

**The University of Texas at Tyler**  
**Department of Health and Kinesiology**  
**Course Information**  
**Fall 2024**

**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 02255 (HPC2255)

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

**Dates:** 8/26/2024 – 12/14/2024

**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:** 8:00 am to 11:00 am on Tuesday 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 (8/29/24) Course Overview Online Module 1: What is Biomechanics?
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Week 2	F2F (9/5/24) Discussion and in class quiz for Module 1 Online Module 2: Kinematic Concepts for Analyzing Human Motion
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Week 3	F2F (9/12/24) Online	Discussion and in class quiz for Module 2 Module 3: Kinetic Concepts for Analyzing Human Motion
Week 4	F2F (9/19/24) Online	Discussion and in class quiz for Module 3 Module 4: Biomechanics of Bones, Joints and Muscles
Week 5	F2F (9/26/24)	Discussion and in class quiz for Module 4
Week 6	F2F (10/3/24) Online	Exam I Module 5: Linear Kinematics of Human Movement
Week 7	F2F (10/10/24) Online	Discussion and in class quiz for Module 5 Module 6: Angular Kinematics of Human Movement
Week 8	F2F (10/17/24) Online	Discussion and in class quiz for Module 6 Module 7: Linear Kinetics of Human Movement
Week 9	F2F (10/24/24) Online	Discussion and in class quiz for Module 7 Module 7: Linear Kinetics of Human Movement
Week 10	F2F (10/31/24)	Discussion and in class activity for Module 7
Week 11	F2F (11/7/24) Online	Exam II Module 8: Equilibrium and Human Movement
Week 12	F2F (11/14/24) Online	Discussion and in class quiz for Module 8 Module 9: Angular Kinetics of Human Movement
Week 13	F2F (11/21/24) Online	Discussion and in class quiz for Module 9 Module 10: Human Movement in a Fluid Medium
Week 14	No class (11/28/24)	Thanksgiving Holiday.

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Week 15	F2F (12/5/24) 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).

**Student Resources:**

*Faculty can update student resources to provide additional supports appropriate for each course.*

**Resources to assist you in the course**

- [UT Tyler Student Accessibility and Resource \(SAR\) Office](#) (provides needed accommodations to students with document needs related to access and learning)
- [UT Tyler Writing Center](#)
- [The Mathematics Learning Center](#)
- [UT Tyler PASS Tutoring Center](#)
- [UT Tyler Supplemental Instruction](#)
- [Upswing \(24/7 online tutoring\) - covers nearly all undergraduate course areas](#)
- [Robert Muntz Library](#) and [Library Liaison](#)
- [Canvas 101](#) (learn to use Canvas, proctoring, Unicheck, and other software)
- Digital Support Toolkit (for supported courses only. Students are automatically enrolled in the toolkit for supported courses)
- LIB 422 -- Computer Lab where students can take a proctored exam
- [The Career Success Center](#)
- [UT Tyler Testing Center](#)

- [Office of Research & Scholarship Design and Data Analysis Lab](#)

### Resources available to UT Tyler Students

- [UT Tyler Counseling Center](#) (available to all students)
- [MySSP App](#) (24/7 access to Student Support Program counseling through phone or chat and online wellness resources available in a variety of languages)
- [Student Assistance and Advocacy Center](#)
- [Military and Veterans Success Center](#) (supports for our military-affiliated students)
- [UT Tyler Patriot Food Pantry](#)
- [UT Tyler Financial Aid and Scholarships](#)
- [UT Tyler Student Business Services](#) (pay or set up payment plans, etc.)
- [UT Tyler Registrar's Office](#)
- [Office of International Programs](#)
- [Title IX Reporting](#)
- [Patriots Engage](#) (available to all students. Get engaged at UT Tyler.)

## **University Policies and Information**

### Withdrawing from Class

Students may [withdraw](#) (drop) from this course using the [Withdrawal Portal](#). Withdrawing (dropping) this course can impact your Financial Aid, Scholarships, Veteran Benefits, Exemptions, Waivers, International Student Status, housing, and degree progress. Please speak with your instructors, consider your options, speak with your advisor, and visit the One-Stop Service Center (STE 230) or email [enroll@uttyler.edu](mailto:enroll@uttyler.edu) to get a complete review of your student account and the possible impacts to withdrawing. We want you to make an informed decision. UT Tyler faculty and staff are here for you and often can provide additional support options or assistance. Make sure to carefully [read the implications for withdrawing from a course and the instructions](#) on using the [Withdrawal portal](#).

