

EGRMGMT 576
Design Thinking and Innovation
Fall 2023

Professor: Kathie Amato

Office Hours: Thursdays, 3:00 pm to 5:00 pm, via Zoom

Also by appointment (the best way to schedule an appointment is to send me an email)

I. Course Background & Course Objectives

“Design is not just what it looks like and feels like. Design is how it works.”

Steve Jobs

“Design can help to improve our lives in the present. Design thinking can help us chart a path into the future.”

Tim Brown

“Purposeful innovation begins with looking, asking, and listening . . . don’t be deluded by all the stories about flashes of insight. The key task is to work out analytically what the innovation has to be in order to satisfy a particular opportunity.”

Peter Drucker

Both established companies and entrepreneurial ventures have a strong focus on design thinking and innovation, given that the success of firms depends upon their ability to identify customer needs, problems, and/or opportunities and then develop products and services that meet the needs, solve the problems, and/or capitalize on the opportunities in an effective and sustainable manner. Yet, many people struggle with their own skills as innovators and design thinkers.

The reality is that everyone can be an effective design thinker and innovator. This course covers the disciplined design thinking process that leads to successful innovations, particularly with regard to value creation and market impact. Starting with an understanding of empathy, ethnography, and interviewing techniques, moving on to the iterative process of defining, ideating, prototyping, and testing, and then developing final designs, this course will be a highly engaged opportunity for students to develop a deep set of skills in design thinking and innovation. The course also includes modules detailing how design thinking is implemented across a range of industry settings, with sessions on lean startup, design sprints, and agile development. Through a combination of lectures, simulations, projects, presentations, and interactive learning modules, the class provides the hands-on learning experience required to effectively learn and implement skills in design thinking and innovation.

This course is designed to help you acquire the knowledge, skills, and abilities required to:

- Develop a disciplined approach to exploring and defining problems and opportunities
- Develop an understanding of the common underlying process involved in design thinking, including empathy, ethnography, problem identification and validation, lean startup, design sprints, and agile development
- Build a strong working knowledge of the constructs and common language employed in implementing design thinking

- Identify and frame problems, opportunities, and needs in a manner that leads to effective design thinking and innovation
- Expand one's abilities to work as a member of a collaborative team in developing solutions to complex problems
- Communicate effectively, particularly innovative ideas and solutions, verbally and in writing
- Enhance one's abilities to create an ethical environment in which to pursue design thinking and innovation
- Understand the connection between design thinking and product development, product management, strategy, and consulting
- Evaluate the success of design thinking and innovation projects
- Build strong skills in personal self-reflection, with the goal of building one's overall skills in critical thinking and creative problem-solving

II. Class Format, Assignments, Teamwork, Attendance, & Grading

Class Format

We will draw on lectures, classroom activities, simulations, textbook and coursepack readings, class discussions, and a semester-long design challenge to develop a strong understanding of design-thinking and innovation. This course also relies heavily on team-based learning.

Lectures: A portion of each class meeting will be in lecture format, introducing materials not otherwise covered in the course readings along with reinforcing/further explaining topics included in the text and coursepack readings.

Guest Lecturers: A number of guest lecturers participate in delivering the course content. They are leading experts in their fields and their contributions are core elements of the course content.

Classroom Activities: To effectively learn design thinking and innovation, one must be actively involved in critical thinking and creative activities. With this in mind, each class session will include highly engaged classroom activities designed to build skills in critical thinking and creativity.

Design Challenge Project and Modules: Over the course of the semester, each student will be assigned to a team that will be working on a problem currently being faced by a client. There will be specific assignments linked to these problems, allowing each team to work through the design thinking process for their assigned problem in an organized manner. To ensure the teams stay on track, there will be graded assignments throughout the semester to allow you to fully experience each step in the design thinking process. At the end of the semester, student teams will present their recommendations to their clients.

