Computer Science with MS in Computer Science 4+1

Recommended Graduation Plan (Fall 2024)

The recommended graduation plan is designed to provide a blueprint for students to complete their degrees on time. These plans are the recommended sequences of courses. Students must meet with their Academic Advisor to develop a more individualized plan to complete their degree.

NOTE: This recommended Graduation Plan is applicable to students admitted into the major during the 2024-2025 academic year.

To enroll, visit https://www.ramapo.edu/dmc/4plus1/

CRWT Placement
CRWT 101 to CRWT 102
CRWT 101S to CRWT 102S

Math Placement
MATH 021/022 to MATH 024 to MATH 110-121

NOTE: CRWT and MATH courses are determined by placement testing and should be taken following the sequence above.

First Year					
Fall Semester	**HRS**	**✓**	**Spring Semester**	**HRS**	**✓**
CMPS 147-Computer Science I	4		CMPS 148-Computer Science II	4	
Gen Ed: MATH 110-Precalculus	4		MATH 121-Calculus I	4	
Gen Ed: INTD 101-First Year Seminar	4		CMPS 220-Assembly Language Programming	4	
Gen Ed: CRWT 102 - Critical Reading and Writing II	4		General Education Requirement	4	
			Career Pathways: PATH TS1 – Career Pathways Module 1	Degree Rqmt.	
Total:	16		**Total:**	16	

Second Year					
Fall Semester	**HRS**	**✓**	**Spring Semester**	**HRS**	**✓**
CMPS 231-Data Structures	4		CMPS 311-Operating Systems **WI**	4	
MATH 237-Discrete Structures or MATH 205 Mathematical Structures **WI**	4		CMPS Elective	4	
General Education Requirement	4		General Education Requirement	4	
General Education Requirement	4		General Education Requirement	4	
Career Pathways: PATH TS2 – Career Pathways Module 2	Degree Rqmt.		Career Pathways: PATH TS3 – Career Pathways Module 3	Degree Rqmt.	
Total:	16		**Total:**	16	

Third Year					
Fall Semester	**HRS**	**✓**	**Spring Semester**	**HRS**	**✓**
CMPS 361-Software Design	4		CMPS Elective	4	
CMPS Elective	4		CMPS Elective	4	
MATH Elective	4		MATH Elective	4	
General Education Requirement	4		General Education Requirement	4	
Free Elective (minor, certificate, or second major requirement)	2		Free Elective (minor, certificate, or second major requirement)	1	
Total:	18		**Total:**	17	

Fourth Year					
Fall Semester	**HRS**	✓	**Spring Semester**	**HRS**	✓
CMPS 366-Organization of Programming Languages	4		CMPS Elective	4	
CMPS Elective	4		CMPS 450: Senior Project **WI**	4	
CMPS Elective	4		CMPS 531 Data Structures and Algorithms	3	
CMPS 547 Foundations of Computer Science	3		MSCS Elective or DATA 620	3	
Total:	15		**Total:**	14	

Fifth Year - MSCS					
Fall Semester	**HRS**	✓	**Spring Semester**	**HRS**	✓
MSCS Elective	3		**MSCS Elective or DATA 620**	3	
MSCS Elective	3		**MSCS Elective**	3	
MSCS Elective	3		**CMPS 750 - THESIS**	3	
MSCS Elective	3				
Total:	12		**Total:**	9	

Total Credits Required for undergraduate degree: 128 credits**
GPA Required for BS in Computer Science: 2.0
GPA Required for 4+1 Pathway: 3.0
WI: Writing Intensive-3 required in the major

General Education courses can be done in any order with the exception of INTD 101, CRWT and MATH. Those three general education courses will need to be done first. First Year Seminar is taken in the first semester. Failure to complete CRWT and MATH will result in a hold when the student hits 64 credits. The following general education courses can be done in any order. For more info on these courses, please visit the [General Education program requirements website in the College Catalog](#):

- Social Science Inquiry (SOSC 110) *[+W]*
- Scientific Reasoning
- Historical Perspectives *[+W]*
- Studies in the Arts & Humanities (*CRWT 102 is a prerequisite to this course*) *[+W]*
- Global Awareness *[+W]*
- Distribution Category (Systems, Sustainability, & Society **OR** Culture & Creativity **OR** Values and Ethics) **(Must be outside of TAS)**
- Distribution Category

+W: Students transferring in with 48 or more credits are waived from these general education requirements.

* Two additional electives are required in the 3rd year because graduate courses are only 3 credits, instead of the usual 4 for undergraduate courses. Thus, a student must take an additional 3 credits to meet the 128-credit graduation requirement.

Total Graduate Credits Required: 30 credits**
GPA Required for MSCS: 3.0

**The 9 credits of graduate coursework taken in the fourth-year will double count towards both the undergraduate degree requirement of 128 credits as well as the required 30 graduate credits.