

University of Florida
College of Public Health & Health Professions Syllabus
PHT 6608: Evidence Based Practice II (3 credit hours)

Semester: Summer 2023

Location: Building – Online through Zoom

Time: Tuesday, 9:00 – 11:00

Delivery Format: Online through Zoom

Course hosted on Canvas in e-Learning: <https://lss.at.ufl.edu/>

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Prerequisites

Course participation is limited to entry-level Doctor of Physical Therapy (DPT) program students.

PURPOSE AND OUTCOME

Course Overview

The purpose of the evidence based practice sequence at the University of Florida is to promote active learning and to provide the student with skills to become critical consumers of the rehabilitation literature, as well as their own clinical practice. Evidence Based Practice II continues this sequence by reviewing selected statistical topics related to error, power, interval estimation, and inferential tests. Evidence Based Practice II will also review criteria for determining quality of individual studies related to prevention, screening, and harm, as well as introduce students to the systematic review. Evidence Based Practice II also will introduce important elements of the Patient/Client Management Model ([Guide to PT Practice](#)) related to intervention and outcomes with special emphasis placed on common statistical estimate interpretation. The material presented in lecture is accentuated with “real-world” examples from the literature and the course instructor’s ongoing research. An emphasis will be placed on using evidence to supplement clinical decision making in this part of the sequence and will prepare students for collection of standardized outcomes as required for your EBP3 Project. Student competence will be assessed by quizzes, presentations, class projects, and 1 written examination.

Relation to Program Outcomes

The primary goal of the entry-level DPT program is to prepare entry-level students/graduates to become practitioners of collaborative, interdisciplinary, evidence-based practice and meet the dynamic needs of physical therapy healthcare consumers; with an expected outcome being that students/graduates will be independent problem-solvers and critical thinkers ([UF DPT Student Handbook](#)).

Course Objectives

Upon successful completion of this course, students will be able to:

1. Describing how Type I and II error rates can affect the interpretation of a statistical finding.
2. Describing how Type I error rate, sample size, type of hypothesis, and effect size influence statistical power.
3. Differentiating between hypothesis testing for 2 means and more than 2 means.
4. Discussing different methods of post-hoc testing.

5. Differentiating between interaction and main effects reported in 2 x 2 ANOVA models.
6. Completing analysis or interpretation of selected statistical procedures.
7. Identifying ideal design for study addressing screening and prevention.
8. Identifying special issues for studies addressing harm.
9. Discussing the potential consequences of diagnostic or preventative “labeling.”
10. Describing selected methodological issues related to systematic reviews, meta-analyses, and clinical practice guidelines.
11. Discussing advantages and disadvantages of systematic reviews, meta-analyses, and clinical practice guidelines.
12. Describe and use [PICOTS formula](#) to develop a focused clinical question.
13. Describe and perform efficient literature search strategies.
14. Interpret research questions appropriate for descriptive and experimental designs.
15. Describe general rationale and goals of providing intervention.
16. Interpret estimates of magnitude (treatment effect) for interventions (i.e., effect size, NNT, AUC).
17. Describe different types of outcome measures and commonly reported domains.
18. Differentiate between different estimates of change in outcome measures (i.e., SEM, MDC, and MCID).
19. Differentiate between statistical and clinical significance.
20. Apply appraisal tools to interpret physical therapy literature (focusing on intervention and outcomes).
21. Discuss the opportunities and challenges of implementing the collection and use of patient-reported outcomes into clinical practice.

Instructional Methods

The course instructor will utilize the following techniques: lecture, focused pre-class readings and videos, class discussion, group projects, audience polling, and discussion board sessions. The teaching philosophy for this course will be focused on the Socratic Method (i.e., cooperative argumentative dialogue between individuals, based on asking and answering questions to stimulate critical thinking and draw out ideas and underlying presumptions). Active student participation is vital for the success of this class.