IDEO Analysis, Final Course Reflection, Practice Interview Questions, and Simulation: Strong analytical skills along with self-awareness and self-reflection are important attributes of successful design thinking and innovation. To help build skills in these areas, students will complete an analysis on the design process as practiced by IDEO early in the founding of the IDEO design consultancy. At the end of the course, students will complete a Final Self-reflection essay that explores their success in achieving their desired growth in design thinking skills.

A deep understanding of others is also key to design thinking. The course emphasizes building one's ability to ask interview questions that allow one to build empathy and truly understand and identify problems people are facing. The Practice Interview Questions assignment is the first step in beginning to develop these interview skills.

Teamwork and Team Expectations: Design thinking and innovation take place with people working together in collaborative teams. To foster a learning environment that mirrors the expectations of businesses with regard to design thinking and innovation, you will be assigned to a team throughout the course, with a focus on further enhancing your skills in collaborating as a member of a highly creative team. With regard to specific assignments in the course, you will work with your team on the semester-long design challenge project and the design challenge module assignments.

In the interest of making sure all team members acquire a full suite of effective design thinking skills, as well as that the team arrives at the best decision and/or strategy on each of the course assignments, please **DO NOT** divide up and assign the work each week so that individual team members are "specializing" in specific parts of the assignment. Each team member should contribute equally to all aspects of all assignments, so that the team is developing the best approach for moving forward and each team member has mastered the concepts and material being covered in the assignment.

The course includes a module on effective team dynamics. All teams are expected to use the frameworks covered in this module to facilitate highly effective teamwork. These frameworks are expected to be a part of all team interactions in class, as well as all team meetings held outside of class.

All team members are expected to participate fully with their team in the completion of all team-based assignments. Failure to do so will result in a reduced grade.

Attendance: MEM's policy is that campus students are expected to attend class regularly and in person, adhering to Duke's Academic Calendar. You are expected to attend every class and to be present for the entire class, with class attendance graded each class meeting. Being absent from class without a valid excuse (related to an illness, religious observance, or emergency) will result in a grade of "0" for the class meeting.

It is especially important that students attend the first day and the last day of class for all courses in which they are enrolled. Unless and until all coursework and examinations (whether comprehensive final exams, quizzes, or otherwise) have been completed for all courses in which a student is enrolled, a student is expected to remain at Duke in person through the end of final exam week as established by the MEM program.

At the conclusion of the first class, the instructor will report any unexcused absences to the MEM program administration. Thereafter, such students shall be dropped from the course.

Responsibility for regular and punctual class attendance rests with individual students. The course faculty shall refer a student to MEM's administrators in the event of excessive absences.

While attendance in class is important, student health, safety, and well-being are the university's top priorities. To help ensure your well-being and the well-being of those around you, **please do not come to class if you have symptoms related to COVID-19 and have not yet tested, have had a known exposure to COVID-19, or have tested positive for COVID-19.** If any of these situations apply to you, you must follow university guidance related to the ongoing COVID-19 pandemic and current health and safety protocols. If you are experiencing any COVID-19 symptoms, contact student health (dshcheckin@duke.edu, 919-681-9355). Learn more about current

university policy related to COVID-19 at <https://coronavirus.duke.edu/>. To keep the university community as safe and healthy as possible, you will be expected to follow these guidelines. Please reach out to the course instructor and your TAs as soon as possible if you need to quarantine so we may discuss arrangements for your continued participation in class.

Students are permitted by university policy to be absent from class to observe a religious holiday. Accordingly, the Pratt School of Engineering has established procedures to be followed by students for notifying their instructors of an absence necessitated by the observance of a religious holiday. Please submit requests for religious accommodations at the beginning of the semester so that we can work to make suitable arrangements well ahead of time.

In the event of an absence linked to an emergency, illness, or religious holiday observance, you are expected to advise the instructor prior to any missed class or late arrival. Students who miss class with a valid excuse related to an emergency, illness, or religious holiday observance will receive a make-up assignment for that class meeting. Completing the assignment in a satisfactory manner and by the stated deadline will result in full credit for the missed class session. Failure to meet the assignment standards and/or submission deadline will result in a reduced grade. Failure to complete the makeup assignment will result in a grade of "0" for the class meeting.

