New Product Development
BUSML 7218

I. Course Instructor

**Deborah Mitchell** – Clinical Associate Professor in Marketing
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Office Hours by appointment

II. Course Materials

A. Course Packet (CP) available through Harvard Business School Publishing. The packet contains Harvard Cases and other reading materials. It will be available for purchase via a link at the Carmen course website.

B. Supplemental Reading Materials - other readings provided by the instructor as posted at the Carmen website.

C. There are two e-books that are **recommended (but not required) for the course.** At times I may reference optional readings that can be found in these books, but again: they are not required materials that must be obtained in order to take the course. I recommend renting the Ulrich and Eppinger book rather than purchasing if you choose to acquire it. The Stickdorn and Schneider book is a paperback, available in digital format. (Note, both of these books are available in hard copy if you prefer that format for an additional price.) Titles, authors and pricing information are provided below:

1. *Product Design & Development* (6th Edition is the newest), Karl T. Ulrich and Steven D. Eppinger. This book is a classic text (very thorough, some would say DRY) and is available for rent or purchase at the following link:

2. *This is Service Design Thinking* by Marc Stickdorn and Jakob Schneider. This book is a great resource for designing customer experiences, and is available at the following link:
   https://www.amazon.com/This-Service-Design-Thinking-Basics/dp/1118156307/ref=sr_1_1?ie=UTF8&qid=1381333909&sr=1-1&keywords=service+design+thinking
III. Course Overview and Objectives

Peter Drucker, groundbreaking business writer, consultant and teacher, famously said:

“The business enterprise has two and only two basic functions: marketing and innovation. Marketing and innovation produce results; all the rest are costs.”

In this class we will examine and weave together both of these functions!

Innovation is necessary for organic, sustainable growth. While there are many types of innovation—for example, innovation in processes or business models—product innovation is a high profile, high-stakes arena where the development of new offerings is the focus. New markets, and new platforms for growth, are created when new offerings are developed and launched.

While new products and services are vital to the success of all companies, innovation is risky and most new products fail in the marketplace. Very often, ineffective marketing is the primary cause of new product failure. Marketing plays a fundamental role throughout the cross-functional development process and takes center stage during launch. Thus expertise in the design and marketing of new products is a critical skill for all managers, inside and outside of the marketing department.

The development of new offerings is a challenging, rewarding activity that requires interdisciplinary skills as well as collaboration with multiple functions across the firm. The topics in this class span a range of disciplines to reflect this imperative. You will also be introduced to “design thinking” techniques and learn new creativity skills that can be applied in all aspects of life. We will focus on the tools and techniques associated with analyzing marketing opportunities and then designing, testing and introducing new products and services. Both quantitative and qualitative approaches are covered.

This is a practical, hands-on course where students go through several of the activities of new product development in small teams. Students who take this course will find immediate applications if they work in product development, program management, brand and product management, or in operations or services related to new products. More broadly, the course is intended for students who are interested in working on new product innovations, both in entrepreneurial ventures and in established companies.

Course Objectives include the following:

- To understand the new product development process.
- To learn how to integrate the customer and knowledge of the customer into this process.
- To learn and apply concepts and tools appropriate for new product development.
- To go through the new product development process by conceiving and developing a new product or service.
IV. Bases for Grading

**Grade Components and their Contributions to the Final Grade**

Across the semester your performance on three key components will determine your grade in the course: (1) Reflection Paper, (2) Team Project (including interim project deliverables and final project presentation/deliverable), and (3) Class Participation (including In-Class Exercises). How each of these components contributes to the final grades received in the course is shown as follows. Note that the total amount of points students can earn across the semester = 500 points.

<table>
<thead>
<tr>
<th>Course Component</th>
<th>Contribution tied to BUSML 7218 Final Grade</th>
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<tbody>
<tr>
<td>Personal Application (20%)</td>
<td>100 points</td>
</tr>
<tr>
<td>Team Project (60%)</td>
<td>(300 points total, broken down across interim and final deliverables as shown)</td>
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<tr>
<td>• Interim Deliverable 1</td>
<td>30 points</td>
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<tr>
<td>• Interim Deliverable 2</td>
<td>30 points</td>
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<tr>
<td>• Interim Deliverable 3</td>
<td>30 points</td>
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<tr>
<td>• Interim Deliverable 4</td>
<td>30 points</td>
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<tr>
<td>• Final Presentation, Report</td>
<td>180 points</td>
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<tr>
<td>Class Participation, In-Class Exercises (20%)</td>
<td>100 points</td>
</tr>
<tr>
<td>Total Points (out of maximum of 500)</td>
<td>500 points</td>
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A. Personal Application

*Note, please make sure your name is included on your paper*

This final deliverable for BUSML 7218 is designed to provide a platform on which you can demonstrate your understanding and ability to apply course material going forward.

