



PREPARING INNOVATIVE LEADERS FOR GLOBAL IMPACT

Graduate School of Management
Department of Marketing
University of California - Davis

New Product Development

Winter Quarter 2020

MGT 241 001 WQ 2020 (CRN: 65024)

Instructor: Dr. Kay Peters, Visiting Assistant Professor
Office: Gallagher Hall, Graduate School of Management
E-Mail: kpeters@ucdavis.edu
Office Hours: Please arrange a meeting via email and give some advance notice.

**Please note: This course has been updated
and incorporates valuable student feedback.**

Student Evaluations from	2013 SAC	2014 BAY	2015 SAC	2016 SAC
Instructor Rating:	4.8 (16 students)	4.3 (31)	4.5 (22)	4.5 (20)
Course Rating:	4.4 (16 students)	4.3 (31)	4.5 (22)	4.7 (20)

Course Description

Each year, in the US, approximately 30,000 new consumer products (i.e. CPG products) are launched. About 95% of them are failures (see Carmen Nobel (2011), *Clayton Christensen's Milkshake Marketing*). For other product categories the failure rate ranges from 40%-60%. Why is this so? Even though firms have a long history of bringing new products to the market, why do a majority of them fail?

As evident from this fact, bringing a new product to market is fraught with uncertainty, and the odds are stacked against you (quite heavily!). While no course can ensure success for every new product introduction you might make, this course will help you think of ways to reduce the possibility of failure – i.e., we will study the challenges of bringing new products to market, and discuss avenues to possibly overcome them. The topics discussed are relevant whether you work for a startup or Fortune 500 firm or whether your firm focuses on the B2B or B2C space.

The course focuses on state of the art frameworks, concepts and tools that have been recently validated by innovative companies. We will structure our learning around the following basic steps of the innovation process:

- Opportunity Identification
- Idea Generation
- Product Design
- Concept Testing
- Launch Strategies

You are introduced to and apply the following state of the art frameworks used by the most renowned and successful startups:

- Customer Development Process (CDP)
- Business Model Canvas (BMC) & Value Proposition Design (VPD)
- Design Thinking
- Rapid Prototyping and Agile Lean Development

As part of this course you will also learn to deal with multiple entities that speak 'different languages,' helping you develop the ability to communicate ideas to the different constituencies involved in product development.

Course Objectives

The course focuses on the NPD steps of:

- Opportunity Identification
- Idea Generation
- Product Design
- Concept Testing
- Launch Strategies

To learn and to subsequently apply the acquired knowledge the course is structured into the following layers:



This ensures that you take away as much as you possibly can: A NPD project to pitch to Your company or Your own start-up if you decide to do so.

Any team can continue to pursue the idea by

- Connecting to Marc Lowe’s class on “Small Business Ventures”
- registering for the BIG BANG competition (<http://gsm.ucdavis.edu/big-bang-business-competition>).

Class Format and Administration

Classes are organized in the following way:

1. In-class lectures
2. In-class discussions
3. In-class exercises
4. Group case analysis, group case presentations, group project work, and discussions

Classes consist of lectures, exercises, discussions, case and group project work. Lectures provide the concepts and tools. In-class discussions are based on the assigned reading material, lectures, and case work. The cases will furnish real-world examples of how concepts and tools are applied in practice. Additional information will be given in the first class (**do not miss it**).

Class Rules

Academic Honor Code

There are several individual level assignments in this course. You are expected to complete the assignments on your own, without help from your peers – i.e., you are not permitted to work with others on any aspect of the individually graded coursework. In case you have questions regarding the material or assignments, I'm available either in my office, by phone or email and will be happy to answer your questions.

Please read <http://sja.ucdavis.edu/files/cac.pdf> for details.

Use of Electronics in Class

You are allowed to use your laptop/tablet in class – however this use is conditional. You cannot use your laptops for any other activity other than those pertaining to the class. Hence, surfing, emailing, chatting, facebook visits and other related activities are not allowed. If such activity is observed in class, then laptop privileges will be revoked – for the entire class. Smartphone/phone use is not allowed in class – you are welcome to step out of class, with my permission, if you need to answer a call.

