

Advanced Healthcare Analytics and AI MIS 752-1001

UNIVERSITY OF NEVADA LAS VEGAS

Lee Business School: Information Systems

Fall 2026

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Time(s):	Asynchronous, no fixed meeting time (online; weeks run Monday through Sunday)
Class Location	WebCampus (Canvas), online
Office Hours:	Mondays and Wednesdays , 3:00-4:00 p.m., in BEH 328 (drop in - no appointment needed). Friday afternoons by appointment, in person or on Zoom (link in WebCampus).
Office:	BEH 328
Office Phone:	1 (702) 895-1768
WebCampus:	https://webcampus.unlv.edu
Faculty website:	https://young.faculty.unlv.edu
UNLV People:	https://www.unlv.edu/people/richard-young
Hugging Face Page	

Note: The instructor reserves the right to change the syllabus regarding how the course is administered. When the syllabus is changed, the updated version is posted to WebCampus.

Course Description

This course is about how AI gets built and used in healthcare. We are not just asking whether a model can perform well in a notebook. We are asking what happens after that: Can it fit into a real clinical workflow? Can people trust it? Is it safe, fair, explainable, and useful?

Healthcare is one of the largest sectors of the U.S. economy, and it is full of problems where AI could help: claims, privacy, cost, readmissions, medical imaging, patient navigation, and clinical documentation. But

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healthcare is also messy, regulated, and high-stakes, which makes it the perfect place to learn what responsible AI deployment really requires.

In this course, you will use a free tool stack, including Google Colab, Hugging Face, Ollama, and agent frameworks, to build working AI projects. The course ends with your own final project: a publicly deployed AI artifact that answers a question you care about. The course runs in three acts:

- LEARN (Weeks 1-7, forge the tools)
- BUILD (Weeks 8-12, assemble the agents)
- JUDGE (Weeks 13-15, evaluate and govern)

Every week ships one working, public artifact: a portfolio, not a transcript.

Course Prerequisite(s)

Graduate standing in the Lee Business School or permission of instructor. Familiarity with Python programming (or willingness to learn rapidly). Prior coursework in statistics or data analytics recommended but not required.

Learning Outcomes / Course Objectives

- Map the Healthcare Data Ecosystem: Students will understand claims processing, FHIR/OMOP data standards, and the 18 HIPAA identifiers for privacy engineering.
- Build Clinical Predictive Models: Students will implement supervised models for clinical prediction on realistic synthetic patient data at scale (synthea-575k).
- Audit for Bias and Fairness: Students will use the Fairlearn framework to identify proxy discrimination and demographic disparities in healthcare algorithms.
- Architect Agentic AI Systems: Students will design multi-agent verification loops using the "Clinical Brain" vs. "Operational Engine" paradigm for prior authorization, clinical documentation, and patient navigation.
- Apply Causal Reasoning: Students will distinguish clinical correlation from causation using propensity-score methods, counterfactual inference, and world models.
- Evaluate LLM Risks in Healthcare: Students will identify and mitigate hallucination, sycophancy, and instruction drift in clinical AI deployments.
- Build a Portfolio, Not Just Homework: Students will ship roughly fourteen working Hugging Face Spaces or publicly shared projects in addition to a student-chosen final project you can show an employer.

Required Texts

Healthcare Analytics and AI: Building Systems That Actually Work	Richard Young, Ph.D. The course textbook, written for this class and provided as a PDF at no cost in WebCampus. Reading uses the 25-chapter numbering.
Study Guides Independent Learning	Provided per module in WebCampus.
Supplementary Reading	YouTube / Medium / Hugging Face and other sources linked per week.

Library and Information Resources

Librarians are available to consult with students on research needs, including developing research questions and search strategies.

