

# DePaul University - Kellstadt Graduate School of Business

## GSB 525 – Business Innovation and Design

Winter 2021

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**Important:** As the term progresses, we may need to adjust some parts of the syllabus (e.g. due dates or instructions for assignments) to keep the course running smoothly and in a way that is manageable for all. This is a new class offered in a new format, and the current circumstances have sent us into somewhat uncharted territory, but we will work to have an excellent experience together.

### **Course Description**

This course explores the role of innovation in organizations, markets, and society. An analysis of the forces behind creativity and innovation provides the foundation for understanding what determines successful innovation outcomes. Within organizations, the discussion focuses on people, including individual creativity, and process, such as Design Thinking, Inventive Problem Solving and others. The course also explores the role of creativity in the economy and the empirical measurement of innovation in order to provide a useful and pragmatic view. The class approach is largely applied and experiential, and includes group and individual projects and exercises that allow students to be immersed in the creativity and innovation process.

While innovation and creativity methods are widely used by practitioners, the methods are also studied by academics. We will learn practical methods and approaches to innovation and creativity from a practitioner perspective and also learn what the academic literature teaches us about the effectiveness of different methodologies, the incentives of innovation policies, and how innovation fits within the firm's overall strategy.

### **Course Objectives**

In this class, students will learn to:

1. Critically evaluate different measures of innovation and creativity.
2. Understand the role of market forces in identifying and evaluating innovation opportunities.

3. Gain insight into how market structure, regulation, contracting, and joint ventures affect the supply of innovation.
4. Analyze empirical evidence about innovation activity, creativity, and performance in order to identify processes that are more likely to lead to successful outcomes.
5. Explore, enhance and demonstrate your own creative and innovative abilities to generate ideas and solutions to problems and opportunities.
6. Apply team creative collaboration principles to identifying problems and opportunities
7. Develop a practical approach to driving innovation in the organization through Design Thinking, Innovative Problem Solving, Lean Startup, and other complementary techniques.
8. Analyze the leader's role in creating an organizational environment that fosters leading edge thinking by reducing barriers to creativity and building a culture to support innovation in the workplace.
9. Analyze the impact of Business Model Innovation and Disruptive Innovation on overall innovation outcomes and trends in the economy.

## **Course Format**

We will conduct this online course in an online asynchronous format. This means that you are not required to be online at any specific time. You can work through each week's materials at your own pace but keep in mind that there will be group-based work and weekly deadlines for discussion posts and assignments. **We will post new weekly content on Mondays.**

Please make sure to have the necessary technical resources to be able to access course materials and complete assignments. If you do not have access to the following resources, please let us know immediately so that we can make accommodations for you:

- A computer that connects to the internet (web cam helpful but not required).
- A working DePaul email address. All communication goes through your DePaul email address. You can forward your DePaul email address to your personal email if you wish.
- Access to Microsoft Office or similar software.
- Ability to playback video files.

## **Office Hours/Contact Hours**

We will conduct office hours in two ways:

-By appointment at a mutually convenient date and time. Please email us to make an appointment. We will do our best to reply as quickly as possible.

-Every Thursday we will host a live Zoom call from 6 to 7 p.m. Central (Chicago) Time. This session is open to anyone who wants to join and ask questions about the class, chat, and get to know each other in a synchronous way. **This is not a required session, but we encourage you to attend when**

**you can for as long or as short a time as you are available. This will enrich our class experience and build a sense of community.**

## **Materials**

1. No required text .
2. No required readings.
3. Required lecture slides and videos posted on D2L.
  - a. The slides and videos are the core content for this class.
  - b. We expect you to carefully study and learn the content in these lectures and videos.
  - c. Some weeks our lectures are longer compared to other weeks. We present the topics and also review evidence for each topic.

We will use the Discussion Boards most weeks. The discussion boards will be posted on D2L.

## **If You Are Interested**

Once again, there are no required readings for this class. However, some of you may be interested in further pursuing some of the topics we discuss in the lectures. For those who are interested, we have curated readings about the topics we cover. Each week on the syllabus you will find a few 'If You Are Interested' readings. **These are for you to read only if you wish, and we will not test you on them.** For your reference we will include a longer set of interesting readings. These readings are meant to serve as a resource for you as you continue your MBA and beyond. Consider the readings a resource to take with you after the course ends. Perhaps you will want to come back to some of these readings in future courses, to help you develop ideas for papers/projects in other classes, or to help with a project at your job.

