THE UNIVERSITY OF TEXAS AT DALLAS

ENTP 6314 - Fall 2026
AI in Action: Building Products, Ventures, and Competitive Advantage
Syllabus Version Date: August 24, 2026

Instructor

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Course Code

This class is cross-listed with MIS 6361.

Class Schedule for Fall 2026

Section 501: Wednesday, 7 - 9:45PM, Room: JSOM 13.501

Office Hours

11am-12pm on Tuesdays in JSOM 4.222

Students are welcome to visit office hours *without an appointment* to discuss course details (e.g., logistics, material, assignments, exams). If the above time does not work for you, or if you have something specific to discuss, please email me to schedule an appointment.

Course Description

This course focuses on building new products and ventures with the help of artificial intelligence (AI). There are two parts to this course. First, students will learn how to use AI to conduct market research, formulate strategy, assess competition, and identify customer needs. Second, students will use AI to build new products. Working in teams, they will create AI-assisted strategic analyses, functional prototypes, go-to-market strategies, and investor-ready pitch decks. Throughout the course, students will also learn how AI is reshaping the nature of competition, viable business models, and the structure of organizations, and get to hear first-hand accounts from industry executives and startup founders. The course combines hands-on practice with strategic thinking, helping students leverage cutting-edge AI tools, while also understanding their broader implications for strategy and society.

Course Objectives

By the end of this course and the completion of all deliverables, students will be able to take an idea from concept to launched product with the help of AI tools. This includes the following four course objectives.

1. First, students will be able to design, build, validate, and ship a working digital product by directing AI coding tools. Specifically, students will translate a market idea into a product requirements document (PRD); scaffold, iterate, and deploy a publicly accessible web application with version control; extend that application beyond a prototype by integrating a data layer and at least one external component (e.g.,

authentication, payment processing, call to an LLM, or others); diagnose and recover from failures in AI-generated issues; and revise the product's design and interface in response to usability heuristics and evidence from user testing.

2. Second, students will be able to use AI to produce and verify a strategic analysis of the market opportunity linked to their product. This includes defining the market problem and the case for timing of entry; sizing the target market (e.g., TAM) with defensible assumptions and strong evidence; designing, conducting, and synthesizing primary and secondary customer research into validated customer needs that influence product features; mapping the competitive landscape and the layers of the AI value chain to identify where their venture captures value; specifying a business model, pricing logic, and unit economics; and arguing for the defensibility of a proposed moat for their product. Central to this objective is validation and verification, which entails distinguishing AI-generated claims that are supported by evidence from those that are conjectured or hallucinated.

3. Third, students will be able to communicate the venture to an external audience. Students will construct an investor-facing narrative that leads with the customer problem and demonstrated value rather than the underlying technology, defend their assumptions under live questioning, and revise both the product and the pitch story in response to feedback and critiques.

4. Fourth, students will also be able to assess how AI is reshaping work, society, industries, and entrepreneurship. This includes understanding the ethical, regulatory, and workforce implications of deploying AI at scale, and articulating what those implications mean for how they design their own venture.

Required Course Materials

Students must purchase a Claude Pro subscription ($20/month + tax). If UT-Dallas changes institutional access to Claude by the start of the class, there might be the possibility to use it instead of purchasing a subscription. Other AI tools (e.g., Open AI's Codex or Google Antigravity) may be used upon discussion with and permission from the instructor. All other tools that will be used in the course have sufficient free tiers. Instructions for access of each are available on the course website, and will also be provided in class.

Other than the above, there are no other materials to be purchased. Required and optional course readings (noted in the course schedule below) are available online for free, and where possible, in Canvas.

Course Evaluation

Course grades will be based on the following four components:

1. ***Class Participation (Individual Assignment; Weightage: 20%)***
   Active engagement in the course plays an integral role in the learning process for students and their peers, and can be achieved through participation in class and in assignment groups. Class participation will be evaluated as a function of the following:

   - Contribution to in-class discussions: A critical component of the course experience will be rigorous and spirited discussion. I expect all students to be well prepared for each class, having studied the required pre-class material. Students who make consistent, meaningful contributions to class discussions will receive better class participation grades. The quality of comments is evaluated based on the clarity and coherence of ideas and arguments, and the ability to support claims with quantitative or qualitative evidence from the course materials (e.g., slides, readings). Finally, engagement by colleagues during student group presentations is also acknowledged.

- Name Tents: I will provide students with name tents (i.e., a prominent sign to write full name on) on the first day of class. Students must bring these name tents to every subsequent session. This is critical for accurate receipt of participation points.

