

COMPUTER INFORMATION SYSTEMS, B.S.

Prepare for a future with innovative, diverse, technology-based organizations in the ever-changing field of computer science and IT. The Bachelor of Science in Computer Information Systems offered through Saint Louis University's School for Professional Studies provides you with the knowledge and skills needed to be competitive in today's market. By taking only two extra courses, you can add a certificate with an emphasis in data analytics or cybersecurity, providing you with expertise that is in demand in modern organizations.

Curriculum Overview

As part of the School for Professional Studies, this 120-credit degree program offers future and current leaders like you a flexible option to meet your personal career goals. With six accelerated, eight-week terms each year offered by SLU online, you can begin working toward your degree at any time, making advanced education more accessible for working professionals.

Careers

A computer information systems degree can prepare students for advanced studies or employment in the ever-changing field of computer science and information technology.

According to the U.S. Bureau of Labor Statistics, the computer science and database industry is expected to grow by 12 percent through the year 2024, adding 488,500 new jobs. Job opportunities within this field have a broad range of salaries.

Students in the data analytics concentration may pursue a career as a market research analyst, data analyst or in business intelligence. Students learn how to collect, analyze, interpret and present information obtained from data drawn from multiple, often disparate sources of organizational data.

Students in the cybersecurity concentration may pursue a career as a cybersecurity analyst, web developer, computer network architect or information assurance engineer. Students gain the skills needed to secure information assets of an organization and ensure that data can be created, accessed and modified by only those with the requisite privileges. Upon completion, students will be prepared for employment opportunities in a variety of businesses and organizations.

Admission Requirements

The School for Professional Studies welcomes adult learners whose educational journey has been interrupted by life's circumstances. This includes individuals with at least one of the following characteristics:

- Delayed enrollment in post-secondary education
- Attends part-time for at least part of the academic year
- Works full-time (35 hours or more/week) while enrolled
- Financial independence, has dependents other than a spouse, is a single parent, or has other demands that make traditional education less feasible

Application Requirements

- **Work Experience:** At least three years or the equivalent. Work experience may include a full-time/part-time job, internship, volunteer work, or comparable experiences.
- **Education:** High school diploma or composite GED score of at least 2250.
- **Coaching session:** Successful completion of a meeting with an academic coach (this can be done virtually or on campus).
- **Grade Point Average:** Minimum transfer cumulative GPA of 2.5 (unless qualified for conditional admittance).
- **Transcript:** An official transcript from the most recent institution attended.

Scholarships and Financial Aid

There are two principal ways to help finance a Saint Louis University education:

- **Scholarships:** Scholarships are awarded based on academic achievement, service, leadership and financial need. The School for Professional Studies offers numerous scholarships and awards specially for new students.
- **Financial Aid:** Financial aid is provided in the form of grants and loans, some of which require repayment.

To determine eligibility for financial assistance, submit the Free Application for Federal Student Aid (FAFSA) early for maximum consideration. FAFSA is available online at <http://www.fafsa.ed.gov>.

For information on other scholarships and financial aid, visit the student financial services office online at <http://finaid.slu.edu>.

Active Military and Veterans and First Responders

Honorably discharged veterans, active-duty military members, reserve members and first responders qualify for a reduced tuition rate of \$295 per credit hour for any undergraduate program offered through the School for Professional Studies.

Learning Outcomes

1. Graduates will be able to analyze a problem, and to identify and define the computing requirements appropriate to its solution. (ABET-1)
2. Graduates will be able to design, implement, and evaluate a computer-based solution to meet a given set of computing requirements in the context of the discipline. (ABET-2)
3. Graduates will be able to communicate effectively with a range of audiences about technical information. (ABET-3)
4. Graduates will be able to make informed judgments in computing practice based on legal and ethical principles. (ABET-4)
5. Graduates will be able to function effectively on teams to establish goals, plan tasks, meet deadlines, manage risk, and produce deliverables. (ABET-5)