Prerequisites

- Marketing Management (MGT/P/B 204)

I will assume that you have some prior knowledge of pricing and market research techniques – but it is also my pleasure to guide you towards introductory references and answer your questions if you would like some help.

Course Requirements and Grading

The course requirements and their contribution to the overall **letter** grade are as follows:

Your Individual Performance:	60%
1. Individual Class Participation	15%
2.a. Individual Essay 1 (1 article from the list)	15%
b. Individual Essay2 (1 article from the list)	15%
3. Peer Group Evaluation for Cases & Project	15%
Your Group Performance:	40%
4. Group Case Presentations (4 cases)	15%
5. Group Project (1 report, 4 presentations)	25%

Your Individual Performance (60%)

1. Class Participation (15%)

Meaningful class interactions add a great deal to the learning experience. Hence, I consider class participation to be an important component of your education in this course. A lot of your learning about ideation and the creativity process will come from intensive class discussions – so, I expect that you have read all the articles assigned to each class prior to the class and come prepared to discuss your insights about and analysis of the articles. Additionally, feel free to go above and beyond just the class readings – bring articles that caught your attention, any prior experience you might have had with new product development also into the conversation. Conversations that enrich the class discussion are encouraged; at the same time I will discourage conversations that might veer the class off-track. Simply speaking in class without adding constructively to the class discussion will not merit any points. Finally, while I encourage you to voluntarily participate in the class discussion, also expect to be cold called from time to time.

Please miss no more than 1 class or your grade will be B+ or lower.

2. Individual Essays (2x15%)

Each student is expected to write an essay on **two (2) different readings** for a respective grade. Any student can pick any **two (2) different articles** from the list provided below. Essays should be in the form of an executive summary (see outline on Canvas). The Essay should highlight the interesting points of the article and must contain **personal original insight based upon your analysis** of the article, applying the chosen article insights to your own business idea and deriving **actionable recommendations** for your team. This original insight may be supported by including attachments that highlight your analyses. This can form the appendix of the paper.

The Essay should be double-spaced; Times Roman size 12 fonts; and the Essay should not exceed three (3) pages (not including appendices).

Please structure your Essay as follows:

1. Introduction (1 para, 1/3 page max)
2. Summary of key take-aways from reading (bullet points, max 2/3 page)
3. Original comments & insights that relate to your employer / NPD project (≈2p)
4. Summary (1 para, 1/3p)

You will be provided with an outline (word doc) and I explain in class what the expectations are.

Essays are due by:

Essay #1: Feb 9, 2020, 11pm (max. 3 pages)

Essay #2: Feb 16, 2020, 11pm (max. 3 pages)

You may add examples/illustrations for your suggested actions in the Appendix.

List of Articles for Essays:

- | | |
|--|----------------|
| 1. Why Most Product Launches Fail (Schneider & Hall 2011) | F1104A-PDF-ENG |
| 2. Turn Customer Input into Innovation (Ulwick 2002) | R0201H-PDF-ENG |
| 3. The Customer Centered Innovation Map
(Bettencourt & Ulwick 2008) | R0805H-PDF-ENG |
| 4. Customer Discovery and Validation for Entrepreneurs
(Cespedes, Eisenmann & Blank 2012) | 812097-PDF-ENG |
| 5. Design Thinking. (Brown 2008) | R0806E-PDF-ENG |

3. Peer Group Evaluation on Case and Project (15%)

The four (4) cases and the group project are team work. Part of the overall individual grade for each student depends on an anonymous rating by his group peers at the end of class.

Your Group Performance (40%)

4. Group Case Presentations (15%)

As the course aims to enable participants to analyze realistic scenarios and subsequently devise and implement appropriate solutions, team case work is key. Team memberships will be assigned in the first class and hold for the entire course. Grading will be based on the analytics as well as the suggested solution, their presentation, and the team's contribution to class discussion.