- Patrick Griffis (Business): patrick.griffis@unlv.edu
- Sue Wainscott (Engineering): sue.wainscott@unlv.edu
- Alyssa Renteria (Data Guide): https://guides.library.unlv.edu/prf.php?account_id=343426
- UNLV Libraries: <https://www.library.unlv.edu>

Course Platforms and the Hugging Face Classroom

Labs run in Google Colab from a laptop or other computer with a modern browser and reliable internet; no dedicated desktop is required. You also need access to a coding LLM to help you write and debug code, and you will have one from Week 1. There are two routes, and they are interchangeable. Ollama serves open models locally inside Colab; OpenRouter is a single API gateway to many models (GPT, Claude, Gemini, and others) where you sign up for your own free account and use the free-tier models. Use either one, or switch between them. The course is designed to run on free tiers; provider limits and availability can change. Setup is the Week 1 setup lab.

This course also has its own public home on Hugging Face, the platform where machine-learning practitioners actually work. You will be invited to join the class organization in Week 1; a free account is all it takes. Everything the class builds lives there, in the open.

Class organization	https://huggingface.co/MIS-752 The MIS-752 classroom hub, the public home for the course.
Course Home	https://huggingface.co/spaces/MIS-752/course-home The schedule, the labs, and every deployed Space in one place.
Class gallery	https://huggingface.co/collections/MIS-752/mis-752-ai-and-healthcare-6a722c1d93cc292188dd34f2 The "MIS 752: AI and Healthcare" collection. Your Spaces are added as you ship them.

Where your work lives: deploy each lab Space to your own personal Hugging Face account, then submit the URL, and it gets added to the class gallery. Your work stays under your name and remains yours after the semester ends.

Evaluation Methods

This class focuses on transferable, hands-on skills for the real world. There are no timed exams; instead, every week you build and ship a working artifact. Grades come from doing: weekly labs, discussion participation, a midterm project proposal, and a final deployed project.

Item	Effort	% of Total
Weekly Discussion posts Part 1: first post Wed 10 p.m. Part 2: Sun 10 p.m. Peer Feedback (as needed)	~30 minutes / week	30%
Weekly Labs (1-14), each a deployed Hugging Face Space	(~5-6 hrs avg)	40%
Midterm Project Proposal (Week 6)	three to five pages	10%
Final Project & Presentation (Week 16, recorded demo video)	Weeks 12-15	20%

Assignment Due Dates

Everything in this course is due **Sunday at 10:00 p.m.** at the end of that week. That includes the weekly lab and the second discussion post. The only earlier deadline is the first discussion post, which is due **Wednesday at 10:00 p.m.** so that classmates have something to reply to. Every due date is also posted on the WebCampus calendar, which is the authoritative version if anything here disagrees with it.

Discussion posts are a 2-part assignment (20 points)

Since this is an asynchronous class, discussion posts are attendance. They cannot be made up, and there is no late work for the discussion post. If needed, these can be semi-completed on a mobile device if you are traveling or away from your home computer.

- The first post is due by **Wednesday at 10:00 p.m.:** a reply to the week's topic. (10 pts)
- The second post is due between Thursday and **Sunday at 10:00 p.m.:** a reply to another student. (10 pts)
- Discussions count as your attendance for the week, so show up there.

General Description of Projects

Item	Description of Project
Midterm Proposal (Week 6)	A three to five page plan for the final project: your question, your domain, your data plan, which of the semester's tools your agent will call, and what could go wrong.
Final Project & Presentation (Week 16)	Your own working, deployed AI agent, answering a question you actually care about. The domain is your choice. You may build in a healthcare or clinical context,

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	using what we have worked with all semester, or you may build in any other field you know well: finance, operations, education, sports, gaming, your current job. Both are equally acceptable, and neither is graded higher than the other. What is graded is the technique and the rigor. Deliverable: a 5-minute recorded demo video plus 2 minutes on "what could go wrong / who is affected," with substantive peer feedback.
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If you turn in the midterm proposal or final early, more than five days before it is due, I can review it and provide feedback. Then you can resubmit it with any changes, and your grade will only stay the same or increase on the re-submission; it will never go down.