Requirements

| Code | Title | Credits |
|---------------------------|----------------------------------|-----------|
| Core Requirements | | 39 |
| | College core requirements (p. 2) | |
| Major Requirements | | 39 |

| | | |
|----------------------------|--|----------------|
| CIS 1300 | Information Systems and Technology | |
| CIS 1600 | Introduction to Programming | |
| CIS 2300 | Data-Driven Decision Making | |
| CIS 2700 | Discrete Methods and Models | |
| CIS 3000 | System Analysis and Design | |
| CIS 3150 | Workplace Ethics | |
| CIS 3250 | Cybersecurity Principles | |
| CIS 3300 | Database Analysis and Design | |
| CIS 3850 | Analytics and Visualizations | |
| CIS 4100 | Technology Strategy and Decision Making | |
| CIS 4700 | Advanced Database Systems | |
| CIS 4960 | Computer Information Systems Capstone Experience | |
| Certificate Options | | 0-12 |
| Cyber Security Certificate | | |
| CIS 4300 | The Fundamentals of Computer Forensics | |
| CIS 4600 | Cyber Threats and Defense | |
| Data Analytics Certificate | | |
| CIS 4250 | Survey of Machine Learning | |
| CIS 4750 | Data Mining | |
| General Electives | | 33 |
| Total Credits | | 111-123 |

Additional Courses Needed for Data Analytics Concentration

| Code | Title | Credits | |
|-------------------------|----------------------------|----------|----------|
| Required Courses | | | 6 |
| CIS 4250 | Survey of Machine Learning | | |
| CIS 4750 | Data Mining | | |
| Total Credits | | 6 | |

Additional Courses Needed for Cybersecurity Concentration

| Code | Title | Credits | |
|-------------------------|--|----------|----------|
| Required Courses | | | 6 |
| CIS 4300 | The Fundamentals of Computer Forensics | | |
| CIS 4600 | Cyber Threats and Defense | | |
| Total Credits | | 6 | |

Continuation Standards

Students must maintain a minimum 2.00 GPA.

SPS Core Curriculum Requirements

| Code | Title | Credits | |
|--|--|---------|----------|
| Communication and Technology | | | 9 |
| PST 1500 | Igniting Success: Jesuit Education and the Adult Learner | | |
| CMMK 1210 | Public Speaking in Org. Life | | |
| ENGL 4005 | Business and Professional Writing | | |
| Critical Thinking and Problem Solving | | | 6 |
| CIS 2700 | Discrete Methods and Models | | |
| or CIS 2850 | Principles of Data Analysis | | |
| PHIL 1055 | Intro to Phil: Self & Reality | | |

| | | | |
|--|--|-----------|-----------|
| Ethics, Values & Spirituality | | | 9 |
| THEO 1005 | Theological Foundations | | |
| PHIL 2055 | Ethics | | |
| THEO/SPR | One additional THEO or SPR course | | |
| Engaging the Human Experience | | | 15 |
| HUM 2000 | Ethics of Writing | | |
| HUM 1500 | Engaging the Human Experience | | |
| <i>One Humanities course</i> | | | |
| HUM 1930 | Special Topics | | |
| ARTH 3805 | Twentieth Century Art | | |
| ENGL 2025 | Intro to Literary Study | | |
| ENGL 2605 | Introduction to Short Fiction | | |
| ENGL 3295 | American Literary Traditions: Special Topics | | |
| HIST 1115 | Origins of the Modern World to 1500 | | |
| HIST 1125 | Origins of the Modern World, 1500 to Present | | |
| HIST 3485 | U.S. Civil War and Reconstruction: 1850-1877 | | |
| HIST 3635 | The Saint Louis Region | | |
| PHIL 1055 | Intro to Phil: Self & Reality | | |
| PHIL 3605 | Science and Religion | | |
| SPR 3610 | Spirituality: Work & Vocation | | |
| SPR 4810 | Spirituality, Peace & Justice | | |
| THEO 2355 | American Christianity | | |
| <i>One Natural Science course</i> | | | |
| BIOL 1385 | Introduction to Ecology and Evolution | | |
| BIOL 1405 | Biology of Health and Disease | | |
| <i>One Social Science course</i> | | | |
| POLS 1105 | Introduction to American Politics | | |
| PSYK 1010 | General Psychology | | |
| PST 1900 | Survey of Economics | | |
| SOC 1105 | Introduction to Sociology | | |
| <i>One Diversity course</i> | | | |
| CIS 3150 | Workplace Ethics | | |
| CMMK 3650 | Professional Communication Between Cultures | | |
| PSYK 3330 | Applied Personality | | |
| SOC 1105 | Introduction to Sociology | | |
| Total Credits | | 39 | |