Class attendance will be tracked through sign-in sheets, with students expected to sign in as they enter the classroom before the start of class. There will be an "on time" attendance sheet that will be removed at the start of class and replaced with a "late" sign in sheet. Students who sign in late will receive a reduced attendance grade for the day. Failure to return on time after break will also result in a reduction in one's attendance grade, as will leaving in the middle of class outside of the schedule break times. It is the student's responsibility to make sure they sign in before the start of class and also to keep track of the time allotted for break to allow for an on-time return to class. Please note that falsifying attendance or signing in for a classmate are both considered a violation of the Duke Community Standard in this course, since attendance is a graded component of the course.

Students are not allowed to attend class with any section other than their assigned section.

Not only are you expected to attend each class meeting in its entirety, you are expected to be fully prepared for each class meeting and to participate fully in the class discussions and activities. In the event students demonstrate a pattern of not being prepared for class or of not participating in class discussions and activities, the instructor reserves the right to make the Class Attendance portion of the grade a Class Participation grade, where students will receive grades based on participation in class.

Grading

The following table summarizes how grades will be determined. The subsequent sections elaborate on the overall structure for grading in the course.

Grading Element	Weight
Attendance (Individual)	6%
Reflection on IDEO (Individual)	3%
Practice Interview Questions (Individual)	3%
Simulation Participation (Individual)	1%
Design Challenge Project Module 1: Initial Client Outreach Email (Team)	2%

Mural Introduction (Individual)	1%
Design Challenge Project Module 2: Initial Interview Questions (Individual)	4%
Design Challenge Project Module 3: Background Research (Team)	6%
Confirmation of Completion of IBM Enterprise Design Thinking Practitioner Course (Individual)	1%
Design Challenge Project Module 4: Initial Interviews and Observations (Individual)	4%
Design Challenge Project Module 5: “What Is” Design Meeting, Problem Statements, and Personas (Team)	6%
Design Challenge Project Module 6: “What If” Leading in to “What Wows” Ideate and Prototype (Team)	4%
Design Challenge Project Module 7: Second Set of Interviews and Observations (Individual)	4%
Design Challenge Project Module 8: Email Meeting Request to Client (Team)	1%
Design Challenge Project Module 9: “What Wows” Leading in the “What Works” Learn and Loop (Team)	4%
Design Challenge Project Module 10: Napkin Pitches (Team)	4%
Design Challenge Project Module 11: Storyboards (Team)	4%
Design Challenge Project Module 12: Proposed Presentation Slides and Practice (Team)	4%
Design Challenge Project Class Presentation (Team)	14%
Final Meeting with Client to Review Presentation and Project (Team)	14%
Final Course Reflection (Individual)	10%

Grading Scale by Assignment: There are two categories of grading in this course, as outlined below.

Scale of 0 to 100

The assignments noted below will be graded on a scale of 0 to 100, with every value in between those two extremes a possible grade.

- Design Challenge Project Class Presentation
- Final Meeting with Client to Review Presentation and Project
- Final Course Reflection
- Confirmation of Completion of IBM Enterprise Design Thinking Practitioner Course
- Participation in In-class Simulation
- Attendance

Five-Category Scale (0, 50, 75, 85, 95)

The assignments noted below will be graded on a five-category scale—Did not submit (0), Minimal Effort (50), Passing (75), Good Work (85) or Exceptional (95).

- IDEO Reflection
- Practice Interview Questions

- Mural Introduction
- Design Challenge Project Modules (1 through 12)

The five-category scale is based on the following:

Did not Submit	Minimal Effort	Passing—“B”	Good Work—“B+/A-“	Exceptional—“A+”
0 points	50 points	75 points	85 points	95 points
You did not submit the assignment. You know you are not going to get a good grade.	You met the minimum basic requirements of length and timeliness, but otherwise showed no serious engagement with the material. You know you are not going to get a good grade.	You completed the assignment as prescribed and demonstrated an acceptable level of engagement with the material.	You did everything you were supposed to do and you engaged with the material at a high level. You displayed clear effort, interest, and the ability to analyze and apply the theories and constructs we are covering in class and in the course readings. You should be pleased with this grade.	You far exceeded the expectations with a truly exceptional effort and ability to analyze and apply the theories and constructs we are covering in class and in the course readings. This grade will be given in rare instances.

