Biotransport

Last Updated: Thu, 12/18/2025

Course prefix: BMED

Course number: 3310

Section: A

CRN
27249 27320 27321 27322

Instructor first name: James

Instructor last name: Blumling

Semester: Spring

Academic year: 2026

Catalog description:

The course introduces students to the fundamentals of momentum, heat, and mass transport and their application to biomedical engineering problems. Students will build upon and apply a breadth of knowledge in all three domains of Biotransport.

Topics include, but are not limited to: hydrostatics, Reynolds transport theorem, Bernoulli's equation, the Navier-Stokes equation, conduction and diffusion, heat and mass convection, heat and mass differential balances.

Academic honesty/integrity statement:

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.

Honor Code: Students are expected to abide by the GT Honor Code (https://policylibrary.gatech.edu/student-life/academic-honor-code) at all times. The objective of the honor code is “to prevent any student from gaining an unfair advantage over other students through academic misconduct”. Starting with the first offense, any potential violations of the honor code will be immediately reported to the Office of Student Integrity to be reviewed. To preserve the integrity of the classroom and the instructor-student relationship, we cannot use personal discretion in instances of potential honor code violations – ***consider this the first and only warning***. For any questions involving these or any other Academic Honor Code issues, please consult your instructor or the student code of conduct. Included in this policy is the use of ANY resources not allowed on an

assignment. Specific examples of this are the use of sites like Chegg or Course Hero for help on quizzes or exams. We do monitor this type of activity. We consider the use of ANY resources not allowed on an assignment as a violation of the Honor Code and will be treated as such. The instructional team may collect photo/video evidence to document instances of suspected academic misconduct.

Artificial Intelligence (AI) Use Policy: AI programs (e.g. ChatGPT) may be used as a learning tool but should not be a substitute for your own independent and critical thinking. Additionally, it is important to note that the material generated by these programs may be inaccurate or incomplete. Be aware that an over-reliance on AI programs can stifle your learning and impact your performance on AI-prohibited assessments.

AI use is strictly prohibited on in-class assessments (quizzes and exams). For assignments completed outside of class (e.g. homework), you may not submit any work generated by an AI program as your own. Violations of this policy will be considered academic misconduct.

Core IMPACTS statement(s) (if applicable):

This course is not eligible to satisfy any Core IMPACTS area attributes.