- Regular attendance to class: Though not individually graded, attendance is a student's obligation. No right or privilege exists that permits you to be absent from any class meetings except for excused absences for authorized University activities or Religious Holy Days. Regular absence from class will severely impact the class participation score. Two unexcused absences per semester are allowed for which no points will be deducted. For these absences, students do not need to inform me.

- Late attendance to class: Arriving to class past the start time will be marked as late. Excessive late attendance to class will result in a reduction of participation points.

2. ***First App and Build Memo (Individual Assignment; Weightage 10%)***
   In this assignment, students will build and deploy a small working web application using AI. There are two parts two this assignment. First, students will submit a live URL for the web application, and a Github repository link. Second, students will submit two-page single-spaced memo that explains what was built, and why it was built it (i.e., what market problem did it solve, and how will customers use the application). In addition, the memo should cover what challenges faced along the way (e.g., did anything brake, how they recovered, and some AI-prompting techniques) that worked well.

3. ***Individual Build Log (Individual Assignment; Weightage 15%)***
   Starting Session 4 onwards, each week students must maintain a build log. It should be roughly 3-pages long, and discuss what you built that week, what unique things you tried, what broke along the way, how you fixed it, and what you learned. At the end of the semester, students will submit their four most interesting weekly logs in a combined document. In the final submission, students must also describe a case where AI was confidently wrong, how the student caught it, and learnings from these incidents. More details will be available on Canvas.

4. ***Product Proposal (Team Assignment; Weightage: 5%)***
   This assignment is a team-written 3-page single-spaced project proposal outlining the group's three potential ideas for a new product. This should briefly cover why the group is interested in this idea, what problem it will solve, the novelty, value, and uniqueness of the proposed solution, and why AI can help build it. More details will be available on Canvas.

5. ***Discovery Report (Team Assignment; Weightage: 20%)***
   The Discovery Report is a team-written summary of the research each group conducts across three sessions: *Finding Market Problems*, *Understanding Customers*, *Assessing Competition & Moats,* and *Business Model & Unit Economics*. In the assignment, teams will explicitly identify and define the market problem they are solving and explain why now is the right time to target the market. In addition, students will size the target market, present what they learned from customer research, analyze their competitors, argue for the defensibility of their product's proposed moat, and lay out a business model with planned unit economics. Students will use AI throughout to conduct this research but must verify and validate its output. In addition, AI is not permitted for the writing of the report. The report is due as a single document, with a total of twelve double-spaced pages maximum plus figures, appendices, and references.

6. ***MVP Demo (Team Assignment; Weightage: 10%)***
   Students must complete an eight-minute live, working demonstration of their product's core workflow in front of the class. The following must also be submitted via Canvas: live URL, link to Github repository. This assignment will be graded on whether the product runs, whether and how evidence presented in the Discovery Report visibly shaped the product and its features, the quality of

your testing and validation, and responses to questions during the presentation.

7. ***Final Venture Package and Pitch Presentation (Team Assignment; Weightage: 20%)***
   At the end of the semester, each team will deliver an ten-minute pitch presentation, followed by five minutes of Q&A, judged live by external judges. Teams will then submit a final package containing the final pitch deck with an appendix of supporting evidence, a live product URL, a GitHub repository, and a two-page double-spaced AI-usage report documenting the most impactful uses of AI over the semester, such as pivotal prompts and agent workflows. The package also includes the Discovery Report, but now revised and reframed as a G*o-to-Market Strategy* document. This is an update rather than a rewrite. Therefore, every substantive change must be visibly annotated using highlighting or a short change log so it clearly evident to see what shifted and why. Finally, a central addition to this deliverable is the incorporation of real customer evidence. Each team must document a minimum of six real interviews, and learnings from each. More details will be available on Canvas.

8. ***Peer Evaluation***
   A confidential end-of-term evaluation adjusts individual grades on team components by a multiplier of 0.85 to 1.10. Individual assignments are not subject to multipliers.

Final Course Grades

Final grades will be assigned based on the following scale: 93-100% (A), 90-92.99 (A-), 87-89.99 (B+), 83-86.99 (B), 80-82.99 (B-), 77-79.99 (C+), 73-76.99 (C), 70-72.99 (C-), and so forth. I reserve the right to make changes to this distribution based on overall class performance at the end of the semester. No exceptions or rounding up of grades will be provided.

Other Class Policies

1. ***The Use of Generative AI Tools in the Classroom & Assignments.***
   This class requires the use of generative AI. However:

   - **Every factual claim in submitted assignments needs to be manually verified.** AI generates confident and plausible claims that often rely on weak logic, and incorrect or fabricated evidence. Whenever you submit an assignment, you are responsible for verifying the accuracy of the claims.

