

# KIN 415: Theory of Corrective Exercise

**Instructor:** Chris Ramos, PhD

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**Office:** Health South 414

**Office Hours:** M W 2-3pm

**Prerequisites:** EXW 330 or KIN 334

## Course Objectives:

At the conclusion of this course students should be able to:

- (1) Understand common injury mechanisms for major muscle groups and joints
- (2) Identify basic assessment protocols for determining relative muscle strength / control
- (3) Identify basic corrective exercises for common muscle weaknesses / postural impairments
- (4) Communicate functional anatomy principles and their relation to Objectives 1-3

## Course Format:

The course follows the following structure for each unit. Individuals work in groups of 3-4 of their choosing and analyze a case study across all 5 units for an athletic movement of their choice using it to investigate common injury mechanisms and potential problems. This exploration involves various analyses of the movement, problem, and solution in conjunction with reports and presentations to demonstrate their findings.

### Functional Review / Movement Analysis

- identify phases, goals, actions, and muscle roles for movement

### Unit Lecture

- instructor explains mechanisms of common pathologies

### Pathology Analysis

- justify and explain each relevant pathology for movement

### Exercise Analysis

- explain and compare exercises for each pathology

### Unit Analysis

- create roadmap of pathologies and exercises

### Unit Paper / Presentation

- present cohesive report of analysis for the unit

## Course Details

### *Readings*

There is no textbook required for this course.

### *Group Requirements*

All presentations and assignments will all be conducted in groups of 3-4 individuals. You will be in the same group the entire semester. Each group will pick an athletic movement case study to investigate throughout the course for each Unit and the Final Paper / Presentation. Group members found to not be contributing significantly will be deducted 50% of possible points. Group members found to be consistently absent or not contributing will work on their own.

### *Analyses*

On a regular basis we will be engaged in a variety of in-class activities called analyses that are designed to facilitate active learning. These analyses will be graded for completion and not accuracy. If you are absent on the day of an analysis, you will not receive credit for it even if you submitted the individual component.

### *Unit Papers*

A Unit Paper will be due online after each unit. There is no required format or structure for these papers. The goal is to compare and contrast the exercises learned by describing how / why the exercise is performed, explaining / rationalizing the muscles involved, describing the possible injury mechanisms leading to the necessity of each exercise for different populations, and thoroughly explain the strengths and weaknesses. These papers should conclude with each group's respective case study by which you investigate common injuries / deficiencies and discuss the methods by which one could evaluate the injury and how corrective exercises could be used / implemented. Including supplemental material (with citations) to the lectures is encouraged. Papers will be graded depending on thoroughness, effectiveness, and formatting.

Each group will perform a 30 minute presentation for their designated unit once in the semester rather than submitting a Unit Paper. The goal of this presentation is to be the Unit Paper in presentation form. Unit Presentations will be graded using the same rubric as the Unit Papers.

### *Final Paper*

There is no final exam for this class. Instead each group will submit a Final Paper consisting of a breakdown of their case study with all relevant pathologies / corrective exercises along with descriptions / rationales across all 5 units.

## Course Grading

### *Grade Distribution*

**Analyses:** 20%

**Unit Papers (x4):** 60%

**Final Paper:** 20%

### *Final Grade Scale*

Grade	Percentage
A+	97-100
A	93-96.9
A-	90-92.9
B+	87-89.9
B	83-86.9
B-	80-82.9
C+	77-79.9
C	70-76.9
D	60-69.9
E	< 60 (Fail)

## General Policies

### *Attendance*

Attendance is mandatory for the entire class period on days in which a presentation is scheduled, regardless of whether the student is presenting or not. Missed presentations may not be made up except in the case of university business, religious holiday, or physician-documented illness. Unexcused absences will result in a grade deduction of up to 100% of the possible points.

### *Grading*

Questions regarding report or exam grades must be handled before the next submission of that nature is due. If the submission in question is the last of its nature, i.e. at the end of the semester, the student must bring the question to the instructor's attention immediately. Therefore, the question can be handled before final grades are due. In general, I allow for up to one week after a grade has been issued to dispute that grade.

### *Communication*

E-mail is the preferred means of communication. In general, I reply to emails within 24 hours.

