Managing and Marketing New Product Developments  
EBGN 576  
Fall Semester 2019

Instructor  
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Office Hours  
Fridays  
12:00-1:00  
AND flexible by appointment

Class Meetings  
Tuesdays & Thursdays  
11:00 – 12:15

Teaching Assistant  
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Course Overview  
New products and services are the lifeline of competitive companies and committed non-profits. To differentiate their brands, organizations leverage their resources and capabilities to turn creative ideas into innovative products and services that address important needs. With the technical expertise you gain here at Mines, you may be called on to lead or participate in a new product/service development or marketing team. In this course, you will experience the methodical process of developing new products from early concept to market launch.

Using a hands-on approach, we start by exploring simple product concepts from your chosen technical field of study. This is a fun opportunity for you to get creative. After settling on an appropriate target market for your future product, we use a combination of tools to uncover customers’ needs and wants. These tools include empathy mapping and conjoint analysis. Next, we turn potential customers’ input into an early prototype that we validate and test with target customers. We iterate on this prototype testing assumptions and gathering insights along the way. We develop a business model to validate the business case for your new product/service. Finally, we develop a launch plan for the new product/service.

LEARNING OBJECTIVES  
Upon completion of this course, you will learn and gain first-hand experience with the following topics:

- Understand the process of developing a new product that leverages a company’s resources, capabilities and technical opportunities.
- Gain an understanding of analytical methods used to gather, synthesize and operationalize customer needs and wants.
- Acquire experience turning a new product concept into a prototype for validating assumptions and customer acceptance.
- Develop a business model to ensure the new product achieves its strategic and financial objectives.
- Gain a thorough understanding of the complex activities involved in a new product launch.
- Attain a high level of competence that allows you to contribute to a successful new product team.
REQUIRD COURSE MATERIALS

- Readings to be posted.

PEDAGOGICAL METHOD
This course is centered on learning and applying new product development concepts to complex day-to-day business realities. I use a combination of interactive lectures, class discussions, and real-world projects (teamwork) to communicate the learning objectives.

COURSE GRADING

Attendance: Due to the experiential and integrative nature of this course, your attendance in ALL class sessions is required.

Individual Grades

1. Participation and In-class Learning (200 points)
   In class, your collaboration opportunities multiply and you gain so much through networking and real-world problem solving. Quality class participation is therefore grounded in your preparation for and contribution to discussions and assignments. Here’s a rough breakdown of how I assess your participation and in-class learning:

   85-95%: You attend class consistently on time and actively participate in discussions. Your contributions indicate genuine interest in collaborating and helping. Focus is on quality contributions, not quantity. Your teammates cannot live without you.

   75-84%: You attend class consistently on time and actively participate in discussions. Your comments indicate some interest in helping. Your teammates find you somewhat helpful.

   70-74%: You attend class consistently on time, and usually do not participate in discussions. Your teammates wouldn’t miss you if you were absent.

   <69%: You don’t come to class consistently and when you do, you are not usually engaged. Your teammates think you dropped the course.

2. Team Journal – Individual Contribution (200 points)
   As is typical of real-world teams, I expect your team to document alternatives explored, action contemplated and taken, assumptions tested, and customer input gathered. Your team maintains a shared team journal. We will elaborate on this in more detail during the first week of the course. While the team journal is shared by all team members, this grade reflects your individual contribution to the journal.

Team Grades

1. Team Deliverables (500 points)
   In order to facilitate learning-by-doing, this course incorporates real-world projects. You will form a new product/service development team. This team works through the process of developing a simple new product or service and its launch plan. Your goal is to collaborate to develop a product/service that appeals to customers while demonstrating the potential to meet strategic and financial goals. Your deliverables grade will be influenced by feedback solicited from project sponsors.

