

DELIBERATE INNOVATION AND STARTUPS

Fall 2026 - Course Syllabus

Title:

CS 2701 (+HP) / CS 8803/ ECE 8863: Deliberate Innovation and Startups

Instructor:

Professor Merrick L. Furst

Background & Purpose:

This graduate/undergraduate Honors Program course was developed at Georgia Tech's Center for Deliberate Innovation (CDI). The course draws on the curriculum developed for business entrepreneurs participating in CDI's start-up accelerator, *Flashpoint@GT*, and for academic "intrapreneurs" participating in CDI's *Change Accelerator*. The process for innovation leadership developed and taught in these contexts—and taught in this course—is called "Deliberate Innovation."

This course will further your ability to be of value in the world. You will learn how to lead formative innovation by the process of Deliberate Innovation and why this process works. You will develop an understanding of the artificial instincts needed to build and maintain a deliberately innovative culture at startups and established organizations, whether in business, industry, governmental/nongovernmental organizations, academia, or other contexts. You will learn a theoretical framework and practical methodology for answering your questions about teaming, leadership, negotiation, finance, ideation, customer discovery, prototyping, market analysis, business models, selling, capital raises, and storytelling, and you will apply your learning in team projects.

No prior coursework is required; students should be prepared, however, to engage novel theoretical concepts at the intersection of innovation processes and human/social behavior.

Topical Outline:

The Four Basic Risks to Innovation: Market Risk, Technology Risk, People Risk, and Money Risk. How these relate to class business plan models and

how they can be used in early invention and planning at the earliest stages.

Decision making in Ambiguous and Uncertain Situations: Learning how the brains aversion to ambiguity affects situations where the range of parameters required for decision making is unknown – which is a common feature of entrepreneurship and innovation.

Non-Indifference: Replacing the notion of “build something that customers want (need/ desire)” with the more stable idea of looking for what customers are skillfully coping with because they are non-indifferent to it.

Developmental Levels: Understanding the distinct developmental levels that human beings can advance through and their bearing on innovation endeavors.

Understanding Human Behavior: It’s really hard for human beings to change their behavior, even with intent. Therefore, it is necessary to understand human behavior at a deeper level:

- 1. Cognitive Biases:** How people are operating subject to the biases they do not even know they are under the influence of. Learning to identify these biases and build approaches to limit their effects, where possible.
- 2. Immunities to Change:** Learning to map the psychological immune system that is keeping human beings from changing their behavior, even if they want to. Understanding how to use these immunity maps to calculate product.
- 3. Influence and Persuasion:** Recognizing the psychology of why people say “yes” and noticing the social influencers that affect these situations. How does this apply to building successful products and marketing them.

Illusion of Validity & Fundamental Attribution Bias: Noticing human tendency to believe concise, coherent stories that are easy to recall. In conjunction with the tendency to overestimate disposition and underestimate situation, it becomes nearly impossible to not generate a theory and a story to explain away behavior. This makes it really hard to see customers for who they are and truly understand their behavior.

Preferences are Labile: An introduction to why it is unsafe to think that customers have stable preferences. What should innovators do with the knowledge that if preferences even exist, they are labile and are shortlived?

Thinking about Customers: Learning to think clearly about the customer and the situations they find themselves in. The key to building a successful startup/ innovation product is the innovators ability to see customers for who they are and enable them to become more themselves.

Marketing, Selling and Other Surprisingly Practical ideas: Introduction to the definition of a market, a selling proposition, and a formal sales process. Introduction to recent studies in behavioral economic theory and how predictably irrational human behavior is both exploited by unscrupulous marketers and how it can also inform ethical marketing and product design.

Capitalization Structures and Proven Strategies for Obtaining Resources: What role does money play in the early invention and innovation process? How should someone think about money at this stage? What simple legal structures enable people to invest in inventions and startups. How do inventors, entrepreneurs and investors get together, and how do they protect themselves from each other?

Course Objectives:

1. Acquire new knowledge from fields of behavioral economics, developmental and social psychology, phenomenology, and decision theory, and to apply it in the context of innovation.
2. Apply domain knowledge and expertise acquired thus far towards designing innovation projects, team-based and solo, that are successful.
3. Learn how predictably irrational human behavior can inform ethical marketing and product design.
4. Engage in both formal and informal written and oral professional communication exercises.

Learning Objectives:

1. Demonstrate an understanding of the theoretical framework that is the basis of Deliberate Innovation
2. Analyze the four basic risks of an innovation project

3. Perform unsupervised fieldwork that involves interacting with customers in a structured conversation and extract reliable evidence of nonindifference
4. Recognize how cognitive biases, illusions and blindspots impact innovation and entrepreneurship activities
5. Learn the artificial instincts necessary to build and maintain a deliberate innovation culture at a startup or established organization.

Grading Criteria:

Evaluation will be based on participation in in-class discussions and success at fieldwork.

Readings:

The textbook for the course is "The Heart of Innovation: A Field Guide for Navigating to Authentic Demand", by Chanoff, Furst, Sabbah, and Wegman. You do not have to purchase this text. The instructor will distribute the book and course readings.

Suggested Additional Readings:

1. Thinking Fast and Slow, Daniel Kahneman
2. Skillful Coping: Essays on the phenomenology of everyday perception and action, Hubert Dreyfus
3. Behave: Biology of Humans at our Best and Worst, Robert M. Sapolsky
4. Negotiating the Impossible: How to Break Deadlocks and Resolve Ugly Conflicts (Without Money or Muscle), Deepak Malhotra
5. Pre-Suasion: Channeling Attention for Change, Robert Cialdini
6. Hooked: How to Build Habit-Forming Products, Nir Eyal
7. The Illusions of Entrepreneurship, Scott A. Shane
8. The Hard Thing about Hard Things, Ben Horowitz
9. Sources of Power: How People Make Decisions, Gary Kline
10. You Just Don't Understand, Deborah Tannen
11. Everything is Bullshit, Alex Mayyasi, Rohin Dhar, and Zachary Crockett
12. Scarcity: Why Having Too Little Means So Much, Sendhil Mullainathan and Eldar Shafir
13. Everything is Obvious: Once You Know the Answer, Duncan J. Watts

14. The Power of Habit: Why we do what we do in Life and Business, Charles Duhigg
15. Being Wrong: Adventures in the Margin of Error, Kathryn Schulz