

INNOVATE USING DESIGN THINKING

Block Week:	January 13-17, 2020
Professors:	Gita Johar, Meyer Feldberg Professor of Business Adam Royalty, Designer in Residence, Columbia University
Room:	Columbia Design Studio @ Riverside Church near campus
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Office Hours:	By appointment.

Note: This class will be listed as a Columbia Business School course as well as a SEAS course. We will accept 20 MBA students and 20 SEAS students. The course will be taught in the Design Studio at Riverside Church, near campus. The course is project-based and experiential and you will be expected to leave the classroom in the afternoons to conduct observational research, interviews, and to build and test prototypes.

Introduction

Innovation is about seeking creative solutions to challenging problems. In the world of business, creativity is not only about being novel and original, but also about being useful to the end-user. Does the solution solve a user problem effectively and efficiently? Does it address a customer need? Does it do a job for the consumer, a job that needs to be done? In this course, we will learn about the process and tools of design thinking that can help us to understand and define consumer problems, generate ideas to solve these problems, develop concepts and prototype solutions, and experiment and tweak these solutions.

What is design thinking? In the words of Tim Brown of IDEA: “Put simply, [design thinking] is a discipline that uses the designer’s sensibility and methods to match people’s needs with what is technologically feasible and what a viable business strategy can convert into customer value and market opportunity.” More concretely, design thinking usually refers to:

1. A human-centered approach to solving problems, and
2. Using an iterative process to arriving at a better solution.

Human-centered refers to focusing on *real* people's (usually customer's) needs and problems— as opposed to focusing on the problems of a demographic group or a segment. We will use methods such as observation and depth-interviews with real, individual consumers and develop products/services based on the insights we generate on the basis of interactions with these consumers. This emphasis on observation and interaction rather than surveys recognizes that we don't usually know what would solve our challenges and disappointments, and are therefore at a loss to articulate it.

An iterative process refers to the notion that a solution need not be complete and elegant. Rather, design thinking focuses on building somewhat rough product prototypes that are based on deep customer understanding of “jobs to be done.” These prototypes are tested soon and often and constantly evolve. Experimentation plays a big role in testing and refining potential solutions.

So, to summarize, *design thinking is a creative and systematic approach for solving problems by relying on human-centered and iterative processes.*

Course objectives and approach

The course will illuminate how Design Thinking can enhance innovation activities in terms of market impact, value creation, and speed.

The course objectives are:

1. To provide you with a strong conceptual as well as practical understanding of design thinking, and
2. To enable you to reliably come up with creative solutions to challenging problems.

More specifically, the course aims to:

1. Strengthen your individual and collaborative capabilities to identify customer needs using indirect and qualitative research, create sound concept hypotheses, and develop a prototype that allows for meaningful feedback in a real-world environment.
2. Help you translate broadly defined opportunities into actionable innovation possibilities and recommendations for client organizations.

The course will use a combination of lectures (including guest lectures), videos, readings, and assignments. The project will give you an opportunity to come up with a creative solution to problems or challenges in a particular consumer context (tbd).

Connection with the Marketing Core Course

This course builds on the concepts of market segmentation, targeting, positioning, new product development, and advertising.

Method of Evaluation

Diverse teams of four will be created by the instructors keeping in mind the usefulness of interdisciplinary perspectives in design thinking.

Class participation/preparedness (individual):	20 points
Assignments (individual and group):	80 points
I. Depth interview and poster (individual)	20 points
II. Project templates (individual and group)	20 points
III. Final project submission (group of 4)	30 points
IV. Final project pitch presentation (group of 4)	10 points

Evaluation and Assignments Details

Your class participation / class preparedness grade will be based on:

- **Attending class and being on time** - Much of the learning will occur in the course of the discussions and assignments in class, and regular attendance is required in order to receive credit for class participation. **Excused absences must be cleared through the office of student affairs (OSA), who will then inform me of the excused absence.** In general, reasons for excused absences include health problems, personal emergencies, and religious observance (not interviews).
- **Being prepared for class** - Class preparedness will be assessed based on your comments in class as well as on your feedback to other students. Reading the required readings and cases for each session is the best way to prepare for class discussion. Evaluation of class participation is based upon the quality (not the quantity) of your comments, as reflected by their relevance, insightfulness, and coherence. Attendance is a necessary but not sufficient condition for participation. If you do not actively participate, you will receive a low participation grade even if you attend every class.