Blended Learning

What is blended learning and why is it important?

A Blended Learning class uses a mixture of technology and face-to-face instruction to help you maximize your learning. Knowledge content that, as the instructor, I would have traditionally presented during a live class lecture is instead provided online before the live class. This lets me focus my face-to-face teaching on course activities designed to help you strengthen higher order thinking skills such as critical thinking, problem solving, and collaboration. Competency in these skills is critical for today’s health professional.

What is expected of you?

You are expected to actively engage in the course throughout the semester. You must come to class prepared by completing all out-of-class assignments (e.g., voiceover PowerPoint lectures, online videos, class readings). This preparation gives you the knowledge or practice needed to engage in higher levels of learning during live class sessions. If you are not prepared for the face-to-face sessions, you may struggle to keep pace with the activities occurring in live sessions, and it is unlikely that you will reach the higher learning goals of the course. Similarly, you are expected to actively participate in the live class. Your participation fosters a rich course experience for you and your peers that facilitate overall mastery of the course objectives.

DESCRIPTION OF COURSE CONTENT

Course Schedule/Topic Outline

Week	Date	Topic
1	5/15	EBP Sequence Revisited and PICOTS Review
	Time: 9:00-11:00 Online/ synchronous	<ul style="list-style-type: none"> • Introduction to course • Review of PICOT • Form groups and remaining class time to work on PROJECT #1
2	5/23	Intervention Studies Part 1
	Time: 9:00-11:00 Online/ synchronous	<ul style="list-style-type: none"> • Introduction to Interventions studies • Threats to validity • Intervention study credibility <p>Quiz: View/ read online material prior to class PROJECT #1 due through Canvas submission prior to class</p>
3	5/30	Intervention Studies Part 2
	Time: 9:00-11:00 Online/ synchronous	<ul style="list-style-type: none"> • Error and power • Absolute and relative Risk reduction • Absolute and relative Benefit increase • Numbers needed to treat <p>Quiz: View/ read online material prior to class</p>
4	6/6	Intervention Studies Part 3
	Time: 9:00-11:00 Online/ synchronous	<ul style="list-style-type: none"> • Prevention and harm • Pragmatic studies <p>Quiz: View/ read online material prior to class</p>
5	6/13	Intervention Studies Part 4
	Time: 9:00-11:00 Online/ synchronous	<ul style="list-style-type: none"> • T tests and AVOVA • Non parametric tests for difference i.e. chi square <p>Quiz: View/ read online material prior to class</p>
6	6/20	Presentations
	Time: 9:00-11:00 Online/ synchronous	<ul style="list-style-type: none"> • Group presentations (PROJECT #2)
7	6/27	Compilation
	Time: 9:00-11:00 Online/ synchronous	<ul style="list-style-type: none"> • Systematic reviews • Meta analysis • Clinical practice guidelines <p>Quiz: View/ read online materials prior to class</p>
8	7/4	No Class: Holiday
9	7/11	Outcomes Part 1
	Time: 9:00-11:00 Online/ synchronous	<ul style="list-style-type: none"> • Outcome measures (types and common domains) • Clinimetric properties • MDC/ MCID <p>PROJECT #3 due through Canvas submission prior to class Quiz:View/ read online materials prior to class</p>
10	7/18	Ambiguity
	Time: 9:00-11:00 Online/ synchronous	Quiz: View/ read online materials prior to class
11	7/25	Outcomes Part 2
	Time: 9:00-11:00 Online/ synchronous	Group presentation (PROJECT #4)
12	8/1	Exam
	Time 9:00-11:00	