Depending on the final size of the class, each group presentation will be limited to leave sufficient time for in-class discussion. All presentations (6-10 PPT slides) are due by email at the following times:

Case 1: TruEarth	Feb 10, 2020	11pm
Case 2: Kookaburra	Feb 19, 2020	11pm
Case 3: Hasbro	Feb 26, 2020	11pm
Case 4: Metabical	Mar 2, 2020	11pm

5. Group Project (25%)

The project for this course will be to design a **NEW PRODUCT OR SERVICE** for a company of your choice or **START YOUR OWN FIRM**. It will be graded based on how well it incorporates the aspects that have been covered in the course. The readings from the course will also prove useful in formulating your ideas and concepts on the topic you intend to study.

Every student generates 2-3 initial ideas. You can use observational techniques or come up with challenges you think should have better solutions. You should describe your idea on a single slide addressing:

- What is the problem you are addressing?
- Why is it relevant, i.e., why and how much do you think people would be willing to pay for a solution?
- What could be first starting point of how to design a solution?

As a group, you discuss all the ideas: one presents, others try to challenge and improve it. Your group chooses the Top 3 ideas. These are the base for meeting other teams to get similar feedback, but now across groups. Then your team chooses the Top 1 idea to pursue.

Subsequently, your team will apply all concepts learned in class to fail your team idea. If it survives, you take the next step. If you need to kill it, you take your 2nd best idea.

In detail, we plan the following in-class schedule for your group project:

Class 1:

We will kick start your NPD project in class 1. Please bring your personal 3 project ideas to class using the template available on Canvas. Submission via Canvas is due on

Feb 3, 2020, 11pm.

Class 3:

We will have a first in-class feedback round to facilitate constructive feedback on the NPD ideas and their potential focus/structure *across groups*. For this session, each group will have to prepare an initial outline of around 2-3 slides for each of the 3 initial ideas for the other groups.

This initial presentation is due via Canvas on:

Feb 5, 2020, 11pm.

After the feedback sessions your team chooses its final group project idea that it is going to evaluate during the course.

Class 4:

After the Conjoint Exercise you will get some time in class to work on your group project

Class 5:

A first intermediate presentation 1 to class & instructor is scheduled. Your intermediate presentation 1 of around 4-8 slides is due by email on:

Feb 17, 2020, 11pm.

Class 6:

You are prototyping your solution in a design exercise in class.

Feb 20, 2020.

Class 7:

A second intermediate presentation to class for feedback is scheduled.

The intermediate presentation 2 of around 9-15 slides is due by email on:

Feb 24, 2020, 11pm.

Classes 8 & 9:

A third intermediate session to class for feedback is scheduled. Focus is now your associated business case for your group project.

The intermediate presentation 3 of around 4-5 business case slides is due by email on:

Feb 26 & Mar 2, 2020, 11pm.

Class 10:

Final group project report is due and is presented. It is limited to a maximum of twenty (20) slides plus notes below the slides within PPT (not including attachments and appendices). ALL submissions (powerpoint presentation) are due by (no exceptions):

Mar 4, 2020, 11pm.

You may send a final version of your report until **Mar 8, 2020, 11pm.**

Required Course Material

Required Books

Steve Blank	The Four Steps to the Epiphany, 5 th edition, 2013, ISBN 0-989200-5-07
Alexander Osterwalder & Yves Pigneur	Business Model Generation, 1 st edition, 2011, ISBN 978-0-470-87641-1
Alexander Osterwalder et al.	Value Proposition Design, 2014 ISBN 978-1-118-96805-5

'New Product Development' TextPak

which consists of articles used in the lectures.

