OPIM 5515: Generative AI for Business

Fall 2025, August 25 – December 5
Mon 6-9PM, In-person DTWN 3117

INSTRUCTOR: Wei Chen (Call me Wei)
EMAIL: weichen@uconn.edu
OFFICE HOURS: Tue 1-2PM on WebEx (link on HuskyCT)

COURSE DESCRIPTION

Generative AI for Business is a course designed to equip participants with the knowledge and skills needed to leverage generative AI and Large Language Models (LLMs) in business contexts. This course will delve into the core mechanisms of generative AI, focusing on Large Language Models (LLMs). Participants will explore advanced techniques in prompt engineering, retrieval augmented generation (RAG), agentic systems, fine-tuning LLMs, and ensuring the ethical governance of AI technologies. The curriculum balances conceptual frameworks with hands-on exercises, enabling participants to apply generative AI innovations to real-world business challenges effectively. By demystifying the complexities of LLMs, this course aims to empower learners to leverage these powerful models for creating innovative solutions and navigating the dynamic landscape of generative AI with confidence. By the end of the course, you should be able to:

- Articulate the essentials of LLM architecture, training methods, and business applications.
- Implement effective prompt engineering to develop LLM business applications.
- Integrate RAG into LLM applications to provide coherent and contextually relevant responses (using your own data).
- Design agentic systems that incorporate tools and workflows.
- Customize LLMs using fine-tuning, balancing model capabilities and computational demands.
- Address ethics and governance issues in LLM applications.
- Engage in thoughtful discussions on the transformative potential of generative AIs.

COURSE MATERIALS
- *iClicker* (more details later)

TENTATIVE SCHEDULE

I outline the course calendar below with the schedule of topics, readings, and assignments. I will post specific instructions for readings, lecture slides, and extra online readings on HuskyCT to

enrich the learning. It is expected that everyone will read the required readings before class. Syllabus and schedule are subject to change. All changes will be announced in class and/or on HuskyCT.

Week	Date	Topic	Assignment Due
1	Aug 25	Lecture 1: Course Introduction	
2	Sep 1	Labor Day – No Class	
3	Sep 8	Lecture 2: Prompt Engineering I	
4	Sep 15	Lecture 3: Prompt Engineering II	HW 1
5	Sep 22	Lecture 4: Embeddings and RAG	Project Topic
6	Sep 29	Lecture 5: RAG II	HW 2
7	Oct 6	Lecture 6: Midterm	
8	Oct 13	Lecture 7: Agentic Systems I & Project Update	Project Update 1
9	Oct 20	Lecture 8: Agentic Systems II	
10	Oct 27	Lecture 9: Fine-tuning & Challenges	HW 3
11	Nov 3	Lecture 10: Engineering & Operations	HW 4
12	Nov 10	Lecture 11: Project Rehearsal & Feedback	Project Update 2
13	Nov 17	Lecture 12: Governance & Opportunities	
14	Nov 24	Thanksgiving Recess – No Class	
15	Dec 1	Lecture 13: Final Exam & Presentations	Project Presentation
	Dec 8	Project Report	Project Report

ASSIGNMENTS & GRADES

Your grade is based on the following:

Assignments	Percentage
Midterm	20%
Final exam	20%
Lab assignments x 4	20% (5% x 4)
Project (team)	30%
Class participation and quizzes	10%
Total	*100%*

Note:
- Group: You need to form groups of 3-4 for the project.
- Exams: Attendance is mandatory. Please plan ahead.
- Participation: Only correct clicker responses to questions at the start and end of each class will be counted. You only need to answer 80% of all questions to get full participation grade.

