

**OAKLAND UNIVERSITY  
SCHOOL OF HEALTH SCIENCES  
PROGRAM IN PHYSICAL THERAPY  
Winter 2018**

**COURSE SYLLABUS:**

Therapeutic Exercise Interventions II

PT 7532

**COURSE DESCRIPTION:**

This course will build upon the fundamental concepts presented in PT 7520 and serve as one of your capstone orthopedic patient intervention courses. Detailed anatomy, biomechanics, and orthopedic condition lectures will be provided prior to exercise lab. Clinical reasoning for exercise prescription and clinical reasoning for exercise modification based on medical co-morbidities, orthopedic conditions, condition acuity, and stage of tissue healing will be discussed and presented. Exercise prescription will also consider patient impairments identified during the physical examination. These impairments will include pain, stiffness, laxity (hypermobility/instability), and weakness impairments. Exercise prescription in relation to associated functional limitations will also be discussed. The therapeutic exercises discussed in this course will include spinal and extremity stabilization (strength building) exercises, spinal and extremity self-mobilization (stretching) exercises, and exercises geared toward immediate pain relief, cartilage and soft tissue protection. All forms of manual therapeutic motion (PROM, AAROM, AROM, RROM) will be discussed, demonstrated, and practiced in a lab based setting.

**DEPARTMENT OFFERING COURSE:**

Physical Therapy

**CREDIT HOURS:**

3 credits

**INSTRUCTORS:**

Doug Creighton MS DPT OCS FAAOMPT

**CONTACT INFORMATION:**

[creight@oakland.edu](mailto:creight@oakland.edu)

248-364-8696

**LAB ASSISTANT:**

1. Anthony Gioannini DPT, OMPT  
[Anthony.gioannini@team-rehab.com](mailto:Anthony.gioannini@team-rehab.com)
2. Mike Studnicki DPT OMPT  
klatook@gmail.com

**GUEST LECTURES:**

1. Karen Sadowski MS, PT ATC, OMPT  
[karen.sadowski@team-rehab.com](mailto:karen.sadowski@team-rehab.com)
2. Emily Kuhn DPT OMPT  
[battleem@gmail.com](mailto:battleem@gmail.com)
3. Mark Gruca DPT  
[Mark.gruca@team-rehab.com](mailto:Mark.gruca@team-rehab.com)
4. Alexa Schweiger DPT  
Alexa.schweiger@yahoo.com

**REQUIRED COURSE READING:**

1. Therapeutic Exercise: Exercise Techniques for Patients with Common Orthopedic Conditions. By: Creighton Second Edition 2016. This text and companion DVD should be purchased prior to the first class meeting. It is available at Zip Publishing, toll free at 866-880-5373, or Amazon. com, and the Oakland University book center.
2. Course Handouts and Moodle posts including all orthopedic condition power point presentations and any instructor selected research article or abstract.

**RECOMMENDED READING:**

1. Therapeutic Exercise By: Kisner and Colby

**COURSE INFORMATION:**

TUESDAY 8:00 – 11:50 **5002/5036** HHB

THURSDAY 8:00 – 11:50 **5035/5036** HHB

**CLOCK HOURS:**

2:1 Laboratory and lecture format with anatomy, biomechanics, and pathology presentations (lecture) preceding each lab session where exercise are demonstrated, performed, prescribed in a patient simulated format.

