Instructor Information

Instructor(s): Liping Tang

Office Number: Engineering Research Building 238

Email Address: ltang@uta.edu

Faculty Profile: https://www.uta.edu/profiles/liping-tang

Office Hours: All appointment requests should be sent to ltang@uta.edu

Course Information

Section Information: BE 5364-005 / BE 4364-005

Time and Place of Class Meeting: Monday/Wednesday 2:30-3:50 pm.
This is a hybrid 1 class, meaning that the class will meet Wednesday/Wednesday online using Teams and face-to-face in ERB 238 on specified exam and presentation dates. Alternatives will be provided for students unable to attend in-person. For a full definition of the course modalities, please go to https://www.uta.edu/academics/courses-and-schedules

Teaching Assistant: Joyita Roy, joyita.roy@mavs.uta.edu

Description of Course Content: Provide basic knowledge and training related to the designs, fabrication, research and FDA approval of tissue engineering products.

Student Learning Outcomes: Acquire the skill to apply tissue engineering knowledge, design logic, and research techniques to produce FDA approved tissue engineering implants and devices.

Textbooks and Other Course Materials: No textbook is required. All class materials can be found in the CANVAS.

Description of Major Assignments and Examination: One written closed book exam and two assigned topic group presentations. The assignments and examination may be shift to an online format due to the rising COVID-19 risk.

Technology Requirements: The online teaching will be carried out using Canvas and Teams. For the potential written exam, students need a webcam and are also familiar with the Respondus Lockdown or other proctoring tools, etc. Students can access tutorials on these tools by clicking on the “Get Started” Box on their Canvas Homepage.

Grading Information

Grading: The final grade will be calculated based on the written exam, several assignments/quizzes, and two project presentations at the following percentages.
- Written Exam (25%)
- Assignments (20%)
- Attendance (5%)
- Device design presentation (25%) – Group score (10%), and Individual score (based on peer evaluation and participation in discussions) (15%).
- Final product design presentation (25%) – Group score (10%), and Individual score (based on peer evaluation and participation in discussions) (15%).

Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels; see “Student Support Services,” below.

Make-up Exams: NO make-up exam will be offered.

Expectations for Out-of-Class Study: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 10 hours per week of their own time in course-related activities, including reading required materials, preparing for exams, group discussion, etc.

Grade Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current University Catalog.

Course Schedule

**BASIC KNOWLEDGE**

Aug 26 (Wed): Class introduction. An introduction to tissue engineering
Aug 31 (Mon): Cell source, culture and seeding for tissue engineering.
Sep 2 (Wed): Hydrogel for tissue engineering and drug delivery.
Sep 7 (Mon): No class (Labor Day).
Sep 9 (Wed): Degradable polymers.
Sep 14 (Mon): Scaffold fabrication.
Sep 16 (Wed): Scaffold characterization.
Sep 21 (Mon): Growth factors for tissue engineering/Foreign body reactions
Sep 23 (Wed): Stem cell tissue engineering
Sep 28 (Mon): Bioreactors.
**Sep 30 (Wed): Written exam.**

**TISSUE ENGINEERING PRODUCT DEVELOPMENT**

Oct 5 (Mon): Introduction of Tissue Engineering Products
Oct 7 (Wed): Tissue engineering - special topic (Bone tissue engineering)
Oct 12 (Mon): Tissue engineering - special topic
Oct 14 (Wed): Tissue engineering - special topic (Cartilage tissue engineering)
Oct 19 (Mon): FDA submission
Oct 21 (Wed): Tissue engineering - special topic (Vascular tissue engineering)
**Oct 26 (Mon): Device design presentation - Group A**
**Oct 28 (Wed): Device design presentation - Group B**
Nov 2 (Mon): Tissue engineering - special topic
Nov 4 (Wed): Tissue engineering - special topic
Nov 9 (Mon): Tissue engineering - special topic
Nov 11 (Wed): Tissue engineering - special topic
Nov 16 (Mon): Tissue engineering - special topic
Nov 18 (Wed): Final product design presentation - Group A
Nov 23 (Mon): Final product design presentation - Group B
Nov 25 (Wed): No class scheduled
Nov 30 (Mon): Tissue engineering - special topic
Dec 2 (Wed): Tissue engineering - special topic
Dec 7 (Mon): Design improvement

