



SAINT LOUIS UNIVERSITY
MADRID

ESCI 1020 M01: Computer Aided Design
Spring 2018

Class Days and Time: M 16:00-17:50

Classroom: PAH-25

Prerequisite(s): ESCI 1010

Credit(s): 1

Instructor: Hector Barrio

Instructor's Email: hector.barrio@slu.edu

Instructor's Campus Phone: 680301847

Office: PAH Science Faculty Office (PAH 2nd Floor, to the right, next to Dr. Gasmi's office). If I am not there look for me in the basement (physics lab).

Office Hours: M 18:00-19:00 R 17:30-18:30

Course Description: As learned during the freshman engineering course, the design process has been altered by the introduction of new technologies in the industrial complex. Proper design is part of the basic engineering circle and new computer assisted design technologies have generated a whole new mode of design even altering the classic engineering procedures in favor of more efficient and time-effective work usage. This course will show the student the "industrial design" side of the engineering circle and will enable him to use the computer tools currently used in the industry.

Course Goals and Student Learning Outcomes: The basic objectives of this course are:

- 1- Understand the principles Industrial Design.
- 2- Understand the evolution of Industrial Design philosophies.
- 3- Gain proficiency in Computer Assisted Design tools.

At the end of this course the student will be able to understand product design processes, the different methodologies to develop successful products, how to model these products using ProE and how to present new products to a technical audiences successfully. For this, the student at the end of the course will be:

- Able to explain perfectly the product design cycle and apply it to real design processes.
- Able to understand the uses and applications of 3D printing and rapid prototyping.
- Able to use a concurrent design approach effectively
- Able to understand and apply quality concepts to generate the best possible product.
- Aware of the existence of advanced design generation and evaluation tools.
- Totally capable of generating a multi part product using pro-engineer.
- Capable of 3D printing model solids.

Saint Louis University - Madrid Campus is committed to excellent and innovative educational practices. In order to maintain quality academic offerings and to conform to relevant accreditation requirements, the Campus regularly

assesses its teaching, services, and programs for evidence of student learning outcomes achievement. For this purpose anonymized representative examples of student work from all courses and programs is kept on file, such as assignments, papers, exams, portfolios, and results from student surveys, focus groups, and reflective exercises. *Thus, copies of student work for this course, including written assignments, in-class exercises, and exams may be kept on file for institutional research, assessment and accreditation purposes.* If students prefer that Saint Louis University - Madrid Campus does not keep their work on file, they need to communicate their decision in writing to the professor.

Required Texts and Materials: None, all materials will be provided in class.

Attendance Policy: Attendance is mandatory. This is a single day, lab based course, missing a single class results in a serious loss of teaching material. All missed classes have to be justified.

Course Requirements and Grading Rationale/System:

Midterm Project 15%
Final Project 30%
Midterm Exam 15%
Final Exam 30%
Class Attendance and Participation 10%

Participation in the class discussions is highly encouraged, positive additions that helps understand the topic and/or arising alternative views will be welcome. Engineering is partly based in accumulation of knowledge and the only way for this to happen is sharing your thoughts with others. Two projects will be completed by the students, one individual engineering problem and a final group project. There will be one midterm exam and one final exam covering the full content of the course. The grading scale is:

A 90-100%
A- 87-89%
B+ 84-86%
B 80-83%
B- 77-79%
C+ 74-76%
C 70-73%
C- 66-69%
D 60-65%
F < 60%

Note that late submissions will be penalized with an automatic 15% grade reduction.

E-mail: Campus and course announcements will often be handled by e-mail. Students should check their "@slu.edu" e-mail regularly.

University Statement on Academic Integrity: Academic integrity is honest, truthful and responsible conduct in all academic endeavors. The mission of Saint Louis University is "the pursuit of truth for the greater glory of God and for the service of humanity." Accordingly, all acts of falsehood demean and compromise the corporate endeavors of teaching, research, health care and community service via which SLU embodies its mission. The University strives to prepare students for lives of personal and professional integrity, and therefore regards all breaches of academic integrity as matters of serious concern.

The governing University-level Academic Integrity Policy can be accessed on the Provost's Office [website](#). Additionally, SLU-Madrid has posted its academic integrity policy online: <http://www.slu.edu/madrid/academics>.

As a member of the University community, you are expected to know and abide by these policies, which detail definitions of violations, processes for reporting violations, sanctions and appeals.

The professor will review these matters during the first weeks of the term. Please direct questions about any facet of academic integrity to your faculty, the chair of the department of your academic program, or the Academic Dean of the Madrid Campus.

University Title IX Statement: Saint Louis University and its faculty are committed to supporting our students and seeking an environment that is free of bias, discrimination, and harassment. If you have encountered any form of sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the University. If you speak with a faculty member about an incident of misconduct, that faculty member must notify SLU's Title IX deputy coordinator, Marta Maruri, whose office is located on the ground floor of Padre Rubio Hall, Avenida del Valle, 28 (mmaruri@slu.edu; 915-54-5858, ext. 213) and share the basic fact of your experience with her. The Title IX deputy coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus.

If you wish to speak with a confidential source, you may contact the counselors at the SLU-Madrid's Counseling Services on the third floor of San Ignacio Hall (counselingcenter-madrid@slu.edu; 915-54-5858, ext. 230) or Sinews Multipletherapy Institute, the off-campus provider of counseling services for SLU-Madrid (www.sinews.es; 917-00-1979). To view SLU-Madrid's sexual misconduct policy and for resources, please visit the following web address: <http://www.slu.edu/Documents/Madrid/campus-life/SLUMadridSexualMisconductPolicy.pdf>.