### *Academic Dishonesty*

Cheating and plagiarism will not be tolerated under any circumstances and will be punished according to program, college, and university guidelines. Punishment will vary with the nature of the offense and may range from receiving a grade of 0 for an assignment to expulsion from the University. Please refer to the Provost's website on Academic Integrity for more information: <https://provost.asu.edu/index.php?q=academicintegrity>

### *Accommodations for Students with Disabilities*

Students with disabilities as documented by the Student Accessibility and Inclusion Learning Services (SAILS) should notify the instructor as soon as possible if any arrangements need to be made for testing, note taking, etc. Every effort will be made to accommodate students with disabilities as directed by SAILS. Students who suspect they may have a disability should contact the SAILS for further information: <http://eooss.asu.edu/drc>

### *Online Requirements*

Some components of this course take place online through the use of Canvas. By enrolling in the course, you are automatically enrolled on Canvas. You will obtain some class information, some assignments, and grades by accessing Canvas at [myasucourses.asu.edu](http://myasucourses.asu.edu) or by clicking on the course through your MyASU home page. If this course is not listed under your courses, contact the instructor immediately. Canvas will also serve as a means of communication for the instructor so check it regularly for announcements and other course information. You are expected to obtain a copy of this syllabus and to stay abreast of all course communications. Therefore, in order to complete this course, you must have reliable access to the Internet and Canvas. You are solely responsible for ensuring your Internet and Canvas access. If you have any problems with Canvas access, please submit a help ticket to Canvas technical support in the ASU Help Center. It is recommended that you have a backup plan in place should your Internet access fail.

Become familiar with the class interface before the session begins and seek help if necessary. All ASU campuses have resources available to help you with this task. A lack of Canvas knowledge is not an acceptable excuse for late work. If you need help learning more about Canvas, visit the ASU Help Center. Last-minute Internet crashes (or other excuses—technical or personal) will not be accepted as excuses for missed assignments, and a grade of zero will be assigned. You are responsible for managing your time in regards to assignments and planned Canvas outages.

#### *Satisfactory Y Grade*

A Y (Satisfactory) grade is considered the equivalent of a C or better, and is available at the discretion of the instructor. The Y grade is not an option for this class. To request the Y grading option, you must email your request to the instructor by the last day of class. All students should review their major map for (1) grade requirements for this course, and (2) grade requirements as a prerequisite for future required coursework. You should contact your advisor with questions about how a Y grade may impact your DARS or graduate school applications. A Y grade is not used for computing your GPA and does not affect your GPA.

## KIN 415: Theory of Corrective Exercise – Spring 2024 Class Schedule

Day	Date	Lecture	Assignment Due
<b>M</b>	1/8	Exercise Basics	
<b>W</b>	1/10	Case Study Selection and Breakdown	
<b>M</b>	1/15	No Class	
<b>Unit 1 – Shoulder Girdle and Shoulder Joint</b>			
<b>W</b>	1/17	Movement Analysis	Movement Analysis 1
<b>M</b>	1/22	Pathology Lecture	
<b>W</b>	1/24	Pathology Analysis	Pathology Analysis 1
<b>M</b>	1/29	Exercise Analysis	Exercise Analysis 1
<b>W</b>	1/31	Unit Analysis	Unit Analysis 1
<b>M</b>	2/5	Unit Paper Presentations	<b>Unit 1 Paper</b>
<b>Unit 2 – Elbow, Radioulnar, and Wrist Joints</b>			
<b>W</b>	2/7	Movement Analysis	Movement Analysis 2
<b>M</b>	2/12	Pathology Lecture	
<b>W</b>	2/14	Pathology Analysis	Pathology Analysis 2
<b>M</b>	2/19	Exercise Analysis	Exercise Analysis 2
<b>W</b>	2/21	Unit Analysis	Unit Analysis 2
<b>M</b>	2/26	Unit Paper Presentations	<b>Unit 2 Paper</b>
<b>Unit 3 – Spinal Column and Pelvic Girdle</b>			
<b>W</b>	2/28	Movement Analysis	Movement Analysis 3
<b>Spring Break</b>			
<b>M</b>	3/11	Pathology Lecture	
<b>W</b>	3/13	Pathology Analysis	Pathology Analysis 3
<b>M</b>	3/18	Exercise Analysis	Exercise Analysis 3
<b>W</b>	3/20	Unit Analysis	Unit Analysis 3
<b>M</b>	3/25	Unit Paper Presentations	<b>Unit 3 Paper</b>
<b>Unit 4 – Hip and Knee Joints</b>			
<b>W</b>	3/27	Movement Analysis	Movement Analysis 4
<b>M</b>	4/1	Pathology Lecture	
<b>W</b>	4/3	Pathology Analysis	Pathology Analysis 4
<b>M</b>	4/8	Exercise Analysis	Exercise Analysis 4
<b>W</b>	4/10	Unit Analysis	Unit Analysis 4
<b>Unit 5 – Ankle Joint and Foot</b>			
<b>M</b>	4/15	Movement Analysis	<b>Unit 4 Paper</b> Movement Analysis 5
<b>W</b>	4/17	Unit Lecture Pathology Analysis	Pathology Analysis 5
<b>M</b>	4/22	Exercise Analysis Unit Analysis	Exercise Analysis 5 Unit Analysis 5
<b>W</b>	4/24	Open Class	
<b>Monday May 29<sup>th</sup> – Final Paper Due (by 11:59pm MST)</b>			