- **Your conduct and behavior in class** – Out of respect for the other students in your class, it is important for you to focus your full attention on the class for the entire class period. Most students observe proper decorum, but it takes only one person’s behavior to distract the entire class. Columbia Business School students have complained to the school about students who use class time for other purposes or act in a distracting manner. Class will be conducted using the same rules of decorum that would apply in a business meeting. These rules include the following: Arrive in class on time; once you have arrived, you should leave the classroom only if absolutely necessary--leaving to make or take phone calls, to meet with classmates, or to go to an interview, is not considered appropriate behavior. If for some reason you must be late for class or leave early, please let me know. Unless otherwise directed, use of laptops, cell phones, PDAs, or any other wireless devices is prohibited.

Details on other assignments will be presented in class. You will work on an innovation project for a client and create a pitch based on a design thinking process that we will follow in class. The pitch deck is the final group deliverable. Along the way, you will submit the following templates that will be input to your final pitch: Design Brief, Design Criteria, Napkin Pitch, and Final Learning Launch. Some of these are individual assignments.

Required Books

Jeanne Liedtka and Tim Ogilvie, *Designing for Growth: A Design Thinking ToolKit for Managers* (New York: Columbia University Press, 2011) **(DG)**

Jeanne Liedtka, Tim Ogilvie, and Rachel Brozenske, *The Designing for Growth Field Book: A Step-by- Step Project Guide* (New York: Columbia University Press, 2014) **(DGFB)**

Cases

Design Thinking at Great Lakes: The Search for Growth” (UVA-S-0248

frog design (HBS 5-119-040)

Additional Readings to be Discussed in Class (subject to modification)

Burroughs, J. & Dahl, D. & Moreau, P. & Chattopadhyay, A. & Gorn, G. (2011). Facilitating and Rewarding Creativity During New Product Development, *Journal of Marketing*, (75), 53-67.

deBellis, Emanuel and Gita V. Johar, “Exploring Barriers to Adoption of Autonomous Products: Anticipating Meaning from Mundane Tasks,” Working Paper.

Faraji-Rad, Ali, Shiri Melumad and Gita V. Johar (2017), "Consumer Desire for Control as a Barrier to New Product Adoption," *Journal of Consumer Psychology*, 27 (3), 347-354.

Faraji-Rad Ali, Shiri Melumad, and Gita V. Johar (2016), "When New Products should Make Customers Feel in Control," *Harvard Business Review*.

Goldenberg, Jacob et al. (2003), "Finding your Innovation Sweetspot," *Harvard Business Review*.

Goldenberg Jacob, David Mazursky and Sorin Solomon (1999), "Creativity Templates: Towards Identifying the Fundamental Schemes of Quality Advertisements," *Marketing Science*, Vol. 18, No. 3 p. 333-51.

Goldenberg Jacob, David Mazursky, and Sorin Solomon (1999), "Toward Identifying the Inventive Templates of New Products: A Channeled Ideation Approach," *Journal of Marketing Research*, 36 (May), p. 200-210.

Goldenberg Jacob and David Mazursky (1999), "The Voice of the Product: Templates of New Product Emergence," *Innovation and Creativity Management*, September Vol. 8, 3, 157-164.

Goldenberg, Jacob et al., (1999), "Creative Sparks," *Science*.

Moreau, P. & Dahl, D., (2009) "Constraints and Consumer Creativity," *Tools for Innovation*, 2009, Arthur M. Markman and Kristin L. Wood, (Eds.)