## **Grading**

The grade you make is based on the following required components and weights:

Case Reports	30%
Discussion Boards	30%
Course Project	
Foundation Report	15%
Final Report and Video	25%

The grading scale in this course is:

A	93% and above	C	73-76%
A-	90-92%	C-	70-72%
B+	87-89%	D+	67-69%
B	83-86%	D	60-66%
B-	80-82%	F	59% and below
C+	77-79%		

## **Description of Assignments**

### ***A. Case Reports (written in teams of two)***

You will have three case reports due in weeks 4, 6, 9 (January 25, February 8, March 1). The reports will be based on background information, lecture content, and questions that we post on D2L. Case reports are limited to a maximum of three pages (unless otherwise noted) and will be graded on a 10-point scale.

If a team member has not worked on a case report, that person's name may be omitted from the report. A team member may request to dissolve the group and work independently.

### **Case Report Requirements and Grading:**

- a. Reports must incorporate relevant class material, demonstrating a deep understanding and knowledge of concepts and frameworks from class, applying them correctly to the case.
- b. There is no re-teaching of class material. Use the class material and concepts without re-teaching them.
- c. Analysis in the report is positive (not normative) and shows a high level of independent, critical thinking, and thoughtfully addresses the case questions. A good description of what is positive and what is normative is [here](#).
- d. There are no unsubstantiated claims in the report.
- e. Report does not quote extensively from the case but explain things in your own words.
- f. Report is well organized.
- g. Report consistently uses active voice.
- h. Spelling, punctuation and grammar are accurate.

As reports deviate from the above criteria, the score on the report will be lower.

### ***B. Discussion Boards—Individual grade***

There will be required discussion board activities in weeks 1 through 7. Your discussion board grade will be an individual grade, and we will update it twice; midway through the course and at the end of the course.

### **Discussion Board Requirements and Etiquette:**

- a. Posts demonstrate knowledge of the class concepts and are linked to evidence and/or course material.
- b. Adhere to the posting requirements. In general, each discussion board topic requires one comment, either as a thread or as a reply. Most weeks have two discussion board topics -- which means that you will write two total posts for the week, one for each topic.
- c. Timely -adhere to the time window set aside for each discussion, not posted at the last minute. Timely posting leads to productive discussions, in that it allows class members to respond to each other's comments. Posts will be marked down if they are consistently entered during the last hours the board is open.
- d. If your post is related to an existing thread, you must reply to the existing thread, not create a new thread.
- e. Respectful -even when there is strong disagreement.
- f. Stimulate thinking. Do not be afraid to challenge existing comments.
- g. Encourage others to provide evidence and/or refer to course concepts to support their arguments.
- h. Move the class understanding forward.

Posts that simply state "I agree" or "I was going to say the same thing" or repackage what a previous classmate said are not actually discussion posts and will not be credited as such.

Please do not write in all CAPS. If you want to emphasize a word or phrase you may write it in bold, italics, underline it, or put an asterisk before and after the word or phrase.

We will actively monitor the discussion boards and participate when we see fit. We will keep track of the posting requirements and the quality of your comments.

### ***C. Final Project—Team of 4 (we will combine 2 case report groups for the Final Project)***

The purpose of the project is twofold:

- a. To learn more about the innovation process at a company, [open-source](#) community, or [maker-style environment](#) and,
- b. To use innovation methods or processes from class to develop two relevant innovations that can be presented to management and/or investors in a 25-minute (max) video presentation. Each member of the team must appear in the video.

There are three deliverables for the project:

- a. Project Foundation -- due in Week 7, February 15, 11:59 pm.
- b. Final Report -- due March 17, 11:59 pm.
- c. Video in mp4 format (and accompanying pitch deck) -- due March 17, 11:59 pm.