Texas law prohibits students from dropping more than six courses during their entire undergraduate career\*. The six courses dropped includes those from other 2-year or 4-year Texas public colleges and universities. Consider the impact withdrawing from this class has on your academic progress and other areas, such as financial implications. We encourage you to consult your advisor(s) and Enrollment Services for additional guidance. **CAUTION #1:** Withdrawing before census day does not mean you get a full refund. Please see the [Tuition and Fee Refund Schedule](#). **CAUTION #2:** All international students must check with the [Office of International Programs](#) before withdrawing. All international students are required to enroll full-time for fall and spring terms. **CAUTION #3:** All UT Tyler Athletes must check with the Athletic Academic Coordinator before withdrawing from a course. **CAUTION #4:** All veterans or military-affiliated students should consult with the [Military and Veterans Success Center](#).

\* Students who began college for the first time before 2007 are exempt from this law.

### Artificial Intelligence Statement

UT Tyler is committed to exploring and using artificial intelligence (AI) tools as appropriate for the discipline and task undertaken. We encourage discussing AI tools' ethical, societal, philosophical, and disciplinary implications. All uses of AI should be acknowledged as this aligns with our commitment to honor and integrity, as noted in UT Tyler's Honor Code. Faculty and students must not use protected information, data, or copyrighted materials when using any AI tool. Additionally, users should be aware that AI tools rely on predictive models to generate content that may appear correct but is sometimes shown to be incomplete, inaccurate, taken without attribution from other sources, and/or biased. Consequently, an AI tool should not be considered a substitute for traditional approaches to research. You are ultimately responsible for the quality and content of the information you submit. Misusing AI tools that violate the guidelines specified for this course is considered a breach of academic integrity. The student will be subject to disciplinary actions as outlined in UT Tyler's Academic Integrity Policy. *Refer to the About This Course section of the UT Tyler Syllabus Module for specific information on appropriate use of AI in your course(s).*

For this course, AI is encouraged during the course, and appropriate acknowledgment is expected. Students can use AI platforms to help prepare for assignments and projects. You can use AI tools to revise and edit your work (e.g., identify flaws in reasoning, spot confusing or underdeveloped paragraphs, or correct citations). When submitting work, students must identify any writing, text, or media generated by AI. In this course, sections of assignments generated by AI should appear in a different colored font, and the relationship between those sections and student contributions should be discussed in a cover letter that accompanies the assignment when submitted.

### Final Exam Policy

Final examinations are administered as scheduled. If unusual circumstances require that special arrangements be made for an individual student or class, the Dean of the appropriate college, after consultation with the faculty member involved, may authorize an exception to the schedule. Faculty members must maintain student final examination papers for a minimum of three months following the examination date.

### Incomplete Grade Policy

If a student, because of extenuating circumstances, is unable to complete all of the requirements for a course by the end of the semester, then the instructor may recommend an Incomplete (I) for the course. The "I" may be assigned in place of a grade *only when all of the following conditions are met*: (a) the student has been making satisfactory progress in the course; (b) the student is unable to complete all coursework or final exam due to unusual circumstances that are beyond personal control and are acceptable to the instructor, and (c) the student presents these reasons before the time that the final grade

roster is due. The semester credit hours for an Incomplete will not be used to calculate the grade point average.

The student and the instructor must submit an Incomplete Form detailing the work required and the time by which the work must be completed to their respective department chair or college dean for approval. The time limit established must not exceed one year. Should the student fail to meet all of the work for the course within the time limit, then the instructor may assign zeros to the unfinished work, compute the course average for the student, and assign the appropriate grade. If a grade has yet to be assigned within one year, then the Incomplete will be changed to an F, or NC. If the course was initially taken under the CR/NC grading basis, this may adversely affect the student's academic standing.