Moreau, P. & Dahl, D., (2005) "Designing the Solution: The Influence of Constraints on Consumer Creativity," *Journal of Consumer Research*.

Design Thinking Comes of Age (Harvard Business Review)

<https://hbr.org/2015/09/design-thinking-comes-of-age>

Design Thinking Preserves the Status Quo (Harvard Business Review)

<https://hbr.org/2018/09/design-thinking-is-fundamentally-conservative-and-preserves-the-status-quo>

Why Design Thinking Works(Harvard Business Review)

<https://hbr.org/2018/09/why-design-thinking-works>

IDEO Breaks Silence on Design Thinking Critics (Harvard Business Review)

<https://www.fastcompany.com/90257718/ideo-breaks-its-silence-on-design-thinkings-critics>

COURSE OUTLINE

Day/ Session	Topic	Assignments	Pre-class Readings	Post-class Assignment
Monday: Explore 1	<p>Why Design Thinking and The Design Process</p> <p>Project Presentation by client</p> <p><i>Introduction to the subject of design thinking. Discuss models used by IDEO, Frog Design etc. Importance of mindsets. Discuss the project with the client.</i></p>	Complete step 1: Identify the opportunity based on the project presentation	DG Chapters 1 and 2 DGFB Step 1	
Monday 2	<p>Design Brief</p> <p><i>Scoping the project and deciding on target. For whom are we designing? How will we know if we have succeeded or failed?</i></p>	Complete steps 2 and 3: Scope the project and draft your design brief Secondary Research	DGFB Step 2, 3,	Submit design brief for your project
Monday 3	<p>Constraints and Visualization</p> <p><i>How to apply constraints and visualization to the design problem.</i></p>	Design Tool: Visualization Think about what a visualization of the project issue might look like	DG Chapter 3 pages 76-77	
Monday 4	<p>Ethnography</p> <p><i>Share challenges and tips on observation and interviewing.</i></p>	Individual: Complete 2, 45-minute target market respondent interviews (individual assignment), using guide. Monday evening.	DG Chapter 4, DGFB Step 4, pages 46-61	
Tuesday: Explore and Reframe 1	<p>Identifying Insights</p> <p><i>Great Lakes Case</i> <i>Create mind maps and derive insights.</i> <i>Tools: Journey Maps, Empathy Maps, User Needs</i></p>	Create a team poster based on your interviews	DG Chapter 6, DGFB Step 6 Great Lakes Case	
Tuesday 2	<p>Design Criteria, Brainstorming</p> <p><i>Finalizing insights, developing design criteria, brainstorming and other ideation techniques</i></p>		DG Chapter 7 DGFB Step 7, 8	Submit design criteria for your project

Tuesday: Generate 3	Concept Development <i>Building a portfolio of concepts</i>		DG Chapter 8, DGFB Step 9,	
Tuesday 4	Napkin Pitch, Surface Assumptions <i>Developing napkin pitches-- describing the big idea, its target customers and their unmet need, and why the concept creates novel value for them; the elements you will make, buy, and partner for; the channels you will use; and the potential rivals to watch. Four tests of business model including desirability, feasibility, viability.</i>	Create napkin pitch	DG chapter 9 DGFB Step 10, 11	Submit group's final napkin pitch and assumptions
Wednesday: Prototype 1	Prototypes <i>Maker Space Introduction</i> <i>How to create a pre-experience using storyboards, journey map, user scenarios etc.</i>	Create prototype	DG: Chapter 10 DGFB: Step 12, pages 78-80	
Wednesday 2	Feedback <i>Using co-creation conversations to refine prototypes.</i>	Interviews	DG: Chapter 11 DGFB: Step 13	
Thursday: Testing 1	Experimentation <i>Designing an experiment to test critical assumptions.</i>	Design a learning launch for your project	DG: Chapter 12 DGFB: Step 14	Submit final learning launch
Thursday 2	Experimentation <i>Run an experiment to test critical assumptions.</i>	Run experiments		
Thursday 3	Storytelling Prepare final pitch			

