


BS in Computer Science – Software Engineering Applied Option

SAMPLE CURRICULUM 2023-2024

FIRST YEAR

SECOND YEAR

FALL	WINTER	SPRING	FALL	WINTER	SPRING
ENGR 100 (3 cr) The OSU Engineering Student	ENGR 102 (3 cr) Design Engineering and Problem Solving	ENGR 103 (3 cr) Engineering Computation and Algorithmic Thinking Preq: ENGR 102 & MTH 112Z	CS 162 (4 cr) Intro to Computer Science II Preq: ENGR 103 or CS 161	CS 261 (4 cr) Data Structures Preq: CS 162 & MTH 231	CS 325 (4 cr) Analysis of Algorithms Preq: CS 261 & MTH 231
MTH 111Z (4 cr) Precalculus I: Functions (Taught Fall, Winter & Summer) Preq: MTH 095 or MTH 103 or placement	MTH 112Z (4 cr) Precalculus II: Trigonometry (Taught Winter & Summer) Preq: MTH 111Z	MTH 231 (4 cr) Discrete Math Preq: MTH 111Z	PERSPECTIVE Social Processes & Institutions (see bacc core guide)	CS 340 (4 cr) Introduction to Databases Preq: CS 290 (request pre-req override)	CS 290 (4 cr) Web Development Preq: CS 162
WR 121Z (4 cr) Composition I (Taught Fall, Winter, & Spring)	WR 214 (3 cr) Writing in Business (TBD) Preq: WR 121Z	WR 227Z (4 cr) Technical Writing (Taught Winter, Spring & Summer) Preq: WR 121Z	MTH 251 (4 cr) Differential Calculus (Taught Fall, Winter & Summer) Preq: MTH 112Z	MTH 252 (4 cr) Integral Calculus (Taught Winter, Spring & Summer) Preq: MTH 251	ST 314 (3 cr) Intro to Statistics for Engineers (Taught Spring & Summer) Preq: MTH 252
PERSPECTIVE Physical Science (see bacc core guide)	PERSPECTIVE Additional Science (Physical or Biological) (see bacc core guide)	COMM 111Z (4 cr) Public Speaking (Taught Fall & Winter) or COMM 114 (3 cr) Argument & Critical Discourse (Taught Spring)	CS 391 (3 cr) Social and Ethical Issues in CS SYNTHESIS Science, Technology & Society Preq: CS 101 or computer literacy	PERSPECTIVE Literature & Arts (see bacc core guide)	PERSPECTIVE Biological Science (see bacc core guide)
HHS 231 (2 cr) Lifetime Fitness for Health (Taught Fall, Winter, Spring) & HHS 241 or PAC (1 cr) (All)	PERSPECTIVE Difference, Power & Discrimination (see bacc core guide)				

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.

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THIRD YEAR

FOURTH YEAR

FALL	WINTER	SPRING	FALL	WINTER	SPRING
<div>CS 361 (4 cr) Software Engineering I</div> <div>Preq: CS 261</div>	<div>CS 362 (4 cr) Software Engineering II</div> <div>Preq: CS 261 (CS 361 recommended)</div>	<div>Applied Option Elective CS 331 (4 cr) Intro to Artificial Intelligence</div> <div>Preq: CS 325</div>	<div>CS 461 (3 cr) Senior Software Engineering Project (WIC)</div> <div>Preq: CS 361, CS 325, & CS 362. Co-req: CS 466</div>	<div>CS 462 (3 cr) Senior Software Engineering Project (WIC)</div> <div>Preq: CS 362 & CS 461</div>	<div>CS 463 (2 cr) Senior Software Engineering Project</div> <div>Preq: CS 462</div>
<div>CS 271 (4 cr) Computer Architecture & Assembly Language</div> <div>Preq: ENGR 103 or CS 161</div>	<div>CS 374 (4 cr) Operating Systems I</div> <div>Preq: CS 261, CS 271, & C programming</div>	<div>CS 474 (4cr) Operating Systems II</div> <div>Preq: CS 344 & CS 271</div>	<div>CS 466 (4 cr) Web-based Start-up Project</div> <div>Preq: Co-requisite: CS 461</div>	<div>CS 492 (4 cr) Mobile Software Development</div> <div>Preq: CS 344</div>	<div>CS 493 (4 cr) Cloud Application Development</div> <div>Preq: CS 290, CS 340, & CS 372</div>
<div>CS 352 (4 cr) Introduction to Usability Engineering</div> <div>Preq: ENGR 103 or CS 161</div>	<div>CS 381 (4 cr) Programming Language Fundamentals</div> <div>Preq: CS 261 & MTH 231</div>	<div>Upper Division Restricted Elective</div>	<div>CS 372 (4 cr) Introduction to Computer Networks</div> <div>Preq: CS 261, CS 271, C programming, & Unix</div>	<div>Applied Option Elective CS 478 (4 cr) Network Security</div> <div>Preq: CS 372</div>	<div>Applied Option Elective CS 475 (4 cr) Intro to Parallel Programming</div> <div>Preq: CS 261</div>
<div>PERSPECTIVE Cultural Diversity (see bacc core guide)</div>	<div>PERSPECTIVE Western Culture (see bacc core guide)</div>	<div>SYNTHESIS Contemporary Global Issues (see bacc core guide)</div>	<div>Applied Option Elective CS 434 (4 cr) Machine Learning & Data Mining</div> <div>Preq: CS 325 & ST 314</div>	<div>Upper Division Restricted Elective</div>	<div>Applied Option Elective</div>

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.