Grading Scale

A 93-100	A- 90-92.99	B+ 87-89.99	B 83-86.99
B- 80-82.99	C+ 77-79.99	C 70-76.99	F below 70

Course Procedures

WebCampus

The course will use the WebCampus (Canvas) portal. This portal will have all resources related to the course: weekly modules, the textbook PDF, labs, discussion boards, and grades.

Engagement / Attendance

This is a fully online, asynchronous course; there are no physical class sessions. Your engagement is measured by what you do: weekly lab submissions, discussion posts, and peer feedback. Students who fall more than two weeks behind on labs without prior communication may be administratively withdrawn.

Class Assignments

- Class assignments need to be turned in individually.
- You can consult resources while doing the assignments.
- The assignments will vary in structure. Details about assignments will be provided when they are assigned.

Do not miss any assignments. If you miss an assignment without a valid excuse, then your grade in that assignment will be zero. If an assignment is missed, it is the student's responsibility to (a) contact the professor as soon as possible via email, telephone, or in person, and (b) produce a document describing the valid reason for missing the assignment. Examples of valid excuses are serious illness and participation in University-sponsored events. If you miss an assignment due to illness, a written excuse from a doctor is necessary. When you must miss an assignment due to participation in a University-sponsored event, you must inform me prior to the assignment and submit appropriate documentation to verify your claim. When you miss an assignment for a valid reason, contact your professor with valid documentation within 7 days of the missed assignment.

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Late Work

No late work will be accepted past the due date without a valid excuse.

Final Project

The final project is your own agent, in a domain you choose. You propose it in Week 6 (midterm proposal), build it in Weeks 12-15, and demo it in Week 16.

To be explicit about the domain: either choice is fine. Build a healthcare or clinical application if that is the work you want to do after this course, and you will have the whole semester's material behind you. Or build in an area you already know well, medical or not, and bring the same methods to it. Students have strong results both ways. What the rubric measures is the same either way: a working deployed system, sound technique, honest evaluation, and a clear-eyed account of what could go wrong and who it affects. If you are unsure which way to go, that is exactly what the Week 6 proposal and my office hours are for.

University Policies

These are UNLV's policies. They apply to every student in every class at the University, are maintained online, and apply in full to this course:

Academic Policies for Students: <https://www.unlv.edu/policies/students>



Academic Integrity

Academic integrity is a legitimate concern for every member of the University community. We all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Integrity Policy and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. One example of academic misconduct is plagiarism: using the words or ideas of another person, from the Internet or any other source, without proper citation. See <https://www.unlv.edu/osrr/academic-integrity/policy>

Accessible Course Materials

Course materials are intended to be provided in accessible formats. Instructional videos will be delivered through approved UNLV systems with captions or transcripts. Students who encounter an accessibility barrier should notify the instructor and may also contact the Disability Resource Center to request accommodations.

Auditing a Course

Auditing a course allows a student to continue attending the sessions associated with the course, but the student will not earn a grade for any component. Students who audit receive the same educational experience as students taking the course for a grade, but are excused from exams, assessments, and other evaluative measures whose primary purpose is assigning a grade.

Copyright

The University requires all members of the University Community to familiarize themselves with and follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information is available at <https://www.unlv.edu/provost/copyright>.

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Disability Resource Center (DRC)

The UNLV Disability Resource Center (DRC), located in the Campus Resource Center across Harmon Avenue from the Lied Library, coordinates accommodations and academic-access support for students with disabilities, temporary injuries, and pregnancy-related needs. Students who may need an accommodation should contact the DRC at <https://www.unlv.edu/drc> or 702-895-0866 as early as practical. Students already registered with the DRC should request their accommodations online each semester. After the instructor receives the official DRC notification, students are encouraged to contact the instructor so that the accommodations can be implemented effectively in WebCampus materials, assignment timing, recorded presentations, peer-feedback activities, group work, and other course requirements. Students do not need to disclose their diagnosis or private medical information to the instructor. Students who encounter an accessibility barrier in any course material should notify the instructor so that the barrier can be corrected or an accessible alternative can be provided.