After reviewing the syllabus, your notes, course readings and other materials please describe how you will apply what you have learned in this course to an actual project or aspect of your life. Application can be tied to your current professional realm (e.g., a current or upcoming job search; a project where you work now; etc.). Alternatively, application can be tied to your current personal realm (e.g., how you would like to apply it as part of a volunteer project or nonprofit cause), or it might be tied to an entrepreneurial, for-profit venture you would like to pursue.

As a rough guideline, the length of your write-up should be between about eight and ten pages (independent of any graphics, tables, appendices or other such content you might wish to include). You can submit your “personal application” assignment anytime via Dropbox up to the **October 11 deadline** provided on the syllabus.
Our course is frameworks- and tools-based, and follows a multi-stage process culminating in your team’s project deliverable. So in your write-up you should make sure that you can reflect back your understanding of key frameworks, tools and process knowledge (as well as skills) you have gained over the seven weeks in the course—in the context of a project or application beyond the one you’re working on with your team.

B. Team Project

The team project is intended to replicate the entire design and development process of a new product, service or initiative. Although 7 weeks may seem to be a short time horizon, often product or service development must be completed in a similar window.

You will need to form a 6 (or 7) person team. Please note, there can be no teams with fewer than six members. Across the Term and based on a structured approach, as a team you will identify an opportunity for user-focused innovation, gather ethnographic data, brainstorm ideas and translate the identified customer needs into a product or service concept, and make the business case to support the development and launch of your product or services. You will refine and validate the concept by building a prototype (as realistic a mock-up or service blueprint as you can get) and conducting tests with the target users. At key milestones you will turn in an interim deliverable, and receive feedback from the instructor (see milestone templates for specific guidelines in how to structure your output for these deliverables). At the end of the Term you will make a presentation as well as turn in supporting materials that reflect your project work.

Please note, the team project requires focus on creating a new offering that is designed to deliver superior value to a specified customer/user group. Your customers can be external or internal depending on the type of innovation. A business case for the adoption of your innovation, including the supporting financial logic, is required as part of the final deliverable. You must have a clear target “customer” who will (or will not) perceive superior value in the adoption of your innovative new offering. You must also have a “sound” approach to design and deliver your product or service offering.

Here is an overview of the different steps, milestones and deliverables for the team project. (Each deliverable should be submitted to Dropbox by the date listed below):

<table>
<thead>
<tr>
<th>Date</th>
<th>Milestones and Deliverable (the latter are due in Dropbox by the indicated deadline)</th>
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</thead>
<tbody>
<tr>
<td><strong>Week 1</strong></td>
<td><strong>Due: List of team members and a team name</strong> (you don’t want to be just a number!) (Due by 10:00 pm Tuesday August 23)</td>
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<td><strong>Week 2</strong></td>
<td><strong>Interim Deliverable #1: Initial User / Customer Insights (Outputs of Observation and Empathic Inquiry Related to Your Project; 6 pages or slides max in length, not including photos and/or videos)</strong> (Due by 5:00 pm Monday August 29)</td>
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To conduct the observational research:
• As a team, choose a focus area for new product or service development. Be specific in your definition of product or service category (e.g., think “Assisted Living,” not “Institutional Facilities”…think “Oral Care,” not “Personal Care” or “Consumer Packaged Goods”).

• Individually, find a venue for observation that will tell you something interesting about people’s needs in your chosen category. Remember and use the guidelines provided in class—at this point you are trying to observe and engage in empathic inquiry solely to surface needs and gain surprising insights—NOT to generate solutions or establish that you have an idea that is better than the “competition” or status quo.

• Pick a place where you can see mainstream needs, extreme needs, cultural attitudes and/or analogous behavior.