Course Materials and Technology

- The following textbook is required for the EBP sequence:
Jewell, Dianne V. Guide to Evidence-Based Physical Therapy Practice, 4th Edition. Jones & Bartlett, 2018 (ISBN-13: 9781284104325)
- Supplemental reading material is provided to enhance overall learning experiences.
- The course instructor will assign required journal articles for lecture and discussion board material.
- Mobile devices or laptop computers will be required for audience polling during class.
- Access to Excel (or other statistical software package) will be required for completion of projects.
- For technical support for this class, please contact the UF Help Desk at:
Learning-support@ufl.edu
(352) 392-HELP - select option 2
<https://lss.at.ufl.edu/help.shtml>

Discussion Boards

In certain circumstances, further clarity may be needed for content that has not been sufficiently discussed in class. Therefore, Discussion Boards will be posted on Canvas to optimize student learning experiences. Discussion Boards will focus on specific content that allows for student-to-student dialogue (monitored by course instructors) as a strategy to increase understanding of the topic. Material from the Discussion Boards can be brought into the following class if indicated. Discussion Boards will be provided to enhance student learning experiences based on individual learning styles. Discussion Boards will not be graded and students are not required to provide posts, however intellectual contributions are encouraged.

General Review and Office Hours

Discussion boards will be used over the duration of the semester to enhance in-class learning and serve as format for structured review of course material. Discussion boards will not be graded. Course instructors may also lead a review session before the examination and will be available for individual meetings by appointment.

ACADEMIC REQUIREMENTS AND GRADING

Projects

- These are group projects consisting of 3-5 students. (Each group will be assigned a course instructor that will serve as project mentor)
- Participation from all group members is expected.
- If individual group member participation is a concern, communicate with lead instructor ASAP.
- Refer to individual grading rubrics in Canvas.
- Due dates are subject to change depending on pace of class.

Project #1 – Involves development of a focused clinical question related to an intervention in your group's area of interest using the PICOTS format. Project #1 will be due before class on **May 23** (submitted through Canvas).

Project #2 – Involves efficient searching, appraisal, and interpretation of an intervention journal article culminating in a group presentation. Project #2 presentations will occur during class **June 20th** .

Project #3 – Involves development of a focused clinical question related to an outcome in your group's area of interest using the PICOTS format. Project #3 will be due before class on **July 11th** (submitted through Canvas).

Project #4 – Involves efficient searching, appraisal, and interpretation of an outcomes journal article culminating in a group presentation. Project #4 presentations will occur during class on **July 25th** .

Quizzes

There will be several quizzes' over the course of the semester related to content you are expected to review prior to class. Quizzes will be administered through Canvas and should be completed prior to class.

Grading

Requirement	Due Date	Potential Points	Percent of Final Grade
Project #1	May 23	50	10%
Project #2	June 20	50	10%
Project #3	July 11	50	10%
Project #4	July 25	50	10%
Quizzes	N/A	50	10%
Exam	August 1	100	50%
		350 (Total Possible Points)	100% (Total)

Points Earned	418.5-450	405-418	391.5-404.5	373.5-391	360-373	315-355.5	270-314.5	0-269.5
Percent Grade	93-100	90-92	87-89	83-86	80-82	70-79	60-69	<60
Letter Grade	A	A-	B+	B	B-	C	D	E

Please be aware that a C- is not an acceptable grade for graduate students. GPA for graduate students must be (3.0) in all 5000 level courses and above to graduate. A grade of C counts toward a graduate degree only if sufficient numbers of credits in courses numbered 5000 or higher have been earned with a B+ or higher.

Letter Grade	A	A-	B+	B	B-	C	D	E
Grade Points	4.0	3.67	3.33	3.0	2.67	2.0	1.0	0.0

For greater detail on the meaning of letter grades and university policies related to them, see the Registrar's Grade Policy regulations at:
<http://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Exam Policy

Multiple assessment methods are used to allow students multiple opportunities to display application of their knowledge in this class. Written exams (n = 2) will incorporate multiple choice questions (including true/false), short answer responses, and interpretation of simple calculations. Appraisal projects (n = 2) will incorporate written responses that emphasize critical analysis of a peer-reviewed journal article and providing rationale for the analysis based on specific content areas (e.g., intervention, outcomes). Projects also incorporate written justification of how data reported in the article may influence clinical application. A standard rubric is used for each project to ensure consistent assessment methods are used. In general, all assessments for this class are designed to closely match the previously listed course objectives.

