# General Education Core

<table>
<thead>
<tr>
<th>Category</th>
<th>Credits</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year Seminar</strong></td>
<td>1</td>
<td><strong>CSCI12000 Windows on Comp. Science</strong></td>
</tr>
<tr>
<td><strong>Foundational Intellectual Skills</strong></td>
<td></td>
<td><strong>ENG-W 131 or W140 Elementary Comp I</strong></td>
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<tr>
<td><strong>Analytical Reasoning</strong></td>
<td></td>
<td><strong>MATH16500 Calculus I</strong></td>
</tr>
<tr>
<td><strong>Intellectual Breadth and Adaptiveness</strong></td>
<td></td>
<td><strong>MATH16600 Calculus II</strong></td>
</tr>
<tr>
<td><strong>Life and Physical Sciences</strong></td>
<td></td>
<td><strong>MATH17100 Multidimensional Math</strong></td>
</tr>
<tr>
<td><strong>Arts, Humanities &amp; Social Sciences</strong></td>
<td></td>
<td><strong>MATH35100 or 51100 Linear Algebra</strong></td>
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<tr>
<td><strong>Cultural Understanding</strong></td>
<td></td>
<td><strong>STAT35000, 41600 or 51100 Statistics</strong></td>
</tr>
<tr>
<td><strong>Capstone Experience (Senior Year):</strong></td>
<td></td>
<td><strong>PHYS15200 Mechanics</strong></td>
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</tbody>
</table>

# Computer Science Major Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Core Courses</strong></td>
<td></td>
<td><strong>CSCI 23000 Computing I [C: MATH 15300]</strong></td>
</tr>
<tr>
<td><strong>SP, SU1, FA</strong></td>
<td></td>
<td><strong>CSCI 24000 Computing II [P:23000 &amp; MATH 15300]</strong></td>
</tr>
<tr>
<td><strong>SP, SU2, FA</strong></td>
<td></td>
<td><strong>CSCI 34000 Discrete Computational Structures</strong></td>
</tr>
<tr>
<td><strong>[P: MATH 15300; C: 24000] SP, FA</strong></td>
<td></td>
<td><strong>CSCI 36200 Data Structures [P:24000 &amp; 34000]</strong></td>
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<tr>
<td><strong>SP, FA</strong></td>
<td></td>
<td><strong>CSCI 40200 Computer Architecture [P:34000] SP, FA</strong></td>
</tr>
<tr>
<td><strong>CSCI 40300 Operating Systems [P:36200 &amp; 40200]</strong></td>
<td>(3)</td>
<td></td>
</tr>
<tr>
<td><strong>SP, FA</strong></td>
<td></td>
<td><strong>CSCI 48400 Theory of Computation [P:36200]</strong></td>
</tr>
<tr>
<td><strong>SP, FA</strong></td>
<td></td>
<td><strong>Capstone Experience (Senior Year):</strong></td>
</tr>
<tr>
<td><strong>Computer Science and Supporting Course Electives</strong></td>
<td></td>
<td><strong>CSCI 49500 Theory of Computation (Senior Year):</strong></td>
</tr>
<tr>
<td><strong>Computer Science majors take 11 major elective courses. A minimum of 6 CSCI electives at the 400 level or higher is required.</strong></td>
<td></td>
<td><strong>No more than 3 courses can be from the select list of N-series courses. No more than 2 courses can be chosen from the list of supporting electives outside of computer science.</strong></td>
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</tbody>
</table>

# General Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Electives</strong></td>
<td>(3)</td>
<td>(Required # of general elective credit hours varies based on how many credit hours needed to reach 120 credits)</td>
</tr>
</tbody>
</table>

**Total Credits:** 120
May Take Up to 3 Courses
From List:
CSCI-N Series
CSCI-N300 Mobile Computing Fundamentals
CSCI-N305 C Language Programming
CSCI-N311 Advanced Database Programming, Oracle
CSCI-N317 Comp. for Scientific Applications
CSCI-N321 System and Network Administration
CSCI-N335 Advanced Programming, Visual Basic
CSCI-N341 Client Side Web Programming
CSCI-N342 Server Side Web Development
CSCI-N343 Object-Oriented Programming for the Web
CSCI-N345 Advanced Programming, Java
CSCI-N351 Intro to Multimedia Programming
CSCI-N355 Intro to Virtual Reality
CSCI-N361 Software Project Management
CSCI-N410 Mobile Computing Application Development
CSCI-N420 Mobile Computing Cross Platform Development
CSCI-N430 Mobile Computing and Interactive Applications
CSCI-N431 E-Commerce with ASP.NET
CSCI-N435 Data Management Best Practices with ADO.NET
CSCI-N443 XML Programming
CSCI-N450 Mobile Computing with Web Services
CSCI-N461 Software Engineering for Applied Computer Science
CSCI-N499 Topics in Applied Computing (topic varies)

May Take Up to 2 Courses
From List:
Supporting Electives*
NEWM-N204 Intro to Interactive Media
NEWM-N230 Intro to Game Design & Development
NEWM-N255 Intro to Digital Sound
NEWM-N304 Interactive Media Applications
NEWM-N330 Game Design, Development, and Production
NEWM-N335 Computer-Based Character Simulation/Animation II
CIT-402 Design & Implementation of Local Area Networks
CIT-406 Advanced Network Security
CIT-420 Digital Forensics
CIT-440 Computer Network Design
HERR-A371 Intro to Interactive Design
HERR-A471 Advanced Interactive Design
INFO-I300 Human Computer Interaction
INFO-I310 Multimedia Arts: History, Criticism & Technology
INFO-I320 Distributed Systems & Collaborative Comp
BUS-S302 Management Information Systems
BUS-L203 Commercial Law I
BUS-L303 Commercial Law II
ECE-204 Intro Electrical & Electron Circuits
ECE-270 Intro to Digital System Design
ECE-362 Microprocessor Systems & Interfacing
ECE-471 Embedded Systems
STAT-514 Design of Experiments
MATH-261 Multivariate Calculus
MATH-266 Differential Equations

*Please note that the courses above may require pre-requisites. Be sure to plan accordingly.

1. Must earn minimum 120 hours
2. Must take minimum 32 hours of 300/400 level courses at IUPUI
3. May need 9 hours of general electives to reach 120; must be college-level courses 100 level or higher. See bulletin for list of excluded classes.
4. Only 6 credits of Studio, Clinical, Athletic, or Performing Arts can be applied to the 120 hours
5. One grade of D+ or D is allowed in Math and one grade of D+ or D is allowed in Life and Physical Sciences.

Life and Physical Science electives
Please refer to the CS Science List for approved life and physical science electives. NOTE: Not all courses on the university list are approved for this program.

Students pursuing the BS in CS should also avoid PHYS-P201, P202, PHYS21800 and 21900.

The following courses do not appear on the General Education Core but will count as Baccalaureate Competencies Life and Physical Science electives:
ECE20100 Linear Circuit Analysis
ECE20200 Linear Circuit Analysis II
ECE27000 Intro to Digital Logical Design

Other CSCI Elective Options
CSCI-300 Systems Programming
CSCI-355 Intro to Programming Languages
CSCI-363 Software Design