Diversity Statement

As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to cultivating a campus environment that values diversity, practices inclusion, and actively promotes equitable experiences and outcomes. Accordingly, the University supports understanding and appreciation of all members of its community. See University Statements and Compliance, <https://www.unlv.edu/about/statements-compliance>. A successful learning experience requires mutual respect and trust between students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another's points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.

Final Examinations and Study Week

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule, available at <https://www.unlv.edu/registrar/calendars>.

Identity Verification and Online Course Requirements

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas. UNLV students enrolled in online or hybrid courses are expected to read and adhere to the Student Academic Integrity Policy, <https://www.unlv.edu/osrr/academic-integrity/policy>, which states that "acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment" is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute and could result in investigation and sanctions. Students are also expected to adhere to the Acceptable Use of Computing and Information Technology Resources Policy, <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts without authorization.

Incomplete Grades

A grade of "I" (Incomplete) is a temporary, neutral mark that is excluded from GPA calculation. An Incomplete may be considered when a student has been performing satisfactorily but, for reasons beyond the student's control, cannot complete the course requirements during the instructional period. Nonattendance, poor

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performance, or a desire to repeat the course is not an acceptable reason for an Incomplete. The student may request an Incomplete, but the instructor determines whether the circumstances qualify and establishes in writing the remaining work, completion deadline, and conditions for earning a final grade.

Undergraduate courses: The student must have completed at least three-fourths of the semester with satisfactory performance. The remaining work must be completed by the last day of the following regular semester or by an earlier deadline established by the instructor. If the requirements are not completed by the applicable deadline, the “I” will convert to an “F,” or to a “U” in a satisfactory/unsatisfactory course.

Graduate courses: For a content or lecture course, the student must have completed the majority of the coursework with a cumulative average of “B” or better. The remaining requirements must be completed within one calendar year or by an earlier deadline established by the instructor. If the requirements are not completed by the applicable deadline, the “I” will convert to an “F.” An undergraduate student enrolled in a graduate-level course must complete the remaining work within one semester.

A student completing an Incomplete does not register for the course again but makes individual arrangements with the instructor who assigned the “I.” The complete and current policy is available in [UNLV Policies for All Students](#).

Mental Health, Crisis, and Student Support

UNLV students have access to mental health and student support resources. Student Counseling and Psychological Services (CAPS) provides counseling and related services and can be reached at 702-895-3627 or <https://www.unlv.edu/caps>. Students may also use YOU@UNLV and the support resources listed in UNLV’s current Policies for All Students. The 988 Suicide & Crisis Lifeline is available 24 hours a day by calling or texting 988, or by chatting at <https://988lifeline.org>, for anyone experiencing a mental-health, substance-use, or emotional crisis or who simply needs immediate support. In an immediate life-threatening emergency, call 911.

Missed Classwork

Any student missing quizzes, examinations, or other coursework because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course of their intention to participate in religious holidays that do not fall on state holidays or periods of class recess. See the Missed Classwork policy under Registration Policies on the Academic Policies webpage, <https://www.unlv.edu/policies/students>.

In accordance with Faculty Senate policy, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided the student submits official written notification to the instructor no less than one week prior to the missed work. The spirit and intent of the policy is to offer fair and equitable assessment opportunities to all students. This policy does not apply where completing the assignment at an alternate time would impose an undue hardship that could be reasonably avoided.

Disagreements can be appealed to the Department Chair, the Dean, or the Faculty Senate Academic Standards Committee.

Online Conduct and Recordings

Students have a responsibility to conduct themselves in ways that do not interfere with the rights of other students to learn or of instructors to teach. In this fully online course, that responsibility applies to discussion boards, group work, peer-feedback activities, course messages, and any live or recorded interactions.

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Students are specifically prohibited from recording classes without instructor authorization, including online and remote sessions, whether audio only or video and audio. The instructor may rescind permission at any time. If a student does not comply with established requirements or obstructs the class's functioning, the instructor may initiate an administrative withdrawal.