• Take 3-5 (or more) photos and/or shoot some video. Make notes about the place and how people are interacting in the space.

• Make three interpretations of what you see. Don’t just stay at the easily-observed surface level. Peel back the layers. Go deep. If you talk to any consumers or users, utilize the principles of empathic inquiry.

• As a team, come together and synthesize all your different observations, “a-has,” and so on. Using the tools provided in class, look for patterns, etc.

• Summarize your process, what you learned and your most valuable insights.

• Print out (samples of) your data, plus your interpretations & summary P.o.V. (problem statement).

**Week 3 Interim Deliverable #1b (additional research and revised P.o.V., based on feedback in Week 2.)**
- Print out (samples of) your updated data, plus your interpretations & summary P.o.V. (problem statement)

**Week 4 Interim Deliverable #2: Outputs of Ideation & Initial Screening: Top 3 Concepts (6 pages or slides max)**
To generate ideas, utilize a variety of the methods discussed in class and assigned readings. Based on preliminary testing and screening, identify three concepts that merit further consideration for product or service design. Make sure that all three are relatively equal in their attractiveness at this point (i.e., do not have a preferred idea and then include two “straw man”-type ideas to simply meet the requirement for three ideas at this stage.

**Week 5 Interim Deliverable #3: Proposed Concept with Initial Value Proposition and Supporting Rationale (10 pages or slides max)**
Based on subsequent screening and evaluation of the three concepts selected previously using frameworks and tools from class, select your project concept and research the marketplace or environment in which it will compete. From the users’ point of view, what are the next best options to adoption of your concept? What
and/or who are you competing with? How will the product or service be made? Are there operational challenges/constraints you anticipate during the development process?

Your deliverable needs to include an analysis of the category, initial value proposition (which may be modified later), and a description of your concept screening and evaluation process (Why did you choose that concept? What are the advantages and disadvantages of the product or service concept compared with the status quo or other options?).

**Week 6**  
*Interim Deliverable #4: Outputs of Structured Prototyping*

A central part of new product or service development is the creation of a physical prototype and plan on how to make or design the product or service. The prototype may be a mock-up made with cardboard, plastic, clay, or whatever else you may wish to use to “form” your idea (if it is a service it may be a storyboard or service blueprint of the experience).

Turn in a summary (one page max) on what you have learned from consumer and stakeholder feedback regarding your prototype. Include descriptions of any modifications or other responses you’ve made in light of the feedback; attach a photo or other representation of your current working prototype to the 1-page summary.

**Week 7**  
*Project Presentations & Final Report*

Please make sure to fully document the development process, including ideas which are not subsequently acted upon. Your overall team project grade will be based on ongoing deliverables, the final project report (created in part from weaving the weekly deliverables into one document), the in-class presentation during the final session, and peer evaluations. An outline for the presentation as well as your final project write-up is shown on the project template document (See Carmen).

The presentation must include a year-one launch plan, including your market forecast and reflecting your decisions about marketing and operational issues tied to launch. Your launch plan should be informed by your previous market research and the consumer and stakeholder feedback on your product prototype. If your innovation involves an internal initiative, your year-one launch plan should address internal marketing and change management as well as operational issues.

An important element of the presentation is its persuasiveness. The frame you should adopt for the presentation is one of a “pitch”: You are trying to persuade key decision-makers (e.g., a senior executive leadership team; investors; your boss; etc.) that your proposed innovation is worthy of investment, resources and support.

**General guidelines for successful projects are as follows:**

- **Your innovation must be able to create significant value for a target group**—value that can also be captured. This is an obvious and critical aspect of being able to make the business case for your proposed innovation. One good way to verify a market need is to perform a competitive
review and identify existing products or services (or the status quo) that try to meet the need. Your innovative offering need not be a variant of an existing product or service, but the market need addressed by your product should be clearly evident. The offering does not have to have a tremendous economic potential, but should at least be an attractive opportunity for a firm.

- **There should be a demonstrable way to make or deliver your product and service offering.** Having an idea or having a customer without the operational capability to make the product or design the service is useless. A successful project must be realistic in terms of operational considerations on where to make, how to make, how to trigger a change in the system (for service design), how to design your supply chain networks etc.

- **The new offering should require no basic technological breakthroughs.** We do not have time to deal with large technological uncertainties. In fact, we are more concerned that you have a specific market need in mind and the right approach to make your product or service than that you attempt to develop new technologies.