The final grades (out of 100%) will be converted to letter grades according to the following scale:

Grades (percent)	Letter Grade	GPA
93 +	A	4.0
90 - 92.99	A-	3.7
87 - 89.99	B+	3.3
83 - 86.99	B	3.0
80 - 82.99	B-	2.7
77 - 79.99	C+	2.3
73 - 76.99	C	2.0
70 - 72.99	C-	1.7
67 - 69.99	D+	1.3
63 - 66.99	D	1.0
60 - 62.99	D-	0.7
< 60	F	0

We may curve grades at the end of the semester. Please note that the TA and I make every effort to enter your grades accurately into HuskyCT. However, it is your responsibility to check periodically to ascertain if there are any errors, which you should point out to us immediately.

Exams
Two cumulative exams will be administered during the course, a midterm and a final. Each is worth 20% of your grade. Each exam will cover all material in the text, additional readings, class discussions, guest lectures, case studies, and labs completed before the exam. Both exams are open-book and open-notes but closed to the Internet (Except HuskyCT). <u>Get prepared. Your time limit will not allow you to look up every definition!</u> Exams will be given during class time and no make-up exams will be allowed.

Assignments
The goals of the class assignments are to provide hands-on experience, to help you better understand the class material, and to help you prepare for the exams. Four (4) assignments will be given throughout the semester. More information on assignments will be provided in class and on HuskyCT.

Project
As an opportunity to apply generative AI to real issues, each group will need to complete a final

project for this course. At the end of the semester, you are expected to submit a report and deliver a final demo/presentation to the class. Your peers and I will evaluate your presentation and report. Detailed instructions and grading rubrics will be posted on HuskyCT.

You will be responsible for periodic updates. Both the content and presentation of your updates will be graded. The presentation is expected to be fun, engaging, insightful, and within time limit. You may be as creative as you wish. However, be sure to emphasize on content over style. We are far more interested in sharp analysis and quality content that is presented in a simple but interesting style. Refer to guidelines in the section of suggestions for making effect presentations. I will give feedback in class and through HuskyCT.

Class participation and quizzes
During the course, we will use a variety of cases, exercises, and simulations. This course is interactive and participatory. Class participation is therefore a large component of your learning. A necessary (but not sufficient) element of class participation is being present for every class. Additionally, your comments in class should reflect your knowledge of the reading and integration of materials. Ideally, they should also add substance to the discussion and reflect critical thinking.

An iClicker is required for this class and can be purchased from the UConn Bookstore or directly from iClicker.com. For this class, y*ou will need to use the App option, which allows you to participate in polls remotely.*

I use clickers to develop more meaningful engagement in lecture and to promote learning. They are used in two ways. First, I will present 2-3 simple quiz questions at the beginning and end of each class. You should easily answer these questions if you read the required readings before class and pay attention in each lecture. Your ***correct*** answers to these questions will be worth 10% of your final grade. You will get full participation points if you correctly answer 80% of all the questions through the semester. For example, if there are 40 questions in total and you answer 32 of them correctly, you will get 10 out of 10 for participation because you have 80% correct answers. If you answer 24 correctly, you will get 10*(24/32) = 7.5 out of 10 for participation.

Second, I will present more challenging questions and ask for your responses several times during each lecture and I will discuss the results in class. These questions will *not* count towards participation but are designed to help you understand the materials.

Clicker use begins in week 1, but there is no graded work until week 3 which provides time for you to get your clicker, register it, and become accustomed to using it during the first two week of class. *There are no make-up assessments for missed days or for misplaced, malfunctioning, or forgotten clickers but by counting 80% of the questions there is built in protection for all such occurrences.*

CLASS POLICY & SUGGESTIONS
Suggestions for Making Effective Presentations
You will be responsible for project presentations in this class. Both the content and presentation of your updates will be graded. The presentation is expected to be fun, engaging, insightful, and within time limit. You may be as creative as you wish. However, be sure to emphasize on content over style. We are far more interested in sharp analysis and quality content that is presented in a simple but interesting style. Refer to guidelines below for making effect presentations. Detailed instructions and grading rubrics will be posted on HuskyCT. I will give feedback in class and through HuskyCT.

