

# COMPUTER SCIENCE AREA OF CONCENTRATION, COMPUTER SCIENCE AND TECHNOLOGIES AA

Total Credits: 60

Catalog Edition: 2023-2024

## Program Description

This degree is designed for students who plan to transfer to a four-year degree program in computer science or for students in mathematics, science, or technical areas who wish to acquire skills in computer software development for scientific and technical applications. The courses in the program provide an academic core of the theoretical concepts of computer science combined with the fundamentals of structured design and development techniques for computer programming.

Because of the academic level of this area of concentration, students are expected to demonstrate college-level skills in English, mathematics, and elementary programming.

Not all CMSC courses transfer to all institutions. Please consult an advisor or the transfer institution before selecting elective courses. **This program can be completed either on campus or online.**

## Program Outcomes

Upon completion of this program, a student will be able to:

- Apply logical skills and mathematical concepts to analyze, design and implement computer algorithms and programs.
- Demonstrate proficiency in a high level programming language.
- Demonstrate proficiency in current design techniques, i.e. Object Oriented Design.

## Program Advisors

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For more information, please visit: <https://www.montgomerycollege.edu/computerscience>

To view the Advising Worksheet, please visit <https://www.montgomerycollege.edu/documents/counseling-and-advising/advising-worksheets/current-catalog/107.pdf>

2023-2024

# Program Advising Guide

An Academic Reference Tool for Students

COMPUTER SCIENCE AREA OF CONCENTRATION, COMPUTER SCIENCE AND  
TECHNOLOGIES  
ASSOCIATE OF ARTS: 107

# COMPUTER SCIENCE AREA OF CONCENTRATION, COMPUTER SCIENCE AND TECHNOLOGIES AA

## Suggested Course Sequence

A suggested course sequence for full-time students follows. All students should review this advising guide and consult an advisor.

### First Semester

ENGL 101 - Introduction to College Writing *3 semester hours* \*

MATH 181 - Calculus I *4 semester hours* (MATF)

CMSC 140 - Introduction to Programming *3 semester hours*

Arts Distribution *3 semester hours* (ARTD)

Behavioral and Social Sciences Distribution *3 semester hours* (BSSD) \*\*

### Third Semester

CMSC 204 - Computer Science II *4 semester hours*

Humanities Distribution *3 semester hours* (HUMD)

Natural Sciences Distribution with Lab *4 semester hours* (NSLD)

Program Elective *3 semester hours* †

### Second Semester

English Foundation *3 semester hours* (ENGF)

CMSC 203 - Computer Science I *4 semester hours*

MATH 182 - Calculus II *4 semester hours*

Art or Humanities Distribution (ARTD or HUMD) or Health Course (HLTH) *3 semester hours* (GEIR) † †

### Fourth Semester

COMM 108 - Foundations of Human Communication *3 semester hours* (GEIR)

OR

COMM 112 - Business and Professional Speech Communication *3 semester hours* (GEIR)

CMSC 207 - Introduction to Discrete Structures *4 semester hours*

Behavioral and Social Sciences Distribution *3 semester hours* (BSSD) \*\*

Natural Sciences Distribution *3 semester hours* (NSND)

Program Elective *3 semester hours* †

## Total Credit Hours: 60

\* ENGL 101/ENGL 101A, if needed for ENGL 102/ENGL 103, or elective. Please consult an advisor or transfer institution for assistance with course selection.

\*\* Behavioral and Social Science Distribution (BSSD) courses must come from different disciplines.

† Program elective courses are any CMSC or DATA course, 200 World language course, MATH 117, MATH 165, MATH 280, MATH 282, MATH 284. See department advisor for elective or equivalent course substitution if appropriate. Not all CMSC courses transfer to all institutions. Please consult an advisor or the transfer institution before selecting program elective courses.

†† Please consult an advisor or the transfer institution before selecting General Education institutional requirements (GEIR).

**This program can be completed either on campus or online.**

## Transfer Opportunities

Montgomery College has partnerships with multiple four-year institutions and the tools to help you transfer. To learn more, please visit <https://www.montgomerycollege.edu/transfer> or <http://artsys.usmd.edu>.

## Get Involved at MC!

Employers and Transfer Institutions are looking for experience outside the classroom.

MC Student Clubs and Organizations: <https://www.montgomerycollege.edu/life-at-mc/student-life/>

Computer Science and Technologies Student Professional Groups: <https://www.montgomerycollege.edu/computerscience>

## Related Careers

Some require a Bachelor's degree.

Computer Science Teacher, Computer Systems Engineer/Architect, Computer/Information Research Scientist, Web Administrator, Mobile Developer, Game Programmer.

## Career Services

Montgomery College offers a range of services to students and alumni to support the career planning process. To learn more, please visit <https://www.montgomerycollege.edu/career>

## Career Coach

A valuable online search tool that will give you the opportunity to explore hundreds of potential careers or job possibilities in Maryland and the Washington D.C. metropolitan area. Get started today on your road to a new future and give it a try. For more information, please visit <https://montgomerycollege.emsicc.com>

## Notes: