

# COMPUTER SCIENCE (BS) MAJOR

## COMPUTER SCIENCE AND CYBERSECURITY DEPARTMENT

### MAJOR CHECKLIST FALL 2020-SUMMER 2021

*This checklist aids in placement of students into their major coursework and documents the department evaluation of transferred credit and course waivers, based on coursework listed on the Degree Audit Report (DARs). A student must complete General Education and Liberal Studies (GELS) along with other graduation requirements for graduation – refer to your DARs.*

*Official admission to this major program and review of prior course credentials is done directly through the Computer Science and Cybersecurity (CSC) Department. Contact information is noted at the bottom of this checklist.*

Student Name	Metro State ID #	Date

### PRE-MAJOR FOUNDATION COURSES: 28 CREDITS

*In order to declare a Computer Science major, students are required to complete the following foundation courses listed with a grade of C- or better:*

- *Minimum cumulative GPA of 2.5 for ICS 141, ICS 240 and MATH 215 or transfer equivalents*
- *Demonstrated competency in the Java programming language either through completion of coursework (e.g. ICS 141) or passing a Java competency exam*
- *Successful completion of General Education Goal I Writing requirement*

*Students who do not meet the pre-major foundation requirements noted in this section or are on academic probation will not be accepted to the major. Students not accepted to the major will not be allowed to take advanced courses in the discipline.*

Course #	Title	Transfer Equivalent Details	Credits	Grade	✓
MATH 120	Precalculus				
MATH 208 or MATH 210	Applied Calculus, OR, Calculus I				
MATH 215	Discrete Math				
ICS 140	Computational Thinking with Programming				
ICS 141	Programming with Objects				

Course #	Title	Transfer Equivalent Details	Credits	Grade	✓
ICS 232	Computer Organization and Architecture				
ICS 240	Introduction to Data Structures				

### JAVA COMPETENCY REQUIREMENT

Check box if demonstrated competency in Java either through course work or passing exam.

### WRITING COURSE REQUIREMENT

Check box if General Education Goal I Writing requirement has been successfully completed. Reference DARs to determine which courses fulfill this requirement.

Pending completion of \_\_\_\_\_.

GPA Calculation: A = 4.00, A- = 3.67, B+ = 3.33, B = 3.00, B- = 2.67, C+ = 2.33, C = 2.00, C- = 1.67, D = 1.00, F = 0

### CORE REQUIREMENTS: 32 CREDITS

Once admitted into major the following courses are required.

Course #	Title	Transfer Equivalent Details	Upper Division	Credits	Grade	✓
ICS 311	Database Management Systems					
ICS 340	Algorithms and Data Structures					
ICS 365	Organization of Programming Languages					
ICS 372	Object-Oriented Design and Implementation					
ICS 440	Parallel and Distributed Algorithms					
ICS 460	Networks and Security					
ICS 462	Operating Systems					
ICS 499	Software Engineering and Capstone Project					

### ELECTIVE (8-CREDITS) COURSE REQUIREMENT OR MINOR

Either eight credits of approved upper-division electives, or complete a minor in a field approved by the academic advisor, is required for the Computer Science major. Consult with academic advisor which option is appropriate for your degree and career plans.

1. Elective option: 8-credits

- At least 4-credits of electives must come from any 300-level or higher CYBR or ICS courses, not already required for the major, with the following exceptions: ICS 350I, ICS 370, ICS 381, ICS 383, ICS 390, or ICS 495.
- Repeatable exceptions: ICS 490 Special Topics in Information and Computer Sciences and ICS 492 Seminar on Emerging Technologies may be taken more than once for elective credit, so long as the topics differ.
- Any upper division Mathematics or Statistics course may be used as an elective except for internships and seminars
- Internship/Residency: A maximum of 4-credits in ICS 350I Individualized Internship may be spread over 1-3 semesters.

2. An approved minor. Recommended fields for a minor include (but are not limited to): Industrial and Applied Mathematics, Applied Statistics, Biology, Chemistry, Computer Forensics, Cybersecurity, Design of User Experience, Game Studies, Physics, Project Management, and Technical Communication. Students with a previous Bachelor's degree should talk to their advisor about whether that degree can be used in lieu of a minor.

APPROVED MINOR/MAJOR: \_\_\_\_\_

OR

ELECTIVE REQUIREMENT: 8 CREDITS

Course #	Title	Transfer Equivalent Details	Upper Division	Credits	Grade	✓

ADDITIONAL NOTES, CREDIT TOTALS OR COMMENTS:

Academic advisor notes:

GRADUATION REQUIREMENTS

Below is a summary of residency and graduation requirements for this major and used as an advising tool as you work towards completion. Students are advised to reference their DARs for official graduation requirements.

Major Requirements Checklist	Remaining	In Progress	Completed
<input type="checkbox"/> 60 Major credits with minor option			
<input type="checkbox"/> 68 Major credits with elective option			

Major Requirements Checklist	Remaining	In Progress	Completed
20 Metro State Major Credits			
32 Upper Division Major (300 or higher)			

University Requirements Checklist	Remaining	In Progress	Completed
120 Total Credits (minimum), and GPA of 2.0 or better			
30 Metro State Credits			
40 Upper Division (300 or higher)			
48 credits GELS +RIGR (see DARs)			

## CONTACT US

*For specific questions about this major program or equivalencies of prior coursework at other institutions, contact the Computer Science and Cybersecurity Department at:*

*Email: [CSC@metrostate.edu](mailto:CSC@metrostate.edu)      Tel: 651.793.1471      Web: [www.metrostate.edu/csc-department](http://www.metrostate.edu/csc-department)*



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This information is available in alternative formats upon request by contacting the Center for Accessibility Resources, [accessibility.resources@metrostate.edu](mailto:accessibility.resources@metrostate.edu) or 651-793-1549. Information is subject to change without notice.

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