

**The University of Texas at Tyler**  
**Department of Health and Kinesiology**  
**Course Information**  
**Fall 2023**

**Course Title:** Biomechanics and Anatomical Kinesiology

**Course Number:** KINE 3334.001

**Credits:** 3.00

**Prerequisites:** Credit in anatomy and physiology courses (BIOL2301 and BIOL 2101) or CI

**Co-requisite:** Biomechanics and Anatomical Kinesiology Laboratory (KINE 3135)

**Days/Hours of Class:**

**Face-to-Face Meeting**                      Thursday 2:00 pm – 3:20 pm at Herrington Patriot Center 03055 (HPC3055)

**Online Component**                      Canvas (<http://www.uttyler.edu/canvas/>)

**Dates:** 8/21/2023 – 12/9/2023

**Instructor Information**

**Name and Title:** X. Neil Dong, Ph.D., Professor of Health and Kinesiology

**Office location:** HPC2166 (within Biomechanics Lab at HPC2165)

**Phone number:** 903-565-5615

**Email address:** [xdong@uttyler.edu](mailto:xdong@uttyler.edu)

**Office hours:** 11am to 2pm on Thursday or by appointment

**Textbook:**

Hall S. (2022) Basic Biomechanics (7<sup>th</sup> Edition). McGraw Hill Publishing. ISBN-10: 1260836983 | ISBN-13 9781260836981.

**Catalog description:**

Analysis of human movement, applying principles from Newtonian mechanics and study of structure and function of major joints and muscle groups.

**Student Learning Objectives:** After the full completion of this course the student will be:

1. Able to identify and discuss the major terminology and concepts related to human movement analysis.
2. Able to decide what biomechanical questions should be asked and studied related to activities of daily living, sports, basic movements and work related tasks.
3. Able to develop research to answer the biomechanical questions asked related to activities of daily living, sports, basic movements and work related tasks.
4. Able to distinguish kinematic from kinetic research related to the mechanics of human motion.
5. Able to list and explain the differences between qualitative and quantitative analysis.

- 6. Able to develop and implement kinematic, kinetic, and electromyography (EMG) research.

**Methods of Instruction**

To meet student learning objective, student learning experiences include but not limited to: a) online lectures, b) classroom demonstrations and discussion (face-to-face), c) problem solving situations and laboratory experiences, d) observations and analysis of movement performances, e) reading designated textbooks and supplementary materials upon assignment.

**Assessment and Measurement:**

The students will be evaluated on the basis of performance on periodic three examinations, weekly face-to-face quizzes and online quizzes and class participation. A percentage of total points possible determine the course grade.

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

*Course Structure:*

300 points	Three Non-Cumulative Exams (Exam I, Exam II, and Final Exam)
100 points	Face-to-Face (In Class) Quizzes
100 points	Online Quizzes
Total Possible Points: 500 points	

*Face-to-Face Quizzes:*

The in-class quizzes will be given at the end of class for lecture material. **There will be no makeup quizzes given.** Therefore, it is imperative that you arrive early or on time for each class meeting. There may or may not be a quiz for a given week ... therefore it is important to be prepared each time.

*Online Quizzes:*

The online quizzes will be taken after online lectures are completed. You are encouraged to use online quizzes to assess your own learning progress.

**Course Outline**

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Week 1	F2F (8/24/23) Course Overview Online Module 1: What is Biomechanics?
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Week 2	F2F (8/31/23) Discussion and in class quiz for Module 1 and Shoulder Joint Online Module 2: Kinematic Concepts for Analyzing Human Motion
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Week 3	F2F (9/7/23) Online	Discussion and in class quiz for Module 2 and Elbow Joint Module 3: Kinetic Concepts for Analyzing Human Motion
Week 4	F2F (9/14/23) Online	Discussion and in class quiz for Module 3 and Wrist Joint Module 4: Biomechanics of Bones, Joints and Muscles
Week 5	F2F (9/21/23)	Discussion and in class quiz for Module 4 and Hip Joint
Week 6	F2F (9/28/23) Online	Exam I Module 5: Linear Kinematics of Human Movement
Week 7	F2F (10/5/23) Online	Discussion and in class quiz for Module 5 and Knee Joint Module 6: Angular Kinematics of Human Movement
Week 8	F2F (10/12/23) Online	Discussion and in class quiz for Module 6 Module 7: Linear Kinetics of Human Movement
Week 9	F2F (10/19/23) Online	Discussion and in class quiz for Module 7 and Ankle Joint Module 7: Linear Kinetics of Human Movement
Week 10	F2F (10/26/23)	Discussion and in class activity for Module 7
Week 11	F2F (11/2/23) Online	Exam II Module 8: Equilibrium and Human Movement
Week 12	F2F (11/9/23) Online	Discussion and in class quiz for Module 8 and Spine Joint Module 9: Angular Kinetics of Human Movement
Week 13	F2F (11/16/23) Online	Discussion and in class quiz for Module 9 Module 10: Human Movement in a Fluid Medium
Week 14	No class (11/23/23)	Thanksgiving Holiday.

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Week 15	F2F (11/30/23) Online	Discussion and in class quiz for Module 10 Review Session for Final Exam
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Week 16	TBD	Final Exam
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### **Online Etiquette:**

*Tone Down Your Language:* If you feel particularly strongly about a point, it may be best to write it first as a draft and then to review it, before posting our statement. If someone states something you find offensive, mention it directly to the instructor. Remember the person may be new to online learning. What you find offensive may be an unintended and can be corrected by the instructor.

*Test for Clarity:* Messages may often appear perfectly clear to you as the writer but turn out to be confusing by another reader. One way to test for clarity is to read your message aloud to see if it flows smoothly. Be concise when possible when contributing to a discussion. If you have several points you want to make, it may be a good idea to post them individually in more focused messages rather than a single, all-encompassing message.

### **Communication Policy:**

If you email me, expect a response within one business day at UT Tyler (M-F).

### **University Policies**

#### **STUDENTS RIGHTS AND RESPONSIBILITIES**

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please go to the following site:

<http://www.uttyler.edu/wellness/StudentRightsandResponsibilities.html>

#### **GRADE REPLACEMENT**

If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the 12th day of class. Failure to file an intent to use grade forgiveness will result in both the original and repeated grade being used to calculate your overall grade point average. A student will receive grade forgiveness (grade replacement) for only three (undergraduate student) or two (graduate student) course repeats during his/her career at UT Tyler (2006-2008 Catalog, P. 35).

#### **STATE-MANDATED COURSE DROP POLICY**

Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during his/her entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or

university. For purposes of this rule, a dropped course is any course that is dropped after the 12th day of class (See Schedule of Classes for the specific date). Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Registrar's Office and must be accompanied by documentation of the extenuating circumstance. Please contact the Registrar's Office if you have any questions.

### DISABILITY SERVICES

In accordance with federal law, a student requesting accommodation must provide documentation of his/her disability to the Disability Support Service counselor. If you have a disability, including a learning disability, for which you request an accommodation, please contact the Disability Support Services office in UC 3150 or call (903) 566-7079.

### CLASS ATTENDANCE

Responsibility for class attendance rests with the student. When a student has a legitimate reason for being absent, the instructor has the option of permitting make-up work. The university reserves the right to consider individual cases of nonattendance. In general, students are graded on the basis of intellectual effort and performance. In many cases, class participation is a significant measure of performance, and nonattendance can adversely affect a student's grade. When, in the judgment of the instructor, a student has been absent to such a degree as to jeopardize success in the course, the instructor informs the Office of Student Records that the student is to be dropped from the course.

### APPROVED STUDENT ABSENCES

On those occasions when it may be necessary for students to miss a regularly scheduled class in order to participate in an official university event or activity, faculty sponsors and program directors are requested to observe the following procedures:

1. Faculty sponsors or program directors should draft a memorandum to the vice president for academic affairs. This memorandum should include information concerning the nature of the event, the date(s) on which students would be absent from class, and the names of the students involved.
2. Copies of the memorandum addressed to the vice president should be given to each of the students listed on the memorandum.
3. Students should be directed to communicate with their instructor(s) prior to the date of the planned absence.

