# OZARKS TECHNICAL COMMUNITY COLLEGE

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

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

**Catalog Year: 2019-2020**

The following is a guide to graduation with completion of OTC's Associate of Science in Computer Science and MSU's Bachelor of Science in Computer Science degree.
The degree may be completed on campus only.

### OTC Year 1 Semester 1

| REQUIREMENT DESCRIPTION | OTC COURSE ID/TITLE | | CREDIT HOURS | MSU EQUIVALENT | MEETS CORE 42 | MSU MAJOR REQUIREMENT |
|---|---|---|---|---|---|---|
| **Mathematical Sciences**<br>*3 credit hours* | MTH 140 | Analytic Geometry and Calculus I | 5 | MTH 261 | ✔ | ✔ |
| **Written Communications**<br>*6 credit hours* | Choose one: | | 3-5 | ENG 110 | ✔ | |
| | ENG 100<br>ENG 101 | Composition I with Support<br>Composition I | | | | |
| **Program Specific Course** | CIS 120 | Introduction to Computer Programming | 3 | CSC 130 | | ✔ |
| **Program Specific Course** | CIS 101 | Technology and Digital Literacy | 3 | ITC 200 | | |
| | | **Semester 1 Total** | **14-16** | | | |

### OTC Year 1 Semester 2

| REQUIREMENT DESCRIPTION | OTC COURSE ID/TITLE | | CREDIT HOURS | MSU EQUIVALENT | MEETS CORE 42 | MSU MAJOR REQUIREMENT |
|---|---|---|---|---|---|---|
| **Program Specific Course** | Choose one: | | 3 | ITC 266<br>CSC 131 | | |
| | CIS 150<br>CIS 170 | C# Programming I<br>Java Programming I | | | | |
| **Oral Communications**<br>*3 credit hours* | Choose one: | | 3 | GEC 103<br>COM 115<br>COM 205 | ✔ | |
| | COM 100<br>COM 105<br>COM 200 | Introduction to Communication<br>Public Speaking<br>Interpersonal Communication | | | | |
| **Program Specific Course** | CIS 250 | Database and Query | 3 | ITC 295 | | ✔ |
| **Program Specific Course** | MTH 141 | Analytic Geometry and Calculus II | 5 | MTH 280 | | |
| **Program Specific Course** | CIS 130 | Web Site Development I | 3 | ITC 205 | | |
| | | **Semester 2 Total** | **17** | | | |

### OTC Year 2 Semester 3

| REQUIREMENT DESCRIPTION | OTC COURSE ID/TITLE | | CREDIT HOURS | MSU EQUIVALENT | MEETS CORE 42 | MSU MAJOR REQUIREMENT |
|---|---|---|---|---|---|---|
| **Program Specific Course** | Choose one: ◆ | | 3 | CSC 131 | | ✔ |
| | CIS 151<br>CIS 171 | C# Programming II<br>Java Programming II | | | | |
| **Program Specific Course** | CSC 210 | Data Structures | 4 | CSC 232 | | ✔ |
| **Natural Sciences**<br>*7 credit hours*<br><br>(Must fulfill 2 disciplines including one course with a lab component) | Choose one: | | 4 | BIO 121<br>CHM 116/117<br>CHM 160 | ✔ | ✔ |
| | BIO 160<br>CHM 101<br>CHM 160 | General Biology I<br>Introductory Chemistry<br>General Chemistry I | | | | |
| **Program Specific Course** | CIS 131 | Web Site Development II | 3 | CSC 365 | | ✔ |
| **Program Specific Elective** | Choose any course from CSC, CIS 125 or higher or MTH 130 or higher in consultation with advisor. | | 3 | Varies | | |
| | | **Semester 3 Total** | **17** | | | |