28 hours lecture

84 hours lab

**COURSE PRE-REQUISITES:**

PT 7532 and PT 7520

**COURSE OBJECTIVES:**

1. In class and as demonstrated *during in-class demonstrations* and on the *final practical examination*, the student will demonstrate the ability to *select* and *prescribe* the correct exercise(s) given identification of certain movement impairments.
2. In class, and as demonstrated during *in-class demonstrations* and on the *final practical examination* the student will demonstrate the ability to *select* and *prescribe* the correct exercise(s) given certain clinical findings/impairments that are often associated with *common orthopedic conditions* affecting a patient's soft tissues, articular and periarticular tissues.
3. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination* when given a *patient care scenario*, the student will be able to *verbally describe and communicate* to the patient, patient's family or caregiver, or others involved the care of that individual the effects and *reason(s) or rationale(s) for a given therapeutic exercise*. Students will do so in culturally competent terms that are understandable to all involved.
4. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination*, the student will discuss during the performance and prescription of therapeutic exercises the importance of *patient involvement in their overall plan of intervention*. Based on dialogue with the course instructor, students will conclude whether or not a patient is following through with assigned exercises by correct and performance of exercises prescribed for home use.
5. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination* given a *simulated physician contact*, the student will confidently describe *the biomechanical, neurological, anatomical, impairment based or function based rationale for selection of the exercise(s)* chosen for the referred patient.

6. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination* the student will be able to *physically demonstrate correct positioning and correct movement patterns* the given exercise(s) to their simulated patient/lab partner.
  
7. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination* the student will demonstrate *professionally appropriate physical contact* with the patient 's body in order to guide movement, assist movement, or resist movement of a limb or spinal region through the correct therapeutic motion.
  
8. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination* during a simulated patient care scenario, the student will *demonstrate and adjust therapeutic exercises* in a way that is *respectful of individual patient differences and values*.
  
9. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination* when given a simulated patient care scenario, the student will analyze and appraise the *adverse effects of incorrect or over-performance of an exercise and make correct modifications if over-performance or incorrect exercise performance* produces a flare up of neuromusculoskeletal symptoms.
  
10. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination* during simulated patient care scenarios, the student will *physically change or verbally modify* an exercise to meet the specific needs of a patient based on pain impairments, postural impairments, motion impairments or strength impairments.
  
11. In class and as demonstrated during *in-class demonstrations* and on the *final practical examination* given a simulated patient care scenario, the student will *recognize* when to *break up* a *multi-faceted multi-movement* exercise into component parts to facilitate patient conceptual understanding or impairment based limitations.
  
12. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or test format* the student will use their learned professional knowledge and current scientific theory to examine and analyze *common abnormal movement patterns*, and prescribe therapeutic exercise intervention may play in the correction of these abnormal patterns of movement.

13. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or test format* students will analyze the clinical situations, clinical conditions, and patient management scenarios where *fewer exercise may be more beneficial* and that the prescription of multiple exercises may have an adverse effect on outcome, comprehension, and compliance with that patient's exercise program.

14. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or test format* student will analyze and debate when certain patient presentations and orthopedic conditions indicate that *long term continuation of certain exercises can actually have an adverse effect of the patient's soft tissues, cartilage, joint or segmental function*.

15. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or test format* student will analyze and debate when certain patient presentations and orthopedic conditions indicate that long term continuation of certain exercise(s) is necessary to maintain function and prevent deterioration.

16. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or test format* the student will give acquired professional knowledge and current scientific theory differentiate when given the *status of tissue healing* and the *acuity of a given clinical condition*, that there are situations where it is *not appropriate* to prescribe therapeutic exercise movements, but rather the clinician needs to respect the *inflammatory cycle* and *immobilize or therapeutically position* the area of the body in question to facilitate tissue healing.

17. The student will describe their *clinical impression* of and make a *physical therapy diagnosis* given the examination findings. The student will do so confidently and professionally advise medical colleagues as to the correct course of physical therapy intervention.

18. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or test format* the student will appraise the *simulated patient's prognosis* and the *corollary rehabilitation potential in terms of immediate and long term symptom management* and or *motion enhancement* with therapeutic exercise..

19. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or test format* the student will demonstrate and practice how to *collaborate with a patient's family, caregivers, other professionals, and payers* regarding the patient's diagnosis, established plan of care which may incorporate both clinic-based and home based therapeutic exercises..

20. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or test format* the student will apprise *what is and is not appropriate delegation to support personnel* in the way of exercise management and exercise advancement.

21. In class and during *in-class demonstrations*, the *final practical* and in a written quiz or test format the student will debate and apprise when to *directly supervise and manage support personnel* as it relates to therapeutic exercise management.

