EMGT 510 UCI: 
USER-CENTERED INNOVATION 

SPRING 2008

VERSION: 1.0 dated March 19, 2008.
INSTRUCTOR: Jean-Claude Balland, Dr. Sc.
TIME AND LOCATION: Monday 5:30 pm to 9:10 pm; PSU Clay 203
TELEPHONE: 503 780 6742 (cell)
EMAIL: jcballand@jcbassociates.com My preferred mode of communication is email. I check my message throughout the day and on weekend.
COURSE WEB SITE http://groups.yahoo.com/group/EMG_510-UCI (ask for invitation)
ADVISING HOURS On demand (make arrangement or appointment in advance or during class at the latest)

COURSE DESCRIPTION
This syllabus has some flexibility to fit the interests of the students.

Traditional innovations have been mostly technology-driven. This approach has given us most of the products we take today for granted, such as television, microwave oven, telephone, and many others. Its success cannot be overemphasized. But with the abundance of choices coming now from technologies that can easily be duplicated anywhere in the world, a new paradigm is emerging that gives the customers a more central role in driving the definition of innovative products.

This course introduces the students to the various approaches to innovation and the strengths and weaknesses of each of them. It then focuses on a customer-driven methodology. It also introduces the students to the increasingly prominent role of design, and on creating memorable experience, and emotional connection with a product and/or a company. Students will learn how to identify opportunities, transform these opportunities into requirements and product concepts that casts an optimum balance between usefulness, usability, and desirability.

The management of such projects at a company/division level and the changes it requires in processes, organization, and people skills will also be covered.

Students will actually use the learned methodology to define an innovative product concept in a team environment.

The course will be supported by case studies. In addition, several industry guest speakers with strong credentials in developing innovative products will come share their experience.
LEARNING OBJECTIVES

The prime objective of the class is to provide the students with some practical understanding of key approaches to finding and defining innovative products. At the end of the term, students should be able to:

- Understand how to identify opportunities for innovative products
- How to really understand what customers want
- Understand the role of strategy, design, technology, and branding
- Learn how others have done it and are doing it: examples, case studies, and guest speakers
- Create an innovative product by following the methodology of the course

TEXTBOOKS


ADDITIONAL READINGS


Additional articles and case studies will be communicated as class progresses

COURSE SLIDES

Course slides will be sent by email prior to each session.

PREREQUISITES

To get the maximum benefit from this course, students should have had at least two years of professional experience. Having completed EMGT 555 Technology Marketing would also be an advantage. It is better to take this course after you have been in the program for a few terms.
TEACHING METHODOLOGY

The class involves a mixture of lectures, class discussions, group exercises, and short case analysis. You are expected to have completed all assignments and be prepared to discuss them in class (see reading briefs later). Participation in class discussions is important and enters into total evaluation.

Preparation includes reading, online search, and personal observations.

GUEST SPEAKERS

We will invite guest speakers to illustrate key points of the course. Names will be communicated ahead of class time.

EMAIL COMMUNICATION

All communication in-between session and assignment submissions will be made by email. Please have an email address with at least 2 Mb memory to allow for exchange of large documents. Please keep your mailbox clean so messages do not bounce. When submitting an assignment, use the following format to name your attachment (that will avoid errors on my side) <name>-<assignment> such as “Bob-personal paper draft”#1

GRADING PROCEDURES

A grade will be assigned to each of the activities outlined below. Each activity has a weight. The final grade is a weighted average of the individual grades. The weights are indicated below:

- Group Project Report 40%
  - Customer needs/requirements 25%
  - Concepts 15%
- Class Presentation (project) 20%
- Reading briefs, case studies, 25%
- Class participation and presentations 15%

Grading is indicated below on a scale of 0 to 4 and 0 to 100

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score</th>
<th>Description</th>
<th>Weight</th>
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<tbody>
<tr>
<td>A</td>
<td>(4.0)</td>
<td>100 Excellent</td>
<td>50</td>
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<tr>
<td>A−</td>
<td>(3.67)</td>
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<td>B+</td>
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<td>B</td>
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<td>B−</td>
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<td>C+</td>
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<td>C</td>
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<td>50 Below graduate standard</td>
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<td>C−</td>
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<td>0 Failure</td>
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CLASS AND GROUP PARTICIPATION

Discussions are a critical step in your learning. You are expected to actively participate in class discussions make thoughtful contributions that will benefit our learning. Therefore, class attendance and preparation are critical.