Instructors who record sessions will inform students in advance. Recorded sessions may not be broadly released; they are made available only to students enrolled in the class during that academic term. Recordings must be stored securely and are subject to the Nevada System of Higher Education's Records Retention Policy, meaning they can only be deleted 120 days after the end of class. Class recordings are protected from disclosure as part of an educational record under the Family Educational Rights and Privacy Act (FERPA).

<https://www.unlv.edu/policies/students>

Rebelmail

Rebelmail is UNLV's official email system for students, and by University policy instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways students receive official University communications, deadlines, and announcements. Sending messages within WebCampus-Canvas is also acceptable.

Title IX

UNLV is committed to providing an environment free of all forms of unlawful discrimination, including sexual and gender-based discrimination, harassment, and violence such as sexual assault, intimate partner violence, and stalking. If you, or someone you know, has experienced or is experiencing these behaviors, know that you are not alone; resources and support are available. To learn more or report an incident, visit the Office of Equal Employment and Title IX website at <https://www.unlv.edu/compliance>, or contact the Title IX Coordinator (702-895-4055, titleixcoordinator@unlv.edu). Please be aware that as an instructor I am not a confidential resource, and I will need to report incidents of sexual misconduct to UNLV's Title IX Coordinator. You can also report directly using the online form at

https://cm.maxient.com/reportingform.php?UnivofNevadaLasVegas&layout_id=18. For confidential support in matters of sexual violence, relationship or family violence, or stalking, contact the Care Center at <https://www.unlv.edu/carecenter> or 702-895-0602.

Tutoring and Coaching

The Academic Success Center (ASC), at the Claude I. Howard Building, provides tutoring, academic success coaching, and other academic assistance. For tutoring subjects, times, and other ASC programs, visit <https://www.unlv.edu/asc> or call 702-895-3177.

UNLV Writing Center

The UNLV Writing Center provides free assistance to students at every stage of the writing process, including help with understanding an assignment, developing ideas, organizing a document, revising a draft, and improving writing skills. Students may choose in-person consultations, live virtual consultations, or asynchronous Online Writing Lab (OWL) feedback. The Writing Center's primary location is on the second floor of the Campus Resource Center, with additional drop-in locations available during the semester. Appointments can be scheduled through the Rebel Success Hub. For current services, locations, and hours, visit <https://www.unlv.edu/writing-center> or contact writingcenter@unlv.edu.

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UNLV Land Acknowledgement

UNLV is situated on the traditional homelands of Indigenous groups, including the Nuwu or Nuwuvi, Southern Paiute People, descendants of the Tulinu, or Desert People. We honor and offer gratitude for those who have stewarded the land; for the land itself; and for the opportunity to cultivate a thriving, diverse, inclusive, and just scholarly community here today that works for a better tomorrow for all.

Lee Business School Policies

These come from the Lee Business School and the UNLV Office of Online Education. They sit on top of the University policies above and apply to courses in this college.

AI at UNLV: Lee Business School guidance

The Lee Business School, together with the UNLV Office of Online Education, publishes guidance on AI use in coursework. That guidance sets out four possible course policies (AI use prohibited; AI use with permission; AI use encouraged with acknowledgment; AI use encouraged without acknowledgment) and leaves the choice to each instructor.

This course adopts the Lee Business School **Encouraging Use with Acknowledgment** approach. The Instructor Policies section below explains what that approach means in practice, including which tools may be used on each assignment, the applicable acknowledgment requirements, and how the course policy is evaluated and enforced. Unauthorized or inappropriate use of AI may constitute academic misconduct.

Working with AI on confidential or sensitive data

Do not enter confidential, proprietary, personal, regulated, or restricted information into a public or personal AI service. This includes Social Security numbers, protected health information, student education records, customer or employee information, credentials, trade secrets, and nonpublic workplace or client data. Students who wish to use workplace or client data must obtain authorization from the organization or data owner and comply with all applicable organizational policies, legal requirements, and contractual restrictions. Instructor approval does not replace authorization from the organization that owns or controls the data. When authorization is uncertain, use public, synthetic, or instructor-provided data.