1. Why Most Product Launches Fail (Schneider & Hall 2011)	F1104A-PDF-ENG
2. Turn Customer Input into Innovation (Ulwick 2002)	R0201H-PDF-ENG
3. The Customer Centered Innovation Map (Bettencourt & Ulwick 2008)	R0805H-PDF-ENG
4. Blue Ocean Strategy (Kim & Mauborgne 2004)	R0410D-PDF-ENG
5. Customer Discovery and Validation for Entrepreneurs (Cespedes, Eisenmann & Blank 2012)	812097-PDF-ENG
6. Direct Observation: Some Practical Advice (Patnaik & Becker 1999, A Jump White Paper, http://bit.ly/dsCuq9).	<i>Available online</i>
7. Bootcamp Bootleg (http://stanford.io/ipaPIa)	<i>Available online</i>
8. Design Thinking. (Brown 2008)	R0806E-PDF-ENG
9. Design Thinking and Innovation at Apple. (Thomke & Feinberg 2012)	609066-PDF-ENG
10. A Practical Guide to Conjoint Analysis (Wilcox 2003)	UV0406-PDF-ENG

Cases:

11. TruEarth Healthy Foods: Market Research for New a Product Introduction (Kasturi Rangan & Yong 2009)	4065-PDF-ENG
12. TruEarth Healthy Foods – Student Spread Sheet	4067-XLS-ENG
13. Kookaburra Cricket Bats: Dealing with Cannibalization (Hennessy 2012)	KEL684-PDF-ENG
14. Kookaburra Cricket Bats – Student Spreadsheet	KEL687-XLS-ENG
15. Hasbro Games – POX (A) & (B) (Godes & Ofek 2004, 2005)	505046-PDF-ENG 505047-PDF-ENG
16. Metabical: Pricing, Packaging and Demand Forecasting for a New Weight-Loss Drug (Quelch & Beckham 2010)	4183-PDF-ENG

Additional Readings (also part of your Textpak):

- | | |
|---|----------------|
| 17. Decisions 2.0: The Power of Collective Intelligence
(Bonabeau 2009) | SMR302-PDF-ENG |
| 18. OpenIDEO (Lakhani, Fayard, Levina & Pokrywa 2012) | 612066-PDF-ENG |
| 19. Innovation's Holy Grail (Prahlad & Mashelkar 2010) | R1007N-PDF-ENG |
| 20. The New Corporate Garage (Anthony 2012) | R1209B-PDF-ENG |
| 21. A Framework for Scaling Local Innovations
(Soman, Kumar, Metcalfe & Wong 2012) | ROT180-PDF-ENG |

Course Schedule

Date	Topic
Introduction to the “Customer Centric Innovation Process”	
<p>Class 1</p> <p>Tue Feb 4 3.10-6pm</p> <p>GH-2310</p>	<p><u>Lecture:</u></p> <ul style="list-style-type: none"> • Class Logistics & Your Expectations • Product vs. Customer Development Model & Business Model Canvas (I) • Customer Discovery & Ideation – Customer Centered Innovation Map • “Blue Ocean” Strategy – Driving Profitable Growth <p><u>Individual Assignments:</u></p> <ul style="list-style-type: none"> • Introduction to the 2 Individual Assignments <ul style="list-style-type: none"> Essay #1: Feb 9, 2020, 11pm (max. 3 pages) Essay #2: Feb 16, 2020, 11pm (max. 3 pages) <p><u>Case Assignments:</u></p> <ul style="list-style-type: none"> • Case TruEarth <ul style="list-style-type: none"> Team Solution Presentations: Feb 10, 2020, 11pm (6-10 slides) • Case Kookaburra <ul style="list-style-type: none"> Team Solution Presentations: Feb 19, 2020, 11pm (6-10 slides) <p><u>Group Project (1):</u></p> <ul style="list-style-type: none"> • Introduction to the Group Project • Assignment of Groups • Kickoff – first in-class Team Session – Get feedback from your group: <ul style="list-style-type: none"> Your 3 Initial Ideas: Feb 3, 2020, 11pm (2-3 slides per idea) • Choose your top 3 Team ideas based on feedback <p><u>Readings:</u></p> <ol style="list-style-type: none"> 1. Why most products fail (Schneider & Hall 2011) 2. Book: The Path to Epiphany: The Customer Development Model 3. Turn Customer Input into Innovation (Ulwick 2002) 4. The Customer Centered Innovation Map (Bettencourt & Ulwick 2008) 5. Blue Ocean Strategy (Kim & Mauborgne 2004) <p><i>Supplemental Reading</i></p> <p>Customer Discovery and Validation for Entrepreneurs (Cespedes, Eisenmann & Blank 2012)</p> <p><i>Supplemental Reading for GP1:</i></p> <ol style="list-style-type: none"> a. Direct Observation: Some Practical Advice (Patnaik & Becker 1999, A Jump White Paper, http://bit.ly/dsCuq9). b. Bootcamp Bootleg (http://stanford.io/ipaPIa)

