



FLORIDA ATLANTIC  
UNIVERSITY

Exercise Science and Health Promotion Department

**COURSE SYLLABUS,  
BIOMECHANICS**

**PET 4340C – 3 credits**

**Fall 2019**

**I. COURSE NUMBER AND TITLE**

PET 4340 – Sect. 001  
Biomechanics

**II. PROFESSOR**

Ian B. Pyka

Office: FH 11 - Rm. 25A Boca Campus

Office hours: Monday 12:00-4:00 PM

Tuesday/Thursday 11:15-12:15 PM

Telephone: 561-297-1284

Email: [ipyka@fau.edu](mailto:ipyka@fau.edu)

**III. CLASS INFORMATION**

Days Wednesday & Friday

Times 12:00 - 1:50 PM

Location Sanson Life Science 178

**III. REQUIRED MATERIALS**

The required textbook for this course is:

Hall, Susan J. *Basic Biomechanics* (8<sup>th</sup> Ed). New York, NY: McGraw Hill, 2019.

ISBN 978-1-259-91387-7

**IV. COURSE DESCRIPTION**

The study of human movement based on anatomical, physiological and mechanical principles. Emphasis is placed on application of these principles to fundamental movement, whether in sport, clinical or daily activities.

**V. COURSE OBJECTIVES**

Following completion of this course, the student should be able to:

- A) Understand the body of terminology that describes direction with respect to the human body and the actions that occur at different joints
- B) Understand the structure and function of muscles
- C) Understand the principles and concepts of human movement and be able to analyze and evaluate activities from a biomechanical perspective.

**VI. CALENDAR OF READING AND WRITING ASSIGNMENTS**

The student shall be expected to contribute to class discussions. Therefore, it is necessary that reading assignments be completed prior to the class sessions in which those readings are addressed. For the initial schedule of lecture topics per class session, see Section X.

**VII. COURSE REQUIREMENTS**

There will be seven examinations and one final examination administered during this course covering the assigned readings outlined in Section X. In addition, there will be 3

announced Quizzes and 3 Lab Experiments which will comprise 10% of your final grade.

#### VIII. CLASS POLICIES

Class Role will be taken! While class attendance will not be directly included as a grading criteria, regular class participation is expected and required for all Exams and Quizzes. It is assumed that you will attend class and **be punctual!** Unexcused absence during scheduled examinations/quizzes, will result in a grade of zero for that exam or quiz, with no option of re-taking exam. No laptops, cell phones or tablets operational during class!! Also, no smart watches during exams!!

#### IV. GRADING POLICIES

1.	Seven Examinations (7 x 50)	350 points	70%
2.	Final examination	100 points	20%
3.	Two Quizzes	25 points	5%
4.	Two Lab Experiments	<u>25 points</u>	<u>5%</u>
	<b>TOTAL GRADE</b>	500 points	100%

#### GRADING SCALE

94 – 100 = A	77 – 79 = C+
90 – 93 = A-	73 – 76 = C
	70 – 72 = C-
87 – 89 = B+	67 – 69 = D+
83 – 86 = B	64 – 66 = D
80 – 82 = B-	60 – 63 = D-
	< 60 = F

**UNIVERSITY ATTENDANCE POLICY:** Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance.

Students are responsible for arranging make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a university-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

**STUDENTS WITH DISABILITIES:** In compliance with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at [www.fau.edu/sas/](http://www.fau.edu/sas/)

**COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS) CENTER:** Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counselling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to [www.fau.edu/counseling/](http://www.fau.edu/counseling/)

**CODE OF ACADEMIC INTEGRITY:** Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see University Regulation 4.001 - [https://www.fau.edu/ctl/4.001\\_Code\\_of\\_Academic\\_Integrity.pdf](https://www.fau.edu/ctl/4.001_Code_of_Academic_Integrity.pdf)

**X. CLASS SESSIONS AND READING ASSIGNMENTS:**

The following is a tentative schedule of class lectures and associated reading assignments.

<b>Dates</b>	<b>Lectures</b>	<b>Exams</b>	<b>Reading</b>
August 21 August 23	Intro To Biomechanics		Chapter 1
August 28 August 30	Kinematic Concepts & Human Motion		Chapter 2
September 4 September 6	Kinetic Concepts & Human Motion	Exam 1	Chapter 3
September 11 September 13	Biomechanics of Human Skeletal Articulations		Chapter 5
September 18 September 20	Biomechanics of Human Bone Growth Biomechanics of Human Skeletal Muscle	Exam 2	Chapter 4 Chapter 6
September 25 September 27	Biomechanics of the Human Upper Extremity		Chapter 7
October 2 October 4	Biomechanics of the Human Lower Extremity	Exam 3	Chapter 8
October 9 October 11	Biomechanics of the Human Spine		Chapter 9
October 16 October 18	Linear Kinematics and Human Movement	Exam 4	Chapter 10
October 23 October 25	Angular Kinematics and Human Movement		Chapter 11
October 30 November 1	Linear Kinetics and Human Movement	Exam 5	Chapter 12
November 6 November 8	Angular Kinetics and Human Movement		Chapter 14
November 13 November 15	Equilibrium and Human Movement	Exam 6	Chapter 13
November 20 November 22	Fluid Dynamics and Human Movement		Chapter 15
November 27 November 29	<b>Thanksgiving Break</b>	Exam 7	
<b>December 6 Friday</b>	<b>10:30 – 1:00</b>	<b>FINAL EXAM</b>	

**DEPARTMENT OF EXERCISE SCIENCE & HEALTH PROMOTION  
PET 4340C – Fall 2019**

**Read, sign and turn in this page the first day of class to the instructor**

- |   | <b>Initial</b> |
|---|----------------|
| 1. I have received the course syllabus.   | _____          |
| 2. I understand I must attend class (not leave during class), be on time, and participate in class.   | _____          |
| 3. I understand if I miss class, I am responsible for the material missed and for obtaining the notes and/or other assignments from another classmate, <b>not the professor.</b>  | _____          |
| 4. I understand that I <b>cannot</b> make up any exams or missed assignments.   | _____          |
| 5. I understand the absences, grading procedures, and point distribution.   | _____          |
| 6. I understand I must do out of class observations/assignments and other work.   | _____          |
| 7. I understand if assignments are not turned in when due, <b>no points will be given.</b>  | _____          |
| 8. I understand my personal guests or children are <b>not</b> allowed during class.   | _____          |
| 9. I understand pagers, cellular phones, and other electronic devices are <b>not</b> to be used during class.   | _____          |
| 10. I understand I must maintain and use an active FAU email account during this course.  | _____          |
| 11. I understand all assignments due need to make it to class even if I do not attend.  | _____          |
| 12. I understand that plagiarism or cheating on any assignment or exam will result in a failing grade on the assignment or exam or possibly even the course. SafeAssign through Canvas is the program used to check for plagiarism. Appropriate university guidelines will be followed for disciplinary action. | _____          |
| 13. I understand I cannot submit work for this class that I have previously completed for another course.   | _____          |
| 14. If you have a learning disability and need special assistance, please notify the instructor by the end of the first week of the semester.   | _____          |

**I have read the course syllabus for Kinesiology, and agree to abide by the above.**

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Z Number

\_\_\_\_\_  
Date