“As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. –Liping Tang”

Institution Information

UTA students are encouraged to review the below institutional policies and informational sections and reach out to the specific office with any questions. To view this institutional information, please visit the Institutional Information page (https://resources.uta.edu/provost/course-related-info/institutional-policies.php) which includes the following policies among others:

- Drop Policy
- Disability Accommodations
- Title IX Policy
- Academic Integrity
- Student Feedback Survey
- Final Exam Schedule

Additional Information

Mandatory Face Covering Policy
All students and instructional staff are required to wear facial coverings while they are on campus, inside buildings and classrooms. Students that fail to comply with the facial covering requirement will be asked to leave the class session. If students need masks, they may obtain them at the Central Library, the E.H. Hereford University Center’s front desk or in their department. Students who refuse to wear a facial covering in class will be asked to leave the session by the instructor, and, if the student refuses to leave, they may be reported to UTA’s Office of Student Conduct.

Attendance
This is a Monday/Wednesday hybrid course with lectures online and exam/presentation face-to-face. Students are expected to attend all sessions. Your attendance will be recorded when you login the classes and be included in your grade calculation. While UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients begin attendance in a course. The attendance rules applied in this course are my own and not a matter of institutional policy. Doing so will keep the University in compliance with Federal regulations as they apply to Title IV funding.

Emergency Exit Procedures (only required for face-to-face portion of the course). Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located east side of the room. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will assist individuals with disabilities. Students should also be encouraged to subscribe to the MavAlert system that will send information in case of an emergency to their cell phones or email accounts. Anyone can subscribe at https://mavalert.uta.edu/ or https://mavalert.uta.edu/register.php
Student Success Programs [Required for all undergraduate courses]. UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring by appointment, drop-in tutoring, etutoring, supplemental instruction, mentoring (time management, study skills, etc.), success coaching, TRIO Student Support Services, and student success workshops. For additional information, please email resources@uta.edu, or view the Maverick Resources website.

The IDEAS Center (https://www.uta.edu/ideas/) (2nd Floor of Central Library) offers FREE tutoring and mentoring to all students with a focus on transfer students, sophomores, veterans and others undergoing a transition to UT Arlington. Students can drop in or check the schedule of available peer tutors at www.uta.edu/IDEAS, or call (817) 272-6593.

The English Writing Center (411LIBR). The Writing Center offers FREE tutoring in 15-, 30-, 45-, and 60-minute face-to-face and online sessions to all UTA students on any phase of their UTA coursework. Register and make appointments online at the Writing Center (https://uta.mywconline.com). Classroom visits, workshops, and specialized services for graduate students and faculty are also available. Please see Writing Center: OWL for detailed information on all our programs and services.

The Library’s 2nd floor Academic Plaza (http://library.uta.edu/academic-plaza) offers students a central hub of support services, including IDEAS Center, University Advising Services, Transfer UTA and various college/school advising hours. Services are available during the library’s hours of operation.

Librarian to Contact. Each academic unit has access to Librarians by Academic Subject that can assist students with research projects, tutorials on plagiarism and citation references as well as support with databases and course reserves.

Emergency Phone Numbers

In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911. Non-emergency number 817-272-3381

Library Information

Ask for Help
- Academic Plaza Consultation Services (library.uta.edu/academic-plaza)
- Ask Us (ask.uta.edu/)
- Research Coaches (http://libguides.uta.edu/researchcoach)

Resources
- Library Tutorials (library.uta.edu/how-to)
- Subject and Course Research Guides (libguides.uta.edu)
- Librarians by Subject (library.uta.edu/subject-librarians)
- A to Z List of Library Databases (libguides.uta.edu/az.php)
- Course Reserves (https://uta.summon.serialssolutions.com/#!/course_reserves)
- Study Room Reservations (openroom.uta.edu/)