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.

The BS in Computer Science can be completed online by transfer students if they meet the following requirements:

- Have a minimum of 45 quarter/30 semester hours of transfer credit
- Completed one (1) semester of Java or C++
- Have a minimum cumulative 2.0 GPA
- Be in good standing at the last school they attended

Note - The lab science requirement, English Composition I (WRD 103), and the pre-calculus prerequisite (MAT 130) for the Discrete Mathematics I (MAT 140) and Data Analysis (IT 223) requirements are not available online at DePaul and will need to be completed on campus or transferred in from another institution.

For more information on this option and a sample schedule please see www.cdm.depaul.edu (http://www.cdm.depaul.edu/).

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

- Software Development
- Game Systems

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

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
--- | ---
Chicago Quarter
LSP 110 | DISCOVER CHICAGO | 4
or LSP 111 | or EXPLORE CHICAGO

Focal Point

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSP 112</td>
<td>FOCAL POINT SEMINAR</td>
<td>4</td>
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</table>

Writing

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>WRD 103</td>
<td>COMPOSITION AND RHETORIC I</td>
<td>4</td>
</tr>
<tr>
<td>WRD 104</td>
<td>COMPOSITION AND RHETORIC II</td>
<td>4</td>
</tr>
</tbody>
</table>

Quantitative Reasoning

Not Required

Sophomore Year

Race, Power, and Resistance

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>LSP 200</td>
<td>SEMINAR ON RACE, POWER, AND RESISTANCE</td>
<td>4</td>
</tr>
</tbody>
</table>

Junior Year

Experiential Learning

Required | 4
Senior Year

Capstone

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 394</td>
<td>SOFTWARE PROJECTS</td>
<td>4</td>
</tr>
<tr>
<td>GAM 395</td>
<td>GAME DEVELOPMENT PROJECT II (Game Systems concentration)</td>
<td>4</td>
</tr>
</tbody>
</table>

1 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

- 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.

Major Requirements

Course Requirements

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Quarter Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSC 241</td>
<td>INTRODUCTION TO COMPUTER SCIENCE I</td>
<td>4</td>
</tr>
<tr>
<td>CSC 242</td>
<td>INTRODUCTION TO COMPUTER SCIENCE II</td>
<td>4</td>
</tr>
<tr>
<td>CSC 300</td>
<td>DATA STRUCTURES I</td>
<td>4</td>
</tr>
<tr>
<td>CSC 301</td>
<td>DATA STRUCTURES II</td>
<td>4</td>
</tr>
<tr>
<td>CSC 321</td>
<td>DESIGN AND ANALYSIS OF ALGORITHMS</td>
<td>4</td>
</tr>
<tr>
<td>CSC 347</td>
<td>CONCEPTS OF PROGRAMMING LANGUAGES</td>
<td>4</td>
</tr>
<tr>
<td>CSC 373</td>
<td>COMPUTER SYSTEMS I</td>
<td>4</td>
</tr>
<tr>
<td>CSC 374</td>
<td>COMPUTER SYSTEMS II</td>
<td>4</td>
</tr>
<tr>
<td>MAT 140</td>
<td>DISCRETE MATHEMATICS I</td>
<td>4</td>
</tr>
<tr>
<td>MAT 141</td>
<td>DISCRETE MATHEMATICS II</td>
<td>4</td>
</tr>
<tr>
<td>WRD 204</td>
<td>TECHNICAL WRITING</td>
<td>4</td>
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Note: Students may take CSC 243 and one (1) Additional Major Elective in lieu of CSC 241 and CSC 242.

Concentration Requirements
Students must also complete the requirements from Software Development or Game Systems 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

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:

• 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/)