## KIN 415: Theory of Corrective Exercise – Spring 2024 Class Schedule

Day	Date	Lecture	Assignment Due
<b>T</b>	1/9	Exercise Basics	
<b>Th</b>	1/11	Case Study Selection and Breakdown	
<b>T</b>	1/16	No Class	
<b>Unit 1 – Shoulder Girdle and Shoulder Joint</b>			
<b>Th</b>	1/18	Movement Analysis	Movement Analysis 1
<b>T</b>	1/23	Pathology Lecture	
<b>Th</b>	1/25	Pathology Analysis	Pathology Analysis 1
<b>T</b>	1/30	Exercise Analysis	Exercise Analysis 1
<b>Th</b>	2/1	Unit Analysis	Unit Analysis 1
<b>T</b>	2/6	Unit Paper Presentations	<b>Unit 1 Paper</b>
<b>Unit 2 – Elbow, Radioulnar, and Wrist Joints</b>			
<b>Th</b>	2/8	Movement Analysis	Movement Analysis 2
<b>T</b>	2/13	Pathology Lecture	
<b>Th</b>	2/15	Pathology Analysis	Pathology Analysis 2
<b>T</b>	2/20	Exercise Analysis	Exercise Analysis 2
<b>Th</b>	2/22	Unit Analysis	Unit Analysis 2
<b>T</b>	2/27	Unit Paper Presentations	<b>Unit 2 Paper</b>
<b>Unit 3 – Spinal Column and Pelvic Girdle</b>			
<b>Th</b>	2/29	Movement Analysis	Movement Analysis 3
<b>Spring Break</b>			
<b>T</b>	3/12	Pathology Lecture	
<b>Th</b>	3/14	Pathology Analysis	Pathology Analysis 3
<b>T</b>	3/19	Exercise Analysis	Exercise Analysis 3
<b>Th</b>	3/21	Unit Analysis	Unit Analysis 3
<b>T</b>	3/26	Unit Paper Presentations	<b>Unit 3 Paper</b>
<b>Unit 4 – Hip and Knee Joints</b>			
<b>Th</b>	3/28	Movement Analysis	Movement Analysis 4
<b>T</b>	4/2	Pathology Lecture	
<b>Th</b>	4/4	Pathology Analysis	Pathology Analysis 4
<b>T</b>	4/9	Exercise Analysis	Exercise Analysis 4
<b>Th</b>	4/11	Unit Analysis	Unit Analysis 4
<b>Unit 5 – Ankle Joint and Foot</b>			
<b>T</b>	4/16	Movement Analysis	<b>Unit 4 Paper</b> Movement Analysis 5
<b>Th</b>	4/18	Unit Lecture Pathology Analysis	Pathology Analysis 5
<b>T</b>	4/23	Exercise Analysis Unit Analysis	Exercise Analysis 5 Unit Analysis 5
<b>Th</b>	4/25	Open Class	
<b>Monday May 29<sup>th</sup> – Final Paper Due (by 11:59pm MST)</b>			