

The University of Texas at El Paso  
College of Health Sciences  
Doctor of Physical Therapy Program

PT 6116

Physical Therapy Capstone Project I  
COURSE SYLLABUS

Fall 2018

**Credit Hours:** 1  
**Contact Hours:** 15  
**Schedule:** Independent Study

**Instructors:** Bryan Boyea, PT, DPT, OCS  
Kevin Browne, PT, ScD, OCS  
Mark Caulkins, MD, DPT  
Loretta Dillon, PT, DPT  
Alvaro Gurovich, PT, PhD  
Michelle Gutierrez, PT, DSc  
Rhonda Manning, PT, DPT, PCS  
Celia Pechak, PT, PhD, MPH (DPT Research Coordinator)

**Course Description:**

This is the first of two Capstone courses for Doctor of Physical Therapy (DPT) students. The Capstone courses will culminate in a completed study, a manuscript suitable for submission to a peer-reviewed journal, and a poster appropriate for presentation at a scholarly conference. The Capstone courses build upon relevant research content and experiences integrated across the DPT curriculum. By the end of the first Capstone course, students will complete a review of the literature, design a study, have data collection in progress, and begin to draft early components of the manuscript.

**Course Objectives:**

By the end of this semester, the student will have:

1. Defended a scholarly project (literature review or mini-systematic review). (7D9, 7D11)
2. Critiqued Capstone posters and poster presentations of graduating DPT students. (7D9, 7D11)
3. Developed a research question that may be answered by using primary and/or secondary data. (7D9, 7D11)
4. Designed an appropriate study to answer the research question. (7D9, 7D11)
5. Met advisor expectations for data collection process. (7D9, 7D11)

**Resources:**

Resource related to formulating a PICO question:

- <http://www.cebm.net/finding-the-evidence-1-using-pico-to-formulate-a-search-question/>

Resources related to Systematic Reviews in general:

- <http://www.medicine.ox.ac.uk/bandolier/painres/download/whatis/Syst-review.pdf>
- <http://research.library.gsu.edu/c.php?g=115802&p=752506>

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- Murad MH et al. How to read a systematic review and meta-analysis and apply the results to patient care: users' guides to the medical literature. *JAMA*. 2014;312(2):201:171-179.

Resources related to standardized appraisal tool(s) for Systematic Reviews:

- <http://www.unisa.edu.au/Research/Sansom-Institute-for-Health-Research/Research/Allied-Health-Evidence/Resources/CAT/>
- CEBM worksheets are found at: <http://www.cebm.net/critical-appraisal/>
- <http://www.casp-uk.net/#!checklists/cb36>

Resource related to PRISMA guidelines for Systematic Reviews:

- <http://www.prisma-statement.org/>

Resources related to how to format the manuscript:

- *Guidelines for Authors* (or *Author Guidelines*) are available online at the Web site for each journal.
  - For an original research project, students will follow the Guidelines for Authors / Author Guidelines for the faculty-approved journal to which the manuscript will be submitted.
  - For a systematic review, students will follow the Guidelines for Authors / Author Guidelines for *Physical Therapy (PTJ)* – unless the Capstone advisor approves a different peer-reviewed journal.

#### **Recommended Text:**

Jewell DV. *Guide to Evidence-Based Physical Therapist Practice*, 3rd Ed. Burlington, MA: Jones & Bartlett Learning; 2015. ISBN-13: 978-1-284-03416-5

**Methods of Instruction:** Individual instruction by the respective Capstone advisor

**Methods of Evaluation:** Graded activities and their weight are as follows:

Attendance at/written assignment re: Capstone poster presentations in Year 1	5%
Attendance at/written assignment re: Capstone poster presentations in Year 2	5%
Summer 2 defense/proposal related to written project (from PT 6307 in Spring 1)	20%
○ See rubric at end of syllabus	
PICO / RESEARCH QUESTION – developed and submitted by deadline	10%
DATA COLLECTION PROCESS - fulfillment of advisor-specific expectations	20%
Written assignment	40%
○ Original research: Intro & Methods draft	
○ Systematic review: PRISMA & 10 appraisals	