### **Grade Appeal Policy**

Disputes regarding grades must be initiated within sixty (60) days from the date of receiving the final course grade by filing a Grade Appeal Form with the instructor who assigned the grade. A grade appeal should be used when the student thinks the final course grade awarded does not reflect the grades earned on assessments or follow the grading scale as documented in the syllabus. The student should provide the rationale for the grade appeal and attach supporting document about the grades earned. The form should be sent via email to the faculty member who assigned the grade. The faculty member reviews the rationale and supporting documentation and completes the instruction section of the form. The instructor should return the form to the student, even if a grade change is made at this level. If the student is not satisfied with the decision, the student may appeal in writing to the Chairperson of the department from which the grade was issued. In situations where there is an allegation of capricious grading, discrimination, or unlawful actions, appeals may go beyond the Chairperson to the Dean or the Dean's designee of the college from which the grade was issued, with that decision being final. The Grade Appeal form is found in the [Registrar's Form Library](#).

NOTE: The Grade Appeal Form is different from the Application for Appeal form submitted to the Student Appeals Committee, which does not rule on grade disputes as described in this policy.

### **Disability/Accessibility Services**

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA), the University of Texas at Tyler offers accommodations to students with learning, physical, and/or psychological disabilities. If you have a disability, including a non-visible diagnosis such as a learning disorder, chronic illness, TBI, PTSD, ADHD, or a history of modifications or accommodations in a previous educational environment, you are encouraged to visit <https://hood.accessiblelearning.com/UTTyler/> and fill out the New Student application. The Student Accessibility and Resources (SAR) office will contact you when your application has been submitted and an appointment with the Assistant Director Student Accessibility and Resources/ADA Coordinator. For more information, including filling

out an application for services, please visit the SAR webpage at <https://www.uttyler.edu/disability-services>, the SAR office located in the Robert Muntz Library, LIB 460, email [saroffice@uttyler.edu](mailto:saroffice@uttyler.edu), or call 903.566.7079."

### **Military Affiliated Students**

UT Tyler honors the service and sacrifices of our military-affiliated students. If you are a student who is a veteran, on active duty, in the reserves or National Guard, or a military spouse or dependent, please stay in contact with your faculty member if any aspect of your present or prior service or family situation makes it difficult for you to fulfill the requirements of a course or creates disruption in your academic progress. It is important to make your faculty member aware of any complications as far in advance as possible. Your faculty member is willing to work with you and, if needed, put you in contact with university staff who are trained to assist you. The [Military and Veterans Success Center \(MVSC\)](#) has campus resources for military-affiliated students. The MVSC can be reached at [MVSC@uttyler.edu](mailto:MVSC@uttyler.edu) or via phone at 903.565.5972.

### **Students on an F-1 Visa**

To remain in compliance with Federal Regulations requirements you must do the following:

- Traditional face-to-face classes: Attend classes on the regular meeting days/times.
- Hybrid Classes: Attend all face-to-face classes convened by the instructor according to the schedule set for your specific course.
- Online course: Only one online course can count toward your full-time enrollment. Students are expected to be fully engaged and meet all requirements for the online course.

### **Academic Honesty and Academic Misconduct**

The UT Tyler community comes together to pledge that "Honor and integrity will not allow me to lie, cheat, or steal, nor to accept the actions of those who do." Therefore, we enforce the [Student Conduct and Discipline policy](#) in the Student Manual Of Operating Procedures (Section 8).

### **FERPA**

UT Tyler follows the Family Educational Rights and Privacy Act (FERPA) as noted in [University Policy 5.2.3](#). The course instructor will follow all requirements to protect your confidential information.

### **Absence for Official University Events or Activities**

This course follows the practices related to [Excused Absences for University Events or Activities](#) as noted in the Catalog.



### **Absence for Religious Holidays**

This course follows the practices related to [Excused Absences for Religious Holy Days as noted in the Catalog](#).

### **Absence for Pregnant Students**

This course follows the requirements of Texas Laws SB 412, SB 459, SB 597/HB 1361 to meet the needs of pregnant and parenting students. Part of the supports afforded pregnant students includes excused absences. Faculty who are informed by a student of needing this support should make a referral to the Parenting Student Liaison. NOTE: Students must work with the Parenting Student Liaison in order to receive these supports. Students should reach out to the Parenting Student Liaison at [parents@uttyler.edu](mailto:parents@uttyler.edu) and also complete the [Pregnant and Parenting Self-Reporting Form](#).

### **Campus Carry**

We respect the right and privacy of students who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed. More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>.

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