Date	Topic
Design, Concept Testing, & Demand Forecasting	
<p>Class 2</p> <p>Thu Feb 6 3.10-6pm GH-2310</p>	<p><u>Lecture:</u></p> <ul style="list-style-type: none"> • Design Thinking <p><u>Group Project (2):</u></p> <ul style="list-style-type: none"> • Mutual Group Feedback Session on Your Team 3 Ideas 3 Team Ideas: Feb 5, 2020, 11pm (2-3 slides per idea) • Use Business Model Canvass to illustrate your idea • Choose Your Best Idea based on Feedback across Groups <p><u>Readings:</u></p> <ol style="list-style-type: none"> 1. Design Thinking. (Brown 2008) 2. Design Thinking and Innovation at Apple. (Thomke & Feinberg 2012) 3. Book: Business Model Canvas
Case Demand Forecasting (1) & Group Project Session (1)	
<p>Class 3</p> <p>Tue Feb 11 3.10-6pm GH-2310</p>	<p><u>Lecture:</u></p> <ul style="list-style-type: none"> • Value Proposition & Value Map • Business Model Canvas (II) - Tools <p><u>Individual Assignments - Essays:</u></p> <p>Essay #1 due: Feb 9, 2020, 11pm (max. 3 pages)</p> <p><u>Case Presentations & Discussion:</u></p> <ul style="list-style-type: none"> • Case TruEarth Team Solution Presentations: Feb 10, 2020, 11pm (6-10 slides) <p><u>Readings</u></p> <ol style="list-style-type: none"> 1. TruEarth Healthy Foods: Market Research for New a Product Introduction (Kasturi Rangan & Yong 2009)

Date	Topic
Conjoint Analysis & Exercise	
<p>Class 4</p> <p>Thu Feb 13 3.10-6pm</p> <p>GH-2310</p>	<p><u>Lecture:</u></p> <ul style="list-style-type: none"> • Concept Testing • Nielsen Bases: How new concepts are tested • Conjoint Analysis • Extension: Prospect Theory <p><u>Exercise:</u></p> <ul style="list-style-type: none"> • Conjoint Exercise <p><u>Case Assignments:</u></p> <ol style="list-style-type: none"> 1. Hasbro Games – POX (A) & (B) Team Solution Presentations: Feb 26, 2020, 11pm (6-10 slides) 2. Metabical Team Solution Presentations: Mar 2, 2020, 11pm (6-10 slides) <p><u>Group Project (2a):</u></p> <ul style="list-style-type: none"> • Continue Your Group Project Work in 2nd half of class Intermediate Presentation 1: Feb 17, 2020, 11pm (4-8 slides) <p><u>Readings:</u></p> <ol style="list-style-type: none"> 1. Why is it used: A Practical Guide to Conjoint Analysis (Wilcox 2003) Visit Demos on Conjoint Analysis - http://bit.ly/fl1dqA - http://www.sawtoothsoftware.com/solutions/conjoint_analysis Look at their short video tutorial & then demo the conjoint surveys for CBC, ACBC, ACA and CVA. <i>Come to class prepared to discuss your understanding of the method:</i> <ul style="list-style-type: none"> • Did it work for you? What were your results from the demo? • What product recommendations did you receive? • How were the questions structured? 2. Hasbro Games – POX (A) & (B) (Godes & Ofek 2004, 2005) 3. Metabical: Pricing, Packaging and Demand Forecasting for a New Weight-Loss Drug (Quelch & Beckham 2010)

