# Ozarks Technical Community College

OTC Associate of Science in Computer Science to MSU Bachelor of Science in Computer Science - Software Development Option with Cybersecurity Minor

The following is a guide to graduation with completion of OTC's Associate of Science and MSU's Bachelor of Science in Computer Science. The B.S. degree may be completed on campus. This is a non-comprehensive major meaning it requires a minor or second major. Courses are sequenced to provide guidance and to help ensure that prerequisite requirements are met. Catalog Year: 2022-2023. Date Modified: 5.11.22.

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Finish in 4 Go Bears Missouri State University

### OTC Year 1 Semester 1

Program Specific Course

* OTC Course ID/Title: CIS 120 Introduction to Computer Programming
* Credit Hours: 3
* MSU Equivalent: CSC 130
* Meets Core 42: No
* MSU Major Requirement: Yes

Written Communications - 6 credit hours for CORE 42

* OTC Course ID/Title: Choose one: ENG 100 Composition 1 with support, ENG 101 Composition
* Credit Hours: 3-5
* MSU Equivalent: ENG 110
* Meets Core 42: Yes
* MSU Major Requirement: No

Mathematical Sciences - 5 hours required for the A.S. in Biology

* OTC Course ID/Title: MTH 140 ◈ Analytic Geometry and Calculus I
* Credit Hours: 5
* MSU Equivalent: MTH 261
* Meets Core 42: Yes
* MSU Major Requirement: Yes

Program Specific Course

* OTC Course ID/Title: CIS 101 Technology and Digital Literacy
* Credit Hours: 3
* MSU Equivalent: ITC 200
* Meets Core 42: No
* MSU Major Requirement: No

Semester 1 Total = 14-16 credit hours

### OTC Year 1 Semester 2

Program Specific Course

* OTC Course ID/Title: Choose one: ⯎ CIS 150 C# Programming 1, CIS 170 Java Programming 1
* Credit Hours: 3
* MSU Equivalent: ITC 000
* Meets Core 42: No
* MSU Major Requirement: No

Oral Communications - 3 credit hours for Core 42

* OTC Course ID/Title: Choose one: COM 100, COM 105, COM 200
* Credit Hours: 3
* MSU Equivalent: Varies
* Meets Core 42: Yes
* MSU Major Requirement: No

Program Specific Course

* OTC Course ID/Title: MTH 141 ◈ Analytic Geometry and Calculus II
* Credit Hours: 5
* MSU Equivalent: MTH 280
* Meets Core 42: Yes
* MSU Major Requirement: Yes

Program Specific Course

* OTC Course ID/Title: CIS 130 Web Site Development 1
* Credit Hours: 3
* MSU Equivalent: ITC 205
* Meets Core 42: No
* MSU Major Requirement: No

Program Specific Elective – 3 hours required for the A.S. Computer Science

* OTC Course ID/Title: Choose one: ◈ MTH 214 Discrete Mathematics, MTH 215 Algebraic Structures
* Credit Hours: 3
* MSU Equivalent: MTH 314, MTH 315
* Meets Core 42: Yes
* MSU Major Requirement: Yes

Semester 2 Total = 17 credit hours

### OTC Year 2 Semester 3

Program Specific Course

* OTC Course ID/Title: CIS 151 C# Programming 2, CIS 171 Java Programming 2
* Credit Hours: 3
* MSU Equivalent: CSC 131
* Meets Core 42: No
* MSU Major Requirement: Yes

Program Specific Course

* OTC Course ID/Title: CSC 210 Data Structures
* Credit Hours: 4
* MSU Equivalent: CSC 232
* Meets Core 42: No
* MSU Major Requirement: Yes

Program Specific Course

* OTC Course ID/Title: CSC 250 Database and Query
* Credit Hours: 3
* MSU Equivalent: ITC 295
* Meets Core 42: No
* MSU Major Requirement: No

Program Specific Course

* OTC Course ID/Title: CSC 131 Web Site Development 2
* Credit Hours: 3
* MSU Equivalent: CSC 365
* Meets Core 42: No
* MSU Major Requirement: Yes

Natural Sciences – 7 credit hours total required for CORE 42 (Must fulfill 2 disciplines including one course with a lab component)

* OTC Course ID/Title: BIO 160 General Biology 1
* Credit Hours: 4
* MSU Equivalent: BIO 121
* Meets Core 42: Yes
* MSU Major Requirement: Yes

Semester 3 Total = 17 credit hours

### OTC Year 2 Semester 4

Natural Sciences – 7 credit hours total required for CORE 42 (Must fulfill 2 disciplines including one course with a lab component)

* OTC Course ID/Title: PHY 120 General Physics 1, PHY 220 Physics Engineers and Scientists 1
* Credit Hours: 4-5
* MSU Equivalent: PHY 123 and PHY 203
* Meets Core 42: Yes
* MSU Major Requirement: Yes

