



SAINT LOUIS UNIVERSITY
MADRID

ECE-1001-M01: Introduction to Electrical and Computer Engineering Fall 2017

Class Days and Time: TR, 16:00-16:50

Classroom: PAH-24

Prerequisite(s): None

Credit(s): 1

Instructor: Usama Abou-Kheder González

Instructor's Email: usama.kheder@slu.edu

Instructor's Campus Phone: 91 554 58 58, ext. 266

Office: Sciences and Engineering Office, Padre Arrupe Hall

Office Hours: Tuesday, 17:00-18:00

Course Description:

Electrical Devices, Magnetic Devices, Electronic Devices, Digital Logic, Computer Architecture, Communication Systems. Design concepts in electrical and computer engineering. Some hands-on experiments on familiar pieces of electronic components and devices.

Course Goals and Student Learning Outcomes:

At the end of the course, students will:

- Know the difference between direct current and alternating current.
- Be able to analyze simple circuits
- Know the basics of inductors and capacitors
- Know the difference between analog and digital
- Understand the operation of logic gates
- Know the basics of computer architecture
- Have a general idea of how wireless communication works

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:

Foundations of Electrical Engineering, by J.R. Cogdell, Prentice Hall

Attendance Policy:

Attendance is not mandatory, but a student who attends regularly to lectures and does the homework will get 10% of the final grade.

Grading system:

The grade will be obtained from the following areas:

Homework and attendance: **10%**

Projects: **20%**

First mid-term exam: **20%**

Second mid-term exam: **20%**

Final exam: **30%**

Grading Scale:

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%

Course Outline:

Section 1 - Being an engineer, engineering design process

Section 2 - Direct current fundamentals

Section 3 - Ohm's Law

Section 4 - Alternating current and components

Section 5 - Oscilloscope and function generator

Section 6 - Digital logic devices

Section 7 - Computer architecture

Section 8 - Engineering ethics

Projects:

Additionally to the lectures, homework and exams, students will have to write a paper and do a presentation about a topic related to electrical/computer engineering. The following are some examples. The students can choose one of these topics or propose a different one.

- The Internet: history and technology
- Evolution of the field of communications
- Wireless communication systems
- Digital signal and image processing

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](#) at:. 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 Multiplettherapy 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 <http://www.slu.edu/madrid/learning-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.

(IF APPLICABLE): Mandatory Trips/Activities: Students enrolled in this class must participate and make payment for all mandatory trips/activities. The prices posted on the web are approximate; and the final price will be based on the number of students enrolled on the last day of the Add/Drop period. All students, including those who withdraw from the class after this date, are required to pay these fees, which are non-refundable, unless the trip is cancelled due to low enrollment. Please review SLU-Madrid's trip policies, available on-line.

Fall 2017 Course Schedule:

Monday, September 4	
Tuesday, September 5	
Wednesday, September 6	
Thursday, September 7	
Friday, September 8	
Saturday, September 9	
Sunday, September 10	
Monday, September 11	
Tuesday, September 12	
Wednesday, September 13	

Thursday, September 14	
Friday, September 15	
Saturday, September 16	
Sunday, September 17	Last Day to Drop a Class Without a Grade of W and /or Add a Class, choose Audit (AU) or Satisfactory/Unsatisfactory (S/U) Options
Monday, September 18	
Tuesday, September 19	
Wednesday, September 20	
Thursday, September 21	
Friday, September 22	
Saturday, September 23	
Sunday, September 24	
Monday, September 25	
Tuesday, September 26	
Wednesday, September 27	
Thursday, September 28	
Friday, September 29	
Saturday, September 30	
Sunday, October 1	
Monday, October 2	
Tuesday, October 3	First mid-term exam
Wednesday, October 4	
Thursday, October 5	
Friday, October 6	
Saturday, October 7	
Sunday, October 8	
Monday, October 9	
Tuesday, October 10	
Wednesday, October 11	
Thursday, October 12	Fall Break
Friday, October 13	
Saturday, October 14	
Sunday, October 15	
Monday, October 16	
Tuesday, October 17	
Wednesday, October 18	
Thursday, October 19	Midterm Grades Due.
Friday, October 20	
Saturday, October 21	
Sunday, October 22	
Monday, October 23	
Tuesday, October 24	
Wednesday, October 25	
Thursday, October 26	
Friday, October 27	
Saturday, October 28	
Sunday, October 29	
Monday, October 30	Last Day to Drop a Class and Receive the Grade of W.
Tuesday, October 31	
Wednesday, November 1	University Closed
Thursday, November 2	Spring Registration Opens!

Friday, November 3	
Saturday, November 4	
Sunday, November 5	
Monday, November 6	
Tuesday, November 7	Second mid-term exam
Wednesday, November 8	
Thursday, November 9	University Closed
Friday, November 10	
Saturday, November 11	
Sunday, November 12	
Monday, November 13	
Tuesday, November 14	
Wednesday, November 15	
Thursday, November 16	
Friday, November 17	
Saturday, November 18	
Sunday, November 19	
Monday, November 20	
Tuesday, November 21	
Wednesday, November 22	
Thursday, November 23	
Friday, November 24	
Saturday, November 25	
Sunday, November 26	
Monday, November 27	
Tuesday, November 28	
Wednesday, November 29	
Thursday, November 30	
Friday, December 1	
Saturday, December 2	
Sunday, December 3	
Monday, December 4	
Tuesday, December 5	
Wednesday, December 6	University Closed
Thursday, December 7	
Friday, December 8	University Closed
Saturday, December 9	
Sunday, December 10	
Monday, December 11	
Tuesday, December 12	
Wednesday, December 13	
Thursday, December 14	Final Exam – Day 1
Friday, December 15	Final Exam – Day 2
Saturday, December 16	
Sunday, December 17	
Monday, December 18	Final Exam – Day 3 Midyear Commencement!
Tuesday, December 19	Final Exam – Day 4 – ECE-1001 Final Exam
Wednesday, December 20	Final Exam – Day 5
Saturday, December 23	Grades Due to Registrar

Final exams schedule:

	14 Dec (Th)	15 Dec (Fr)	18 Dec (Mn)	19 Dec (Tu)	20 Dec (Wd)
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 & 10:00	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	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 15:30 & 16:00	Mn classes that meet at 17:30
19:00-22:00	---	---	Mn classes that meet at 19:00	Tu classes that meet at 19:00	---