2. Team Presentation (100 points)
   New product development teams typically deliver presentations to company senior executives. Your team will prepare and deliver a presentation in the same manner. I expect you to deliver a convincing presentation designed to “sell” your company’s executives on your new product plans. More details will be provided in class.
### Summary of Assignments and Points

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Grading Basis</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation &amp; Contribution</td>
<td>Individual</td>
<td>200</td>
</tr>
<tr>
<td>Team Journal</td>
<td>Individual</td>
<td>200</td>
</tr>
<tr>
<td>Class Deliverables</td>
<td>Team</td>
<td>500</td>
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<tr>
<td>Team Presentation</td>
<td>Team</td>
<td>100</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>1000</strong></td>
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SYLLABUS IS SUBJECT TO CHANGE DURING THE SEMESTER AS COURSE IS ADJUSTED TO FIT NEEDS

### Journal Guidelines

Your journal is both a venue in which to keep track of your work and an opportunity to demonstrate the steps you took to evaluate and execute the idea. Thus, the journal should “show your work.” Include a lot of details. For example, rather than saying, “We interviewed eight people this week,” write down who they were, how you identified them, how/where you spoke, and for how long. Also include notes from each interview and an analysis of what you learned and how it influenced your choice of next steps. Generally speaking, “good” journals have frequent, detailed entries. “Average” journals appear to be a rush job put together in the last couple weeks of the semester.

### COURSE EXPECTATIONS

**Active Participation** – All success is built on a foundation of hard work and curiosity. Do not procrastinate. The nature of group work is cumulative and poor work early on will make the deliverables much more difficult later on.

**Collaboration** – Entrepreneurship requires your active collaboration with others including co-founders, beneficiaries, employees, investors, partners, suppliers, etc.

**Creativity** – Entrepreneurship requires creative thinking. You have to be curious to explore new ideas regardless of their source and be willing to see multiple perspectives. To succeed, you must remain open to challenging your assumptions and beliefs.

**Grievances:** As a rule, makeup is not an option in this course. If you feel you have been graded unfairly on an assignment, you may follow this process:

1. Within **seven days** of receiving the grade, write me an appeal. After seven days, **grades are final**.
2. In your appeal, you must provide a **written statement** as to why the grade is unfair. Be sure to state your argument as to why the grade is not in alignment with grading standards, or the work was misinterpreted. Arguing that you need or deserve a higher grade because you worked hard is insufficient.
3. Submit your appeal to me **via email** and I will consider it and let you know my decision within seven days.

### Diversity and Inclusion:

At Colorado School of Mines, we understand that a diverse and inclusive learning environment inspires creativity and innovation, which are essential to the engineering process. We also know that in order to address current and emerging national and global challenges, it is important to learn with and from people who have different backgrounds, thoughts, and experiences. Our students represent every state in the nation and more than 90 countries around the world, and we continue to make progress in the areas of diversity and inclusion by providing [Diversity and Inclusion programs and services](#) to support these efforts.

### Students with Disabilities:

The Colorado School of Mines is committed to ensuring the full participation of all students in its programs, including students with disabilities. If you anticipate or experience any barriers to learning in this course, please
feel welcome to discuss your concerns with me. Students with disabilities may also wish to contact Disability Support Services (DSS) to discuss options to removing barriers in this course, including how to register and request official accommodations. Please visit their website at disabilities.mines.edu for contact and additional information. If you have already been approved for accommodations through DSS, please meet with me at your earliest convenience so we can discuss your needs in this course.

**Accessibility within Canvas:**
Read the [Accessibility Statement](#) from Canvas to see how the learning management system at the Colorado School of Mines is committed to providing a system that is usable by everyone. The Canvas platform was built using the most modern HTML and CSS technologies, and is committed to W3C's Web Accessibility Initiative and Section 508 guidelines.