### OTC Year 2 Semester 4

| REQUIREMENT DESCRIPTION | OTC COURSE ID/TITLE | | CREDIT HOURS | MSU EQUIVALENT | MEETS CORE 42 | MSU MAJOR REQUIREMENT |
|---|---|---|---|---|---|---|
| **Written Communications**<br>*6 credit hours* | ENG 150 ○ | Technical Writing | 3 | ENG 221 | ✔ | ✔ |
| **Natural Sciences**<br>*7 credit hours*<br><br>(Must fulfill 2 disciplines including one course with a lab component) | PHY 220 | Physics for Engineers and Scientists I | 5 | PHY 203 | ✔ | |
| **Social/Behavioral Sciences**<br>*9 credit hours*<br><br>(Must fulfill 2 disciplines) | Choose one: | | 3 | HST 121<br>PLS 101 | ✔ | |
| | HST 120<br>PLS 101 | U.S. History I: to 1865<br>American Government and Politics | | | | |
| **Program Specific Course** | CIS 260 | Software Engineering Project | 3 | CSC 450 | | ✔ |
| **Program Specific Elective** | Choose any course from CSC, CIS 125 or higher or MTH 130 or higher in consultation with advisor. | | 3 | Varies | | |
| | | **Semester 4 Total** | **17** | | | |
| | | **Total Hours at OTC** | **67-69** | *Total Hours Applied Toward MSU Major Requirements:* | | *31* |

◆Choose CIS 151 if you have taken CIS 150 and choose CIS 171 if you have taken CIS 170

○ This course fulfills the Writing II requirement for the B.S. in Computer Science - Software Development option at MSU.

# Missouri State
## UNIVERSITY

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

## MSU Bachelor of Science in Computer Science - Software Development Option
### (with Cybersecurity Minor)
### after OTC Associate of Science in Computer Science

**Catalog Year: 2019-2020**

### MSU Year 3 Semester 1

| REQUIREMENT DESCRIPTION | MSU COURSE ID/TITLE | CREDIT HOURS |
|---|---|---|
| **Humanities and Fine Arts**<br>*9 credit hours*<br><br>(Must fulfill 2 disciplines) | Choose one:<br>ARB 101  ART 271  ENG 200  ENG 289  ENG 362  ITL 101  KOR 102  MUS 175▲  MUS 345  PHI 115  REL 102  SPN 102<br>ARB 102  ART 272  ENG 203▲  ENG 340  FRN 101  ITL 102  LLT 121  MUS 176✳▲  MUS 346  PTG 101  REL 210  THE 101<br>ART 115▲  CHI 101  ENG 205▲  ENG 341  FRN 102  JPN 101  MED 274  MUS 178✳▲  MUS 347  PTG 102  RUS 101  ART 212<br>ART 200  CSD 330  ENG 215▲  ENG 350  GRM 101  JPN 102  MUS 100  MUS 239  PHI 105  REL 100  RUS 102<br>ART 212  CSD 331  ENG 282  ENG 351  GRM 102  KOR 101  MUS 162✳▲  MUS 241  PHI 110  REL 101  SPN 101 | 3 |
| **Cybersecurity Minor Requirement** | ITC 235  Computer Hardware and Operating Systems | 3 |
| **Major Requirement** | CSC 335  Database System Concepts | 3 |
| **Major Requirement** | CSC 338  Parallel and Distributed Computing | 2 |
| **Major Requirement** | CSC 344  Computer Systems Fundamentals | 3 |
| | **Semester 1 Total** | **14** |

### MSU Year 3 Semester 2

| REQUIREMENT DESCRIPTION | MSU COURSE ID/TITLE | CREDIT HOURS |
|---|---|---|
| **Social/Behavioral Sciences**<br>*9 credit hours*<br><br>(Must fulfill 2 disciplines) | Choose one:<br>ECO 165  Principles of Microeconomics<br>PSY 121  Introductory Psychology | 3 |
| **Major Requirement** | CSC 388  Introduction to Secure Computing | 2 |
| **Cybersecurity Minor Elective** | ITC 330  Introduction to Networking | 3 |
| **Major Elective** | Choose one course from CSC 300 and CSC courses numbered higher than 303, with no more than 3 hours in CSC 399 and no more than 3 hours in CSC 596. | 3 |
| **Major Requirement** | CSC 455  Software Quality Assurance and Project Management | 3 |
| **Software Development Option Requirement** | Choose 3 additional hours from eligible CSC courses numbered 500 or higher (excluding CSC 596). | 3 |
| | **Semester 2 Total** | **17** |

