EDF3935 – Generative AI in Education
Spring 2026

Professor: Dr. Walter Leite
Office: Norman 2711J
Phone: 352-273-4302

E-mail: walter.leite@coe.ufl.edu

Meeting Time: Tuesdays 12:50 PM - 3:50 PM
Room: Norman 506
Office hours: Tuedays and Thursdays 4 to 5:30 PM

This is an Honors course.

Course Description

Description: Provides research experience in the field of generative AI in education through the selection and utilization of AI tools and techniques appropriate for the development of an intelligent tutoring system for improving the reading of elementary school students.

Project Management

Each team will use the SCRUM framework of Agile management to work on the research project. SCRUM is a popular Agile framework designed to help teams develop complex projects, especially in software development, by breaking the work into smaller, manageable increments. It emphasizes teamwork, adaptability, and delivering functional product features in short, time-boxed iterations called "sprints," typically lasting 2-4 weeks. We will use 3-week sprints in the course. Each sprint starts with sprint planning and ends with a sprint retrospective, which includes a sprint presentation and a review. Tasks for each sprint (the backlog) will be tracked through Github Projects.

Student Learning Outcomes

Select and/or utilize AI tools and techniques appropriate to a specific context and application

Schedule of Topics and Required Readings:

All readings are available on Canvas.

Week 1 – Agile Framework and Scrum
Introduction to Agile Management and SCRUM
Guide to Sprint Planning
Github Projects

Week 2 - Fundamentals of Generative AI
Sprint Planning 1
Generative AI - Introduction to Large Language Models
Navigator Toolkit API

Week 3 – Prompt Engineering LLMs

Prompt engineering guide

Week 4 – Building blocks of Generative AI: Neural Networks and Deep Learning
Neural Networks and Deep Learning
PyTorch

Week 5 - Sprint Retrospective 1
Sprint Review 1
Sprint Planning 2

Week 6 - Transformers
Training small GPT models from scratch using PyTorch
NanoGPT

Week 7 - Fine-Tunning LLM
Fine-tuning in HiperGator

Week 8 - Sprint Retrospective 2
Sprint Review 2
Sprint Planning 3

Week 9 - Speech Modeling
The Automatic Speech Recognition Inclusivity Dilemma
Whisper
Wav2Vec
Forced aligners

Week 10 – Learning Experience Design (LXD) for AI

Week 11 - Sprint Retrospective 3
Sprint Review 3
Sprint Planning 4

Week 12 - Evaluation of Generative AI
Metrics-based, Automated, and Human Evaluation

Week 13 – Agentic AI

Week 14 – Fair AI
Bias and fairness in AI for Education

Week 15 - Sprint Retrospective 4
Sprint Review 4

Description of Evaluation Methods

- Quizzes (30%)
- Sprint Presentations (12%)
- Sprint Reviews (28%)
- Final paper (30%)

Quizzes: These are 10-question quizzes about the assigned reading. They are individual quizzes and should be completed on Canvas.

Sprint Presentations: These are recorded team presentations of the deliverables of the current sprint. All team members will receive the same grade.

Sprint Reviews: These are online discussions to provide feedback to other teams about the deliverables of their current sprint, and their plans for the next sprint.

Final paper: This is an 8-page paper where each team will present their accomplishments for the project they chose. This paper should follow the format of a submission to the International Conference on Artificial Intelligence in Education (see **https://aied-conference.org/2026/call-for-paper** **)**

Course Grades

Final grades will be assigned based on the scale below:

Overall course percent	*grade*
93.0% - 100%	A
90.0% - 92.9%	A-
87.0% - 89.9%	B+
83.0% - 86.9%	B
80.0% - 82.9%	B-
77.0% - 79.9%	C+
73.0% - 76.9%	C
70.0% - 72.9%	C-
67.0% - 69.9%	D+
63.0% - 66.9%	D
60.0% - 62.9%	D-
59.9% or less	E

Unless a computational error has been made, grades will not be changed after the end of the semester.

A minimum grade of B is required to earn Academic points towards Honors Completion Requirements. Once you have earned your final grade in this course, please upload the course

information and final grade from your Unofficial Transcript into your Honors Canvas Cohort: Honors Requirements module to earn Honors Milestone / Completion credit.

Honors Program contact information:

- Honors Program, Honors Village Complex #4, 352-392-1519
- Quick questions for an Honors advisor? Email advisor@honors.ufl.edu
- Need an Honors advising appointment? Schedule via Microsoft Bookings: https://bit.ly/UFHonorsAdvising
- Honors Program Event Calendar: https://www.honors.ufl.edu/news--events/calendar-of-events/

ACADEMIC POLICIES

UF academic policies and resources are described at https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/