Policy Related to Make up Exams or Other Work

Make up exams or other work is not assigned or allowed to replace required assignments and will only be considered in extenuating circumstances and approved by the course instructors. Personal issues related to fulfillment of course requirements will be handled on an individual basis. Submission of late assignments (projects) will result in a 10 point reduction in final score; again will be handled on an individual basis depending on extenuating circumstances.

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail me within 24 hours of the technical difficulty if you wish to request a make-up.

Policy Related to Required Class Attendance

Attendance is highly suggested for this class, though it will not be directly monitored. We do expect you to attend and be prepared to participate in all class sessions. It is the responsibility of the student to make up any material missed in class. Students are expected to arrive on time. Students arriving after class has started should wait until the next break to enter the classroom. Students that enter class after lecture has started may be asked to leave. Personal issues related to the inability to attend class will be handled on an individual basis.

Excused absences must be consistent with university policies in the Graduate Catalog (<http://gradcatalog.ufl.edu/content.php?catoid=10&navoid=2020#attendance>) and require appropriate documentation. Additional information can be found here: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

Policy Related to Guests Attending Class:

Only registered students are permitted to attend class. However, we recognize that students who are caretakers may face occasional unexpected challenges creating attendance barriers. Therefore, by exception, a department chair or his or her designee (e.g., instructors) may grant a student permission to bring a guest(s) for a total of two class sessions per semester. This is two sessions total across all courses. No further extensions will be granted. Please note that guests are **not** permitted to attend either cadaver or wet labs. Students are responsible for course material regardless of attendance. For additional information, please review the Classroom Guests of Students policy in its entirety. Link to full policy: <http://facstaff.phhp.ufl.edu/services/resourceguide/getstarted.htm>

STUDENT EXPECTATIONS, ROLES, AND OPPORTUNITIES FOR INPUT

Professionalism Expectations

Students will be expected to attend all classes, complete required reading assignments before class (if posted), actively participate in class discussions, and demonstrate professional behavior at all times. Laptops may be used in class only for taking notes, viewing slides, or accessing course assigned materials. Cell phones are only allowed in class for audience polling. Recording of class lectures requires pre-approval from lead instructor on day of class.

Professional behavior is critical for a successful transition from the classroom to the clinical setting. The faculty recognizes the importance of this by incorporating the development and evaluation of professional behavior into each academic course. All students must attain developmentally appropriate levels of professionalism while in the University of Florida's Doctor of Physical Therapy Program. Professionalism will be determined by observation of behaviors in classroom and lab settings. Additional feedback will be provided by peers, instructors, and teaching assistants. Additional information regarding Professionalism is provided in the University of Florida, Department of Physical Therapy Student Handbook (that each student receives and acknowledges reading/understanding upon beginning the DPT program) and that can be accessed at: <http://pt.phhp.ufl.edu/dpt-program/current-students/>

Key professionalism areas emphasized in this class: responsibility, communication, and critical thinking.

Lecture dress is required for all class sessions, except tests.

Communication Guidelines

The preferred method of communication between students, course instructor, and teaching assistants outside of class is UF email. Students are expected to demonstrate professionalism during communication with instructor, teaching assistants, other students and when posting in journal club discussion threads at all times. Failure to do so may result in referral to department professionalism committee.

Academic Integrity

Students are expected to act in accordance with the University of Florida policy on academic integrity. As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge:

“We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity.”

You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied:

“On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For additional information regarding Academic Integrity, please see Student Conduct and Honor Code or the Graduate Student Website for additional details:

<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>
<http://gradschool.ufl.edu/students/introduction.html>

Please remember cheating, lying, misrepresentation, or plagiarism in any form is unacceptable and inexcusable behavior.