Friday 1	<p>frog Design</p> <p><i>Explore the entire process of design and development with a focus on meeting end users' needs</i></p>		Frog design Case	
Friday 2	<p>Final Pitches</p> <p><i>Students present their final pitch to the professors and clients.</i></p>		DG: Chapter 13	Submit final pitch deck incorporating learning launch feedback
Friday 3	Client Feedback and Case Studies			

Columbia Core Culture

The purpose of the Columbia Core Culture is to promote a consistent classroom environment of mutual respect, preparation and engagement. Our expectation of you in class is to be:

Present: Your success depends on being on time and present for the entire class every session. Attendance will be part of your grade for class participation and students are expected to sit in their assigned seats.

Prepared: Bring your nameplate, clicker, and complete any pre-work needed for class discussion. Expect the professor to cold call in class.

Participating: Active participation calls for no electronic devices such as laptops, tablet computers, or smartphones during class, except when the professor tells you as part of in-class work.

Honor Code

You are expected to conform to the norms of behavior outlined in the Columbia Business School Integrity Code. Any allegation of academic dishonesty will be forwarded to the Office of Student Affairs for investigation. Any case of proven academic dishonesty will result in failure in the course. Simple things such as arriving on time to class, turning cell phones off during class time and not being tempted by the many distractions that the Internet offers can make the experience more enjoyable and rewarding to all.

Instructor Bios

Dr. Gita V. Johar, Meyer Feldberg Professor of Business, Columbia Business School

Gita V. Johar (PhD NYU 1993; MBA Indian Institute of Management Calcutta 1985) has been on the faculty of Columbia Business School since 1992 and is currently the Meyer Feldberg Professor of Business and the Vice Dean for Diversity, Equity and Inclusion. She served as the school's Faculty Director of Online Initiatives from 2014 to 2017, Senior Vice Dean from 2011 to 2014, Vice Dean for Research from 2010 to 2011, Director of the Columbia Business School Behavioral Lab from 2006 to 2011, and on Columbia University's Institutional Review Board from 2002 to 2005. Professor Johar also served as the Faculty Director of the Design Your Innovation Blueprint Executive Education program and as Chair of the Faculty Steering Committee for the Columbia University Global Centers | South Asia in Mumbai. She served as the co-editor of the premier academic journal on consumer behavior, the *Journal of Consumer Research* from July 2014 to December 2017 and is currently an associate editor at the *Journal of Marketing* and a guest editor of a special issue of the journal on "Better Marketing for a Better World." Professor Johar's expertise lies in consumer psychology, focusing on how consumers react to marketing efforts, especially advertising, promotions and sponsorship. She also examines the influence of consumer identity, self-control and perceptions of control on decision making and consumption and studies how to nurture creativity. She has published several influential articles in these areas of research in premier journals. Professor Johar has also published cases on consumer adoptions of new products as well as on marketing and advertising planning. She teaches the core Marketing course and Global Immersion courses in emerging markets such as India and Myanmar, as well as courses on Innovation, Research Methods, and Consumer Behavior to MBA, Executive MBA and PhD students.

Adam Royalty, Designer-in-Residence, Columbia Entrepreneurship Innovation and Design

Adam Royalty is the Designer-in-Residence and founder of The Design Studio@Columbia Entrepreneurship. He specializes in helping teams use human centered design to launch and grow their ventures. Design methods and mindsets are especially useful for uncovering key insights from customers and rapidly iterating the core idea. Both of these together drive product/market fit.

Understanding how design can lead to personal and organizational transformation drive Adam's work. His research pursuits focus on how to authentically measure the impact of human centered design. As part of this effort Adam has worked to deepen the creative capacity of organizations across many sectors in over a dozen countries. Prior to his role at Columbia, Adam was a member of the full-time team at the Hasso Plattner Institute of Design at Stanford (a.k.a. the d.school). There he facilitated multiple design thinking courses and workshops. Additionally Adam was a founding member of the d.school K12 Lab and Environments Collaboration.