   - **Your AI-usage documentation must be truthful.** The individual build log and other assignments are graded on insight, and not on how much AI you used. There is no advantage to masking true usage; rather, more thoughtful and creative use of AI is encouraged. Share what you have learnt!

   - **No AI-slop.** By now, you have likely realized that writing generated by AI is often difficult to read or convoluted in its logic. For all written assignments, I encourage students to plan to write without AI, and only use AI for brainstorming ideas, and revising and iterating on arguments and flow. This will significantly enhance the quality of your writing. Most importantly, never send AI slop to a colleague!

   - **UTD policy.** Please review the university policy on **Generative AI use in academic work**.

2. ***The Use of Smart Devices in the Classroom:***
   Electronic devices can disrupt learning for everyone in the classroom, particularly in a discussion-based course where full engagement matters. For this reason, no devices (including phones, laptops, or tablets) are allowed in the classroom, except during lab sessions (i.e., the second half of class), and personal emergencies as defined next. A device may be used briefly for a personal emergency, such as a health, family, or childcare situation. Where possible, please notify the instructor before class if you expect to need this. Students with an approved accommodation through the AccessAbility Resource Center (ARC) that requires device use, such as for note-taking, should contact the instructor directly to arrange this.

Printed notes or other hand-written notes are permitted. Slides will be posted to Canvas within 24 hours of class. If a device is used outside of these exceptions, the student will first receive a reminder. Repeated instances will result in a large reductions of participation points.

3. ***University Course Policies:*** Information contained in the following link constitutes additional University's policies and procedures. Please go to UT Dallas Syllabus Policies webpage for these policies (**https://go.utdallas.edu/syllabus-policies**).

4. ***Honor Code:*** As members of the UT Dallas community, all students are expected to uphold the Comet Creed: *"As a Comet, I pledge honesty, integrity, and service in all that I do."* Severe implications will exist for plagiarism in any capacity, unethical academic behavior, or violations of UT Dallas' official **student code of conduct**. In the event of a violation of the honor code, I will follow UT Dallas' official reporting process for investigation.

5. ***Accommodations for Students with Disabilities:*** The University of Texas at Dallas is committed to providing reasonable accommodations for all persons with disabilities. The syllabus is available in alternate formats upon request. If you are seeking classroom accommodations under the Americans with Disabilities Act (2008), you are required to register with the AccessAbility Resource Center (ARC), located in the Administration Building, Suite 2.224. Their phone number is 972-883-2098, email: **studentaccess@utdallas.edu** and the website is **https://accessability.utdallas.edu/**. To receive academic accommodations for this class, please register and request services by completing the Request for Services form with the proper documentation and meet with the Director of ARC at the beginning of the semester.

6. **Syllabus:** I reserve the right to make any changes to the syllabus, including readings, projects due dates, test dates, and course policies. These changes will be announced as early as possible.

Course Schedule & Weekly Task List

Session	Date	Topic
		Module 1: Foundations of AI-Enabled Product Development
1	8/26	**Introduction** *Pre-Class Task List:* 1. Read: The decline of travel agents (Ernie Tedeschi, Stripe Economics, 2026) *Topics Covered* • Current state of AI in 2026 (e..g, use cases, economic & societal impact, entrepreneurship, labor markets) • Why AI is helpful for new product development • Course grading & expectations
2	9/2	**Installing & Understanding Tools - Part I** *Pre-Class Task List:* 1. Read Course Handbook Parts 1 to 3 2. Purchase Claude Code subscription 3. Watch Software Is Changing (Again) (Andrej Karpathy, 2025) *Topics Covered* • English as a programming language • Conceptual frameworks for building with AI • Unpacking AI-jargon (e.g., LLMs, prompts, agents, skills, human-in-the-loop) *In-Class Lab Tasks:* • Install Claude Code, explore key elements • Build first working web application
3	9/9	**Installing & Understanding Tools - Part II** *Pre-Class Task List:* 1. Submit group project team composition 2. Read Course Handbook Parts 4 to 6 *Topics Covered* • Understanding AI agents, and their use cases • Verification as a key differentiator • Writing a strong product requirements documents (PRD) *In-Class Lab Tasks:* • Install git, and create first repository • Add 1-2 features to first web application