In this class all students submitting a project or test are indicating they have neither given nor received unauthorized aid even if this statement is not included and signed.

All projects and tests are to be completed independently. This means that collaboration with or assistance from any other person (including students from this class or other classes) on projects or tests will be considered a violation of the UF Honor Code and referred to the Dean of Students office.

Online Faculty Course Evaluation Process

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at: <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at: <https://evaluations.ufl.edu/results/>. We have and will continue to use feedback from these evaluations to enhance this course.

SUPPORT SERVICES

Accommodations for Students with Disabilities

If you require classroom accommodation because of a disability, it is strongly recommended you register with the Dean of Students Office <http://www.dso.ufl.edu> within the first week of class or as soon as you believe you might be eligible for accommodations. The Dean of Students Office will provide documentation of accommodations to you, which you must then give to me as the instructor of the course to receive accommodations. Please do this as soon as possible after you receive the letter. Students with disabilities should follow this procedure as early as possible in the semester. The College is committed to providing reasonable accommodations to assist students in their coursework.

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Students in UF Health Sciences programs should be mindful that unique course accommodations may not be applicable in a clinical, fieldwork or practicum setting. Thus, planning a semester in advance with the DRC Health Sciences Learning Specialist, Lisa Diekow ldiekow@ufsa.ufl.edu, is highly encouraged.

Counseling and Student Health

Students sometimes experience stress from academic expectations and/or personal and interpersonal issues that may interfere with their academic performance. If you find yourself facing issues that have the potential to or are already negatively affecting your coursework, you are encouraged to talk with an instructor and/or seek help through University resources available to you.

- The Counseling and Wellness Center 352-392-1575 offers a variety of support services such as psychological assessment and intervention and assistance for math and test anxiety. Visit their web site for more information: <http://www.counseling.ufl.edu>. On line and in person assistance is available.
- You Matter We Care website: <http://www.umatter.ufl.edu/>. If you are feeling overwhelmed or stressed, you can reach out for help through the You Matter We Care website, which is staffed by Dean of Students and Counseling Center personnel.
- The Student Health Care Center at Shands is a satellite clinic of the main Student Health Care Center located on Fletcher Drive on campus. Student Health at Shands offers a variety of clinical services. The clinic is located on the second floor of the Dental Tower in the Health Science Center. For more information, contact the clinic at 392-0627 or check out the web site at: <https://shcc.ufl.edu/>
- Crisis intervention is always available 24/7 from:
Alachua County Crisis Center:
(352) 264-6789
<http://www.alachuacounty.us/DEPTS/CSS/CRISISCENTER/Pages/CrisisCenter.aspx>

Do not wait until you reach a crisis to come in and talk with us. We have helped many students through stressful situations impacting their academic performance. You are not alone so do not be afraid to ask for assistance.

Inclusive Learning Environment

Public health and health professions are based on the belief in human dignity and on respect for the individual. As we share our personal beliefs inside or outside of the classroom, it is always with the understanding that we value and respect diversity of background, experience, and opinion, where every individual feels valued. We believe in, and promote, openness and tolerance of differences in ethnicity and culture, and we respect differing personal, spiritual, religious and political values. We further believe that celebrating such diversity enriches the quality of the educational experiences we provide our students and enhances our own personal and professional relationships. We embrace The University of Florida's Non-Discrimination Policy, which reads, "The University shall actively promote equal opportunity policies and practices conforming to laws against discrimination. The University is committed to non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, gender identity and expression, marital status, national origin, political opinions or affiliations, genetic information and veteran status as protected under the Vietnam Era Veterans' Readjustment Assistance Act." If you have questions or concerns about your rights and responsibilities for inclusive learning environment, please see your instructor or refer to the Office of Multicultural & Diversity Affairs website: www.multicultural.ufl.edu