### MSU Year 4 Semester 3

| REQUIREMENT DESCRIPTION | MSU COURSE ID/TITLE | CREDIT HOURS |
|---|---|---|
| **Humanities and Fine Arts**<br>*9 credit hours*<br><br>(Must fulfill 2 disciplines) | Choose one:<br>ARB 101  ART 271  ENG 200  ENG 289  ENG 362  ITL 101  KOR 102  MUS 175▲  MUS 345  PHI 115  REL 102  SPN 102<br>ARB 102  ART 272  ENG 203▲  ENG 340  FRN 101  ITL 102  LLT 121  MUS 176✳▲  MUS 346  PTG 101  REL 210  THE 101<br>ART 115▲  CHI 101  ENG 205▲  ENG 341  FRN 102  JPN 101  MED 274  MUS 178✳▲  MUS 347  PTG 102  RUS 101  ART 212<br>ART 200  CSD 330  ENG 215▲  ENG 350  GRM 101  JPN 102  MUS 100  MUS 239  PHI 105  REL 100  RUS 102<br>ART 212  CSD 331  ENG 282  ENG 351  GRM 102  KOR 101  MUS 162✳▲  MUS 241  PHI 110  REL 101  SPN 101 | 3 |
| **Major Elective** | Choose one course from CSC 300 and CSC courses numbered higher than 303, with no more than 3 hours in CSC 399 and no more than 3 hours in CSC 596. | 3 |
| **Cybersecurity Minor Requirement** | ITC 560  Fundamentals of Cybersecurity | 3 |
| **Software Development Option Requirement** | Choose one:<br>BIO 121    CHM 116/117    GLG 110    GRY 142    or MTH courses numbered<br>BMS 110/111    CHM 160/161    GRY 135    PHY 203    302 or higher that count toward the Math major | 3 |
| **Software Development Option Requirement** | Choose one:<br>MKT 350    MGT 340    COM 315    PSY 305    PSY 481 | 3 |
| | **Semester 3 Total** | **15** |

### MSU Year 4 Semester 4

| REQUIREMENT DESCRIPTION | MSU COURSE ID/TITLE | CREDIT HOURS |
|---|---|---|
| **Humanities and Fine Arts**<br>*9 credit hours*<br><br>(Must fulfill 2 disciplines) | Choose one:<br>ARB 101  ART 271  ENG 200  ENG 289  ENG 362  ITL 101  KOR 102  MUS 175▲  MUS 345  PHI 115  REL 102  SPN 102<br>ARB 102  ART 272  ENG 203▲  ENG 340  FRN 101  ITL 102  LLT 121  MUS 176✳▲  MUS 346  PTG 101  REL 210  THE 101<br>ART 115▲  CHI 101  ENG 205▲  ENG 341  FRN 102  JPN 101  MED 274  MUS 178✳▲  MUS 347  PTG 102  RUS 101  ART 212<br>ART 200  CSD 330  ENG 215▲  ENG 350  GRM 101  JPN 102  MUS 100  MUS 239  PHI 105  REL 100  RUS 102<br>ART 212  CSD 331  ENG 282  ENG 351  GRM 102  KOR 101  MUS 162✳▲  MUS 241  PHI 110  REL 101  SPN 101 | 3 |
| **Major Elective** | Choose one course from CSC 300 and CSC courses numbered higher than 303, with no more than 3 hours in CSC 399 and no more than 3 hours in CSC 596. | 3 |
| **Social/Behavioral Sciences**<br>*9 credit hours*<br><br>(Must fulfill 2 disciplines) | Choose one:<br>ECO 165  Principles of Microeconomics<br>PSY 121  Introductory Psychology | 3 |
| **Major Requirement** | CSC 482  Seminar in Computer Science | 1 |
| **Cybersecurity Minor Requirement** | ITC 564  Introduction to Ethical Hacking | 3 |
| **Cybersecurity Minor Requirement** | ITC 583  Cloud Computing | 3 |
| | **Semester 4 Total** | **16** |
| | **Total Hours at MSU** | **62** |
| | **Total Hours Overall** | **129-131** |

\*\* 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'

**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).