#### **UTEP DOCTOR OF PHYSICAL THERAPY PROGRAM GRADING SCALE**

The following letter grade scale is used for the UTEP Doctor of Physical Therapy Program:

Letter Grade Scale	Numerical Grade Scale
A	90-100
B	80-89
C	75-79
F	Below 75

**Course Content:** Capstone study

**Special Accommodations (ADA):**

“If you have or suspect a disability and need accommodations, you will contact the Center for Accommodations and Support Services (CASS) at 747-5148.” You can also e-mail the office at [cass@utep.edu](mailto:cass@utep.edu) or go by their office in Union Building East. For additional information, visit the CASS website at <http://sa.utep.edu/cass/>

**CAPSTONE ADVISOR ASSIGNMENTS**

<b>ORIGINAL RESEARCH</b>	
<b>Advisor</b>	<b>Students</b>
Dr. Kevin Browne	Jim Laclede Marco Suriano Nathan Garrido Cole Calder
Dr. Mark Caulkins	Jesus Medrano
Dr. Alvaro Gurovich	Alex Molinar Christian Ibe
	Cynthia Montenegro Delfina Vasquez
Dr. Michelle Gutierrez	Mark Agholor Arron Pierce Andy Martinez Kalynn McKee
Dr. Rhonda Manning	Nathan Wagner Jon Tye Haley Bruns Madison Grenn
	Joshua Torres Andrea Baralt Klarissa Sosa Michael Durling
Dr. Celia Pechak	Evelyn Villarreal
<b>SYSTEMATIC REVIEWS</b>	
<b>Advisor</b>	<b>Students</b>
Dr. Bryan Boyea	Jorge Sanchez Tarango Robert Buentello
Dr. Loretta Dillon	Leticia De Jesus Marlene Gomez Ashley Gomez Janette Rivera
Dr. Celia Pechak	Mayra Flores Emilia Gallegos Liliana Gonzalez Marisol Sanchez

## **OVERVIEW OF CAPSTONE STUDY OPTIONS**

All students will complete a research study for their Capstone project. Two broad options exist:

- Option 1 - Original Research:** The student may complete an *original research* study using *primary data*.
- The topic of the study will be directly relevant to the research interests of a DPT faculty member who will serve as the primary Capstone advisor, except under the following condition:
    - The student may propose a plan to complete a Capstone study under the mentorship of a UTEP faculty member outside of the DPT Program (eg, to continue with research begun as an undergraduate in Kinesiology), but this option will require DPT faculty approval.
  - All students are encouraged to explore opportunities to participate in original research, and to meet with faculty whose research interests align with theirs; however, each faculty member has the freedom to determine which students s/he will mentor for an original research study.
  - Each study will be completed by 1-4 students, with the faculty member determining the number of students s/he is willing to mentor for an original research study.
  - Work related to the original research study will begin no later than Spring 1; therefore, **students should begin meeting with faculty in Summer 1. They will need to obtain faculty approval to participate in original research no later than Nov 15 (Fall 1).**
  - During Spring 1 and Summer 2, the student will complete research-related tasks as directed by their Capstone advisor (inside and outside of courses). By **Aug 1** (Summer 2), the student and faculty member will decide if completion of the original research study remains feasible, **AND if the student is meeting expectations**. If either or both is/are not true, then the student will complete a systematic review for his/her Capstone study.

- Option 2 - Systematic Review:** The student will complete a *systematic review* using secondary data.
- Students who do not complete an original research study will complete a systematic review.
  - Students may choose or default to the systematic review option by **Nov 15** (Fall 1)
  - Students may self-select teams of 3-4 students.
    - If one or more students has not joined a team by **Aug 1** (Summer 2), faculty will determine a plan (which may include: forming a team of unassigned students, or assigning unassigned students to existing teams).
  - Student teams then will be asked to identify their broad research interests (eg, neuro rehab), which will be *considered* in assigning the teams to Capstone advisors in order to best match teams with faculty.
  - In rare exceptions, a systematic review student could transition into an original research; this would need to be done by **Aug 1** (Summer 2).
  - No guarantee is made that students will have the option to pursue their stated research interests. All student teams will complete systematic reviews on topics that are directly relevant to their Capstone advisor's research and/or teaching interests.