22. In class and during *in-class demonstrations* the student will recognize the importance of *peer assessment* as it relates to watching, *analyzing, and giving professionally appropriate corrective criticism to classmates* when a fellow student is verbally describing and or physically demonstrating an exercise.

23. In class and during *in-class demonstrations*, the *final practical* and in a written quiz or test format the student will discuss and explain how *patient age* may or may not affect therapeutic exercise prescription and make exercise adjustments if needed.

24. In class and during *in-class demonstrations*, the *final practical* and in a written quiz or test format the student will discuss and explain how to potentially modify certain exercises to meet the needs of *athletes* in terms of *sports-specific exercise prescription*. Students will analyze and debate when referral to a professional coach for sport specific movement pattern re-education is necessary.

25. In class and during *in-class demonstrations*, the *final practical* and in a written quiz or test format the student will analyze and also appraise how to modify the prescription of *spinal stabilization* exercise training based on need for additional trunk support or therapeutic unloading of pain sensitive spinal segments.

26. Student groups will be responsible for the development and presentation of an evidence based article that supports or does not support the use of therapeutic exercise for assigned joint or orthopedic condition(s). *Each student will present a separate/different article.* The student groups will provide a short verbal presentation of their articles in class as part of their *evidence based, evidence supported, or evidence informed* therapeutic exercise requirement for this course. An electronic version of the article along with an article summary will be emailed to the course instructor the day of their group presentation

27. The student will recognize the importance of *self- assessment* after having received both instructor based and peer based *corrective criticism and review* immediately following the student's in-class practical examination.

28. The student will be able to compare and illustrate clinical situations where *open kinetic chain exercise training or partial weight bearing* exercise training using different *assistive/adaptive devices* to control the amount of weight bearing would be most correct for the patient.

29. The student will be able to demonstrate and utilize different *assistive/adaptive devices* during the performance of upright closed kinetic chain exercise procedures when patient balance and safety be an issue.

30. In class and during *in-class demonstrations*, the *final practical* and in a *written quiz or written final exam* format the student will perform and compare different versions of common therapeutic exercise motions and debate and analyze the difficulty of movement performance and differences in tissue/joint/segmental loading.

31. The following professional qualities and behaviors are expected to be present in all students entering this program. While this is not formally measured in this course it is expected that students are mature adult learners who will exhibit these qualities and behaviors during all instructor and peer interactions. (based on the Generic Abilities, UWM, 1996)

- Identifying/locating appropriate resources to complete course requirements.
- Demonstrating a positive attitude toward learning.
- Offering thoughts and ideas in class.
- Prioritizing information needs.
- Accepting that there may be more than one correct answer to a problem.
- Maintaining a professional demeanor in all classroom and clinical situations.
- Respecting cultural and personal differences of others.
- Communicating with others in a respectful manner.
- Respecting the personal space of others.

- Maintaining confidentiality in all clinical interactions.
- Assuming responsibility for his/her actions.
- Using existing resources effectively.
- Using unscheduled time effectively.
- Completing assignments in a timely fashion.
- Actively seeking feedback and help when necessary.
- Demonstrating a positive attitude toward feedback.
- Developing a plan of action in response to feedback.
- Assessing his/her performance accurately.
- Abiding by the APTA Code of Ethics and Standards of Practice.
- Projecting a professional image in the classroom and clinical setting.
- Demonstrating dependability.
- Accepting constructive feedback.

**OUTLINE OF CONTENT AND DESCRIPTION OF TEACHING METHODS AND LEARNING EXPERIENCES:**

This course will consist of lecture, lab, small group discussion, and student demonstrations.

Information will include clinical decision making regarding exercise prescription based on, the orthopedic condition, condition acuity, level of tissue reactivity, grade of degenerative change, and other medical co-morbidities. Further we will review and expand upon the student's current understanding of human movement analysis and common patterns of motion impairment, functional limitations, and disabilities often associated with common orthopedic conditions.