Generative AI content notice

This course explores generative AI, including multimodal systems capable of producing text, images, code, and other forms of data. Outputs can be unpredictable and may occasionally be inaccurate, biased, offensive, inappropriate, or otherwise unexpected. Students are expected to evaluate these outputs critically and handle them professionally. If an output is disturbing or creates a concern, stop the interaction and contact the instructor; an alternative activity or source may be used when appropriate.

Generative AI can also produce biased, incomplete, or unrepresentative output. Throughout this course, students are expected to evaluate AI output critically, consider who is represented and who may be missing, identify embedded assumptions and limitations, and explain how those limitations affect the analysis.

Video accessibility

Instructor-created course videos are hosted through Panopto and embedded in WebCampus. Automatic captions are enabled and reviewed for accuracy before release. Because technical terminology, names, code, and specialized concepts may still be captioned incorrectly, students should notify the instructor of any remaining errors. A corrected transcript or another accessible format will be provided when needed. Students seeking disability-related accommodations should request them through the DRC each semester and coordinate their implementation with the instructor.

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Assignment	Why you are doing it	AI use	How you are expected to use AI
Weekly discussions ~ 30%	Discussions serve as attendance in this asynchronous course and give you practice reasoning about healthcare-AI tradeoffs in your own voice. They support the professional-communication requirements of the course and the learning outcome concerning LLM risks	Yes, with a short acknowledgment	You may use AI to check grammar, improve sentence clarity, look up information, or pressure-test an argument before posting. The position and explanation must be your own. A reply must respond meaningfully to what your classmate actually wrote. Do not submit an AI-generated discussion post or reply as your own work. When AI is used, add one short acknowledgment naming the tool and explaining what it did.
Weekly Labs 1–14 ~40%	Each lab develops a working, publicly deployed healthcare-analytics or AI artifact. Collectively, the labs build the technical portfolio and support Learning Outcomes 1–6.	Yes; encouraged, with acknowledgment	You may use Ollama, OpenRouter, ChatGPT, Claude, Gemini, Copilot, or other tools to write, debug, explain, test, and improve code. You must be able to explain what every part of your submitted work does and why you made each important choice. A short acknowledgment is sufficient for limited assistance. If AI materially generates or restructures code, analysis, design, or interpretation, include a Detailed AI Use Note in your lab notes or README.
Midterm Project Proposal Week 6, 10%	The proposal establishes the question, domain, data plan, technical approach, and analysis of what could go wrong for the final project. The judgment and planning are the assignment.	Yes; Detailed AI Use Note required for material assistance	AI may help organize the document, improve the prose, identify possible tools, and surface sources that you independently verify. The research question, domain choice, data plan, technical decisions, and analysis of risks and affected groups must reflect your own reasoning. If AI materially contributes to the framing, research, analysis, or proposed design, include a Detailed AI Use Note explaining what it contributed, how you verified it, what you changed, and what substantive work is your own.
Final Project and Recorded Demonstration Week 16,	The final project is a working, deployed AI system and recorded demonstration that integrates the course's technical, analytical,	Yes, for building; no for replacing your presentation or peer feedback	You may use AI extensively to design, build, debug, test, document, and evaluate the system. Include a Detailed AI Use Note in the project README describing material AI assistance. The recorded demonstration must be you

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~20%	evaluative, and governance skills.		explaining and defending your own system in your own words. Do not use an AI-generated voice, avatar, or script that substitutes for your understanding. The required peer feedback must represent your own evaluation of your classmate's work.
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Instructor Policies

These are my policies for this specific course. Where the Lee Business School guidance leaves a choice to the instructor, this is the choice I have made and what it means for your work.

