Bldg Physics Modeling (6242)

Section PK | Fall 2026

Credits 3 credit hours
Instructor Patrick Kastner, PhD

Course Description

Survey of basic thermo-fluid energy and mass flows in buildings, the interrelations between these flows, physical system modeling, and implications for building performance goals. This course focuses on advanced resource efficiency and long-term viability in architectural design.

Course Learning Outcomes

1. Analyze environmental impact.
2. Apply principles of resource efficiency in design.
3. Simulate building physics.
4. Utilize design tools efficiently.
5. Execute and present design projects.

Required Course Materials

TBD

Grading Policy

Category	Weight
Homework Assignments (6 total)	80%
Attendance	10%
Participation	10%
Total	**100%**

Course Policies

Attendance Policy

Instructors determine their own attendance and participation policies. Students are responsible for all material covered in class and for any announcements made in class or via Canvas. Review the Institute Attendance Policy for expectations and restrictions.

Academic Honesty / Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. All students are required to abide by the Georgia Tech Honor Code.

Any student suspected of cheating or plagiarism on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Student Conduct

At Georgia Tech, we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. The Student-Faculty Expectations Agreement articulates the basic expectations for our academic community. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services (404-894-2563) as soon as possible to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.