- **You should have access to more than five potential users of the product or service (more than 20 would be nice).** You will need to talk with them, observe them and visit them with your prototypes. **Research, including repeated collection of primary data, is essential.**

- **The most successful projects tend to have at least one team member with strong personal interest in the target market and knowledge about the product/service functions.**

- **Many products are really not very well designed.** (See for example the badly designed products documented at [www.baddesigns.com](http://www.baddesigns.com).) Thus, if you choose to focus on product innovation that satisfies these general guidelines, you will likely be able to develop a product that is superior to what is currently on the market!

**C. Class Participation, including In-class Exercises**

**Class Participation, including Cases and Exercises as well as In-class Exercises**

Your class participation grade will depend heavily on the quality of comments and contributions made during class. Readings will come from a combination of business press, Harvard Business Review (HBR) articles and other mini-cases to support our class discussions. During some class sessions we will also spend some time evaluating your current progress / status on your team project. Therefore, it is necessary to reflect on readings and/or continue to push forward on the project before coming to class. The course goes by very quickly, so you will want to stay current on the project no matter what.

Quality of participation, i.e. insightful comments or questions, is much more important than quantity. Also, a consistent level of participation throughout the Term will receive a much higher score than a high level of participation for just a few classes. **You are encouraged to check with the instructor periodically to find about your participation grade.**

**V. Honor Code**

Any use of case analyses or any other material in any format from other sections of this course or any course taught at any time in the past or present will be considered a violation of the honor
code. The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the University’s *Code of Student Conduct*, and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the University’s *Code of Student Conduct* and this syllabus may constitute “Academic Misconduct.”

VI. **Disability Accommodation**

If you need an accommodation based on the impact of a disability, please arrange an appointment with one of the instructors as soon as possible. We need to discuss the course format and explore potential accommodations. We rely on the Office for Disability Services (150 Pomerene Hall) for assistance in verifying need and developing accommodation strategies. You should start the verification process as soon as possible.
Class Schedule
(Fall Semester, Term 1)
Readings found in Course Packet (CP) or posted at Carmen Website

Week 1: Tuesday (August 23)
Topic: **Introduction to New Product Development: It’s not about me, it’s not about you, it’s about THEM**

Related Readings (these should not be read ahead of our first class meeting, but can be referenced after that session):
- Four Steps to the Epiphany, Chapters 1 and 2 (Carmen)
- Direct Observation: Some Practical Advice (Carmen)

**In-class Activity:** “Phone”

**Team Project Activity:** Team Formation and Discussion of First Team Assignment

**Due by 10:00 pm Tuesday Aug 23:** List of Team Members with Contact Information, using template provided (post to Dropbox)

**Due by Monday August 30:** Team Project Interim Deliverable #1 (post to Dropbox)

Week 2: Tuesday (August 30)
Topic: **Opportunity Identification and P.o.V.**

**Related Readings:**
- Needfinding (Carmen)
- Turn Customer Input into Innovation (Carmen)
- Customers as Innovators (Carmen)

**In-class Activity:** “20 bugs”

**Team Project Activity:** Debrief, Interim Deliverable #1

Week 3: Tuesday (September 6)
Topic: **Idea Generation**

**Read:** Breakthrough Thinking from Inside the Box (Carmen)
- Creative Sparks (Carmen)
- Finding Your Innovation Sweet Spot (Carmen)
- Synectics: A Problem-Solving Tool for Educational Leaders (Carmen)

**In-class Project Activities:** “Synectics for Fun and Pleasure,” other Applications.

**Team Project Activity:** Progress check-in on revisions to Interim Deliverable #1.

**Due by Monday September 14:** Team Project Interim Deliverable #2 (Post to Dropbox).

Week 4: Tuesday September 13
Topic: **Managing Ideas and the Team**

**Read:** Cross-Functional Product Development Teams… (Carmen)
- New Product Development Teams Success… (Carmen)

**Skim:** Pinto (Chapter 3), Project Selection and Portfolio Management (Carmen)

**In-class Project Activity:** DiSC-related; Scoring Application

**Team Project Activity:** Debrief, Interim Deliverable #2.

**Due by Monday September 21:** Team Project Interim Deliverable #3 (Post to Dropbox).
Week 5: Tuesday (September 20)
Topic: **Methodological Issues in Consumer/User Testing and Design**