Certain therapeutic exercises presented in PT 7532 will focus on advanced forms of therapeutic manual and self-stabilization (strengthen) exercises for all three spinal regions. The course will discuss supporting the spinal segments and in particular the IVD, while training stabilizer muscles, functional carryover of stabilization exercises, and changing habitual spinal movement patterns that commonly occur during the performance of daily activities. Also, this course will introduce active and passive spinal self-mobilization exercises for motion segments that commonly develop movement restriction. In addition, there will be discussion regarding the



potential problems associated with the prescription and long term performance of large amplitude and loaded spinal exercise stretching exercises.

Regarding therapeutic exercise prescription for the extremity joints, this course will include detailed discussion and practice sessions regarding exercise intervention for joints demonstrating articular cartilage degeneration and soft tissue irritation and degeneration. Load and motion modification in the presence of these joint and soft tissue pathologies will be an emphasis of this course. There will be detailed discussion on how to tailor exercise prescription and promote improved movement and strength without provoking symptoms or damaging cartilage and other soft tissues.

Prior to exercise prescription, regional anatomy, joint/soft tissue biomechanics, and common orthopedic conditions will be reviewed by way of power point presentation. This along with assigned readings and class discussion will form the basis of all quizzes. Time allowing, the instructor will also present patient cases and student groups will discuss the selection of key examination techniques, possible findings, prognosis, goal setting, and options for exercise prescription based on the information provided.

In preparation of for the final practical examination and as a course requirement, each student will be required to fully describe, demonstrate, perform, and instruct one therapeutic exercise in a simulated patient encounter. Student names will be drawn at random at the beginning of certain class session for this 35 point class requirement. Students will need to come prepared for this course requirement each time the class meets.

Also, throughout the course of the semester, each student will present a research article that examines the evidence for exercise management of certain orthopedic conditions. The course instructor will need to approve the selected research article prior to class presentation and an e version of the article along with an article summary is to be submitted to the course instructor.

### **METHOD OF STUDENT EVALUATION/GRADING:**

1. Two or three multiple choice quizzes in the **30-40 point range**. Dates to be announced by the instructor one class prior to taking the quiz.
2. One comprehensive written final exam at the end of the semester - **80 points**
3. One comprehensive practical exam at the end of the semester - **105 points**.
4. One group project where each group member submits to the instructor and presents to the class an approved research article which examines the evidence for therapeutic evidence intervention. Each group member will present their own individual article summary to the class. Oral article presentations will be **3-5 minutes** in length per group member. Groups will be formed based on spinal region, for example a thoracic group or shoulder group. Again, each group member will be presenting a different research article. A maximum of **60 points** will be awarded after the 3 minute class presentation and after each student turns in **one full text article (30 points) and a one page article summary (30 points), both in electronic format to the course instructor**. I will make copies of each one page article summary and hand it out of the class on the morning of your presentation. The quality of verbal presentation and the quality of the article summary will determine the students point total for this course requirement.
5. Your professional behavior/conduct grade (**30 points**) will consist of coming dressed to class in gym/workout clothes for all sessions and to continually practice all during all lab session and all instructor demonstrated exercises until the next exercise or lab situation is described. Failure to do so will result in an immediate 30 point deduction. Students will simulate a therapeutic encounter with a patient in a clinical setting, verbally prescribe, demonstrate, and observe the performance of the exercise(s) under discussion and described by the course instructor until the instructor starts the next lab scenario or next exercise. Again, if students are not dressed correctly or the course instructor observes a poor practice pattern 30 points will be deducted. This simulated exercise instruction, exercise demonstration and observation of patient/lab partner is to occur for each exercise the instructor demonstrates and assigns to practice. Be creative regarding this during your practice time. The student/treating therapist will practice verbally describing each exercise in terms that would be understandable to a patient. Students must also be able to

discuss each exercise from a more academic perspective in terms of its anatomical, physiological, or biomechanical effects. The patient/lab partner may purposely position or perform a movement pattern incorrectly so the “treating therapist” will have to adjust the movement pattern or patient position. The course instructor expects all students to continually practice exercise prescription and exercise performance more than one time. I expect you to know what each exercise “feels” like, and to continually practice until I start the next topic for discussion.

