


# BS in Computer Science – Software Engineering Applied Option


## SAMPLE CURRICULUM 2024-2025

### FIRST YEAR

### SECOND YEAR

FIRST YEAR			SECOND YEAR		
FALL	WINTER	SPRING	FALL	WINTER	SPRING
<p><b>ENGR 100 (3 cr)</b> The OSU Engineering Student</p>	<p><b>ENGR 102 (3 cr)</b> Design Engineering and Problem Solving</p>	<p><b>ENGR 103 (3 cr)</b> Engineering Computation and Algorithmic Thinking</p> <p>Preq: ENGR 102 &amp; MTH 112Z</p>	<p><b>CS 162 (4 cr)</b> Intro to Computer Science II</p> <p>Preq: ENGR 103 or CS 161</p>	<p><b>CS 261 (4 cr)</b> Data Structures</p> <p>Preq: CS 162 &amp; MTH 231</p>	<p><b>CS 325 (4 cr)</b> Analysis of Algorithms</p> <p>Preq: CS 261 &amp; MTH 231</p>
<p><b>MTH 251 (4 cr)</b> Differential Calculus <i>(Taught Fall, &amp; Winter)</i></p> <p>Preq: MTH 112Z</p>	<p><b>MTH 252 (4 cr)</b> Integral Calculus <i>(Taught Winter, &amp; Spring)</i></p> <p>Preq: MTH 251</p>	<p><b>MTH 231 (4 cr)</b> Discrete Math</p> <p>Preq: MTH 111Z</p>	<p><b>CS 391 (3 cr)</b> Social and Ethical Issues in CS</p> <p>SYNTHESIS Science, Technology &amp; Society</p> <p>Preq: CS 101 or computer literacy</p>	<p><b>CS 340 (4 cr)</b> Introduction to Databases</p> <p>Preq: CS 290 (request pre-req override)</p>	<p><b>CS 290 (4 cr)</b> Web Development</p> <p>Preq: CS 162</p>
<p><b>WR 121Z (4 cr)</b> Composition I <i>(Taught Fall, Winter, &amp; Spring)</i></p>	<p><b>WR 214 (3 cr)</b> Writing in Business <i>(TBD)</i></p> <p>Preq: WR 121Z</p>	<p><b>WR 227Z (4 cr)</b> Technical Writing <i>(Taught Fall, Winter, &amp; Spring)</i></p> <p>Preq: WR 121Z</p>	<p><b>PERSPECTIVE Social Processes &amp; Institutions</b> <i>(see bacc core guide)</i></p>	<p><b>PERSPECTIVE Difference, Power &amp; Discrimination</b> <i>(see bacc core guide)</i></p>	<p>Restricted Elective <b>ST 314 (3 cr)</b> Intro to Statistics for Engineers <i>(Taught Spring)</i></p> <p>Preq: MTH 252</p>
<p><b>PERSPECTIVE Physical Science</b> <i>(see bacc core guide)</i></p>	<p><b>PERSPECTIVE Additional Science (Physical or Biological)</b> <i>(see bacc core guide)</i></p>	<p><b>COMM 111Z (4 cr) Public Speaking</b> <i>(Taught Fall &amp; Winter)</i> or <b>COMM 114 (3 cr) Argument &amp; Critical Discourse</b> <i>(Taught Spring)</i></p>	<p><b>HHS 231 (2 cr) Lifetime Fitness for Health</b> <i>(Taught Fall, Winter, Spring)</i> &amp; <b>HHS 241 or PAC (1 cr)</b> <i>(All)</i></p>	<p><b>PERSPECTIVE Literature &amp; Arts</b> <i>(see bacc core guide)</i></p>	<p><b>PERSPECTIVE Biological Science</b> <i>(see bacc core guide)</i></p>

**NOTES:**  Shaded courses are part of the CS Applied Option's requirements and electives.

 MTH courses not required for CS major but are MTH course pre-reqs.

# BS in Computer Science – Software Engineering Applied Option

## SAMPLE CURRICULUM 2024-2025

### THIRD YEAR

### FOURTH YEAR

FALL	WINTER	SPRING	FALL	WINTER	SPRING
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 361 (4 cr)</b>  <b>Software Engineering I</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 261</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 362 (4 cr)</b>  <b>Software Engineering II</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 261</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Restricted Elective</b>  <b>CS 331 (4 cr)</b>  <b>Intro to Artificial Intelligence</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 325</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 461 (3 cr)</b>  <b>Senior Software Engineering Project (WIC)</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 361, CS 325, &amp; CS 362</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 462 (3 cr)</b>  <b>Senior Software Engineering Project (WIC)</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 362 &amp; CS 461</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 463 (2 cr)</b>  <b>Senior Software Engineering Project</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 462</p>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 271 (4 cr)</b>  <b>Computer Architecture &amp; Assembly Language</b> </div> <p style="text-align: center; font-size: small;">Preq: ENGR 103 or CS 161</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 374 (4 cr)</b>  <b>Operating Systems I</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 261, &amp; CS 271</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 474 (4cr)</b>  <b>Operating Systems II</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 344 &amp; CS 271</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Restricted Elective</b>  <b>CS 475 (4 cr)</b>  <b>Intro to Parallel Programming</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 261</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Applied Option Elective</b>  <b>CS 466 (4 cr)</b>  <b>Web-based Start-up Project</b> </div> <p style="text-align: center; font-size: small;">Preq: Co-requisite: CS 461</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Applied Option Elective</b>  <b>SE 467 (4 cr)</b>  <b>Business of Software II</b> </div> <p style="text-align: center; font-size: small;">Preq:TBD</p>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 352 (4 cr)</b>  <b>Introduction to Usability Engineering</b> </div> <p style="text-align: center; font-size: small;">Preq: ENGR 103 or CS 161</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 381 (4 cr)</b>  <b>Programming Language Fundamentals</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 261 &amp; MTH 231</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Applied Option Elective</b>  <b>CS 464 (4 cr)</b>  <b>Open Source Software</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 261 &amp; 361</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>CS 372 (4 cr)</b>  <b>Introduction to Computer Networks</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 261 &amp; 271</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Applied Option Elective</b>  <b>CS 492 (4 cr)</b>  <b>Mobile Software Development</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 344 or CS 374</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Applied Option Elective</b>  <b>CS 493 (4 cr)</b>  <b>Cloud Application Development</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 290, CS 340, &amp; CS 372</p>
<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>PERSPECTIVE</b>  <b>Cultural Diversity</b>  <i>(see bacc core guide)</i> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>PERSPECTIVE</b>  <b>Western Culture</b>  <i>(see bacc core guide)</i> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <b>SYNTHESIS</b>  <b>Contemporary Global Issues</b>  <i>(see bacc core guide)</i> </div>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Applied Option Elective</b>  <b>CS 434 (4 cr)</b>  <b>Machine Learning &amp; Data Mining</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 325 &amp; ST 314</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Applied Option Elective</b>  <b>CS 478 (4 cr)</b>  <b>Network Security</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 372</p>	<div style="border: 1px solid black; padding: 5px; margin-bottom: 5px; background-color: #e0e0e0;"> <b>Applied Option Elective</b>  <b>CS 494 (4 cr)</b>  <b>Advanced Web Development</b> </div> <p style="text-align: center; font-size: small;">Preq: CS 290 &amp; 340</p>

**NOTES:** Shaded courses are part of the CS Applied Option's requirements and electives.

- Courses may not be offered in the term shown in future years. Students should check with their advisor about upcoming changes.
- Restricted Electives (RE): Required to complete two upper division restricted electives. Students should check with their advisor on upper division restricted elective course offerings.