ECE 1100 Syllabus – Section A

ECE Discovery Practicum, 2-hour Studio, 1 credit hour

Instructor Information

Instructors	Email
Dr. Lakshmi Raju	lraju@gatech.edu
Dr. Jacki Rohde	jrohde@ece.gatech.edu

General Course Information

Description

ECE Discovery Practicum is designed to guide new ECE students through opportunities (social, academic, and professional) within the School of Electrical and Computer Engineering. Throughout the course, students will work both individually and collaboratively with peers to explore ECE as a major, technical field of research, and a future career. Students will gain the knowledge, skills, and agency to define their individual roadmap with respect to the ECE curriculum threads and opportunities available during the undergraduate experience while building an understanding for who they are as emerging engineers and young professionals.

Pre- &/or Co-Requisites

None

Course Learning Outcomes

As part of this course, students will…

- discover opportunities that are available to you in the School of Electrical and Computer Engineering, at Georgia Tech, and beyond.
- build an understanding of the ECE curriculum threads and make a preliminary decision regarding their course of study.
- explore the broader field of electrical and computer engineering with respect to the “big ideas” in the discipline, relevant career options, and areas of research.
- navigate early career planning with respect to the co-op and internship process at Georgia Tech while developing the necessary professional communications skillset to articulate their skills, interests, and the value they bring to organizations, teams, extracurriculars, etc.
- ignite a passion for electrical and computer engineering.

Course Structure

ECE Discovery Practicum is co-taught by two ECE faculty members. Students will work in collaborative groups throughout the semester, led by a Peer Leader to serve as your peer mentor and a source of first-hand knowledge. Students will choose the Peer Leaders that they are most interested in getting to know better and/or learning more about their activities, the small groups are capped and first come, first serve. Students can expect an active learning environment that is hands-on and participant driven.

This class strives to be an inclusive community, geared towards supporting students from all matriculation pathways and backgrounds. Mutual respect of each other’s ideas and experiences is expected. If you feel like your performance in this, or any other course, is being impacted by your experiences in or outside of class, please don’t hesitate to reach out to the instructors. If you would like any concerns addressed by someone else, please contact Dr. Elliot Moore, or the Dean of Students office.

Course Materials

The course will use Canvas to provide readings, resources, assignment guidelines, small-group facilitation, and assignment submissions. http://canvas.gatech.edu

Grading Policy

ECE Discovery Practicum is a pass/fail course. A passing grade is considered a final grade of 80% (or 800 cumulative points) and above.

All assignments will be submitted and returned via Canvas. On some occasions students will be asked to bring **hard copies of their submissions to class for workshops** – **these submissions should still be submitted on Canvas**. These instances are outlined in this syllabus and on Canvas. All assignments are "scaffolded", meaning students will complete foundational, minor assignments to build up to major deliverables. **Major Assignment** sequencing and grading is outlined below:

Major Assignment Sequence	Components	% of Final Grade
Resume Development (100 Points Total)	Polished 1-Page Resume (100 points) 1 resubmission allowed within 1 week of grading	10%
Career Fair Participation (75 Points Total)	Company Research (50 points) Career Fair Reflection (25 points)	7.5%
ECE Deep Dive (125 Points Total)	ECE Deep Dive Presentation Slides (50 points) Live Presentation & Discussion (100 points)	12.5%
Academic Planning (150 Points Total)	ECE Roadmap (100 points) Professional Development Plan (50 points)	15%
Discovery Project (200 Points Total)	Discovery Project Pitch (50 points) Discovery Project Showcase (150 points)	20%
ePortfolio Development (150 Points Total)	ePortfolio Peer Review (25 points) Published ePortfolio (125 points)	15%
From Discovery to Goals (100 Points Total)	Thread Reflection (50 points) Final Course Reflection (50 points)	10%
Attendance and Engagement (100 Points Total)	Tallied throughout the semester	10%
Total Grade (1000 Points Total)		100%

Resubmissions will be accepted only for selected assignments, as specifically indicated by the instructors. If an assignment is eligible for resubmission, the instructor will clearly communicate this in advance along with any additional guidelines or deadlines for the resubmission process.

Description of Graded Components

Polished 1-Page Resume

The goal of this assignment is to develop a career-fair ready resume. Students will learn to develop an employer-focused, results-driven resume that communicates how and why you are the perfect candidate by connecting your qualifications to the needs and expectations of a specific company or field of work. You will be critiqued based on this. What skills do they need that you have? What specific experiences should you include? What projects would they find telling about your experience? To avoid potentially time-consuming conversations surrounding formatting preference, all students are required to use the ECE Resume Template. Resumes using any other format will not be accepted. At the end of this assignment, you will be

equipped with the skills needed to adapt your resume to any job requisition and prepare a career-fair ready technical resume.

Individual Discovery Project

This project is an individual, hands-on exploration designed to help you discover your interests in Electrical and Computer Engineering (ECE) and develop a new ECE skill. You have the entire semester to complete your project, with the freedom to choose a project that interests you. However, your project plan must be approved by the course instructors through the Project Pitch assignment. Students should also be realistic about the time constraints and err on the side of simpler projects. Use the available resources, such as Interdisciplinary Design Commons and the ECE Instructional Labs, to gain skills and borrow materials to complete your project. The primary goal is for you to learn and explore rather than to produce a polished final product. Since students have varying levels of prior experience, each Discovery Project will be unique.