Social/Behavioral Sciences - 9 credit hours total required for CORE 42 (Must fulfill 2 disciplines)

* OTC Course ID/Title: Choose one: HST 120 U.S. History 1: To 1865, HST 130 U.S. History 2: to 1865-Present, PLS 101 American Government and Politics
* Credit Hours: 3
* MSU Equivalent: HST 121, HST 122, PLS 101
* Meets Core 42: Yes
* MSU Major Requirement: No

Program Specific Course

* OTC Course ID/Title: CIS 260 Software Engineering Project
* Credit Hours: 3
* MSU Equivalent: CIS 000
* Meets Core 42: No
* MSU Major Requirement: No

Program Specific Course

* OTC Course ID/Title: CSC 244 Computer Architecture
* Credit Hours: 3
* MSU Equivalent: CSC 244
* Meets Core 42: No
* MSU Major Requirement: No

Semester 4 Total = 13-14  
Total Hours at OTC = 61-64  
Total Hours Applied Toward MSU Major Requirements: 34

\* One credit hour course ▲May choose only one, falls under MOTR code 'PERF

❑ Must be taken with CHM 161 to count as a lab course. In order to fulfil the Core 42 Natural Science requirement, students must complete at least one lab course.

# Missouri State University

MSU Bachelor of Science in Computer Science - Software Development after OTC Associate of Arts in General Studies

Date Modified: 5.11.22  
MSU Transfer Advisor: Ajay Katangur, [AjayKatangur@MissouriState.edu](mailto:AjayKatangur@MissouriState.edu), 417-836-6646  
  
Finish in 4 Go Bears Missouri State University

Courses are sequenced to provide guidance and to help ensure that prerequisite requirements are met.

Catalog Year: 2022-23

### MSU Year 3 Semester 1

Humanities and Fine Arts - 9 credit hours (Must fulfill 2 disciplines)

* MSU Course ID/Title: Choose one: ARB 101, ARB 102, ART 115▲, ART 200, ART 212, ART 271, ART 272, CHI 101, CSD 330, CSD 331, ENG 200, ENG 203▲, ENG 205▲, ENG 215▲, ENG 282, ENG 289, ENG 340, ENG 341, ENG 350, ENG 351, ENG 362, FRN 101, FRN 102, GRM 101, GRM 102, ITL 101, ITL 102, JPN 101, JPN 102, KOR 101, KOR 102, LLT 121, MED 274, MUS 100, MUS 162\*▲, MUS 175▲, MUS 176\*▲,MUS 178\*▲, MUS 239, MUS 241, MUS 345, MUS 346, MUS 347, PHI 105, PHI 110, PHI 115, PTG 101, PTG 102, REL 100, REL 101, REL 102, REL 210, RUS 101, RUS 102, SPN 101, SPN 102, THE 101
* Credit hours: 3

Social/Behavioral Sciences - 9 credit hours required for Core 42 (Must fulfill 2 disciplines)

* MSU Course ID/Title: Choose one: ECO 165 Principles of Microeconomics, PSY 121 Introductory Psychology
* Credit hours: 3

Written Communication - 6 credit hours required for CORE 42Major Requirement

* MSU Course ID/Title: ENG 321 Writing 2: Beginning Technical Writing
* Credit hours: 3

Major Requirement

* MSU Course ID/Title: CSC 482 Seminar in Computer Science
* Credit hours: 1

Major Requirement

* MSU Course ID/Title: CSC 335 Database System Concepts
* Credit hours: 3

Cybersecurity Minor Requirement

* MSU Course ID/Title: ITC 330 Introduction to Networking
* Credit hours: 3

Semester 1 Total: 16 Credit Hours

### MSU Year 3 Semester 2

Major Requirement

* MSU Course ID/Title: CSC 388 Introduction to Secure Computing
* Credit hours: 3

Humanities and Fine Arts - 9 credit hours (Must fulfill 2 disciplines)

* MSU Course ID/Title: Choose one: ARB 101, ARB 102, ART 115▲, ART 200, ART 212, ART 271, ART 272, CHI 101, CSD 330, CSD 331, ENG 200, ENG 203▲, ENG 205▲, ENG 215▲, ENG 282, ENG 289, ENG 340, ENG 341, ENG 350, ENG 351, ENG 362, FRN 101, FRN 102, GRM 101, GRM 102, ITL 101, ITL 102, JPN 101, JPN 102, KOR 101, KOR 102, LLT 121, MED 274, MUS 100, MUS 162\*▲, MUS 175▲, MUS 176\*▲,MUS 178\*▲, MUS 239, MUS 241, MUS 345, MUS 346, MUS 347, PHI 105, PHI 110, PHI 115, PTG 101, PTG 102, REL 100, REL 101, REL 102, REL 210, RUS 101, RUS 102, SPN 101, SPN 102, THE 101
* Credit hours: 3