**Discrimination, Harassment, and Title IX:**
All learning opportunities at Mines, including this course, require a safe environment for everyone to be productive and able to share and learn without fear of discrimination or harassment. Mines’ core values of respect, diversity, compassion, and collaboration will be honored in this course, and the standards in this class are the same as those expected in any professional work environment. (More information can be found here.) **Discrimination or harassment of any type will not be tolerated.** As a participant in this course, we expect you to respect your instructor and your classmates. As your instructor, it is my responsibility to foster a learning environment that supports diversity of thoughts, perspectives and experiences, and honors your identities. To help accomplish this:

- Course rosters are provided to the instructor with the student’s legal name. I will honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records.
- If something is said or done in this course (by anyone, including myself) that made you or others feel uncomfortable, or if your performance in the course is being impacted by your experiences outside of the course, please report it to:
  - Me (if you are comfortable doing so)
  - Wellness Center- [Counseling](https://www.mines.edu/counseling-center/)
  - Speak Up (https://www.mines.edu/speak-up/) – Anonymous Option

In this course, we will cultivate a community that supports survivors, prevents interpersonal violence, and promotes a harassment free environment. Title IX and Colorado State law protects individuals from discrimination based on sex and gender in educational programs and activities. Mines takes this obligation seriously and is committed to providing a campus community free from gender and sex-based discrimination. Discrimination, including sexual harassment, sexual violence, stalking, and domestic violence, is prohibited and will not be tolerated within the Mines campus community. If these issues have affected you or someone you know, you can access the appropriate resources on the [Mines Title IX website](#). You can also contact the Mines Title IX Coordinator, Camille Torres, at 303.384.2124 or titleix@mines.edu for more information.

It's on us, all of the Mines community, to engineer a culture of respect.

**CARE @ Mines:**
If you feel overwhelmed, anxious, depressed, distressed, mentally or physically unhealthy, or concerned about your wellbeing overall, there are resources both on- and off-campus available to you. If you need assistance, please ask for help from a trusted faculty or staff member, fellow student, or any of the resources below. As a community of care, we can help one another get through difficult times. If you need help, reach out. If you are concerned for another student, offer assistance and/or ask for help on their behalf. Students seeking resources for themselves or others should visit [care.mines.edu](#).

Additional suggestions for referrals for support, depending on comfort level and needs include:
- [CARE at Mines](care.mines.edu)– for various resources and options, or to submit an online “CARE report”
about someone you’re concerned about (email care@mines.edu)

- **CASA** ([https://www.mines.edu/casa](https://www.mines.edu/casa)) – for academic advising, tutoring, academic support, and academic workshops
- **Counseling Center** ([https://www.mines.edu/counseling-center/](https://www.mines.edu/counseling-center/)) – for students to call 303-273-3377 for an appointment. There are also online resources for students on the website. Located in the Wellness Center 2nd floor at 1770 Elm St.
- **Health Center** ([https://www.mines.edu/student-health/](https://www.mines.edu/student-health/)) – students may call 303-273-3381 for appointment. Located in Wellness Center 1st floor at 1770 Elm St.
- **Colorado Crisis Services** ([http://coloradocrisisservices.org](http://coloradocrisisservices.org)) – for crisis support 24/7, either by phone, text, or in person. Colorado Crisis Services is a great confidential resource, available to anyone by calling 1-844-493-8255, or texting “TALK” to 38255. Walk-in location addresses are posted on the website.

All of these options are available for free for students. The Counseling Center, Health Center, and Colorado Crisis Services are confidential resources. The Counseling Center will also make referrals to off-campus counselors, if preferred.

In an emergency, you should call 911, and they will dispatch a Mines or Golden PD officer to assist.

**Absence Policy:**
The [Student Absences](https://www.mines.edu/student-absences) webpage outlines CSM's policy regarding student absences. It contains information and documents to obtain excused absences.

**Note:** All absences that are not documented as excused absences are considered unexcused absences. Faculty members may deny a student the opportunity to make up some or all of the work missed due to unexcused absence(s). However, the faculty members do have the discretion to grant a student permission to make up any missed academic work for an unexcused absence. The faculty member may consider the student's class performance, as well as their attendance, in the decision.

In the case of an absence, the student is responsible for determining what work was missed and for putting forth a good faith effort to review the material on their own.