***(i) Project Foundation—due Week 7, February 15, 11:59 pm.***

Each final project team will submit a report that lays out the foundation for the final project. The report is limited to 5 pages maximum and must include the following:

- a. The company, open-source community, maker-style project.
- b. The problem(s) or need (s) that will be addressed by your innovations and why these are important.
- c. The customer segments including at least 2 personas (more if you want) that will inform your innovation ideas.
- d. The class methods or processes you will use to ideate and innovate.
- e. Short but clear statement of your goals (3-4 sentences).
- f. Division of parts of project—who will do what—with a short description of the opportunities and barriers for each role.

Unless the team identifies a particular member who has not contribute to the report, the entire team will earn the same grade on the Project Foundation Report. A team may identify a member who has not contributed to the report by leaving that person's name off the report, or by contacting Gabriella or Rafael to discuss the issue in advance.

***(ii) Final Deliverables—due March 17, 11:59 pm.***

**Final Report-- The Process:** Learn about the innovation process at the organization you identified in your Project Foundation Report (we need to approve your choice). You may use primary sources—interviews—or secondary sources like articles, reports etc. Prepare a 6-page (maximum) summary that covers the following aspects:

- The development process, timeline, team composition and anything else relevant for your company or organization.
- Innovation culture/management/incentives
- Innovation challenges in the organization, such as financial, technical, political issues, the effect these have had on innovation, and how these challenges can affect your proposed innovations.
- The role of Technology Push and Demand Pull.
- Open source vs. closed source.
- The role of end-users and/or lead users in innovation.
- Internal mechanisms for collecting ideas, if any.
- How innovation is measured and tested, where testing takes place. The time frame for prototype turnaround, A/B testing etc.
- Any other relevant aspects (especially those covered in the class).

Unless the team identifies a member who has not contributed or minimally contributed to the report, the entire team will earn the same grade on the 6-page report. A team may identify a member who has not contributed or minimally contributed to the report by leaving that person's name off the report, or by contacting Gabriella or Rafael to discuss the issue. Teams will also provide peer- assessments of their contribution and their team members' contributions to the final deliverables.

**Video and Pitch Deck – The Innovations:** Using some of the processes and methods we studied in class, develop two relevant innovations that you can present to management and/or investors. Your proposed innovations can be product or process. Create a deck and video of your pitch. Make sure to address opportunities and barriers, and how you will measure whether your ideas are successful or not. If you want (and if relevant), you can include a prototype in your presentation. Limit is 25 minutes.

We will grade each team member individually in the video. If a team member is not in the video, we will assume that person did not contribute.

The Final Deliverables Score for each team member will be:

(Report grade + Individual video grade) / 2

**Final Deliverables Due March 17 at 11:59 pm Central Time.**

### **Schedule of Deliverables**

<b>Assignment</b>	<b>Due Date. All are due at 11:59 pm Chicago time</b>
<b>Video Introduction</b>	Week 2 January 11 (on discussion board)
<b>Case Report 1</b>	Week 4 January 25
<b>Case Report 2</b>	Week 6 February 8
<b>Project Foundation</b>	Week 7 February 15
<b>Case Report 3</b>	Week 9 March 1
<b>Final Deliverables</b>	Week 11 March 17

### **Course Organization**

The learning unit in this course is the week. The term has 10 instructional weeks, and we will follow a weekly schedule that begins on Monday (i.e., new lecture notes and videos and discussion questions will be posted on Mondays).

### **Academic Integrity**

All work completed for this course must adhere to the University Academic Integrity Policy which you can review at <http://academicintegrity.depaul.edu>.

We may use **Turnitin** plagiarism detection technology for all written work submitted for this class to ensure the work is the student's (or group's) own creation and is not in violation of DePaul University's Academic Integrity Policy. Submission of work for this course constitutes (i) a pledge

that the work is the student's own original work and (ii) consent to have the work submitted to verify that fact.

If you use any materials beyond the text and lecture videos in anything you write or submit for this course, you must cite them properly. Proper citation includes using quotation marks for all quoted text and adding references for anything you paraphrase.

