



Research and Entrepreneurship in Computing - CS 101

Computer Science • School of Engineering and Science

Example Syllabus

COURSE DESCRIPTION

This seminar course will cover various areas of Computer Science, presented by different faculty members and guest speakers from industry. The seminars will present breakthrough research ideas in different areas of Computer Science and discuss how some of these changed or created new industries.

LEARNING OBJECTIVES

After successful completion of this course, students will be able to...

1. summarize important ideas in computer science, analyze the conditions required for research to lead to industrial success, and the broader impact of computing on society.

FORMAT AND STRUCTURE

This course involves a weekly one-hour seminar presented by a different faculty member each week. Students are required to attend the lecture and then complete a short 5-question quiz to confirm that they had a reasonable understanding of the material.

COURSE MATERIALS

Textbook(s): None

Presentation topics: Announced during the semester. Examples include:

- Programming Languages
- Security
- High-Performance Computing
- Systems Programming
- Deep Learning
- Machine Learning Theory
- Computational Cognitive Science
- Access Control
- Generative AI
- Model Visualization Tools
- Natural Language Processing
- Model Interpretability in AI

COURSE REQUIREMENTS

- **Attendance and Participation.**

1. **Attendance.** Students must attend all lectures, which are over zoom. Attendance is measured in a variety of ways, to confirm that the student is present and engaged.
2. **Performance.** After the lecture is over, students must complete a short quiz to confirm their understanding of the material. This is due by 11:59pm that evening.

GRADING PROCEDURES

Grades will be based on:

Participation (Attending lectures, completing weekly quizzes)	65%
Performance (Score on weekly quizzes)	35%