It is expected that students will not abuse the privilege of being absent from class for authorized university activities, and that make-up assignments will be made at the discretion and convenience of the instructor.

### ACADEMIC DISHONESTY POLICY

At The University of Texas at Tyler students and faculty are responsible for maintaining an environment that encourages academic integrity. Students and faculty members are required to report an observed or a suspected case of academic dishonesty immediately to the faculty member in charge of an examination, classroom or laboratory research project, or other academic exercise.

Since the value of an academic degree depends on the absolute integrity of the work done by the student for the degree, it is imperative that a student maintain a high standard of individual honor in scholastic work. Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, and collusion:

"Cheating" includes:

- 1 . Copying from the paper of another student, engaging in written, oral or any other means of communication with another student, or giving aid to or seeking aid from another student when not permitted by the instructor;
2. Using material during an examination or when completing an assignment that is not authorized by the person giving the examination or making the work assignment;
3. Taking or attempting to take an examination for another student, or allowing another student to take an examination for oneself;
4. Using, obtaining, or attempting to obtain by any means, the whole or any part of an unadministered examination or work assignment.

"Plagiarism" includes the unacknowledged incorporation of the work of another person in work that a student offers for credit.

"Collusion" includes the unauthorized collaboration with another person in preparing written work that a student offers for credit.

#### GRADE APPEAL PROCEDURE

A student who wishes to contest a grade given by an instructor must initiate the procedure by contacting the instructor who assigned the grade. The instructor and the student should informally review the criteria for assignment of grades and the student's performance. The instructor may affirm the grade or revise the grade.

If the student is not satisfied after the informal discussion with the instructor, then the student may initiate a formal grade appeal by completing a Grade Appeal Form that may be obtained from the Office of Student Records. Normal grade appeals should be filed at the earliest date possible, but no later than six months from the final date of assignment. The instructor and the student should complete the appropriate parts of the form clearly indicating the instructor's rationale for the grade given and the student's basis for the grade appeal.

At each administrative level of the appeal process, an attempt will be made to resolve the issue. If the instructor holds one of the administrative positions used in the appeal process, then that level is omitted. If no resolution is reached at a particular level, then the appeal is forwarded with the recommendation of the administrator at that level with all documentation.

If the appeal is to be considered by the vice president for academic affairs, then a copy of the Grade Appeal Form shall be forwarded by the academic dean of the students. The Office of the President is the final step in the appeal process at The University of Texas at Tyler.

#### FOOD AND DRINK IN CLASSROOMS

Consumption of food and drink in university classrooms is prohibited.

#### INDOOR SMOKE-FREE CAMPUS

The University of Texas at Tyler is an indoor smoke-free campus. No smoking will be permitted in any building, office, hallway, classroom, laboratory, restroom, lounge, or any other indoor location.

#### IMPORTANT COVID-19 INFORMATION FOR CLASSROOMS AND LABORATORIES

Students are required to wear face masks covering their nose and mouth, and follow social distancing guidelines, at all times in public settings (including classrooms and laboratories), as specified by [Procedures for Fall 2020 Return to Normal Operations](#). The UT Tyler community of Patriots views adoption of these practices consistent with its [Honor Code](#) and a sign of good citizenship and respectful care of fellow classmates, faculty, and staff.

Students who are feeling ill or experiencing symptoms such as sneezing, coughing, or a higher than normal temperature will be excused from class and should stay at home and may join the class remotely. Students who have difficulty adhering to the Covid-19 safety policies for health reasons are also encouraged to join the class remotely. Students needing additional accommodations may contact the Office of Student Accessibility and Resources at University Center 3150, or call (903) 566-7079 or email [saroffice@uttyler.edu](mailto:saroffice@uttyler.edu).

#### RECORDING OF CLASS SESSIONS

Class sessions may be recorded by the instructor for use by students enrolled in this course. Recordings that contain personally identifiable information or other information subject to FERPA shall not be shared with individuals not enrolled in this course unless appropriate consent is obtained from all relevant students. Class recordings are reserved only for the use of students enrolled in the course and only for educational purposes. Course recordings should not be shared outside of the course in any form without express permission.

**Note: This syllabus is subject to change based on the needs of the class.**