## **Course Outline**

### **Week 1 (Jan 4)**

#### **Introduction**

- Coarse Roadmap
- Creativity, Design, and Innovation
- Role of Creativity and Innovation in the Economy
- Measuring Creativity, Innovation, and Innovation Outcomes
- Myths of Innovation

#### **If You Are Interested:**

- Kyllianen, The Importance of Innovation – What Does it Mean for Businesses and our Society? White Paper, *Viima*, 2019.
- Popa et. al., A Theoretical Approach to the Concept of Innovation, Managerial Challenges of the Contemporary Society, 2010.
- Gerguri and Ramadani, The Impact of Innovation into the Economic Growth, *MPRA Paper No. 22270*, 2010
- Berkun, The Ten Myths of Innovation: The Best Summary, 2013, <https://scottberkun.com/2013/ten-myths-of-innovation/>

### **Week 2 (Jan 11)**

#### **Supply of Innovation**

- Demographics and Education
- Market Structure
- Innovation Policy and R&D
- IP and Control Rights
- Prizes and Contracting
- Open Innovation

**\*\*\*Video Introduction due on Discussion Board.**

#### **If You Are Interested:**

- Tam, How Immigrants Drive Entrepreneurship and Innovation, *Behavioral Scientist*, 2020.
- Amabile, Motivating Creativity in Organizations: On Doing what you Love and Loving what you Do, *California Management Review*, 1997.

- Simon and Shallone, Effects of Firm Size and Market Structures in Technological Innovation: A Review of Literature, *Journal of Sustainable Development Studies*, 2013.
- Bloom et. al., A Toolkit of Policies to Promote Innovation, *Journal of Economic Perspectives*, 2019.
- Belleflamme, Patents and Incentives to Innovate: Some Theoretical and Empirical Economic Evidence, *Ethical Perspectives: Journal of the European Ethics Network*, 2006.
- Chesbrough, The Era of Open Innovation, *MIT Sloan Management Review*, 2003.

### Week 3 (Jan 18)

#### **Demand for Innovation**

- Market Pull Factors
- Identifying Opportunities
- End-User Approaches

#### If You Are Interested:

- Motoyama and Malizia, Demand Pull or Supply Push? Metro-level Analysis of Startups in the United States, *Regional Studies, Regional Science*, 2017.
- OVO, Identifying the Best Innovation Opportunities, White Paper, 2016.
- Schuurman, User Innovation, in *Bridging the Gap Between Open and User Innovation?: Exploring the Value of Living Labs as a Means to Structure User Contribution and Manage Distributed Innovation*, 2015.

### Week 4 (Jan 25)

#### **Role of Management and Culture in Fostering Creativity and Innovation**

- Management of Innovation
- Evidence-Based Approaches to Innovation
- Corporate Culture
- Leadership

#### **\*\*\*Case 1 Due 11:59 pm**

#### If You Are Interested:

- Hamel, The Why, What and How of Management of Innovation, *Harvard Business Review*, 2006.
- Damanpour and Aaravind, Managerial Innovation: Conceptions, Processes, and Antecedents, *Management and Organization Review*, 2011.
- Rosing et. al., Explaining the Heterogeneity of the Leadership-Innovation Relationship, *The Leadership Quarterly*, 2011.
- Cameron and Quinn, The Competing Values Framework, in *Diagnosing and Changing Organizational Culture 3e.*, 2011.
- Tushman et. al., The Ambidextrous CEO, *Harvard Business Review*, 2011.

## Week 5 (Feb 1)

### **Design Thinking**

- The Design Thinking Process
- Design Thinking Variations
- Complementary Tools (Mind Mapping, Journey Mapping)
- Fundamentals of Brainstorming and Ideation

### If You Are Interested:

- Brown and Wyatt, Design Thinking for Social Innovation, *Stanford Social Innovation Review*, 2010.
- Kolko, Design Thinking Comes of Age, *Harvard Business Review*, 2015.
- Liedtka, Why Design Thinking Works, *Harvard Business Review*, 2018.
- Dam and Siang, 14 Barriers to Ideation and How to Overcome Them, *Interaction Design Foundation*, 2020.
- Cy, Detailed Book Notes on 'Mind Mapping Mastery' by Tony Buzan, *Medium*, 2019.
- Temkin et. al., Mapping the Customer Journey, *Forrester*, 2010.