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

| Course | Title | Credits |
|-----------------|-------|---------|
| Year One | | |
| Fall | | |
| Fall 1 | | |

| | | |
|--|--|-----------|
| PST 1500 | Igniting Success: Jesuit Education and the Adult Learner | 3 |
| CIS 1300 | Information Systems and Technology | 3 |
| Fall 2 | | |
| HUM 2000 | Ethics of Writing | 3 |
| CIS 1600 | Introduction to Programming | 3 |
| Credits | | 12 |
| Spring | | |
| Spring 1 | | |
| CMMK 1210 | Public Speaking in Org. Life | 3 |
| CIS 2700 | Discrete Methods and Models | 3 |
| Spring 2 | | |
| CIS 2300 | Data-Driven Decision Making | 3 |
| PHIL 1055 | Intro to Phil: Self & Reality | 3 |
| Credits | | 12 |
| Summer | | |
| HUM 1500 | Engaging the Human Experience | 3 |
| CIS 2850 | Principles of Data Analysis | 3 |
| Credits | | 6 |
| Year Two | | |
| Fall | | |
| Fall 1 | | |
| CIS 3000 | System Analysis and Design | 3 |
| ENGL 4005 | Business and Professional Writing | 3 |
| Fall 2 | | |
| CIS 3300 | Database Analysis and Design | 3 |
| PHIL 2050 | Ethics | 3 |
| Credits | | 12 |
| Spring | | |
| Spring 1 | | |
| CIS 3250 | Cybersecurity Principles | 3 |
| THEO 1000 | Theological Foundations | 3 |
| Spring 2 | | |
| Social Science elective or CIS Certificate (optional) | | 3 |
| THEO/SPR | | 3 |
| Credits | | 12 |
| Summer | | |
| Humanities Elective | | 3 |
| CIS 3150 | Workplace Ethics | 3 |
| Credits | | 6 |
| Year Three | | |
| Fall | | |
| Fall 1 | | |
| Humanities Elective | | 3 |
| Natural Science elective or CIS Certificate (optional) | | 3 |
| Fall 2 | | |
| CIS 4100 | Technology Strategy and Decision Making | 3 |
| General Elective | | 3 |
| Credits | | 12 |
| Spring | | |
| Spring 1 | | |
| General Elective or CIS Certificate (optional) | | 3 |

| | | |
|--|--|------------|
| CIS 3850 | Analytics and Visualizations | 3 |
| Spring 2 | | |
| CIS 4700 | Advanced Database Systems | 3 |
| Social Science elective or CIS Certificate (optional) | | 3 |
| Credits | | 12 |
| Summer | | |
| General Elective | | 3 |
| General Elective | | 3 |
| Credits | | 6 |
| Year Four | | |
| Fall | | |
| Fall 1 | | |
| General Elective or CIS Certificate (optional) | | 3 |
| General Elective or CIS Certificate (optional) | | 3 |
| Fall 2 | | |
| General Elective or CIS Certificate (optional) | | 3 |
| General Elective or CIS Certificate (optional) | | 3 |
| Credits | | 12 |
| Spring | | |
| Spring 1 | | |
| Natural Science Elective or CIS Certificate (optional) | | 3 |
| General Elective | | 3 |
| Spring 2 | | |
| CIS 4960 | Computer Information Systems Capstone Experience | 3 |
| General Elective | | 3 |
| Credits | | 12 |
| Summer | | |
| General Elective | | 3 |
| General Elective | | 3 |
| Credits | | 6 |
| Total Credits | | 120 |

Contact Us

Apply for Admission (<https://www.slu.edu/online/becoming-a-student/apply.php>)

For additional admission questions, please call 314-526-2825 or email sps@slu.edu.

2+SLU

2+SLU programs are formal transfer agreements for students seeking an associate degree at a partner institution.

- Computer Information Systems, B.S. (STLCC 2+SLU)