COMPUTER SCIENCE (MINOR)

This program was approved for students entering the university in the Summer 2023–Spring 2024 catalog year. For more information about catalog year, go to Catalog Year Information (http://catalog.louisville.edu/undergraduate/university-wide-unit-specific-policies/catalog-year/).

Minor in Computer Science
Unit: Speed School of Engineering (http://engineering.louisville.edu) (SS)
Department: Computer Science and Engineering (http://engineering.louisville.edu/computer/)
Academic Plan Code: CS MINOR

Program Requirements

The minor in Computer Science (CS) program is for undergraduate students who are majoring in disciplines other than Computer Science and Engineering. The CS minor requires successful completion of 18 credit hours with a GPA of 2.25 or higher.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MATH 180</td>
<td>Elements of Calculus - QR (<a href="http://catalog.louisville.edu/undergraduate/general-education-requirements/">http://catalog.louisville.edu/undergraduate/general-education-requirements/</a>) (or Equivalent)</td>
<td>3</td>
</tr>
</tbody>
</table>

Admission Requirements

Minimum cumulative GPA: 2.25
Minimum grade in MATH 180 (or equivalent): C-
Minimum number of hours completed: Sophomore standing

<table>
<thead>
<tr>
<th>Code</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>CSE 130</td>
<td>Introduction to C and C++ Programming Languages</td>
<td>3</td>
</tr>
<tr>
<td>CSE 302</td>
<td>Data Structures</td>
<td>3</td>
</tr>
<tr>
<td>CSE 310</td>
<td>Discrete Structures</td>
<td>3</td>
</tr>
</tbody>
</table>

Choose one course from the following list:

<table>
<thead>
<tr>
<th>Code</th>
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<th>Hours</th>
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<tbody>
<tr>
<td>CSE 120</td>
<td>Introduction to Programming with Python</td>
<td>3</td>
</tr>
<tr>
<td>CSE 350</td>
<td>Introduction to Software Engineering (Prerequisite: CSE 302 and CSE 220)</td>
<td>3</td>
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</table>

CS Core Requirements

Choose two courses from the following list: 3

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>CSE 419</td>
<td>Introduction to Algorithms (Prerequisites: CSE 302, CSE 310)</td>
<td>3</td>
</tr>
<tr>
<td>CSE 420</td>
<td>Design of Operating Systems (Prerequisite: CSE 302)</td>
<td>3</td>
</tr>
<tr>
<td>CSE 470</td>
<td>Mobile Device Programming</td>
<td></td>
</tr>
<tr>
<td>CSE 504</td>
<td>Automata Theory (Prerequisite: CSE 310)</td>
<td></td>
</tr>
<tr>
<td>CSE 528</td>
<td>Game Design and Programming (Prerequisite: CSE 302)</td>
<td>3</td>
</tr>
<tr>
<td>CSE 530</td>
<td>Design of Compilers (Prerequisite: CSE 420)</td>
<td>3</td>
</tr>
<tr>
<td>CSE 532</td>
<td>Python and Data Analytics</td>
<td>3</td>
</tr>
<tr>
<td>CSE 535</td>
<td>Database Systems (Prerequisite: CSE 302)</td>
<td>3</td>
</tr>
<tr>
<td>CSE 538</td>
<td>Graph Database and Graph Analytics</td>
<td>3</td>
</tr>
<tr>
<td>CSE 545</td>
<td>Artificial Intelligence (Prerequisites: CSE 302, CSE 310)</td>
<td>3</td>
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</table>

Minimum Total Hours 18

NOTE: At least 9 semester hours must be successfully completed while enrolled at the University of Louisville.

1 Fulfills General Education requirement.
2 Credit for courses taken to fulfill CS Core requirements cannot also be counted to satisfy CS Depth requirements.
3 Some courses listed under CS Depth requirements may need further prerequisites to be satisfied.