## Week 6 (Feb 8)

### **Brainstorming and Ideation Techniques**

- SCAMPER
- Six Thinking Hats
- Morphological Analysis and Brainswarming

### **Behavioral Design**

- The Behavior-Centered Design Model
- Fogg's Behavior Model
- Wendel's Behavior Change Model
- Eyal's Hook Model

### **\*\*\*Case 2 Due 11:59 pm**

### If You Are Interested:

- Dam and Siang, Learn How to Do the best Ideation methods: SCAMPER, *Interaction Design Foundation*, 2020.
- Rump, Six Thinking Hats, *Medium* (Various), 2019.
- McCaffrey and Pearson, Find Innovation Where You Least Expect It, *Harvard Business Review*, 2015.
- Sunstein, Nudging: A very Short Guide, *Journal of Consumer Policy*, 2014.
- Fogg, A Behavior Model for Persuasive Design, *Stanford University Persuasive Technology Lab*, 2009.
- Wendel, *Designing for Behavior Change* (Preface), 2013.

-Batterbee, How to Create Habit-Forming Products Using the Hook Model, *UX Collective*, 2020.

## Week 7 (Feb 15)

### **Learn Startup**

### **UX Design**

#### If You Are Interested:

- Blank, Why the Lean Startup Changes Everything, *Harvard Business Review*, 2013.
- Blank, The Path to Epiphany: The Customer Development Model, in *The Four Steps to the Epiphany*, 2005.
- Kos, The Lean Startup Ultimate Guide – Everything you Need to Know About the Lean Startup, *AgileLeanLife.com*, 2017.
- Gallo, A Refresher on A/B Testing, *Harvard Business Review*, 2017.
- Minhas, User Experience Design Process, *Medium*, 2018.
- Gube, What is User Experience Design? Overview, Tools, and Resources, *Smashing Magazine*, 2010.

**\*\*\*Project Foundation Due 11:59 pm**

## Week 8 (Feb 22)

### **The Theory of Inventive Problem Solving (TRIZ)**

#### If You Are Interested:

- Illevbare et. al., A Review of TRIZ, and its Benefits and Challenges in Practice, *Technovation*, 2013.
- Souchkov, TRIZ for Business and Management: State of the Art, *Proceedings of the TRIZ Developers Summit*, 2019.
- Souchkov, TRIZ for Business and Management: State of the Art, *Proceedings of the TRIZ Developers Summit*, 2019.
- Mann and Domb, 40 Inventive Principles for Business, *The TRIZ Journal*, 1999.

## Week 9 (March 1)

### **Business Models and Business Model Innovation**

- Business Model vs. Business Strategy**
- Business Model Generation**
- Osterwalder's Business Model Canvas**
- Business Model Patterns**
- Game-Changing Moves**
- Paths to Business Model Innovation**
- Open Business Models**

**\*\*\*Case 3 Due 11:59 pm**

If You Are Interested:

- Osterwalder and Pigneur, *Business Model Generation* Book Preview, 2010.
- Cassadesus-Massanell and Ricart, How to Design a Winning Business Model, *Harvard Business Review*, 2011.
- Strategyzer, Business Models, <https://www.strategyzer.com/expertise/business-models>, 2020.
- Chesbrough, Why Companies Should Have Open Business Models, *MIT Sloan Management Review*, 2007.
- Cuofano, Innovation in Business: What is Business Model Innovation, *FourWeekMBA*, 2020.

Week 10 (March 8)

**Dynamics of Innovation**

- Technology and Market Dynamics**
- Disruptive Innovation and the Innovator's Dilemma**

If You Are Interested:

- Christensen, Exploring the Limits of the Technology S Curve, Part I: Component Technologies, *Production and Operations Management*, 1992.
- Christensen, Exploring the Limits of the Technology S Curve, Part II: Architectural Technologies, *Production and Operations Management*, 1992.
- Christensen and Bower, Disruptive Technologies: Catching the Wave, *Harvard Business Review*, 1995.
- Christensen et. al., What is Disruptive Innovation,? *Harvard Business Review*, 2015.

**Guest Speaker: March 11, 6 pm.**

**\*\*\*Final Deliverables Due March 17, 11:59 pm Chicago time**