University of the Philippines Cebu
College of Science

Bachelor of Science in Computer Science
2018 Curriculum, Approved during the 5th UPC UC on 2018 June 13

Study Plan
Effective First Semester AY 2025-2026

OUR

First Year, First Semester				
GE	SAS 1	Self and Society	3	none
GE	KAS 1	Kasaysayan ng Pilipinas	3	none
Foundation	CMSC 11	Introduction to Computer Science	3	none
Foundation	CMSC 56	Discrete Mathematical Structures in Computer Science 1	3	none
Foundation	MATH 53	Elementary Analysis I	5	none
Foundation	STAT 123 *STAT 111	Probability and Statistics	3	none
PE	PE 2		(2)	none
NSTP	NSTP 1	National Service Training Program 1	(3)	none
			20	

First Year, Second Semester				
GE	COMM 10	Critical Perspectives in Communication	3	none
GE	SCIENCE 11	Living Systems: Concepts and Dynamics	3	none
Foundation	CMSC 21	Fundamentals of Programming	3	CMSC 11
Foundation	CMSC 57	Discrete Mathematical Structures in Computer Science 2	3	CMSC 56
Foundation	MATH 54	Elementary Analysis II	5	MATH 53
Foundation	PHYSICS 81	Intermediate Physics 1	3	MATH 40 or MATH 53
Foundation	PHYSICS 81.1	Intermediate Physics 1 Laboratory	1	PHYSICS 81 (co)
PE	PE 2		(2)	none
NSTP	NSTP 2	National Service Training Program 2	(3)	none
			21	

Second Year, First Semester				
GE	ETHICS 1	Ethics and Moral Reasoning in Everyday Life	3	none
Foundation	CMSC 23	Programming Paradigms	3	CMSC 21 or COI
Foundation	CMSC 123	Data Structures	4	CMSC 21, (CMSC 57 or MATH 102)
Major	CMSC 130	Logic Design and Digital Computer Circuits	3	CMSC 11
Foundation	MATH 55	Elementary Analysis III	3	MATH 54
Foundation	PHYSICS 82	Intermediate Physics 2	3	PHYSICS 81, PHYSICS 81.1
Foundation	PHYSICS 82.1	Intermediate Physics 2 Laboratory	1	PHYSICS 82 (co)
PE	PE 2		(2)	none
			20	

Second Year, Second Semester				
GE	ARTS 1	Critical Perspectives in the Arts	3	none
GE	MATH 10	Mathematics, Culture and Society	3	none
Major	CMSC 106	Research Methods for Computer Science	3	STAT 123
Major	CMSC 127	File Processing and Database Systems	3	CMSC 123
Major	CMSC 133	Introduction to Computer Organization, Architecture, and Machine-level Programming	3	CMSC 130
Major	CMSC 141	Introduction to the Theory of Computation	3	CMSC 57
PE	PE 2		(2)	none
			18	

Third Year, First Semester				
GE	STS 1	Science, Technology and Society	3	none
GE	GE Elective	GE Elective	3	none
Major	CMSC 110	Technical Writing for Computer Science	3	none
Major	CMSC 124	Design and Implementation of Programming Languages	3	CMSC 123, CMSC 141
Major	CMSC 128	Software Engineering 1	3	CMSC 123
Major	CMSC 142	Design and Analysis of Algorithms	3	CMSC 123
Major	CMSC 192	Ethical and Professional Issues in Computing	1	none
Major	CMSC 194.1	Research Internship 1	1	CMSC 106
			20	

*Revised Course Number (8 May 2025)

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Third Year, Second Semester				
GE	GE Elective	GE Elective	3	none
Major	CMSC 125	Operating Systems	3	CMSC 124, CMSC 133
Major	CMSC 129	Software Engineering 2	3	CMSC 128
Major	CMSC 170	Introduction to Artificial Intelligence	3	CMSC 123
Major	CMSC 194.2	Research Internship 2	1	CMSC 194.1
Mandated	PI 100	The Life and Works of Jose Rizal	3	none
Elective	Elective	Elective	3	
			19	

Third Year, Midyear Term				
Major	CMSC 195	Practicum	3	CMSC 129
			3	

Fourth Year, First Semester				
GE	GE Elective	GE Elective	3	none
Major	CMSC 137	Data Communication and Networking	3	CMSC 125, CMSC 133
Major	CMSC 173	Machine Learning	3	CMSC 170
Major	CMSC 198.1	Special Problem 1	2	CMSC 194.2
Elective	Elective	Elective	3	
Elective	Elective	Elective	3	
			17	

Fourth Year, Second Semester				
GE	GE Elective	GE Elective	3	none
Major	CMSC 134	Introduction to Computer Security	3	CMSC 123, CMSC 137
Major	CMSC 196	Technopreneurship	3	CMSC 128
Major	CMSC 198.2	Special Problem 2	2	CMSC 198.1
Elective	Elective	Elective	3	
Elective	Free Elective	Free Elective	3	
			17	

Total Required Units **155**

ELECTIVES				
	CMSC 22	Fundamentals of Object-oriented Programming	3	CMSC 21
	CMSC 126	Web Engineering	3	CMSC 23, CMSC 128
	CMSC 143	Computability	3	MATH 102
	CMSC 151	Systems Analysis and Design	3	CMSC 128
	CMSC 152	Management Information Systems	3	CMSC 128
	CMSC 153	Accounting and Information Systems	3	CMSC 21
	CMSC 161	Interactive Computer Graphics	3	CMSC 57, CMSC 123
	CMSC 162	3D Computer Graphics and Animation	3	CMSC 123
	CMSC 165	Introduction to Project Management	3	CMSC 128
	CMSC 166	Introduction to Quality Concepts	3	CMSC 128
	CMSC 167	Software Validation and Verification	3	CMSC 166
	CMSC 171	Expert Systems and Knowledge Engineering	3	CMSC 123
**	CMSC 176	Topics in Theoretical Computer Science (Topic to be indicated)	3	Junior Standing
**	CMSC 177	Topics in Net-Centric Computing (Topic to be indicated)	3	Junior Standing
**	CMSC 178	Topics in Software Technology (Topic to be indicated)	3	Junior Standing
**	CMSC 179	Topics in Computer Systems (Topic to be indicated)	3	Junior Standing
	CMSC 180	Computer Simulation and Modeling	3	CMSC 123
	CMSC 181	Introduction to Parallel Computing	3	CMSC 133

*** may be taken twice provided that the topics are different*