Your course grade will be based on these five criteria. If a student is ill on the day of a quiz, he/she must contact the course instructor before 8:00AM of the same day. A grade of zero will be assigned if a written quiz, final exam, in-class demonstration, or final practical is missed and the course instructor is not contacted as instructed above.

### **Comprehensive Final Exam:**

During the final week of class final written comprehensive test will be given.

This will be worth 50 points will again be based on concepts, theories and techniques discussed in class, material in the course notes and other assigned reading from the required course texts or journal articles.

### **Final Comprehensive Practical Exam:**

During the final week of class a comprehensive lab practical will be given. Students will draw questions on various exercise procedure(s) some with limited patient case scenarios in which one or more examination procedures are to be applied. Examination techniques for the final practical will be performed on the instructor or lab assistant. Note, a grade of 80% must be achieved on this final practical or a single re-take will be required. If the second re-take is passed with a grade of 80% or greater, the original grade on the first attempt will be averaged with a maximum grade of 80%. If the student does not pass the second attempt with a grade of 80% or greater, the student will receive a failing grade of 0.0 in the course.

Note, practical exams will only be considered for a passing grade if a student demonstrates safe practice. If a student does not demonstrate safe practice, the student will automatically receive a grade of 0.0 on the practical exam even if they are able to demonstrate successful completion of other examination criteria. Students will have one opportunity to re-take the practical examination without being recommended for review by the Promotion and Honors Committee. Students should meet with the course instructor to determine how to successfully complete the re-take practical exam. The course instructor will schedule the re-take examination.

The course instructor will also schedule the examiner(s). The student is required to wait until the course instructor or examiners are available. The time frame for re-taking the practical exam will be determined by the course instructor.

In general, unless there are extenuating circumstances, the re-take will usually take place during the semester in which the course is offered. If there is not sufficient time at the end of the semester to schedule a re-take exam, it will be scheduled within the first 3 weeks of the following semester which will allow the student time, if necessary, to drop their classes if they are not successful in passing the retake practical exam. Students who have not completed the re-take prior to the end of the semester will receive a failing grade unless they request an Incomplete “(I)”. If the student successfully completes the re-take examination, the student will receive a grade for the exam and the course, as described in the course syllabus.

If a student does not successfully complete the re-take examination, either because of unsafe practice or not receiving a passing grade, the faculty member for the course will bring the student case to the Promotion and Honors Committee. The student case will be reviewed by the Promotion and Honors Committee who will determine a course of action.

**GRADING SCALE:**

<b>GP Numerical</b>	<b>Letter</b>	<b>Percent</b>	<b>GP Numerical</b>	<b>Letter</b>	<b>Percent</b>	<b>GP Numerical</b>	<b>Letter</b>	<b>Percent</b>
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

## **ACADEMIC CONDUCT STATEMENT:**

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 that “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 Program in Physical Therapy. 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.

## **ACCOMMODATION/DISABILITY SUPPORT SERVICES STATEMENT:**

Any student with a documented disability needing academic accommodations is require to speak with the Office of Disability Support Services to make arrangements. The office is located in room 106 North Foundation Hall. For information or to make an appointment call 370-3266.

## **EMERGENCY PREPAREDNESS STATEMENT**

**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 (Grizz 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.

#### **ATTENDANCE:**

All class sessions should be attended. If a student cannot attend a given class, he or she should contact the course instructor in advance. Failure to do so will be reflected in the professional conduct/behavior portion of their grade.

#### **COURSE SCHEDULE:**

1/4 Course syllabus, Musculoskeletal tissue Loading and Stress Response

Read Chapters 1-4 from Therapeutic Exercise: Exercise Techniques for Patients with Common Orthopedic Conditions by: Creighton

1/9 MSK tissues and the Stress-Strain Curve Begin Shoulder Anatomy and Biomechanics

Read Chapters 5-9 from Therapeutic Exercise: Exercise Techniques for Patients with Common Orthopedic Conditions by: Creighton.