Session	Date	Topic
		Module 2: Building with Strategic Intent
4	9/16	**Finding Market Problems** *Pre-Class Task List:* 1. Submit "First App and Build Memo" assignment on Canvas 2. Prepare three potential ideas for market problems you would like to solve. For inspiration, skim through the following resources: **AI Market Clarity** (Elad Gil, 2025), **a16z's Where Enterprises Are Actually Adopting AI** (Kimberly Tan, 2026), and Requests for Startups from **Y Combinator**, **Bessemer**, **Greylock**, and **Sequioa** 3. Read Course Handbook Parts 7 and 8 *Topics Covered* • Complements, substitutes, and Jevons paradox • Vertical industry applications of AI • Assessing viability of market opportunities *In-Class Lab Tasks:* • Run an AI agent workflow to conduct opportunity evaluations on 3 candidate problem areas • Build a landing page for three candidate problem areas
5	9/23	**Understanding Customers** *Pre-Class Task List:* 1. Read **Customer Interviews: How to Recruit, What to Ask, and How to Synthesize What You Learn** (Teresa Torres, 2022) 2. Read Course Handbook Part 9 *Topics Covered* • The importance of customer discovery and validation • Using AI for customer research and assessing qualitative customer data *In-Class Lab Tasks:* • Design interview questions and structure; conduct practice interviews • Write a product requirement document (PRD) for your chosen idea, and iterate on it with AI

Session	Date	Topic
6	9/30	**Business Model & Unit Economics** *Pre-Class Task List:* 1. Submit "Product Proposal" assignment *Session Guest Workshop:* • **Garvit Patel** (Applied Scientist at Uber) *Topics Covered* • AI business models, pricing, and unit economics • Identifying the core value proposition • Building a positioning statement *In-Class Lab Tasks:* • Draft your positioning statement, value proposition, business model choice, and pricing hypothesis • Identify which features of your product are "core" vs. "peripheral", and adjust application accordingly
7	10/7	**Assessing Competition & Moats** *Pre-Class Task List:* 1. Read **How A.I. Helped One Man (and His Brother) Build a $1.8 Billion Company** (New York Times, 2026) 2. Read Course Handbook Part 10 *Topics Covered* • Understanding the layers of the AI value chain • Building defensible AI-specific moats *In-Class Lab Tasks:* • Run an AI agent workflow to conduct an evaluation of competitors and the value chain of the target market • Add 2-3 features or capabilities to your working product
	10/14	***Break; No In-Person Class***

Session	Date	Topic
		Module 3: Iterate & Extend
8	10/21	**Mapping Product Infrastructure: From Skeleton to Real Application** *Pre-Class Task List:* 1. Submit "Discovery Report" assignment 2. Read Course Handbook Part 11 *Topics Covered* • Architecture of a software product (non-technical overview) • Build vs. buy at the component-level • Adding a data-layer to your product *In-Class Lab Tasks:* • Integrate new components into your product (e.g., payment processing, database, call to an LLM for AI features)
9	10/28	**Polishing Design & Testing** *Pre-Class Task List:* 1. Read Ten Usability Hueristics (Nielsen Norman Group, 2024) 2. Read Course Handbook Parts 12-14 *Session Guest Workshop:* • **Jenny S. Le'Dang** (Senior Product Designer at American Airlines) *Topics Covered* • Usability and design judgment for non-designers • AI-assisted design critique and edge-case testing *In-Class Lab Tasks:* • Build a design system for your product • Conduct design iterations of your product

Session	Date	Topic
		Module 4: Pitch
10	11/4	**MVP Demo Day** *Pre-Class Task List:* 1. Read Course Handbook Part 15 2. Submit "MVP Demo" Assignment Package *In-Class Lab Tasks:* • Live presentations of MVP with peer panel feedback
11	11/11	**Developing Compelling Pitches** *Pre-Class Task List:* 1. Read article: **Writing a Business Plan** (Sequoia Capital) 2. Read article: **The 10/20/30 Rule of PowerPoint** (Guy Kawasaki, 2005) 3. Read Course Handbook Part 16 *Topics Covered* • Anatomy of a successful pitch: narrating user value and problem solved rather than technology • Common questions investors ask startups *In-Class Lab Tasks:* • Developing your pitch • User testing of product
12	11/18	**Product Iteration & Pitch Practice** *Pre-Class Task List:* 1. Prepare preliminary version of product pitch *In-Class Lab Tasks:* • Acting on feedback (e.g., what to fix in the product, what to fix in the story) • Delivery mechanics (e.g., timing, who speaks, and answering questions under pressure)
	11/25	***Fall Break; No In-Person Class***
13	12/2	**Pitch Day** *Judges To Be Announced*
	12/9	***No In-Person Class*** **Submit:** Final Venture Package