*Read:* Concept Testing Note (Carmen)
A Practical Guide to Conjoint Analysis (Carmen)

*Skim:* Pretest Market Models: A Critical Evaluation (Carmen)

*Case:* A Giant Among Women (CP)

*Case Discussion Questions:*
1. Does Giant use a “systematic” approach to design and testing? If so, how would you characterize this approach?
2. Would it be appropriate for Giant to use (even occasionally) conjoint analysis in their design and testing? Why or why not?
3. Would you use different methods for testing with technology concepts / designs as compared to Giant’s testing with concepts / designs related to biking? Why or why not?
   In each case (technology and biking), which methods would you be more likely to use?
4. Evaluate the notion of testing products and branding while using retail as a platform. Who else has done this? Who has tried to do it, and failed? Why?

*Team Project Activity:* Debrief, Interim Deliverable #3.

*Due by Monday September 28:* Team Project Interim Deliverable #4 (Post to Dropbox).

Week 6: Tuesday (September 27)
Topic: **Creating the Business Case for Launch**

*Read:* Note on Innovation Diffusion: Rogers’ Five Factors (Carmen)
Eager Sellers, Stony Buyers” (Carmen)

*Case:* Hasbro Games – Pox (A) (CP)

*Case Discussion Questions:*
1. Which of the two proposals do you support? Why?
2. Do you have any suggestions on how to modify the proposal you support to maximize the adoption of POX (given the game’s novel characteristics)?

*Team Project Activity:* Debrief, Interim Deliverable #4.

Week 7: Tuesday (October 4)
Topic and Instructor(s): **Team Presentations**

*Due:* PowerPoint and Supporting Appendices / Materials (*Post to Dropbox plus bring a handout copy of the presentation deck to class*)

Exams Week: Tuesday (October 11)

*Due:* “Personal Application” Assignment (*Post to Dropbox by 9:30 pm*)

*Due:* Team Members Evaluation (*Post to Dropbox by 9:30 pm*)
Summary of Deliverables and Important Dates

Week 1: Tuesday August 23  
Due: Team Composition List (due in Dropbox by 10:00 pm)

Week 2: Monday August 29  
Due: Interim Deliverable #1 (due in Dropbox by 5:00 pm)

Week 3: Monday September 5  
Due: Revised Interim Deliverable #1 (Interim Deliverable “1b,” due in Dropbox by 5:00 pm)

Week 4: Monday September 12  
Due: Interim Deliverable #2 (due in Dropbox by 5:00 pm)

Week 5: Monday September 19  
Due: Interim Deliverable #3 (due in Dropbox by 5:00 pm)

Week 6: Monday September 26  
Due: Interim Deliverable #4 (due in Dropbox by 5:00 pm)

Week 7: Tuesday October 4  
Due: Final Presentation Materials (Powerpoint and Supporting Appendices)  
(due in Dropbox by 6:00 pm)

Week 8: Tuesday October 11  
Due: “Personal Application” Assignment (due in Dropbox by 9:30 pm)  
Due: Evaluation of Team Members (due in Dropbox by 9:30 pm)
Instructor

Dr. Deborah Mitchell
Clinical Associate Professor

Deborah Mitchell has a unique background that combines academic and industry expertise.

She received her Ph.D. in Marketing and Behavioral Science from the University of Chicago and began her academic career as a faculty member at the Wharton School of the University of Pennsylvania. She has held faculty positions at Stanford University Graduate School of Business and the Johnson Graduate School of Management (Cornell). Prior to joining Fisher in 2014 she was a faculty member at the Wisconsin School of Business (University of Wisconsin-Madison), where she taught various marketing courses and was awarded “School of Business Teacher of the Year” by full-time MBA students two years in a row.

Deborah’s research has been published in the Journal of Consumer Research, Journal of Consumer Psychology and Journal of Advertising. In addition to her academic career, Deborah has worked closely with industry leaders as president of CypressTree Corp. Clients have included Time-Warner, CNN, Bristol Meyers Squibb, General Motors, TIAA and Syngenta. Her consulting work has focused heavily on brand-based change initiatives, with an emphasis on building brand and product management excellence across a variety of organizations.