READING BRIEFS

To prepare for class, articles and Textbook chapters are the subject of questions. Each RB is graded on a 100 scale. **If you do not submit reading briefs by class time, you will have a penalty of 7.5 points.** If you do submit a RB by class time, you can submit an update by the Wednesday after class if the learning for the class made you realize some earlier misunderstandings. The grade for the RB will be the one of the first submission plus a bonus between 0-7.5 to reflect the improvement.

We recommend RBs follow the format below:
Your name, title of the article or book chapters/numbers

Key learning (optional. Bonus points).

How the concepts learned can apply to your job, your career, or other areas of interest to you (optional: bonus points)

High value question(s) for class discussion (make us think) on a particular aspect/concept, issues etc., for discussion in class.) (Optional. Bonus points). You can also add value to the reading by challenging or adding arguments to the author’s points

Points that you have difficulty with (whether you do not understand or do not agree)

Answers the questions stated in the week assignment (please restate the question before answering).

Case studies follow a different format

Your name, title of the case study

Key points (summary of the case and the issues)

Answers to questions as stated in the weekly assignments

Key learning and application to your job/company

Please submit all your weekly reading briefs as a SINGLE Word document attachment. Name the document with your name first as follows: <Bill-RB#1>. If you have a follow-up, use the following format <Bill-RBWeek1-2>. This might seem overly constraining but that will minimize errors on my side. Thank you for your understanding.

KEY ASSIGNMENTS

All assignments are to be submitted electronically. There is no specific requirement for font type and size. Do as you would do at your workplace when submitting reports and making presentation to top management: communicate simply and clearly and help the reader (the instructor) get the main points.

Group Project: The project consists in reinventing a common product by defining a more fulfilling customer experience based on strong customer understanding. You will submit a written document and develop a concept that your team will present to the class in a 20 minute presentation, followed by a questions and answers session. Clarity of the presentation, ability to express the needs you have identified, and mastery of the customer-centric process will be evaluated. Additional explanations will be provided the first day of class.

DRAFT SUBMISSIONS:

Students are encouraged to submit a draft for the personal paper and the group project. Drafts are not graded. Except when stated otherwise, drafts with comments will be returned to students within 24 hours of their original submissions using the Comment feature of MS Word. The earlier you submit a draft, the more you can benefit from the feedback and improve your paper. Grading will be made on your final submission. To be useful to you, your draft must reflect what your final paper will look like but still be open to modifications. Obviously, you are welcome to ask questions to clarify any aspect of the assignment or any points that preempt you to produce your best work.

"TIME TO MARKET" BONUS AND PENALTY

In business, it is critically important to hit the market window at the right time. Enter early with an OK product and you might have an advantage. Enter late and you need to compensate your lateness by a superior product. Grading will follow the same principle. For the project, there will be 1.5 points bonus per day early up to 7.5 points, and 1.5 point penalty per day late without limit.

OPM AND ACADEMIC HONESTY

OPM means “Other People’s Materials.” The web is full of information of interest for your research. Sometimes complete sections of a document may even fit perfectly in your report. You are obviously encouraged to make good use of this resource. But remember that these ideas (a creative work) do not
belong to you but to the authors. You must not use this material without putting the text in between quotes or in a style that clearly differentiates it from your own creation and giving credit with full references to the author. Failure to do so is a breach of the integrity that we expect from students and may expose them to severe sanctions. Please refer to the Academic Honesty policy for further details http://web.cecs.pdx.edu/~scott/cee_profession/HonestyPoliciesandProcedures.pdf.