Major Requirement

* MSU Course ID/Title: CSC 360 Operating Systems
* Credit hours: 3

Major Elective

* MSU Course ID/Title: Choose one class from CSC 300 and CSC courses numbered higher than 303, with no more than three hours in CSC 399 and no more than three hours in CSC 596. Courses not eligible: CSC 500, 505, and 510
* Credit hours: 3

Major Requirement

* MSU Course ID/Title: CSC 455 Software Quality Assurance and Project Management
* Credit hours: 3

Semester 2 Total: 15 Credit Hours

### MSU Year 4 Semester 3

Cybersecurity Minor Requirement

* MSU Course ID/Title: ITC 560 Fundamentals of Cybersecurity
* Credit hours: 3

Major Elective

* MSU Course ID/Title: Choose one class from CSC 300 and CSC courses numbered higher than 303, with no more than three hours in CSC 399 and no more than three hours in CSC 596. Courses not eligible: CSC 500, 505, and 510
* Credit hours: 3

Humanities and Fine Arts9 credit hours (Must fulfill 2 disciplines)

* MSU Course ID/Title: Choose one: ARB 101, ARB 102, ART 115▲, ART 200, ART 212, ART 271, ART 272, CHI 101, CSD 330, CSD 331, ENG 200, ENG 203▲, ENG 205▲, ENG 215▲, ENG 282, ENG 289, ENG 340, ENG 341, ENG 350, ENG 351, ENG 362, FRN 101, FRN 102, GRM 101, GRM 102, ITL 101, ITL 102, JPN 101, JPN 102, KOR 101, KOR 102, LLT 121, MED 274, MUS 100, MUS 162\*▲, MUS 175▲, MUS 176\*▲,MUS 178\*▲, MUS 239, MUS 241, MUS 345, MUS 346, MUS 347, PHI 105, PHI 110, PHI 115, PTG 101, PTG 102, REL 100, REL 101, REL 102, REL 210, RUS 101, RUS 102, SPN 101, SPN 102, THE 101
* Credit hours: 3

Social/Behavioral Sciences - 9 credit hours (Must fulfill 2 disciplines)

* MSU Course ID/Title: Choose one: ECO 165 Principles of Microeconomics, PSY 121 Introductory Psychology
* Credit hours: 3

Major Requirement

* MSU Course ID/Title: Choose one: CSC Computer Networks
* Credit hours: 3

Software Development Option Requirement

* MSU Course ID/Title: Choose one: MKT 350, MGT 340, COM 315, PSY 305, PSY 481
* Credit hours: 3

Semester 3 Total: 18 Credit Hours

### MSU Year 4 Semester 4

Major Requirement

* MSU Course ID/Title: CSC 450 Introduction to Software Engineering
* Credit hours: 4

Software Development Option Requirement

* MSU Course ID/Title: Choose one: Choose one class from CSC courses numbered 500 or higher, excluding CSC 596. Courses not eligible: CSC 500, 505, and 510
* Credit hours: 3

Major Elective

* MSU Course ID/Title: Choose one class from CSC 300 and CSC courses numbered higher than 303, with no more than three hours in CSC 399 and no more than three hours in CSC 596. Courses not eligible: CSC 500, 505, and 510
* Credit hours: 3

Cybersecurity Minor Requirement

* MSU Course ID/Title: ITC 564 Introduction to Ethical Hacking
* Credit hours: 3

Cybersecurity Minor Requirement

* MSU Course ID/Title: ITC 583 Cloud Computing
* Credit hours: 3

Semester 4 Total: 16 Credit Hours  
Total Hours at MSU: 65  
Total Hours Overall: 126-129

Successful completion of the computer science major field test (MFT) with at least a score of 140 is required.

\*\* Electives provide the opportunity to customize your degree program. Some elective credits may or may not be needed to bring total credit hours to a minimum of 120 credit hours and upper division hours (300+) to 40.

\* One credit hour course ▲ May choose only one, falls under MOTR code 'PERF'

△ Counts for Cybersecurity minor CSC 244 (ITC 235), CSC 388 (ITC 560), CSC 335 (ITC 295)

This information is provided as a guide only.

* OTC students are strongly encouraged to meet with their major specific MSU transfer advisor early in their OTC education to discuss the most appropriate OTC coursework for their intended MSU major, MSU degree requirements, etc.
* Students are required to fulfill MSU graduation and GPA requirements to receive a degree and should consult with their MSU advisor and the MSU undergraduate catalog for details, as there may exist pre-requisite requirements as well as periodicity limitations that could affect scheduling sequences.
* Please note that transfer students from Missouri public colleges and universities may follow the general education and general baccalaureate degree requirements in effect at Missouri State when they first enrolled (or re-enrolled after an absence of one calendar year or more) as degree-seeking students at the institutions from which they transferred (e.g., OTC).