COURSE	**IT 326 - Product Evaluation**
QUARTER	Spring 2014
LECTURE	Monday, Wednesday 7:40-9:00 AM, Room 3-305
LAB	Friday 12:10-3:00 PM, Room 2-206
OFFICE HOURS	Monday and Wednesday 3:00-4:00 PM or by appointment

INSTRUCTOR	Javier de la Fuente, PhD
OFFICE	03-328
E-MAIL	jdelafue@calpoly.edu
PHONE	(805) 756-1607

INSTRUCTIONAL STUDENT ASSISTANTS	Nicholai Busch (nbusch@calpoly.edu) Justin Farr (jcfarr@calpoly.edu) Taylor Severn (tsevern@calpoly.edu)

COURSE MATERIALS	
REQUIRED TEXTBOOK	**Product Design and Development**. Ulrich KT, Eppinger SD. 5th edition. Published by McGraw-Hill Irwin (2012). ISBN: 978-0-07-340477-6 Additional course material will be posted on PolyLearn.

CATALOG DESCRIPTION	Value engineering, product dissection and the study of reverse product engineering as they relate to product design for manufacturing; improved product quality; reduced usage of energy and materials; material recycling and reuse; product design and development, proving value to the customer and society.

COURSE LEARNING OBJECTIVES

Upon completion of IT 326 students should be able to do the following:

- **LO 1.1**: Apply knowledge to identify opportunities and solve business problems.
- **LO 4.1**: Demonstrate effective written communication skills.
- **LO 4.2**: Demonstrate effective oral communication skills.
- **LO 4.3**: Demonstrate effective participation in teams.

EXPECTATIONS

After finishing this course students are expected to be able to:

- Understand the fundamentals of user-centered product development, reverse engineering, and entrepreneurship and apply it to solve business problems (LO 4.1).
- Have acceptable writing skills (LO 4.1) and acceptable oral communication skills (LO 4.2).
- Work in a team to plan and complete a project using project management skills (LO 4.3).

TOPICS

- User-centered product design and development processes
- Business models and new product development
- Identifying consumer needs
- Consumer insights
- Product specifications
- Concept generation, selection, and testing
- Product architecture
- Industrial design
- Sketching
- Prototyping
- Reverse engineering
- Design for environment
- Design for manufacturing
- Intellectual property

GRADING

All graded material will be handled objectively and fairly. If a mistake in grading occurs you must see me about it immediately.

DISPUTE PERIOD

For all graded assignments you have one week after the grades are distributed to discuss grading issues with me. If you do not address these issues within one week of receiving the grade, there will be no modifications to the grade, even if it works in your favor. I will address all concerns quickly and equitably.

ITEMS

The final grade will be composed of a weighted average of the following items:

1) Class participation: 10%
2) Research paper: 20%
3) Team project: 40%
4) Midterm exam: 15%
5) Final exam: 15%

FINAL GRADE

Final grades will be based on the following distribution (numbers express percentages):

A 100-94	**B+** 89-87	**C+** 79-77	**D+** 69-67	**F** Below 60
A- 93-90	**B** 86-83	**C** 76-73	**D** 66-63	
	B- 82-80	**C-** 72-70	**D-** 62-60	

ASSIGNMENTS

RESEARCH PAPER

Each student will write a paper on the topic of online manufacturing services. Please refer to its handout for details.

TEAM PROJECT

Each team will focus on designing and developing a product. The deliverables will be a written report, a 15-minute oral presentation, prototypes, and drawings. Please refer to its handout for details.

MIDTERM AND FINAL EXAMS

There will be two exams covering material explained during lectures, labs, and reading assignments. Exams are individual; everyone must do their own work. Exams are scheduled for **May 12th** and **June 13th**. Exam dates are subject to change. Make-up exams are only available in cases with legitimate reasons (see course policies).

COURSE POLICIES

CLASS PARTICIPATION

Students are expected to be punctual and attend all classes and laboratories, and to stay for the entire class period or until the class is declared finished. Students are required to read assigned material before coming to class. There will be in-class activities and quizzes. Participation is worth 10% of the final grade. Class participation is proportional to the number of classes attended, in-class activities, and quizzes. It is student's responsibility to check the attendance sheet every class. Students with more than two unexcused absences will receive a participation grade of zero.

ATTENDANCE

Absences may cause you to miss material that will not be repeated. It is your responsibility to get missed assignments and to make up the work regardless of the nature of the excuse. Students may be excused if they have a legitimate reason such as health issues, family matters, job interviews, and an emergency. Proper documentation to verify the reason must be provided. Please try not to schedule job interviews during class time.

LATE ASSIGNMENTS

No late assignment will be accepted. If you miss a deadline without a proper justification you grade will be zero. Assignments sent by another student will not be accepted. In case of sickness, athletic commitment, or field trip student should contact the lab/lecture instructor prior to class meeting for appropriate arrangement. Proper documentation to verify the reason must be provided.

EXTRA CREDIT

There will be no extra credit work to make up for missing assignments or poor performance on the tests and projects.

CLASSROOM CONDUCT

You are expected to be punctual, alert, and prepared for every class. You will be considerate of other students, which includes being quiet when the instructor is speaking or a student is asking a question or making a contribution to a discussion. Please ask questions in class. If you are confused, more than likely several classmates are too. If you need extra help, please see me during office hours or during a mutually agreed upon time.

COURSE POLICIES

CELL PHONES

You may not use your cell phone in class. There will be breaks through each class in which you may use your cell phone. This goes for texting as well.