**CLASS SCHEDULE (PRELIMINARY)**

<table>
<thead>
<tr>
<th>Session Date</th>
<th>Session Topic</th>
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<tbody>
<tr>
<td>March 31, 2007</td>
<td><strong>GUIDING PRINCIPLES</strong></td>
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<td>- Innovative products</td>
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<td></td>
<td>- Various kinds of innovation</td>
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<td>- Why user-centered innovation?</td>
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<tr>
<td>April 7, 2008</td>
<td><strong>THE CUSTOMER-CENTERED PRODUCT DEVELOPMENT PROCESS</strong></td>
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<td>- Process overview</td>
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<td>- Identifying opportunities</td>
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<td>- Social, economic, technology, customer, business factors</td>
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<td>- Searching for product and market gaps</td>
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<td>- Moving to the Upper Right Understanding deeply the customers with qualitative research and ethnography</td>
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<td>April 14, 2008</td>
<td><strong>UNDERSTANDING USER NEEDS, WANTS AND DESIRES</strong></td>
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<td></td>
<td>- Qualitative research and ethnography</td>
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<td>- Designing experience</td>
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<td>April 21, 2008</td>
<td><strong>THE VALUE OF DESIGN</strong></td>
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<td>- Value opportunities</td>
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<td>- Design as a major differentiator</td>
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<td>- Brand and experience</td>
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<td>April 28, 2008</td>
<td><strong>THE TOOLS OF CUSTOMER-CENTRIC PRODUCT DEVELOPMENT</strong></td>
</tr>
<tr>
<td></td>
<td>- Use case, scenarios, and personas</td>
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<td>- Rapid prototyping</td>
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<tr>
<td>May 5, 2008</td>
<td><strong>VALUE, DESIGN, AND BRAND</strong></td>
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<tr>
<td></td>
<td>- Creating breakthrough ideas</td>
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<td></td>
<td>- The “Upper Right”</td>
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<td>- Brand Identity</td>
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<td>May 12, 2008</td>
<td><strong>FROM CUSTOMER NEEDS TO CONCEPTS</strong></td>
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<tr>
<td></td>
<td>- Gathering your notes</td>
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<td>- Expressing requirements</td>
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<td>- Brainstorming</td>
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<td>May 19, 2008</td>
<td><strong>CREATING A CULTURE OF INNOVATION</strong></td>
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<td></td>
<td>- Various models of innovative companies</td>
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<td>- The product development team</td>
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<td>- Prototyping</td>
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<tr>
<td>May 26, 2008</td>
<td><strong>Memorial Day – No class</strong></td>
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<tr>
<td>June 2, 2008</td>
<td><strong>MANAGING THE INTEGRATED NEW PRODUCT DEVELOPMENT TEAM</strong></td>
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<tr>
<td></td>
<td>- Integrating disciplines</td>
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<td></td>
<td>- Dealing with perceptual gaps</td>
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<tr>
<td>June 9, 2008</td>
<td><strong>PROJECTS PRESENTATION AND REVIEW</strong></td>
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WEEKLY ASSIGNMENTS
Monday March 31

Overview and Guiding Principles

Assignments

This first session, I want to answer any question you might have on the syllabus and the various assignments. Then we will an overview of the course and its key elements, and have a discussion on innovation and innovative products.

TO DO after the session

1. Send me an email (jcballand@ichassociates.com) by Thursday April 5 with "Hi! my name is <your name>" in the subject line (that helps me identify your message rapidly and be sure it is not a virus!). Provide following information:
   1) your full name, position, company name, division and address, phone number and email address(es),
   2) a short bio,
   3) the EMT courses you have taken or/and are taking.
   4) Your experience in product development from an R&D, marketing or design experience
   6) any other information that you think I should know about you and your ability to get the maximum benefits from the course

2. Get the books

3. Visit the auxiliary course web site. I will send you an invitation to join to the address you gave me on your introduction “Hi, I am...”. If you want to access the site from several addresses, make sure you give me all these addresses in your email. You will need to register as a yahoo!group member for all addresses

Monday April 7

The Customer-Centered Product Development Process

Reading

Email me your reading brief by noon on the day of the session and answer the questions below:

CBP Chap. 1: What Drives New Product Development,

- After you've read this chapter, watch the video of the iPod introduction at http://uneasysilence.com/archive/2006/10/8008/ You can skip the part on iMovie after three and a half minutes and go to the iPod part starting at approximately the 11th minutes (time is indicated on the bottom right of the screen). The total video time is 45 min. As you watch the video, note the Social, Economic, Technology (SET) and eventually other factors that Apple and iPod capitalized on. Provide a written description of these showing how they all combined to make the iPod the right product at the right time.

- From the video and other info you can gather, how did Apple’s planning of this innovation follow or not the SET approach presented in the textbook?
Monday April 14

Understanding Customer Needs, Wants and Desires

Guest Speaker: TBD

Reading


- What is an experience and how does it differ from a service? What are the major changes that this new focus implies for planning new products? Who would you say is responsible for the total customer experience in your company (if you work in one) or at ETM/PSU if not?


- What are the strengths and weaknesses of observation techniques in understanding customer needs? Why is interviewing customers not enough usually to understand customers?