Required Technology and Accounts

This online course requires regular access to a computer with a current web browser and a reliable internet connection. Coursework uses WebCampus, Google Colab, Python, and the Hugging Face ecosystem. Students may also use generative-AI and coding-assistance tools under the course AI policy. Students should create and test any required free accounts during the first week. No paid generative AI subscription is required unless clearly identified in advance as required course material.

Students who cannot access a required tool, encounter an accessibility barrier, or have concerns about entering information into an external service should contact the instructor promptly so that an appropriate alternative can be considered.

AI is transforming how business gets done, and that shift is accelerating. One of the most valuable skills you can develop is learning to use these tools efficiently, effectively, and in ways that deliver real results. That is a core goal of this course, which is exactly why the policy below is specific about where AI helps you learn and where it gets in the way.

AI Use in This Course

This course adopts the Lee Business School Encouraging Use with Acknowledgment approach. You are allowed and encouraged to use generative-AI, machine-learning, and coding-assistance tools subject to the assignment-specific requirements below. Because different assignments are designed to develop different skills, the permitted uses and acknowledgment requirements vary by assignment type. The table below lists the requirements for each graded activity.

Unauthorized or inappropriate use of AI may constitute academic misconduct.

How to Acknowledge AI

When this policy requires acknowledgment, the amount of detail should be proportional to the role AI played in the work. The purpose is transparency, not paperwork.

Short acknowledgment: For limited assistance—such as checking grammar, improving sentence clarity, looking up a definition, formatting material, or debugging a small coding error—a single sentence naming the tool and explaining what it did is sufficient. Examples include: “ChatGPT checked my grammar and sentence clarity,” “Gemini helped me check whether my explanation was understandable,” and “Claude helped me locate a syntax error in the Python loop.”

Detailed AI Use Note: When AI materially contributes to the analysis, framing, code, system design, interpretation, evidence, evaluation, recommendation, or other substantive content, include a short paragraph explaining what the tool contributed, how its output was verified, any important error or limitation discovered, what you changed, and what substantive work remains your own. Detailed AI Use Notes are required for the midterm project proposal and final project when AI is used materially. They are also required in a lab’s notes or README when AI materially generates or restructures the submitted code, analysis, design, or interpretation.

An acknowledgment must accurately describe the tool’s actual role. A short acknowledgment is sufficient for short or limited assistance, but it may not be used to conceal substantial AI-generated content. The assignment-specific rules in the table above determine whether a short acknowledgment, a detailed AI Use Note, or no acknowledgment is required.

How This Is Checked and What Happens if the Policy Is Broken

I do not use automated AI-detection software to determine whether a student has violated this policy. Such tools are not sufficiently reliable for that purpose. This course instead uses assignment-specific disclosure, process evidence, and the student’s ability to explain and defend submitted work.

You must be able to explain and defend everything you submit. If there is a reasonable question about authorship or understanding, I may ask you to explain your code, sources, prompts, analytical choices, drafts, verification process, and what you tried that did not work. The purpose of that follow-up is to determine whether the submitted work represents your understanding and complies with the assignment-specific AI policy.

Failure to provide a required acknowledgment may result in reduced credit, up to and including a zero for the assignment, depending on the extent and significance of the undisclosed assistance. Using a short acknowledgment to conceal substantial AI-generated content, submitting materially AI-generated work that you cannot meaningfully explain, or presenting AI-generated analysis as your own independent work may constitute academic misconduct under the UNLV Student Academic Integrity Policy, <https://www.unlv.edu/osrr/academic-integrity/policy>. When appropriate, the matter will be handled through that policy and may be referred to the Office of Student Rights & Responsibilities.

If you are uncertain whether a particular use is allowed or how much acknowledgment is required, ask before submitting the work. It is better to clarify the requirement in advance than to submit work that does not comply with the policy.

