

**Doctoral Thesis Research**  
School of Electrical and Computer Engineering  
Georgia Institute of Technology

Instructor: Linda Milor

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Meeting Pattern: Individual research meetings arranged with advisor

### **Catalog Description**

ECE 9000 is doctoral thesis research. Students register for thesis hours while conducting dissertation research under the supervision of their faculty advisor and dissertation committee.

### **Course Purpose**

The student is to carry out dissertation research, document progress, and prepare publishable papers and reports, leading to the final thesis.

### **Prerequisites**

- Admission to the Ph.D. program or permission of the instructor/advisor.
- An approved research direction under the supervision of the faculty advisor.
- Completion of program milestones required by the School and the Institute, as applicable.

### **Learning Outcomes**

- Define and refine a dissertation research problem of appropriate scope and significance.
- Develop, implement, and evaluate research methods appropriate to the dissertation topic.
- Communicate research results clearly in written, oral, and visual form.
- Demonstrate steady progress toward dissertation milestones, including proposal, publications, and thesis completion.

### **Research Activities**

- Literature review and problem formulation.
- Modeling, analysis, simulation, design, experimentation, fabrication, implementation, or measurement, as appropriate to the topic.
- Meetings with the faculty advisor and, when appropriate, dissertation committee members.
- Preparation of technical reports, conference or journal papers, proposal materials, dissertation chapters, and presentations.

### **Expected Deliverables**

Deliverables should be defined by the advisor at the start of the term and may include any combination of the following:

- A written research plan for the semester.
- A progress report summarizing objectives, methods, results, and next steps.
- A presentation to the advisor, research group, or dissertation committee.
- A draft manuscript, proposal section, or dissertation chapter.
- Documented research artifacts such as code, data, schematics, layouts, notebooks, or experimental results.

### **Assessment and Grading**

ECE 9000 is evaluated based on research engagement and progress toward dissertation objectives.

**Weekly / Biweekly Meetings**

Students are expected to meet regularly with the advisor. A common expectation is one scheduled meeting each week or every two weeks, with additional interaction as needed.

**Academic Integrity and Research Conduct**

Students must comply with Georgia Tech policies on academic honesty, responsible conduct of research, authorship, citation, data management, and lab safety. Any use of shared data, software, equipment, or collaborative results must be properly documented and approved by the advisor.