Late Assignments: Students/teams are expected to submit all assignments by the stated deadline. Late assignments (even if it is only by a few minutes) will receive reduced grades. The reduction in the grade will increase as the lateness increases, up to the point where extremely late submissions will receive grades of “0.”

III. Duke Honor Code/Community Standard

The Duke Honor Code/Community Standard is an integral part of this course. This means you cannot give or receive any information on any graded assignment. This prohibition applies not only to conversations you might have with students enrolled in the class, it also means you may not receive information on graded assignments from people in other Duke classes, from people outside of Duke, or from any other source (this includes your friends outside of Duke, as well as your family members).

With regard to work designated as an “individual assignment” within this course, you cannot give or receive any information on any assignment. Your work must be completely your own.

On work designated as a “team assignment,” the expectation is that you will actively participate with the members of your team in the completion of the assignments. You cannot, however, give or receive any information on any assignment outside of working with your team members. This includes prohibitions on sharing information with or receiving information from other teams, as well as sharing information with or receiving information from any individuals who are not members of your team.

If there are any questions about how the Duke Honor Code/Community Standard applies, either in terms of the course overall or with regard to a specific assignment, please contact the course instructor directly.

IV. Required Course Materials

Textbook:

The textbook we use in this course is available to view online through the Duke library. You may access it through the link provided below. If you have any difficulty accessing the text, please advise either the instructor or the course TAs. You also will find the book is available for purchase online at a very reasonable price, if you prefer to own a copy. The textbook information and library link are:

Designing for Growth: A Design Thinking Tool Kit for Managers, Jeanne Liedtka and Tim Ogilvie (Columbia Business School Publishing) ISBN-10: 0231158386; ISBN-13: 978-0231158381 [Designing for Growth](#)

Electronic Coursepack:

The electronic course pack, “Design Thinking and Innovation” contains the rest of the background readings and the simulation for this course. You will obtain and pay for your coursepack directly from Harvard Business Publishing. A link for the coursepack is provided via a Sakai announcement email to the class.

All students are expected to purchase a course pack, in compliance with Harvard’s copyright provisions clearly noted on the Harvard Business Publishing site as well as on each reading and simulation we are using from Harvard.

In addition to the readings and simulations included in the course pack at the beginning of the semester, the instructor reserves the right to add readings and other materials to the course pack throughout the semester, as appropriate. Should this occur, you will be advised to purchase these additional materials directly from Harvard Business Publishing.

V. Wellness and Mental Health

Graduate study can get intense at times, so it's important to take care of your body and mind. There are many resources at Duke to help graduate students with their physical, mental, and social wellbeing. We encourage you to take advantage of these resources. If you have wellbeing-related concerns, questions, or suggestions, please contact grad-gsa@duke.edu.

- [DukeReach](#) is a good starting point if students are unsure where to turn for health, well-being, and safety resources on campus.
- [Counseling and Psychological Services \(CAPS\)](#) helps students manage increasing stress or deal with situations best addressed in collaboration with a trained mental-health professional. CAPS staff members are also available to provide counsel on how to be supportive of a peer that you may be concerned about.
- [Blue Devils Care](#) is a new, free, 24/7 mental telehealth service for students.
- The [Duke Student Wellness Center](#) helps students focus on their individual wellness by looking at the integration of many areas of life, including financial, social, spiritual, intellectual well-being, mind-body,

and the environment around them. The center provides individual services, does group outreach, and acts as consultants as well as a hub of information on wellness. (Check out the center's [Moments of Mindfulness activities](#).)

- [Student Health Services](#) provides a wide range of health-care services, many of which are covered by the student health fee. Student Health can serve as the primary-care physician for students and also refer students to specialists within the Duke network as needed.