## **DEADLINES**

### **Deadlines for PT Capstone Project I – Original Research**

- Research question is due to the Capstone advisor on **Sept 1** (Fall 2).
  - Faculty will provide feedback within 48 hours (not including weekends)
  - NOTE: In most cases, the research question will have been defined in the previous spring or summer

- Revised research question and summary of study design are due to the Capstone advisor on **Sept 10** (Fall 2).
  - NOTE: In most cases, this task will have been completed in the previous spring or summer
- Draft of Introduction & Methods sections due to the Capstone advisor on **Nov 15** (Fall 2).
  - The Introduction / Background section will be written to meet the requirements of the peer-reviewed journal to which the Capstone manuscript will be submitted
  - The intended journal choice must be approved by the Capstone advisor
  - *Guidelines for Authors* (or *Author Guidelines*) for peer-reviewed journals are available online at the Web site for each journal; these Guidelines will be found and followed
- Data collection expectations as determined by Capstone advisor must be met by **Dec 1** (Fall 2).
  - NOTE: In most cases, data collection will have started in the previous spring or summer.

### **Deadlines for PT Capstone Project I – Systematic Review**

- PICO question is due to the Capstone advisor on **Sept 1** (Fall 2).
  - The systematic review cannot duplicate a systematic review that was published within 5 years.
  - Faculty will provide feedback within 48 hours (not including weekends).
- Revised PICO question and summary of study design (including planned search strategy) are due to the Capstone advisor on **Sept 10** (Fall 2).
- Systematic search must be done to answer the PICO question, and a draft of a PRISMA diagram is due to the Capstone advisor by **Oct 15** (Fall 2).
- A minimum of 10 articles must be appraised using a standardized appraisal tool(s) (appropriate for the design of the research study in each article). The priority should be to find articles published within the past 10 years. However, published articles of any publication date may be included in the systematic review if they are relevant. The following is due to the Capstone advisor by **Nov 15** (Fall 2):
  - final PRISMA diagram
  - one file that includes a completed appraisal tool for each article
  - PDFs of all articles that were appraised

### **INSTRUCTIONS**

#### **Original Research Instructions:**

- The design of each original research study will be determined by the Capstone advisor in collaboration with his/her student / student team.
- Each student on the team is responsible for an equal portion of carrying out the study.

#### **Systematic Review Instructions:**

- The team must construct a clear, concise, and answerable question that is based on a specific patient problem in a content area determined by the Capstone advisor.
- All students will be active in the extraction and appraisal of articles found to answer the question.
- EVERY student will be involved in EVERY portion of the work – including:
  - EVERY student will have been involved in searching all databases.
  - EVERY student will APPRAISE every article that meets the study's eligibility. Every student will appraise all 10 articles (or more if the group has found more than 10).
- Of the 10+ articles that are formally appraised, a MINIMUM of the top 6 will be synthesized in the written systematic review that will be completed for PT 6117 Capstone II.

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**For Original Research and Systematic Reviews:**

The team must work cohesively by setting structured objectives to complete the final product. The goal is for all members to contribute equally to the completion of the study. Through using effective communication and constructive conflict resolution as necessary, the faculty expects that the team will meet all objectives in a professional manner. However, in the event a conflict cannot be resolved, the team has the power to dismiss a team member. The consequences of being dismissed from a team may include delayed graduation (at a minimum of one semester) for the dismissed team member. The individual will be expected to complete a new original research study on his/her own.

In preparing written products, the team will read and follow all details of the instructions on the approved journal's Website.