1/11. Shoulder anatomy, biomechanics, and common orthopedic conditions.

1/16 Shoulder anatomy, biomechanics, common orthopedic condition and exercise prescription lab

1/18 Shoulder therapeutic exercise prescription lab

1/23 Shoulder exercise prescription lab and article reviews

1/25 Elbow anatomy, biomechanics and common orthopedic conditions – Emily Kuhn, Guest lecture

1/30 Elbow therapeutic exercise prescription lab and article reviews – Emily Kuhn

2/1 Wrist-Hand anatomy, biomechanics, and common orthopedic conditions – Karen Sadowski,  
Guest Lecture

2/6 Wrist-hand therapeutic exercise prescription lab and article reviews – Karen Sadowski

2/8 Upper Cervical region anatomy, biomechanics, and common orthopedic conditions

2/13 Upper Cervical therapeutic excise lab and article reviews

2/15 TMJ - Disc Pathology and TMJ self-mobilization and stabilization exercises

2/15 Lower cervical regional anatomy, biomechanics and common orthopedic conditions

2/17-2/26/2018 - WINTER BREAK

2/27 Lower cervical regional anatomy review and exercise prescription lab

3/1 Lower cervical exercise prescription lab and article reviews

3/6 Spinal and Extremity Brace lecture and Lab

3/8 Hip anatomy, biomechanics, and common orthopedic conditions and exercise prescription –  
Marc Gruca Guest Lecture

3/13 Hip therapeutic exercise prescription lab – Mark Gruca

3/13 Tibiofemoral and Patellofemoral anatomy, biomechanics, and common orthopedic  
conditions and exercise prescription

3/15 Tibiofemoral therapeutic exercise prescription lab

3/20 Patellofemoral therapeutic exercise prescription lab and article reviews

3/22 Ankle-foot anatomy, biomechanics, and common orthopedic conditions - Alexa Schweiger,  
Guest Lecture

3/27 Ankle-foot therapeutic exercise prescription lab and article reviews – Alexa Schweiger

3/29 Thoracic spine regional anatomy, biomechanics, and common orthopedic conditions

4/3 Thoracic spine therapeutic exercise prescription lab and article reviews

4/5 Lumbar regional anatomy, biomechanics, and common orthopedic conditions

4/10 Lumbar spine regional anatomy, biomechanics, and common orthopedic conditions

4/12 Lumbar therapeutic exercise prescription lab

4/17 Lumbar therapeutic exercise prescription lab and article reviews

4/19 - 25/2018 - FINAL EXAM AND FINAL PRACTICAL



## **Evidence Supported Therapeutic Exercise for Common Orthopedic Conditions**

### **Shoulder Group:**

Erin Worman  
Tom Wilczewski  
Dan Veditti  
Fadi Anwar

### **Elbow Group:**

Kaleigh Swanson  
Kaitlyn Sumner

### **Wrist-Hand Group:**

Ciera Strudwick  
Rose Starceski

### **UC-CGH Group:**

Nick Solu  
Alex Smith  
Ashley Schneider

### **TMJ Group:**

Sara Roy  
Aretha Narayan  
Meghan Murley

### **Lower Cervical Group:**

Tony Munoz  
Kaitlyn Morton  
Sara Lin  
Derek Behlow

### **Hip Group:**

Jacob Lauka  
Nick Labus  
Scott Jones

### **Knee Group:**

Charlotte Hotaling  
Sarah Hartley  
Sarah Hackert  
Sam Gomez

### **Ankle-foot Group:**

Victoria Fulgenti  
Dan Fryc  
Page Felisky

### **Thoracic Group:**

Hannah Durham  
Jenifer Duggan

### **Lumbar Group:**

Jack Dalton  
Sam Chaney  
Steve Brown  
Zack Bepler

### **Pelvic Floor Group:**

Dana Basal  
Kelly Turcznski