Students with Special Needs: In recognition that people learn in a variety of ways and that learning is influenced by multiple factors (e.g., prior experience, study skills, learning disability), resources to support student success are available on campus. Students who think they might benefit from these resources can find out more about:

- Course-level support (e.g., faculty member, departmental resources, etc.) by asking your course instructor.
- University-level support (e.g., tutoring/writing services, Disability Services) by visiting the Academic Dean's Office (San Ignacio Hall) or by going to <https://www.slu.edu/madrid/academics/student-resources>.

Students with a documented disability who wish to request academic accommodations must contact Disability Services to discuss accommodation requests and eligibility requirements. Once successfully registered, the student also must notify the course instructor that they wish to access accommodations in the course. Please contact Disability Services at disabilityservices-madrid@slu.edu or +915 54 58 58, ext. 230 for an appointment. Confidentiality will be observed in all inquiries. Once approved, information about the student's eligibility for academic accommodations will be shared with course instructors via email from Disability Services. For more information about academic accommodations, see "Student Resources" on the SLU-Madrid webpage.

Note: Students who do not have a documented disability but who think they may have one are encouraged to contact Disability Services.

Spring 2018 Course Schedule:

JANUARY	
Wednesday 10	First Day of Classes
Thursday 11	
Friday 12	
Monday 15	Introduction to Design I
Tuesday 16	
Wednesday 17	
Thursday 18	
Friday 19	
Sunday 21	Last Day to Drop a Class without a Grade W and/or Add a Class; Last Day to Choose Audit (AU) or Pass/No Pass (P/NP) Options
Monday 22	Introduction to Design II
Tuesday 23	
Wednesday 24	
Thursday 25	
Friday 26	No Classes Application Deadline for Spring Semester Degree Candidates
Monday 29	Computer Tools in Engineering
Tuesday 30	
Wednesday 31	
FEBRUARY	
Thursday 1	
Friday 2	
Monday 5	CREO LAB
Tuesday 6	
Wednesday 7	
Thursday 8	
Friday 9	
Monday 12	CREO LAB
Tuesday 13	
Wednesday 14	Ash Wednesday Registration for Summer 2018 Begins
Thursday 15	
Friday 16	
Monday 19	CREO LAB
Tuesday 20	
Wednesday 21	
Thursday 22	No Classes (Winter Break)
Friday 23	
Monday 26	Midterm (To be confirmed)
Tuesday 27	Professors' Deadline to Submit Midterm Grades
Wednesday 28	
MARCH	
Thursday 1	
Friday 2	
Monday 5	CREO LAB
Tuesday 6	
Wednesday 7	
Thursday 8	
Friday 9	Last Day to Drop a Class and Receive a Grade of W
Monday 12	Design for Quality
Tuesday 13	

Wednesday 14	
Thursday 15	Last Day to Submit Transfer Application for Fall Semester
Friday 16	
Monday 19	Design Project Management
Tuesday 20	
Wednesday 21	
Thursday 22	
Friday 23	
Monday 26	<i>Semana Santa</i> Holiday (Campus Closed)
Tuesday 27	
Wednesday 28	
Thursday 29	<i>Jueves Santo</i> (Campus Closed)
Friday 30	<i>Viernes Santo</i> (Campus Closed)
APRIL	
Monday 2	CREO LAB
Tuesday 3	
Wednesday 4	Registration for Fall 2018 Semester Begins
Thursday 5	
Friday 6	
Monday 9	CREO LAB
Tuesday 10	
Wednesday 11	
Thursday 12	
Friday 13	
Monday 16	CREO LAB
Tuesday 17	
Wednesday 18	
Thursday 19	
Friday 20	
Monday 23	CREO LAB
Tuesday 24	
Wednesday 25	
Thursday 26	
Friday 27	
Monday 30	Project Presentations
MAY	
Tuesday 1	<i>Día del Trabajador</i> (Campus Closed)
Wednesday 2	<i>Día de la Comunidad</i> (Campus Closed)
Thursday 3	Spring 2018 Final Day of Classes
Friday 4	Spring 2018 Final Exams
Monday 7	
Tuesday 8	
Wednesday 9	
Thursday 10	
Friday 11	University Housing Move-out Date
Saturday 12	Commencement
Sunday 13	Professors' deadline to submit spring 2018 final grades

Final Exam Schedules Spring 2018

	4 May (Fr)	7 May (Mn)	8 May (Tu)	9 May (Wd)	10 May (Th)
08:30-11:30	Mn classes that meet at 9:00 & 9:30	Mn classes that meet at 10:00	Mn classes that meet at 11:00 & 11:30	Tu classes that meet at 9:30	Tu classes that meet at 8:00
12:00-15:00	Tu classes that meet at 11:00	Mn classes that meet at 13:00	Tu classes that meet at 14:30	Mn classes that meet at 12:00 & 12:30	Tu classes that meet at 12:30
15:30-18:30	Mn classes that meet at 14:30	Tu classes that meet at 17:00 & 17:30	Mn classes that meet at 16:00	Tu classes that meet at 16:00	Mn classes that meet at 17:30
19:00-22:00	---	---	Mn classes that meet at 18:30 & 19:00	Tu classes that meet at 19:00	---