**PT 6116**  
**ORAL DEFENSE / STUDY PROPOSAL (20%)**  
**General Instructions**

- This is the oral defense of the Mini-SR, or oral defense and study proposal for the Literature Review completed in PT 6307 Cardiopulmonary Patient Management.
- Students will arrive to the assigned room early, and dressed in business attire.
- Once the room is available, the group will enter and upload their PowerPoint onto the computer.
- Each group will have a MAX of 5 minutes per group (with the time split equally among the individuals in the group) to present their project.
- The remainder of the time (30 minutes) will be 2 faculty members asking questions – for a total of 5 questions per student.
- For a Mini-SR, the students should be prepared to answer questions related to their search process, process of appraisal, and conclusions based on the 3 appraised articles that they used to answer their original PICO question. Students also will be expected to demonstrate knowledge of key research concepts, specifically ones that are relevant to their 3 appraised articles. Finally, students should be prepared to explain how they will improve their approach for their future Capstone systematic review.
- For a Literature Review, the students should be prepared to answer questions related to their search process, process of appraisal, and conclusions based on the 3 articles from their literature review that they appraised. Students also will be expected to demonstrate knowledge of key research concepts, specifically ones that are relevant to their 3 appraised articles. Finally, students should be prepared to explain and defend their proposal for a Capstone study.
- The faculty member will address each question to a particular student; students will only answer their own questions.
- If a student attempts to help answer another student's questions, s/he will receive a grade deduction.
- Refer to the following rubric for more information.
- Students are NOT required to print and bring this rubric; faculty will already have printed copies.

## PT 6116 ORAL DEFENSE RUBRIC

Student Name: \_\_\_\_\_ Faculty Reviewer Name: \_\_\_\_\_

Expectations	Fully Meets Expectations (2 pts)	Partially Meets Expectations: (1 pt)	Does Not Meet Expectations: (0 pt)	Score
<b>Preparation</b> (group grade)	Groups arrives early, and presentation meets time limit, and has no major errors on the PowerPoint	PowerPoint has a several minor or a few major errors	Fails to arrive early and/or presentation exceeds time limit and/or has consistent errors throughout the PowerPoint	
<b>Presentation</b> (group grade)	Presentation appears well rehearsed, and addresses the 3 articles	Presentation is not coordinated at times, and/or presentation only partially addresses the 3 articles	Presentation is overall poorly coordinated, and/or does not address the 3 articles	
<b>Vocabulary</b>	Correct vocabulary is consistently used in answering the questions	Uses incorrect vocabulary on occasion	Consistently uses incorrect vocabulary in answering the questions	
<b>Clarity</b>	Precise language is used when answering questions such that a follow-up question(s) is not required by the reviewer(s)	Attempts to use precise language, but the reviewer(s) must ask a follow-up question to clarify knowledge base	Consistently unable to use precise language in answering the questions	
<b>Speaking Skills</b>	Is easily understandable, and answers the questions confidently, and keeps eye contact with the reviewers	Relies on notes and is somewhat uncomfortable with or unsure of the topic	Consistently unable to answer the questions confidently, relying on notes, and/or looking to others for answers	
<b>Completeness and accuracy of answer to Question #1</b>	Answer to question is overall complete, concise, and accurate (with <10% error)	Answer lacks completeness &/or rambling &/or are partially inaccurate	Answer is consistently incomplete and/or consistently inaccurate	



<b>Completeness and accuracy of answer to Question #2</b>	Answer to question is overall complete, concise, and accurate (with <10% error)	Answer lacks completeness &/or rambling &/or are partially inaccurate	Answer is consistently incomplete and/or consistently inaccurate	
<b>Completeness and accuracy of answer to Question #3</b>	Answer to question is overall complete, concise, and accurate (with <10% error)	Answer lacks completeness &/or rambling &/or are partially inaccurate	Answer is consistently incomplete and/or consistently inaccurate	
<b>Completeness and accuracy of answer to Question #4</b>	Answer to question is overall complete, concise, and accurate (with <10% error)	Answer lacks completeness &/or rambling &/or are partially inaccurate	Answer is consistently incomplete and/or consistently inaccurate	
<b>Completeness and accuracy of answer to Question #5</b>	Answer to question is overall complete, concise, and accurate (with <10% error)	Answer lacks completeness &/or rambling &/or are partially inaccurate	Answer is consistently incomplete and/or consistently inaccurate	
<b>POINTS DEDUCTED</b>		1 point deducted for each incident of answering a question for a teammate without being called upon.  4 points deducted for not arriving in professional dress (appropriate for presentation at a state or national conference).		
			<b>TOTAL POINTS:</b>	

**Comments:**