

Saint Louis University- Madrid Campus
Division of Sciences, Engineering and Nursing

CSCI-1300 Introduction to Object Oriented Programming

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Credits: 4

Semester: Spring 2018

Prerequisite: MATH-120 or equivalent

Curriculum: General Elective, A&S/B&A; Core Requirement, Computer Science and Engineering.

Office Hours: Wednesdays:12:00 to 13:00 and upon request.

Course Description

This course aims to teach students the basic concepts and techniques which form the **object oriented programming paradigm** using Python. We start covering the basics of how one constructs a program from a series of simple instructions in Python to using objects and classes.

Prerequisite:

MATH 1200 (College Algebra) or equivalent, and a C- or better in one of CSCI 1010 through 1090, or equivalent programming experience.

Course Objectives

This **course** provides an introduction to object oriented **programming** (OOP) using Python **programming** language. Students completing the **course** should:

In this course, we'll do the following:

- We'll start by teaching you the core features of Python. These features are included in every modern programming language, so you can use what you learn no matter what you work on next.
- We'll also teach you how to think methodically about programming. In particular, we will show you how to break complex problems into simple ones and how to combine the solutions to those simpler problems to create complete applications.
- Finally, we'll introduce some tools that will help make your programming more productive, as well as some others that will help your applications cope with larger problems.

Learning Outcomes

After successfully completing the course, students will be able to:

1. Create and run a Python program in various ways.
2. Have the ability to write a computer program to solve specified problems.
3. Understand the different Data types existing in Python (list, tuples, dictionary).
4. Structure a program in a logical and functional way.
5. Understand the basics of Object Oriented programming such as classes, methods, inheritance and polymorphism.
6. Structure a program in an object-oriented design, and make use of inheritance and composition.

Textbook

- ✓ “How To Think Like a Computer Scientist: Learning with Python 3” by Allen Downey, Jerrey Elkner, Chris Meyers.
- ✓ A good online book for Python 3: <http://www.codewithc.com/python-programming-an-introduction-to-computer-science-2nd-edition-pdf-download>

Course Management

- ✓ There will be homework problems assigned weekly. The homework will not be graded, but solutions will be provided and students are expected to check their exercises and come to office hours with any difficulties encountered. The assignments will cover material from the textbook and readings, and will consist of programming assignments.
- ✓ Homework in this course will be returned electronically. Homework assignments are weekly posted in Blackboard.
- ✓ Project(s): These will focus on applying techniques to solve real world problems.

Tests: There will be two midterm exams, a set of quizzes and a final exam.

1st Mid-Term Exam: Feb 20 (Class Time)

2nd Mid-Term Exam: April 6 (Class Time)

Final Exam: May 7 (From 9:00 to 11:00)

Grading System

Class participation/Lab performance: 10%
Homework 15%
Projects: 15 %
Quizzes: 10%
Mid-Term Exams: 25%
Final Exam: 25%

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%

Note: Participation and classroom performance impact the grade. The grading system may be adjusted as needed at the discretion of the instructor.

Important Dates:

Jan 10	Spring 2017 first day of classes
Jan 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
Jan 26	Application deadline for spring semester degree candidates. No classes
Feb 14	Registration for Summer 2017 sessions begins
Feb 22-23	No classes (Winter Break).
Mar 9	Last day to drop a class and receive a grade of W
Mar 15	Last day to submit Transfer Application for fall semester
Mar 24	Pre-samana Santa.
Mar 26-28	Semana Santa (university closed).
May 1	Dia del Trabajador holiday.
May 2	Dia de la comunidad de Madrid holiday.
May 3	Spring 2018 final day of classes.
May 4,7-10	Spring 2018 final Exams.

Computer and Cell Phone Policy

Computers will be an integral part of this course, both inside and outside of class. However, out of courtesy to both the instructor and other students, please do not use the lab computers for non-class related activity. In particular, you do not need to be using a computer unless an exercise or in class activity requiring them is in progress.

You are unlikely to need cell phones during the course of lecture. Please ensure that your cell phone is set to vibrate or silent during lecture, and do not send text messages of any kind.

Policies:

- (1) Students are encouraged to participate in class discussions and to ask questions.
- (2) Announcements may be made during the semester.
- (3) Useful information for the course may be found on the web <http://myslu.slu.edu> under tools then Blackboard Learning System. Direct Access to Blackboard: <http://blackboard.slu.edu>.
- (4) Syllabus, reading and homework problems are subject to change.
- (5) Students are responsible to check blackboard for all lecture material, handouts, homework and assigned reading.
- (6) It is mandatory to attend all classes unless a reasonable excuse is given.
- (7) Make up exams are not given. Students who legitimately miss an exam, due to a doctor's visit or family emergency must provide written documentation of the circumstances. A letter from the university counselor is accepted. Exams that are missed illegitimately result in a score of F.
- (8) If for an excused absence a class is not attended, it is the student's responsibility to find out what was covered in class and to secure notes from another student.

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:

http://www.slu.edu/Documents/provost/academic_affairs/University-wide%20Academic%20Integrity%20Policy%20FINAL%20%206-26-15.pdf.

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 policies during the first weeks of the term: please direct questions about any facet of academic integrity to your professor, the chair of the department of your academic program or the Academic Dean of the Madrid Campus.

Others:

1. 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; 91-700-1979) 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>.

2. 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.

3. Information regarding the collection of student work for assessment.

Saint Louis University - Madrid Campus is committed to excellent and innovative educational practices. In order to maintain quality academic offerings and to conform to accreditation requirements, SLU-Madrid regularly assesses its teaching, services and programs for evidence of student learning. For this purpose, SLU-Madrid keeps representative examples of student work from all courses and programs on file, including assignments, papers, exams, portfolios and results from student surveys, focus groups and reflective exercises. Copies of your work for this course may be kept on file for institutional research, assessment and accreditation purposes. If you prefer SLU-Madrid not to retain your work for this purpose, you must communicate this decision in writing to your professor.