturer: Jackie Drouin*

Required reading: Chapters 9,10.

April 10:

- **Test #2**
- Open time for students to consult re: Critical Appraisal assignments

April 17:

- Review of Test
- Developing a research proposal in preparation for Critical Inquiry II, Research Practicum
- Conclusion
- **Critical Appraisal Assignments** are due by midnight April 17. Submit on Moodle.

