Programming & Software Development
Associate of Applied Science | Degree Map

Follow this map to graduate in two years, though other paths are possible. You must average 15 credits a semester to finish in two years. Contact an advisor for additional support, and see the back for more information.

	Course	PC = Program Core; RC = Required Core; FC = Flexible Core	Category	Credits	Session
SEMESTER 1	CSF101 First Year Seminar for Computer Science		PC	2	I
	ENG101 English Composition I (or ENA101)		RC	3	I
	MAT115/117 Algebra and Trigonometry (pre-req for MAT200)		RC	3	I
	SCB Biology, SCC Chemistry or SCP Physics (Life and Physical Sciences)		RC	3	I
	MAT200 Precalculus (Scientific World: pre-req for MAC101)		FC	4	II

	Course	Category	Credits	Session
SEMESTER 2	ENG102 English Composition II	RC	3	I
	MAC101 Introduction to Computer Science (pre-req for MAC109 & 125)	PC	3	I
	MAC172 Web Development I (MAC101 is pre/co-req)	PC	3	I
	MAC109 Introduction to Visual Programming	PC	3	II
	MAC125 Advanced C/C++ Programming	PC	3	II

	Course	Category	Credits	Session
SEMESTER 3	MAC190 Object-Oriented Programming	PC	3	I
	MAC250 Database Concepts and Programming	PC	3	I
	MAC221 App Development for iOS	PC	3	I
	MAC232 UNIX Network Operating Systems	PC	3	I
	MAC280 Game Programming	PC	3	II

	Course	Category	Credits	Session
SEMESTER 4	MAC272 Web Development II (Capstone)	PC	3	I
	MAC110 Systems Analysis and Design	PC	3	I
	MAC220 App Development for Android Devices	PC	3	I
	Flexible Core Course	FC	3	I
	Flexible Core Course (Urban Study)	FC	3	I

> **Register for GRD000 "Intent to Graduate" in CUNYfirst to apply for graduation in your final semester**
> **Students must take at least one Urban Study course**

Start planning now for what comes after graduation! Connect with Transfer Services and the Center for Career & Professional Development. Also see the back of this map for more information on transfer.

Program Core (PC) and Pre/Co-requisites

The Program Core (PC) is the required set of major-specific courses. Refer to the Pre- and Co-requisite list below to ensure you register for the appropriate courses.

Pre-requisite: A course which must be completed <u>prior</u> to taking another course
Co-requisite: A course which must be taken during the <u>same session</u> as another course.

1. CSF101 PRE: None
2. MAT200 PRE: MAT115/117
3. MAC101 PRE: MAT200 & P/C: English Proficiency
4. MAC172 PRE/CO: MAC101
5. MAC109 PRE: MAC101/MAC108
6. MAC125 PRE: MAC101
7. MAC190 PRE: MAC101/MAC108
8. MAC250 PRE: MAC101/MAC108
9. MAC221 PRE: MAC101
10. MAC232 PRE/CO: MAC101/MAC108
11. MAC280 PRE: MAC109
12. MAC110 PRE: ENG101 & MAC101/109
13. MAC220 PRE: MAC190
14. MAC272 PRE: MAC172 & MAC250

Program Note

It is strongly recommended that students meet with the Program Director to discuss selection of Program Core courses. Contact the MEC department to get connected.

General Education & Transfer

<u>PATHWAYS REQUIRED CORE (RC)</u> Pathways is CUNY's general education framework. For Required Core, students must take 2 English courses, 1 Mathematics and Quantitative Reasoning course, and 1 Life and Physical Sciences course. For more details, including a list of Life and Physical Sciences courses, visit the [Pathways Required Core website.](#)

<u>MATHEMATICS AND QUANTITATIVE REASONING</u>
Programming & Systems students should take MAT115/117 Algebra & Trigonometry because it is required for MAT200 Pre-calculus, and students must take MAT200 before taking a required course, MAC101 Introduction to Computer Science.

<u>PATHWAYS FLEXIBLE CORE (FC)</u> allows students to choose courses based on interests, transfer or career plans, or for general exploration. Associate of Applied Science students must take three courses from three separate categories listed below. View DegreeWorks or our [Pathways website](#) to see a full range of options, or talk with the program director or an advisor. <u>Note: your program has specific requirements listed below.</u>
- Creative Expression
- Individual & Society
- <u>Scientific World</u>: **MAT200 Precalculus required** because it is needed for MAC101
- U.S. Experience in its Diversity
- World Cultures and Global Issues

<u>TRANSFER AGREEMENTS</u> The English program has an agreement with the following 4-year colleges. By graduating from LaGuardia and meeting certain requirements, you will be able to complete your studies at a 4-year college and earn a bachelor's degree. For more information, visit our [Transfer Agreement (Articulation) web page.](#)
1. School of Profession Studies – BS in Information Systems