**Policy on Academic Integrity/Misconduct:**
The Colorado School of Mines affirms the principle that all individuals associated with the Mines academic community have a responsibility for establishing, maintaining and fostering an understanding and appreciation for academic integrity. In broad terms, this implies protecting the environment of mutual trust within which scholarly exchange occurs, supporting the ability of the faculty to fairly and effectively evaluate every student’s academic achievements, and giving credence to the university’s educational mission, its scholarly objectives and the substance of the degrees it awards. The protection of academic integrity requires there to be clear and consistent standards, as well as confrontation and sanctions when individuals violate those standards. The Colorado School of Mines desires an environment free of any and all forms of academic misconduct and expects students to act with integrity at all times.

Academic misconduct is the intentional act of fraud, in which an individual seeks to claim credit for the work and efforts of another without authorization, or uses unauthorized materials or fabricated information in any academic exercise. Student Academic Misconduct arises when a student violates the principle of academic integrity. Such behavior erodes mutual trust, distorts the fair evaluation of academic achievements, violates the ethical code of behavior upon which education and scholarship rest, and undermines the credibility of the university. Because of the serious institutional and individual ramifications, student misconduct arising from violations of academic integrity is not tolerated at Mines. If a student is found to have engaged in such misconduct sanctions such as change of a grade, loss of institutional privileges, or academic suspension or dismissal may be imposed.

The complete policy can be found in the [Mines’ Policy Library](https://www.mines.edu).
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topics/Activities</th>
<th>Deliverable/Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tue</td>
<td>Overview, Goals &amp; Expectations.</td>
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<tr>
<td></td>
<td>Thu</td>
<td>No class</td>
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<td>2</td>
<td>Tue</td>
<td>New Product Management Process</td>
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<td></td>
<td>Thu</td>
<td>Project Opportunities. Form Teams</td>
<td>Form Teams, Agreement</td>
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<tr>
<td>3</td>
<td>Tue</td>
<td>Target Markets &amp; Segmentation. Vision. What change are we leading? Who cares?</td>
<td>D1: Positioning Statement Target Market Brief</td>
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<td></td>
<td>Thu</td>
<td>Direct &amp; Indirect Competition: Who's relevant? What's our unfair competitive advantage?</td>
<td>Competitive &amp; Industry Landscape</td>
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<tr>
<td>4</td>
<td>Tue</td>
<td>Customer Discovery. Empathy Maps. Personas. How do we know what our target customers need?</td>
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<tr>
<td></td>
<td>Thu</td>
<td>Empathy Maps: Which problem are we solving?</td>
<td>D2: Empathy Maps 1.0</td>
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<tr>
<td>5</td>
<td>Tue</td>
<td>No class: Career Day</td>
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<td></td>
<td>Thu</td>
<td>Conjoint Analysis: What matters to customers?</td>
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<tr>
<td>6</td>
<td>Tue</td>
<td>Conjoint Analysis: Designing Attributes &amp; Levels</td>
<td>Conjoint Attributes &amp; Levels</td>
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<td></td>
<td>Thu</td>
<td>Conjoint Interviewing: Dig deep</td>
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<td>7</td>
<td>Tue</td>
<td>Concept Design. Pretotyping: Let's do better than an MVP</td>
<td>D3: Prototype 1.0</td>
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<td></td>
<td>Thu</td>
<td>Pretotyping, Adoption &amp; Success Metrics</td>
<td>Adoption Report</td>
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<tr>
<td>8</td>
<td>Tue</td>
<td>Business Models: will it make money? How profitable/sustainable can we make it?</td>
<td>D4: Business Model 1.0</td>
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<td></td>
<td>Thu</td>
<td>Partnerships: Who can help me make this product more successful?</td>
<td>Partnership Model 1.0</td>
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<tr>
<td>9</td>
<td>Tue</td>
<td>Launch Planning: Tying it all together for an epic introduction to customers &amp; markets</td>
<td>D5: Launch Plan 1.0</td>
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<td></td>
<td>Thu</td>
<td>Presentation Prep, Tips &amp; Best Practices</td>
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<tr>
<td>10</td>
<td>Tue</td>
<td>Final Team Presentations</td>
<td>Celebration</td>
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</tbody>
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Schedule is very likely to change