

VIP EcoCAR Syllabus

Section: VPU, Variable Credits

Full Team Meetings: Thursdays, 11-11:50 am, Klaus 1440

Sub-team Meetings: Tuesdays, 11-11:50 am, Location varies by Sub-team

Shop Nights: M-F, 6-8 pm, EcoCAR Garage/Student Space, Student Competition Center (SCC)

Instructor Information

Instructors

Antonia Antoniou

Sam Coogan

David Taylor

Shuman Xia

Email

antonia.antoniou@me.gatech.edu

sam.coogan@gatech.edu

david.taylor@gatech.edu

shuman.xia@me.gatech.edu

General Course Information

Description

In this interdisciplinary course, students gain hands-on experience working on real-world projects connected to the EcoCAR Competition, supported by the U.S. Department of Energy, General Motors, MathWorks, and other industry sponsors. Students from a wide range of majors and colleges collaborate on a complex, large-scale system.

Through this work, students apply concepts from their coursework in a practical setting, develop skills in teamwork, communication, and organization, and learn to clearly explain their design process, decisions, and outcomes to both technical and non-technical audiences.

Pre- &/or Co-Requisites

There are no pre-requisites or co-requisites for this course.

Course Goals and Learning Outcomes

By the end of this course, students will be able to:

- Apply systems-level thinking to contribute to a complex, multidisciplinary project
- Communicate technical and project information clearly to diverse audiences
- Exercise sound judgment and prioritize work under real-world constraints
- Collaborate effectively within multidisciplinary teams
- Demonstrate professionalism, accountability, and responsible conduct in project work

Course Requirements & Grading

VIP teams function like real-world project teams. Members work on different aspects of a shared project, ranging from sophomores to graduate students, and from first-time participants to those with multiple semesters of experience. Students may enroll for variable credit hours, which are considered in grading.

Note: Zero-credit enrollment is reserved for paid participants and follows the same grading criteria.

Grading Overview

Each student is evaluated across three core areas, with three mandatory requirements. Regardless of role or experience, students must demonstrate achievement in all three areas:

1. Documentation and Records (33%)

- Maintain individual documentation
- Contribute to team documentation

2. Personal Contributions (33%)

- Complete assigned quizzes, assignments, essays, or reports.
- Engage actively in the project.
- Pursue knowledge relevant to the project.
- Contribute to technical progress.
- Experienced members may also contribute to project management.

3. Teamwork and Interaction (33%)

- Participate in peer evaluations. Failure to submit results in a full letter grade deduction.
- Attend meetings on time.
- Collaborate toward team goals.
- Coordinate and assist teammates.
- Contribute to team deliverables.

Grading Scale

Your final grade will be assigned as a letter grade according to the following scale:

A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

Course Materials

Course Website and Other Classroom Management Tools

The class uses Canvas for course related content. Team interactions are through Slack. Peer evaluations are administered by the VIP Program [Click Here](#) to access peer-evaluations from off campus. [Click here](#) to access from on campus. You will be prompted to sign in. Users can only log in from on campus or via [VPN](#). Students can only access the peer evaluation portion of the system during active evaluation periods.

Course Policies, Expectations, & Guidelines

VIP is a collaborative, multidisciplinary, project-based learning and research experience. Your success in this course depends not only on your technical contributions but also on your active engagement with your team and the broader learning process.

Your Role in the Learning Process

As a VIP student, you are expected to:

- Take initiative in exploring and applying knowledge relevant to your project.
- Collaborate effectively with team members across disciplines and experience levels.
- Document your work thoroughly.
- Reflect on your learning and contributions throughout the semester.

This course is a real-world team environment, where learning is dynamic, self-directed, and collaborative. Your growth depends on your willingness to engage, contribute, and learn from others.

Team Meetings and Participation

Attendance and active participation in **full team meetings** and **sub-team meetings** are required. These meetings are essential for:

- Coordinating project tasks and timelines.
- Sharing progress and receiving feedback.
- Learning from peers and mentors.
- Contributing to team decisions and direction.

Failure to attend meetings without valid reason may negatively impact your grade and your team's progress. If you anticipate missing a meeting, communicate with your team and advisor in advance.

Throughout the week, subteams hold "shop nights" where students work on their tasks and receive support from senior subteam members, when available. These sessions take place in the team's garage space in the Student Competition Center on 14th Street. While not formally required, regular participation in shop nights is an expected part of meaningful contribution to the team. Students should plan to attend approximately 4-6 shop nights per month to remain engaged with their subteam's work and support overall project progress.

Use of External Resources

You are encouraged to consult external sources to support your learning and project work. However:

- Do not present someone else's work as your own.
- Always cite and reference external materials used in your notebook, code, presentations, or other deliverables.
- Proper attribution is essential to maintain transparency and integrity in a collaborative research environment.

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](#).

Allegations of scientific or scholarly misconduct are handled in accordance with the procedures outlined by the [Policy for Responding to Allegations of Scientific or Other Scholarly Misconduct](#).

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.