

# COMPUTER SCIENCE (BS)

The BS in Computer Science provides essential training in the foundations of computing, data storage and information processing. With this foundation, graduates of the program can easily adapt to and create new information technologies, new computing paradigms, and new ideas for applying computer systems.

Students can choose to study within one of three concentrations in the BS in Computer Science program:

- Artificial Intelligence
- Game Systems
- Software Development

| Program Requirements                 | Quarter Hours |
|--------------------------------------|---------------|
| Liberal Studies Requirements         | 76            |
| Major and Concentration Requirements | 96            |
| Open Electives                       | 20            |
| <b>Total hours required</b>          | <b>192</b>    |

## Learning Outcomes

Students will be able to:

- Model a computational problem, select appropriate algorithms and data structures for a solution, justify the correctness of the algorithm, and implement an application solving the problem.
- Analyze the efficiency of a computational solution mathematically and validate the analysis experimentally.
- Analyze and select an algorithm based on system effects.
- Criticize a program on the basis of its maintainability and suggest improvements.

## Liberal Studies Requirements

Honors program requirements can be found in the individual Colleges & Schools section of the University Catalog. Select the appropriate college or school, followed by Undergraduate Academics and scroll down.

| First Year Program  | Hours |
|---|-------|
| <b>Chicago Quarter</b>                                    |       |
| LSP 110 DISCOVER CHICAGO<br>or LSP 111 or EXPLORE CHICAGO | 4     |
| <b>Focal Point</b>  |       |
| LSP 112 FOCAL POINT SEMINAR                               | 4     |
| <b>Writing</b>  |       |
| WRD 103 COMPOSITION AND RHETORIC I <sup>1</sup>           | 4     |
| WRD 104 COMPOSITION AND RHETORIC II <sup>1</sup>          | 4     |
| <b>Quantitative Reasoning</b>                             |       |
| Not Required  |       |
| <b>Sophomore Year</b>                                     |       |
| <b>Race, Power, and Resistance</b>                        |       |
| LSP 200 SEMINAR ON RACE, POWER, AND RESISTANCE            | 4     |
| <b>Junior Year</b>  |       |
| <b>Experiential Learning</b>                              |       |
| Required  | 4     |

### Senior Year

#### Capstone

Required in major <sup>1</sup>

<sup>1</sup> Students must earn a C- or better in this course.

### Learning Domains

**Arts and Literature (AL)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/arts-and-literature/>)

- 3 Courses Required

**Historical Inquiry (HI)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/historical-inquiry/>)

- 2 Courses Required

**Math and Computing (MC)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/math-and-computing/>)

- Not Required

**Philosophical Inquiry (PI)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/philosophical-inquiry/>)

- 2 Courses Required:
  - CSC 208
  - 1 Additional Course

**Religious Dimensions (RD)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/religious-dimensions/>)

- 2 Courses Required

**Scientific Inquiry (SI)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/scientific-inquiry/>)

- 1 Lab Course Required

**Social, Cultural, and Behavioral Inquiry (SCBI)** (<https://catalog.depaul.edu/undergraduate-core/liberal-studies-program/liberal-studies-learning-domains/social-cultural-and-behavioral-inquiry/>)

- 3 Courses Required

### Note

Specified required courses within Liberal Studies may have grade minimums (e.g. C- or better). Please consult your advisor or your college and major requirements.

Courses offered in the student's primary major cannot be taken to fulfill LSP Domain requirements. If students double major, LSP Domain courses may double count for both LSP credit and the second major. Students who choose to take an experiential learning course offered by the major may count it either as a general elective or the Experiential Learning requirement.

In meeting learning domain requirements, no more than one course that is outside the student's major and is cross-listed with a course within the student's major, can be applied to count for LSP domain credit.

This policy does not apply to those who are pursuing a double major or earning BFA or BM degrees.

## Concentration Requirements

Students must complete the requirements from the Artificial Intelligence, Game Systems, or Software Development concentrations.

## Degree Requirements

Students in this degree must meet the following requirements:

- Complete a minimum of 192 credit hours (generally 48 courses)
- Earn a grade of C- or higher in WRD 103, WRD 104, and all Major and Minor courses
- Earn a grade of D or higher in all other Liberal Studies and Open Elective courses
- Maintain a cumulative GPA of 2.0 or higher

## Program Combination Restrictions

Students pursuing the BS in Computer Science are forbidden from pursuing the following secondary/double majors: BS Computer Science + Animation; BS Computer Science +Geography; BS Game Programming; BS Information Technology; BS Math and Computer Science.

Students pursuing the BS in Computer Science are also forbidden from pursuing the Minor in Computer Science and the Minor in Information Technology.

Concentrations, tracks and specializations provide focus to the major. In addition to any college core requirements, liberal studies requirements and major requirements, students are required to choose one of the following:

- Artificial Intelligence Concentration, Computer Science (BS) (<https://catalog.depaul.edu/programs/computer-science-bs/artificial-intelligence-concentration-computer-science-bs/>)
- Game Systems Concentration, Computer Science (BS) (<https://catalog.depaul.edu/programs/computer-science-bs/game-systems-concentration-computer-science-bs/>)
- Software Development Concentration, Computer Science (BS) (<https://catalog.depaul.edu/programs/computer-science-bs/software-development-concentration-computer-science-bs/>)