Date	Topic
Group Project (2): Intermediate Presentations 1	
Class 5 Tue Feb 18 3.10-6pm GH-2310	<p><u>Individual Assignments - Essays:</u></p> <p style="text-align: center;">Essay #2: Feb 16, 2020, 11pm (max. 3 pages)</p> <p><u>Group Project (2b):</u></p> <ul style="list-style-type: none"> • Present Your Group Project Work to Instructor <p style="text-align: center;">Intermediate Presentation 1: Aug 17, 2020, 11pm (4-8 slides)</p> <p><u>Group Project (3):</u></p> <ul style="list-style-type: none"> • Continue Your Group Project Work in class – incorporate feedback <p style="text-align: center;">Intermediate Presentation 2: Feb 24, 2020, 11pm (9-15 slides)</p>
Case Demand Forecasting (2) & Group Project (3): Design Exercise	
Class 6 Thu Feb 20 3.10-6pm GH-2310	<p><u>Case Presentations & Discussion:</u></p> <ul style="list-style-type: none"> • Case Kookaburra <p style="text-align: center;">Team Solution Presentations: Feb 19, 2020, 11pm (6-10 slides)</p> <p><u>Rapid Prototyping Exercise (Group Project):</u></p> <ul style="list-style-type: none"> • In-class Exercise on Prototyping (approx. 100 minutes) • Based on your Intermediate 4-8 page report plus Instructor Feedback <p><u>Readings:</u></p> <ol style="list-style-type: none"> 1. Kookaburra Cricket Bats: Dealing with Cannibalization (Hennessy 2012)
Group Project (4): Intermediate Presentations 2	
Class 7 Tue Feb 25 3.10-6pm GH-2310	<p><u>Group Project (4):</u></p> <ul style="list-style-type: none"> • Present Your Group Project Work in class to all: <p style="text-align: center;">Intermediate Presentation 2: Feb 24, 2020, 11pm (9-15 slides)</p>

Case Presentations & Discussion & Group Project (5a)

Class 8

Thu

Feb 27

3.10-6pm

GH-2310

Case Presentations & Discussion:

- Hasbro Games – POX (A) & (B)

Team Solution Presentations: Feb 26, 2020, 11pm (6-10 slides)

Group Project (5a):

- Present Your Group Project Work (Focus Business Model Canvas) in class to all (1st round):

Business Case Presentation 1a: Feb 26, 2020, 11pm (4-5 slides)

Readings:

1. Hasbro Games – POX (A) & (B) (Godes & Ofek 2004, 2005)

Case Presentations & Discussion & Group Project (5b)

Class 9

Tue

Mar 3

3.10-6pm

GH-2310

Case Presentations & Discussion:

- Metabical

Team Solution Presentations: Mar 2, 2020, 11pm (6-10 slides)

Group Project (5b):

- Present Your Group Project Work (Focus Business Model Canvas) in class to all (2nd round):

Business Case Presentation 1b: Mar 2, 2020, 11pm (4-5 slides)

Readings:

2. Metabical: Pricing, Packaging and Demand Forecasting for a New Weight-Loss Drug (Quelch & Beckham 2010)

Group Project (6): Final Presentations

Class 10

Thu

Mar 5

3.10-6pm

GH-2310

Group Project (6):

- Present Your Final Group Project Work

Final Presentation: Mar 4, 2020, 11pm (max. 20 slides)

Group Project - Final Report due Mar 8, 2020, 11pm (Max. 20 slides plus notes)

Class Wrap-up

Evaluation