CEE 4600 Syllabus

Transportation Planning & Design, Section B, 3 Credits

Fall 2026

Instructor Information

Instructor: Michael Hunter, Ph.D.

Email: michael.hunter@ce.gatech.edu

Office: SEB 225

General Course Information

Description

Provide an introduction to planning, design, and operation of streets and highways. Laboratory exercises will permit direct application of design principles introduced in the classroom.

Course Learning Outcomes

Outcome 1: Understand transportation engineering sufficient for project work.

Outcome 2: Understand planning/operations/design techniques.

Outcome 3: Apply design via labs.

Outcome 4: Demonstrate problem solving.

Outcome 5: Prepare written/oral project work.

Required Course Materials

Text: *Principles of Highway Engineering and Traffic Analysis*, 7th Edition by Fred L. Mannering and Scott S. Washburn.

A Policy on Geometric Design of Highways and Streets, 7th Edition. AASHTO (American Association of State Highway and Transportation Officials). 2018 (Available through the Georgia Tech Library)

U.S. Department of Transportation, Federal Highway Administration. *Manual on Uniform Traffic Control Devices for Streets and Highways, 11th Edition*. December 2023 (with Rev. 1, Dec 2025). (https://mutcd.fhwa.dot.gov/kno_11th_Editionr1.htm)

Course Website: https://canvas.gatech.edu/

Grading Policy:

Criteria	Weight
Average of Two Highest Exam Scores*	50%
Homework Average	20%
Average of Lab Exercises	20%
Attendance	10%
Total	**100%**

*The course will consist of three exams: two given during the regular class period and a final exam. The final exam is cumulative. The highest two scores on these three exams will be used as your exam average.

Grading Scheme:

A - 89.5 - 100.0
B - 79.5 - 89.4
C - 69.5 - 79.4
D - 59.5 - 69.4
E - 59.4 or lower

Description of Graded Components

Exams:

Exams will cover material given in the textbook, in class (lecture, notes, handouts, overheads, etc.), lab exercises, homework, and projects. Exams must be taken as scheduled. Only university excused circumstances will be considered. A grade of zero will be assigned for missed exams.

You may not access your phone, laptop, or any other device during the exams. You will need a non-programmable calculator. You may not utilize a crib sheet or any other aid. Dr. Hunter will provide a formula sheet. A sample formula sheet will be posted prior to

the exam so you know what will be available. However, do not bring the formula sheet to the exam, a clean version will be provided with your exam.

Homework and Lab:

Homework and labs will be assigned throughout the semester and are an essential part of understanding the lecture material. Homework assignments will be posted on Canvas. Homework will be submitted online and graded. Homework is due by the beginning of class. Late homework is not accepted unless specific arrangements are made with Dr. Hunter prior to the deadline. When working on homework, you may work with other students in the class unless otherwise stated in the assignment. However, you must turn in separate completed homework assignments with your name and the names of everyone you collaborated with on the assignment. You are also allowed (and encouraged) to ask Dr. Hunter or the course TA questions, although you should try to think about the problems before asking. You are encouraged to work on extra problems on your own.

All assignments (homework and labs) should be professional in appearance. This means any handwritten portions must be legible, homework answers should be circled or boxed, any images, scans, or photos used for submission readable, and the names of all team members, your section number, and the submission date must be clearly written on each page. All labs must have a cover letter, this is not required for homework. Assignments not meeting these standards will be docked half the value of the assignment (i.e., 50 points from a 100-point assignment). All assignments must be submitted online unless otherwise noted. Online submissions must be in a single file.

Course Policies

Attendance and/or Participation

Lecture Attendance:

Class attendance and participation are critical to the learning process. New concepts and material will be introduced in class. Sample problems will be completed and explained. Context will be provided that is not found in the text or other written material. Lecture attendance will be taken frequently and count toward your final attendance grade.

Lab Attendance:

Lab attendance and participation is required. Many labs involve group projects. You are expected to participate fully with your groups. Lab attendance will be taken at each required lab session. Lab attendance will be taken and will count toward your attendance grade.

Illness:

If you are sick, not feeling well, etc., please do not come to class or lab. Reach out to Dr. Hunter and let him know you will not be able to attend in-person. We will find a way to make up for the missed material. Please always prioritize your health and that of your classmates.

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. Review Georgia Tech's Honor Code and the student Code of Conduct.

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.

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.

Student-Faculty Expectations Agreement

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 articulate some basic expectations that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Use of Generative AI

You may use generative AI programs, e.g. Microsoft CoPilot, ChatGPT, etc., when completing your labs and homework. However, all material submitted must be your ideas and intellectual contribution.

You should be aware that the material generated by these programs may be inaccurate, incomplete, biased, or otherwise problematic. I have tested several of these tools on samples of your homework problems; they made mistakes. Also, the use of these tools may stifle your own independent thinking and learning process. When working with generative AI, solve problems and work out methods on your own first. Short circuiting the process of working through the problems will hamper your ability to learn and understand the material. There is no shortcut to gaining an understanding of a topic, put in the time to solve the problems!

In addition, generative AI often does not appropriately cite its sources. Use of AI is not an excuse for plagiarism. Per GaTech's Honor Code, you may not submit any work generated by an AI program as your own. AI source material should be cited as any other reference. You are responsible for the correctness of any AI material. When/if you use AI platforms in your assignments, please write a note to clarify where in your process you used AI, include the prompt(s) as necessary used to generate the material, and which platform(s) you used. Again, you are responsible for any submissions – stating that ChatGPT made an error or committed plagiarism is not an acceptable excuse.

Use of Generative AI will not be allowed on exams.

In-Class Electronics:

Computers, cell phones, tablets, etc. are not to be used in class without prior permission.

Lab Policy:

Always wear an orange safety vest when conducting a field lab. Professionalism is expected in lab and in the field. Lab reports will be collected and graded. Late lab reports will not be accepted.

You must agree to abide by all safety rules. Failure to follow all safety procedures and instructions will result in an immediate failure of the course.

Campus Resources for Students

Undergraduate Student Academic Success Resources:

Academic Support: Academic Success and Advising (a unit in the Office of Undergraduate Education & Student Success) provides free support for your courses. Students can attend scheduled supplemental review (PLUS) sessions, stop by Drop-In Tutoring, or schedule a one-on-one appointment through Knack. To explore what options work best for you, please visit us online at success.gatech.edu/tutoring, email us at tutoring@gatech.edu, or come see us at Clough Undergraduate Learning Commons, Suite 283.

Student Well-Being:

At Georgia Tech, we are concerned about your overall physical, social, and mental well-being. A comprehensive list of wellness related resources has been compiled and maintained by the Office of the Vice President for Student Engagement and Well-being (student-resource-guide (gatech.edu)