

COMPUTER SCIENCE, ASSOCIATE IN SCIENCE (CIS)

Effective: Fall 2016

The Computer Science program is a two-year preparatory curriculum for students who plan to continue their education at a four-year institution and complete their major in the computer science field. This curriculum is fully compliant with Pennsylvania Statewide Program-to-Program Articulation Agreement (TAOC) as promulgated by the Pennsylvania Department of Education. This Agreement assures that the Computer Science student can transfer their full degree into a baccalaureate program at a participating Pennsylvania affiliated institution, transferring with full junior class standing. Students enrolled in this degree are strongly encouraged to choose their transfer school as soon as practical, then consult that institution, their Faculty Advisor and the College's Transfer Office to ensure that their course of study will be consistent with the requirements of their transfer institution.

Program Outcomes

Upon successful completion of this program, students should be able to:

- Implement algorithms and data structures using fundamental programming skills.
- Identify and use current industry standards in the field of computer science.
- Apply analytical skills to assess how to solve problems.
- Apply the process of software development including design, implementation, documentation and testing.
- Describe the professional, cultural, legal and ethical issues related to computer science.
- Identify career paths available in computer science and determine professional education and training standards.

Full-Time Academic Plan

The College Transfer Office (<https://www.dccc.edu/admissions-financial-aid/transfer/transfer-office/>) is set up to help Delaware County Community College students transfer to four-year colleges and universities. If you are planning to transfer, you are strongly encouraged to meet with a transfer advisor within your first two semesters (or before you reach 30 transferable college credits from all institutions attended).

First Semester		Hours
ENG 100	English Composition I	3
MAT 160	Calculus I	4
CS 100	Introduction to Information Technology	3
CS 101	Introduction to Computer Science	3
Social Science elective (select any transferable Diversity and Social Justice (DJ) and Global Understanding (GU) designated social science course)		3
Hours		16
Second Semester		
CS 110	Introduction to C++	3
MAT 161	Calculus II	4
ENG 112	English Composition II: Writing About Literature	3
CS 104	Introduction to Java Programming	3
Arts & Humanities elective/Behavioral & Social Science elective		3
Hours		16
Third Semester		
NET 110	Network Communications	3

CS 204	Intermediate Java Programming	3
Science elective with a lab (select from any transferable Scientific Inquiry (SI) designated science course)		4
Behavioral & Social Science Elective		3
Select one of the following Business/Math elective		3
BUS 220	Elementary Statistics	
MAT 210	Statistics	
MAT 230	Foundations of Discrete Mathematics	
Hours		16
Fourth Semester		
CS 212	Data Structures and Algorithms	4
Any transferable Oral Communication (OC) designated course		3
Science elective with a lab		4
Arts & Humanities electives		6
Hours		17
Total Hours		65

Notes

Oral Communication designated courses (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/#OC_Course_List).

Diversity and Social Justice and Global Understanding designated courses (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/#Dual_DJ_GU_CourseList).

Scientific Inquiry designated courses (https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/#SR_Course_List).

Arts and Humanities Electives

This list does not indicate College Academic Learning Goal designation (<https://catalog.dccc.edu/academic-programs/college-academic-learning-goals/>). Refer to your program curriculum for more information.

The subject areas listed are generally transferable to most institutions. However, transferability is always determined by the college or university you are planning to transfer to. Be sure to meet with a transfer advisor before making your course selections.

- ART - Art (<https://catalog.dccc.edu/courses/course-descriptions/art/>)
- COMM - Communication Studies (<https://catalog.dccc.edu/courses/course-descriptions/comm/>)
- DRA - Drama (<https://catalog.dccc.edu/courses/course-descriptions/dra/>)
- ENG - English (<https://catalog.dccc.edu/courses/course-descriptions/eng/>) (ENG 115 and above)
- HUM - Humanities (<https://catalog.dccc.edu/courses/course-descriptions/hum/>)
- MUS - Music (<https://catalog.dccc.edu/courses/course-descriptions/mus/>)
- PHI - Philosophy (<https://catalog.dccc.edu/courses/course-descriptions/phi/>)

Some programs specify or recommend a Foreign Language.

Code	Title	Hours
<i>Foreign Languages:</i>		
FRE 101	Elementary French I	
FRE 102	Elementary French II	
FRE 111	Intermediate French I	
FRE 112	Intermediate French II	
SPA 101	Elementary Spanish I	
SPA 102	Elementary Spanish II	
SPA 201	Intermediate Spanish I	
SPA 202	Intermediate Spanish II	

Behavioral and Social Science

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- ADJ - Administration of Justice (<https://catalog.dccc.edu/courses/course-descriptions/adj/>)
- ECE - Early Childhood Education (<https://catalog.dccc.edu/courses/course-descriptions/ece/>)
- ECO - Economics (<https://catalog.dccc.edu/courses/course-descriptions/eco/>)
- EDU - Education (<https://catalog.dccc.edu/courses/course-descriptions/edu/>)
- HIS - History (<https://catalog.dccc.edu/courses/course-descriptions/his/>)
- INT - Interdisciplinary (<https://catalog.dccc.edu/courses/course-descriptions/int/>)
- POL - Political Science (<https://catalog.dccc.edu/courses/course-descriptions/pol/>)
- PSY - Psychology (<https://catalog.dccc.edu/courses/course-descriptions/psy/>)
- SOC - Sociology (<https://catalog.dccc.edu/courses/course-descriptions/soc/>)
- SWO - Social Work (<https://catalog.dccc.edu/courses/course-descriptions/swo/>)
- TSC - Trauma Studies (<https://catalog.dccc.edu/courses/course-descriptions/tsc/>)

Part-Time Academic Plan

Course	Title	Hours
First Semester		
ENG 100	English Composition I	3
MAT 160	Calculus I	4
CS 100	Introduction to Information Technology	3
Hours		10
Second Semester		
CS 101	Introduction to Computer Science	3
Social Science elective (select any transferable Diversity and Social Justice (DJ) and Global Understanding designated social science course)		3
CS 110	Introduction to C++	3
Hours		9

Third Semester		
MAT 161	Calculus II	4
ENG 112	English Composition II: Writing About Literature	3
CS 104	Introduction to Java Programming	3
Hours		10
Fourth Semester		
Humanities elective/Social Science elective		3
NET 110	Network Communications	3
CS 204	Intermediate Java Programming	3
Hours		9
Fifth Semester		
Science elective with a lab (select from any transferable Scientific Inquiry (SI) designated science course)		4
Social Science elective		3
Select one of the following Business/Math elective		3
BUS 220	Elementary Statistics	
MAT 210	Statistics	
MAT 230	Foundations of Discrete Mathematics	
Hours		10
Sixth Semester		
CS 212	Data Structures and Algorithms	4
Any transferable Oral Communication (OC) designated course		3
Humanities Elective		3
Science elective with a lab		4
Humanities Elective		3
Hours		17
Total Hours		65

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- PSY - Psychology (<https://catalog.dccc.edu/courses/course-descriptions/psy/>)
- SOC - Sociology (<https://catalog.dccc.edu/courses/course-descriptions/soc/>)
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Campus Locations

HYBRID DEGREE (online and classroom)

85% online

The following courses may not be available online:

Code	Title	Hours
Classroom Only		
MAT 160	Calculus I	4
MAT 161	Calculus II	4
Scientific Inquiry (SI) designated science course		4
CS 212	Data Structures and Algorithms	4
Science Elective		4

* Some online courses have **field requirements** or **in-person or proctored testing**. Online courses with these requirements have additional information posted under the **COURSE DESCRIPTION** section when you are registering. Please note these requirements when registering.

Career