COMPUTER USE

During lectures you may not use the computer for any reason other than to participate in a class exercise. During the break you may check your mail or browse the web.

CONTACTING ME

I am happy to help anyone during office hours or through an advance appointment. E-mail is the preferred mode of communication, not phone calls. E-mail will not be accessed/answered between 6:00 PM and 9:00 AM and during weekends.

INCLUSION

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both me and the Disability Resource Center (DRC), Building 124, Room 119, (805) 756-1395 or e-mail drc@calpoly.edu as early as possible in the quarter.

CODE OF CONDUCT

Academic dishonesty, including cheating and plagiarism, is a serious offense and will not be tolerated. By accepting admission to Cal Poly, you made a commitment to understand, support, and abide by the university's honor code and the student computing policy without compromise or exception. Any and all violations of this code will immediately be sent to the judicial board. Any plagiarism or cheating will result in an automatic failure (F) for the course.

Each student is expected to do his/her own work on all examinations and assignments. No assistance is to be accepted or provided on any examinations. Students may consult together on the general approach, etc., to homework assignments, but the final work submitted is to be the student's own effort. Submission of the examination or assignment is considered to be certification that the work has been completed in accord with these requirements.

STUDENT PRIVACY (FERPA)

If you have chosen to protect your directory information, which includes name and email, it is important you communicate this to your instructor prior to or on the first day of class. This course may use blackboard tools that will display students' full names and e-mail addresses.

NOTE

The instructor reserves the right to modify this course syllabus as deemed necessary as the class progresses.

TENTATIVE CLASS SCHEDULE

Week	Day		Topics	Assignments
1	April 2		Course syllabus review Course overview C1 - Introduction	Interest survey Introductions **HW:** read Chapter 1
	April 4	Lab 1	Team project launch Research paper launch Rapid prototyping and Metals Labs Tour	Teams formation
2	April 7		C2 - Product development process	**HW:** read Chapters 2
	April 9		C4 - Product planning C5 - Identifying customer needs	**HW:** read Chapters 4, 5
	April 11	Lab 2	Team project Research paper	
3	April 14		C5 - Identifying customer needs	**Quiz 1:** Chapters 1, 2, 4
	April 16		C5 - Identifying customer needs	
	April 18	Lab 3	C14 - Prototyping Sketching Team project Research paper	**HW:** read Chapter 14 **Due:** Research paper (Draft) List of customer needs Need statements
4	April 21		C6 - Product specifications C7 - Concept generation	**HW:** read Chapters 6, 7 **Quiz 2:** Chapters 5, 14
	April 23		C8 - Concept selection C9 - Concept testing	**HW:** read Chapters 8, 9
	April 25	Lab 4	Team project	Concept generation

Week	Day		Topics	Assignments
5	April 28		C11 - Industrial design	**HW:** read Chapter 11 **Quiz 3:** Chapters 6, 7, 8, 9
	April 30		C11 - Industrial design	
	May 2	Lab 5	Team project	Concept generation and selection
6	May 5		C11 - Industrial design C10 - Product architecture	
	May 7		**Team project presentations** Team 1: 7:40-8:00 AM Team 2: 8:00-8:20 AM Team 3: 8:20-8:40 AM Team 4: 8:40-9:00 AM	15 min + 5 min Q&A
	May 9	Lab 6	**Team project presentations** Team 5: 12:10-12:30 PM Team 6: 12:30-12:50 PM Team 7: 12:50-1:10 PM Team 8: 1:10-1:30 PM 10-min break Team 9: 1:30-1:50 PM Team 10: 1:50-2:10 PM Team 11: 2:10-2:30 PM Review midterm exam	15 min + 5 min Q&A
7	May 12		**Midterm exam**	**Chapters 1-2, 4-9**
	May 14		C12 - Design for environment	
	May 16	Lab 7	Team project review	Industrial design Bring sketches & models

Week	Day		Topics	Assignments
8	May 19		C16 - Intellectual property	
	May 21		Design for manufacturing	**Due:** Research paper (Final hard copy)
	May 23	Lab 8	Team project review	Industrial design Bring sketches & models
9	May 26		Memorial day – No class	
	May 27		TBD	
	May 28		TBD	
	May 30	Lab 9	Team project review	Industrial design Bring sketches & models
10	Jun 2		TBD	
	Jun 4		**Team project presentations** Team 1: 7:40-8:00 AM Team 2: 8:00-8:20 AM Team 3: 8:20-8:40 AM Team 4: 8:40-9:00 AM	**Due:** Team project report (hard copy) and oral presentation
	Jun 6	Lab 10	**Team project presentations** Team 5: 12:10-12:30 PM Team 6: 12:30-12:50 PM Team 7: 12:50-1:10 PM Team 8: 1:10-1:30 PM 10-min break Team 9: 1:30-1:50 PM Team 10: 1:50-2:10 PM Team 11: 2:10-2:30 PM Review final exam	
	June 13		**Final exam**	**Friday, June 13, 7:10 AM**

ACKNOWLEDGEMENT

This syllabus constitutes the Student-Instructor Learning Agreement, to be read thoroughly at the onset of the course. It is available on PolyLearn, and it is subject to periodic update during the course. I have read and fully understand the academic integrity statement, class policies, and grading practices as outlined in the syllabus for IT326. I am aware of my responsibilities as a participant in IT326 lectures and labs for Spring quarter 2014.

Name (printed): _____

Student number: _____

Signature: _____

Date: _____