Monday April 21

Understanding Customer Needs, Wants and Desires (cont’d)

Guest Speaker: TBD


- What is ethnography? Why is it gaining in importance in the definition of new products?
- When in the development cycle is ethnography techniques most useful?
- Why does a sample of 6 to 25 people enough to draw valid conclusions?
- What tools does ethnography use to record consumer behavior
- What are the steps to plan an ethnographic inquiry
- What insights did the Panasonic team gathered from their investigation? What did it add compared to more traditional market research techniques?
- Same question for Fishing Motors
- What issues and concerns do you see for being able to carry such an investigation with your team?
Monday April 28

*The Tools of Customer-Centered Product Development*

**Guest speaker:** TBD

**Reading**


CBP Chap. 7: Understanding the User’s Needs, Wants, and Desires

- What benefits do scenarios and personas bring to the product development process? What makes a good scenario and a good persona? What should they include?

Monday May 5

**Guest speaker:** TBD

*Value, Design, and Brand*

**Reading**

CBP Chap. 2 (page 43-53): Moving to the Upper Right and Chap. 3: The Upper Right: the Value Quadrant, and CBP Chap. 3: Moving to the Upper Right

- Identify three companies (besides Apple and the ones mentioned in the book), which successes are due to great design (that are in the “upper right”). Identify three other companies that could benefit from a greater emphasis on design? Provide supportive explanations.

- Apply the VOA tool of Chap. 3 to a successful product and to an unsuccessful product of your choice (not in the book though). What improvement would you recommend for the unsuccessful one?

- In your opinion, what are the strengths, weaknesses, and limitations of this tool? If you work for a company, could you apply it even with modifications? How or why not?

CBP Chap. 4: The Core of Successful Brand Strategy

- How and why is brand related to experience? Why is brand strategy important to link to product strategy? Give a couple of examples of companies that are missing this link and comment on the impact it has on their success or lack thereof.
Monday May 12

Guest speaker: TBD

From Customer Needs to Product Concepts

Reading

The Art of innovation, Chap. 4, “The Perfect Brainstorm” and Chap. 8 “Expect the Unexpected”

- What is your experience with brainstorming at your company or in other situations? What have you seen work, and what have you seen not work? What are the improvements that the Ideo way brings to the process?
- What idea(s) of application (for your project or otherwise) come to mind when you read this chapter and the approaches and case studies the author present?

Monday May 19

Guest speaker: TBD

Creating a Culture of Innovation

Reading

The Art of innovation, Chap. 5 “A Cool Company Needs Hot Groups, Chap. 6, “Prototyping is the Shorthand of Innovation”

- Were you ever part of a great team? If yes, explain the situation. What did the team achieve? What made the team great? Was there key people? Key conditions, etc? If you have never be part of a great team, I hope you do one day. In the meantime answer the optional questions about Chap. 5
  - Key learning
  - How the concepts learned can apply to your job, your career, or other areas of interest to you
  - High value question(s) for class discussion (make us think) on a particular aspect/concept, issues etc., for discussion in class). You can also add value to the reading by challenging or adding arguments to the author’s points
  - Points that you have difficulty with (whether you do not understand or do not agree)
- Why is building prototypes early on such an accelerator of innovation? How do you see your team building prototypes for your projects? Any issues?
Monday June 2

Guest speaker: TBD

Reading

CBP Chap 6, “Integrating Disciplines and Managing Diverse Teams”
- What are Perceptual Gaps? What solutions do the authors recommend to overcome them and make iNPD teams work well together? What experience do you personally have of these issues, in your job or in other activities?

Art of Innovation, Chap. 12 “Coloring Outside the Lines”
- What are the difficulties that companies face to be and stay innovative? How can they overcome these difficulties? Use examples to support your explanation.

Monday June 9

Project Presentation
SOURCES OF INFORMATION

Topics to cover in the Project

- **Introduction**: presentation of the problem
- **Opportunity analysis**.
  - The driving forces
    - Social
    - Economic
    - Technological
    - Other
  - Product Opportunity Gap
- **Customer research**

  *Explain and justify methodologies used (Present findings)*
  - Segment users based on your research: are there several types of customers and what are they?
  - What are the expressed and unexpressed needs that you identified?
  - Present detailed personas, scenarios, and use case for each
  - First rough ideas for transforming your research into concepts

- **Lessons learned**
  - What did you learn from this part of the project? This is a free comment from the team and individual team members on the learning, including difficulties found, insights, what would you improve next time, etc