

# SAINT LOUIS UNIVERSITY MADRID

## B.A./B.S. COMPUTER SCIENCE

### DEGREE(S)

- + B.S. in Computer Science
- + B.A. in Computer Science
- + Minor in Computer Science

### PROGRAM OVERVIEW

Students can complete a B.S. or a B.A. in Computer Science at the Madrid Campus, or transfer between the Madrid Campus and the St. Louis Campus.

The B.S. degree focuses largely on analytical skills and a detailed understanding of computer science. Since this is a more professionally focused degree, graduates often go directly into the industry upon graduation.

The B.A. degree is often combined with another major, such as international business, economics, or marketing. The program entails a broad liberal arts course of study, which enables students to gain a vision of the application and impact of computer science on society. The degree provides a solid foundation for graduate study in computer science.

In addition to required courses, computer science elective course offerings include:

- + Network Programming
- + Computer Graphics
- + Artificial Intelligence
- + Databases
- + Advanced Operating Systems
- + High-Performance Computing
- + Computer Security
- + Machine Learning

Our computer science programs are modeled after curricular requirements for ABET-CAC accreditation in computer science.

### CURRICULUM

Required courses (B.A. and B.S.):

- + Introduction to Computer Science
- + Introduction to Object-Oriented Programming
- + Data Structures
- + Computer Architecture
- + Computer Ethics
- + Object-Oriented Software Design
- + Operating Systems
- + Capstone Project
- + Calculus I
- + Calculus II
- + Discrete Mathematics

Additional classes required for the B.A.:

- + Computer Science Theory
- + Arts and Sciences Core for B.A.
- + Additional 2000-4000 math courses
- + Additional natural science courses

Additional classes required for B.S.:

- + Algorithms
- + Programming Languages
- + Software Engineering
- + Arts and Sciences Core for B.S.
- + Additional 2000-4000 math courses
- + Additional lab science courses

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Office of Admissions /// Avenida del Valle, 34 /// Madrid, Spain 28003  
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#### Contact

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**Learn More** For course listings and more information about our faculty, visit  
<https://www.slu.edu/madrid/academics/departments/science-engineering/math-computer-science.php>



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## B.A./B.S. COMPUTER SCIENCE

### WHY CHOOSE THIS PROGRAM?

Graduates with computer science degrees are in high demand in the international job market. Our computer science students master a variety of skills, including:

- + Computer hardware and architecture
- + Scientific principle and scientific method
- + Software analysis, design and building
- + Object-oriented programming
- + Server security and management
- + Database design and applications
- + Networking concepts and technologies

Employment sectors:

- + Security analysis
- + Computer graphics and data visualization
- + Artificial intelligence
- + Tele-communications
- + Internet of Things (IoT)
- + Bioinformatics
- + Software or application development
- + Computer programming
- + IT system administration or project management
- + Computer forensics

Types of employers:

- + Software companies
- + IT development companies
- + Manufacturing companies
- + Banking and financial institutions
- + Data warehouse companies
- + Government / federal agencies
- + Schools, colleges and universities
- + Technical support centers

### ADMISSION REQUIREMENTS

- + Online application form // Common Application
- + 2 letters of recommendation (encouraged)
- + Curriculum vitae/résumé (encouraged)

First-year Students:

- + Secondary school academic transcripts
- + University entrance exam scores (SAT/ACT, IB diploma, A levels, Selectividad, etc.)

Transfer Students:

- + College transcript(s)
- + Proof of high school graduation

Non-native English speakers must submit an official English exam (TOEFL or IELTS).

Detailed information is available on our website.

### SCHOLARSHIPS AND FINANCIAL AID

SLU-Madrid is committed to supporting students—and their families—who choose to invest in themselves and their future by studying at the Madrid Campus. Each student, from any state in the U.S., any region in Spain, or any country in the world, is eligible for University-funded aid. Scholarship/financial aid programs available include:

- + Merit Scholarships
- + Visiting Student Scholarships
- + Grants and Loans
- + Departmental Support Scholarships
- + Jesuit High School Award
- + Catholic High School Award
- + Madrid Campus Antiguos Alumnos Award
- + Family Award

For more information: [financialaid-madrid@slu.edu](mailto:financialaid-madrid@slu.edu)

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