AI Use and the Final Project

This course has no quizzes, timed examinations, midterm examination, or take-home final examination. The Week 16 final project presentation consists of a recorded demonstration plus substantive peer feedback and takes the place of a sit-down final examination during finals week. The final project is governed by the Lee Business School Encouraging Use with Acknowledgment approach and the assignment-specific requirements in the table above. AI assistance may be used to design, build, debug, test, document, and evaluate the system. A short acknowledgment is sufficient for limited assistance, while a Detailed AI Use Note is required when AI materially contributes to the system, code, analysis, design, evaluation, or interpretation. The recorded demonstration must be your own explanation and defense of your own work, and the peer feedback must represent your own evaluation of your classmate's work. There is no separate examination AI policy because this course has no examination. Permission to use AI while preparing the project does not authorize AI to replace your required reasoning, explanation, presentation, or individual participation.

Course Overview

Week#	Date	Act	Topic	Reading	Lab: what you'll do
1	08/24/2026	LEARN	How Healthcare Really Works + the Implementation Gap; LLMs from day one	Ch 1	Lab 1. Set Up Shop: get the free toolkit running on Colab and hand in your Hugging Face profile link.
2	08/31/2026	LEARN	Data, FHIR, Privacy & Shadow AI	Ch 2-3	Lab 2. Find Your Patient: merge messy patient records into one clean table, then scrub the personal details.
3	09/07/2026	LEARN	Cost, SDOH & Clinical Dashboards (Labor Day Mon)	Ch 4-5	Lab 3. Follow the Money: where healthcare spending really goes, in a 30-second dashboard.
4	09/14/2026	LEARN	Alert Fatigue, Automation Bias & Deskillling	Ch 6	Lab 4. Fix the Alarm Problem: measure alert overload and redesign warnings people hear.
5	09/21/2026	LEARN	Prediction + Explainability	Ch 7-8	Lab 5. Predict the Bounce-Back. Main: build the predictor. Alternate: explain its predictions. project warm-up
6	09/28/2026	LEARN	Foundation Models & Medical Imaging	Ch 10	Lab 6. Teach AI to Read an X-Ray and audit it across patient groups. midterm proposal due
7	10/05/2026	LEARN	Clinical Operations & Forecasting	Ch 12 (+11)	Lab 7. Staff the ER Before the Rush: forecast tomorrow's arrivals.
8	10/12/2026	BUILD	LLMs I: How LLMs Work + Clinical NLP + RAG	Ch 17	Lab 8. Turn Notes into Facts: structured data from messy clinical notes.
9	10/19/2026	BUILD	LLMs II: Evaluation & Safety	Ch 18	Lab 9. Catch the AI Lying: build a repeatable test suite for hallucination.
10	10/26/2026	BUILD	Agents I: Operational Engine (Nevada Day Fri; last day to drop)	Ch 19	Lab 10. Build the Paperwork Machine: prior auth end-to-end, with guardrails. project checkpoint
11	11/02/2026	BUILD	Agents II: Patient Navigator & RAG	Ch 20-21	Lab 11. Answer the Patient: grounded answers from the patient's own record, with citations.
12	11/09/2026	BUILD	Agents III, Frontier: multi-agent, ambient docs, MCP (Veterans Day Wed)	Agentic chapters 19-21	Lab 12. Upgrade Your Agent: add one frontier capability and redeploy (no new notebook - the deliverable is your redeployed Space).
13	11/16/2026	JUDGE	Causal Inference: did the agent's intervention work?	Ch 13	Lab 13. Prove It Actually Worked: causal ROI, not just correlation.
14	11/23/2026	n/a	Thanksgiving break. No session (campus closed Nov 26-27). Optional lecture on ethics or privacy.	n/a	n/a
15	11/30/2026	JUDGE	Bias & Fairness + Sensitive Use + Governance; peer review (last week of instruction)	Ch 22-25	Lab 14. Judge Your System. Main: find the bias (Fairlearn audit). Alternate: write the model card and governance package.
16	12/07/2026	n/a	Final presentations: live agents (finals week)	n/a	FINAL DEMO (recorded video) + peer feedback

Key dates: Aug 24 start; Week 6 midterm proposal; Oct 30 last day to drop; Nov 23-29 Thanksgiving; Week 16 finals.

Updated: August 21, 2026