Making an effective presentation is an important professional skill. Quality presentations should be insightful, focused, fun and within time limit. The following suggestions might be useful:
1) Practice and rehearse your presentation in advance. This will make a big difference.
2) Don't read from your notes or slides. Instead, speak to the audience lively.
3) Be efficient, get to the key points quickly and clearly.
4) Add some video or multimedia content.
5) Have one person (or two) from your team to complete the whole presentation. Choose a good speaker. Having the whole group to take turn to do a short presentation is not always efficient.
6) Stay within time limit.

About Group Work and Classroom Behavior
Teamwork is an essential skill for success in the workplace. Therefore, the grading criteria attempts to balance teamwork and individual assignments. Please manage your group roles and responsibilities to ensure that the group work is done in high quality and ready by the deadline. At a more fundamental level, students have a responsibility towards each other. Organizations cannot function if members do not take these responsibilities seriously. As a microcosm of the working world, such principles also apply to this class. This translates into two specific criteria.
1. Students may be asked to peer evaluate their group members as to their contributions. With multiple commitments it sometimes turns out that some students decide to make this class a lower priority. Sometimes that lower priority takes the specific form of "missing meetings" and "not contributing to group work". The evaluations are your way to inform the professor about those priorities ("free riders" will be identified), and grade will be adjusted accordingly.
2. *Students are required not to interfere with the experience of others.* Problematic types of acts include but are not limited to: (1) Being repeatedly late, or repeatedly leaving early; (2) Talking to each other when another student is speaking; (3) Reading newspapers/magazines in class while others are trying to learn; (4) Using phones/laptops for non-class purpose (including typing, surfing, email, etc.); (5) Sending disruptive email to other classmates.
3. Due to the online synchronous mode of this class, there are a few additional requirements: (1) You are encouraged to turn on your camera during class time. My teaching and guest speaker engagement will be more effective when we can observe your reactions. (2) Please by default mute yourself during class time. But feel free to unmute yourself to ask questions during any time of the class. Treat it like a normal classroom environment. (3) Lectures will

be recorded and uploaded to HuskyCT. So focus your class time on getting your questions answered.

About Grading and Appeal

It is guaranteed that every piece of homework will be read carefully and graded fairly by the TA and/or the professor. In case a student disagrees with the grading and wishes to appeal for re-grading, he/she should submit a written request together with the full assignment (not only the part under dispute) *within one week* from the date the graded assignment was returned to students. The whole assignment will be reviewed, and if found justifiable, the grade may be adjusted upward or downward (both directions are possible).

If assignments are late, they are penalized as follows. We deduct 10% off if you are less than 24 hours late, 20% off if you are less than 48 hours late, and 40% off if you are less than 72 hours late. You can no longer turn in your assignments after three days past the deadline.

Academic Integrity

Students assume full responsibility for the content and integrity of the academic work they submit. The guiding principle of academic integrity shall be that all submitted work including assignments, examinations, reports, projects, etc. must be that student's own work alone, unless clearly following the rules for allowable group work. Students shall be guilty of violating the Code and be subject to proceedings under it if they cheat, fabricate, plagiarize, and represent others work as their own. You are responsible for reading and understanding the University's policy at https://community.uconn.edu/academic-misconduct/.

In the event of any dishonest behavior, all parties involved (whether they benefited or not) will receive one or more (multiple penalties may be imposed) **severe academic penalties** up to and including (but not limited to):

- A failing grade for the *entire* assessment item (e.g., quiz, homework, exam, etc.) without the option of make-up or replacement (e.g., a 0 on the quiz with no option to drop or make up the score through opportunities normally given to students).
- A letter grade drop in the final class grade (e.g., "B" becomes a "C").
- A failing grade for the entire course.

The course instructor makes the final penalty determination. The department head and/or other faculty members may be consulted if the instructor deems appropriate.

Accommodations for Special Needs

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

University Policies

Please find other university policies at https://provost.uconn.edu/faculty-and-staff-resources/syllabi-references/.