ECE Deep Dive Presentation

The ECE Deep Dive is designed to help you explore Electrical and Computer Engineering (ECE) as a professional field, a major, and a threaded curriculum. For this assignment, you'll start by selecting a news article related to ECE from a provided list. Your analysis of this article will allow you to explore a significant problem or idea within the field today and connect the article to the GT-ECE Threads curriculum. Additionally, you'll identify the ECE skills that would be beneficial for someone addressing this pathway or problem. Finally, you'll prepare a brief presentation to share your article and your analysis. This exercise will deepen your understanding of ECE, its current challenges, and the skills necessary to tackle them.

My ECE Roadmap

You will create a year-by-year plan for your time at Georgia Tech with the “end” in mind. Maybe that end is a dream job, a professional field you know you want to pursue, or several interests you want to explore. You will consider the courses, skills, and threads that will help you obtain these positions. In this assignment you will make a preliminary thread decision, bookmark extracurriculars you want to explore, plan out the best semesters to engage in co-curriculars (research, co-op, internship) or study abroad, and create a course schedule. Above all, this assignment will give you the skills to adapt your plans if your interests change.

Published EPortfolio

Your ePortfolio is the culminating assignment of the semester, utilizing the self-discovery you’ve embarked on, all the information you’ve gathered to build your **ECE Roadmap**, and the content you’ve created in the **1) Discovery Project**, **2) Elevator Pitch Exercise**, and **3) Polished Resume** assignments. The ePortfolio assignment benefits ECE students in a variety of ways:

- Opportunity for self-discovery, resulting in the strategic creation of personal and professional branding and networking
- Online repository for tracking, documenting, recording, and showcasing projects, work experience, course work, leadership, and participation in co- and extra-curricular activities, programs, and organizations
- Method of reflecting on where you’ve been, where you are, and where you want to go
- Tool for identifying gaps in skills, exploring options, and planning career paths
- Web portal for accessing your work, tracking your academic growth, and planning your future
- Electronic record for connecting and applying knowledge learned in the classroom to real-world situations

You are expected to produce a website that will serve as your personal marketing tool. Your vision for your future should be captured into a scalable platform that can grow with you throughout your college career.

Extra Credit Opportunities

If any extra credit opportunities arise, they will be discussed in class and posted on Canvas.

Course Policies

Late-Work Policy

Students are expected to submit all work by the specified deadlines on Canvas, unless pre-approved by an instructor. Assignments are typically due on Tuesdays at 11:59 PM. Assignments submitted after the deadline but before Wednesday at the start of class will incur a 50% penalty. Assignments submitted after Wednesday after the start of class will not be accepted unless you have received prior approval from the instructor.

Attendance and Engagement Policy

ECE 1100 is a studio-style course where learning goals are achieved through active participation, requiring regular attendance and engagement in class activities. Attendance and participation are tracked to encourage your active involvement. A perfect score is awarded for consistent preparedness and professional contributions to class discussions and activities.

Each student is allowed two unexcused absences from in-person studio sessions or synchronous online sessions. More than two unexcused absences will result in a grade reduction. Use the *Excused Absence Request Form* on the ECE 1100 Canvas homepage to document and request excused absences. A virtual option is available to help students stay on track, but it does not replace unexcused absences.

Attendance will be taken at various times during the studio period. Partial attendance without approved extenuating circumstances (such as exam blocks) risks your attendance not being recorded.

Due to size of the class, we will utilize both synchronous and asynchronous online activities to adequately manage the course. Active participation in all course modes is expected and required. These modes are described in detail below:

1. **Synchronous Participation Online:** this mode occurs during our scheduled class time, when you are not required to physically be in the classroom. You are still expected to attend and participate in the activity/discussion. Weeks where this mode is used are highlighted in the course schedule.

2. **Asynchronous Participation Online:** this mode is utilized for viewing video lectures in a flipped-classroom format. Video lectures should be watched at the onset of a new week to prepare you for upcoming in-person studio activities. Video lectures do not occur during a set class time. They are posted to the course Canvas prior to the start of a new week and can be viewed at any time. Engagement with asynchronous course components is tracked in Canvas. **Students are expected to view every video lecture assigned. Failure to engage with a prescribed video lecture will result in course confusion and a reduction of your engagement grade.**

Institute Absence Policy http://www.catalog.gatech.edu/rules/4/

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. For information on Georgia Tech's Academic Honor Code, please visit: http://www.catalog.gatech.edu/policies/honor-code/

Any student suspected of cheating or plagiarizing 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.

Use of AI

Students are allowed to use AI, but they are held responsible for the content of their assignment submissions. Allowed use cases for AI include information gathering, text editing, ideation, brainstorming and getting feedback for your work. However, an AI can never be referred to as a source or an authority. AI can often make mistakes and hallucinate. If you end up incorporating any AI-generated information that is

false or nonsensible, you will be held responsible for the content and your grade will be impacted. AI-aided work should lead to higher quality work, not lower quality than normal.
Students aren't allowed to submit directly AI-created works (i.e., directly copying and pasting the outputs without editing). If submissions are clearly directly copied and pasted from generative AI interfaces, they will receive a 0 for the assignment and lose resubmission privileges.

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.

Content Accessibility

Every effort is being made to ensure that materials provided as part of the course meet accessibility standards.

Campus Resources for Students

Counseling Center	counseling.gatech.edu	404-894-2575
Dean of Students (Student Life)	studentlife.gatech.edu	404-385-8772
GT Police	police.gatech.edu	404-894-2500
Stamps Health Services	health.gatech.edu	404-894-1420