Bachelor of Science in Computer Science
(Effectivity: AY 2018-2019)

First Year
1ST Semester

Subject	Units	Hrs./Wk.	Prerequisite
GE 1	3	3	
GE 2	3	3	
GE 3	3	3	
Math 83 (Essentials of Analysis I)	5	7	HS Algebra & Trigonometry
Math 101 (Elementary Statistics)	3	5	HS Algebra & Trigonometry
CMSC 11 (Introduction to Computer Science)	3	5	
PE	(2)	3	
NSTP	(3)		
	20		

2nd Semester

Subject	Units	Hrs./Wk.	Prerequisite
GE 4	3	3	
Math 84 (Essentials of Analysis II)	5	7	Math 83
Physics 71 (Elementary Physics I)	4	4	Math 83
CMSC 21 (Fundamentals of Programming)	3	5	CMSC 11
CMSC 55 (Discrete Mathematical Structures in Computer Science)	4	4	CMSC 11
PE	(2)	3	
NSTP	(3)		
	19		

Second Year
1st Semester

Subject	Units	Hours/Week	Prerequisite
GE 5	3	3	
Math 85 (Essentials of Analysis III)	3	5	Math 84
Chem 32 (Chemistry of Biomolecules)	3	5	
CMSC 23 (Object-Oriented Programming Paradigms)	3	5	CMSC 21
CMCS 123 (Data Structures)	3	5	CMSC 21, CMSC 55
CMSC 130 (Logic Design & Digital Computer Circuits)	3	5	CMSC 55
CMSC 171 (Ethical & Social Issues in Computer Science)	1	1	
PE	(2)	3	
	19		

2nd Semester

Subject	Units	Hours/Week	Prerequisite
GE 6	3	3	
Stat 121 (Applied Probability Models)	3	5	Math 101
CMSC 121 (Web Programming)	3	5	CMSC 23
CMSC 124 (Design & Implementation of Programming Languages)	3	5	CMSC 23, CMSC 123
CMSC 127 (Database Systems)	3	5	CMSC 23
CMSC 135 (Computer Organization & Architecture)	3	3	CMSC 21, CMSC 130
PE	(2)		
	18		
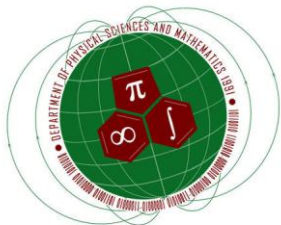
Midyear

Subject	Units	Hours/Week	Prerequisite
GE 7	3	3	
GE 8	3	3	
	6		

Third Year
1st Semester

Subject	Units	Hours/Week	Prerequisite
Stat 122 (Applied Bayesian Inferential Models)	3	5	Stat 121
Math 120 (Linear Algebra)	3	3	Math 85
CMSC 125 (Operating Systems)	3	5	CMSC 123
CMSC 122 (Human Computer Interaction)	3	5	CMSC 121
CMSC 128.1 (Software Engineering I)	3	5	CMSC 121, CMSC 127
CMSC 176 (Fundamentals of Data Science)	3	5	CMSC 127, Stat 121
Major Course 1 • *Stat Comp*: Stat 130 (Nonparametric Statistical Methods) • *HI*: HI 191 (Fundamentals of Health Informatics)	3 3	5 3	Math 101
	21		

2nd Semester

Subject	Units	Hours/Week	Prerequisite
Math 121.1 (Elementary Differential Equations I)	3	3	Math 85
CMSC 128.2 (Software Engineering II)	3	5	CMSC 128.1
CMSC 138 (Computer Networking)	3	5	CMSC 125
CMSC 161 (Interactive Computer Graphics)	3	5	CMSC 123, Math 120
CMSC 177 (Model Building and Assessment in Data Science)	3	5	CMSC 176, Stat 122
Major Course 2 • *Stat Comp*: Stat Comp 181.1 (Linear Models in Statistical Computing I) • *HI*: HI 193.1 (Representation and Algorithms for Computational Biochemistry)	3 3	5 3	Stat 121 HI 191
	18		

Midyear

Subject	Units	Hours/Week	Prerequisite
CMSC 190 (Practicum)	3		Junior standing
	3		
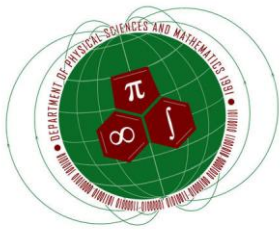
Fourth Year
1st Semester

	Subject	Units	Hours/Week	Prerequisite
	CMSC 141 (Automata & Language Theory)	3	3	CMSC 124
	CMSC 150 (Computer Security)	3	5	CMSC 121 CMSC 138
	CMSC 178 (Algorithm Design and Software Foundation in Data Science)	3	5	CMSC 123, CMSC 176
	CMSC 197 (Undergraduate Seminar)	1	1	Senior Standing
	CMSC 199 (Research Methods in Computer Science)	3	3	Senior Standing
	Major Course 3 • *Stat Comp*: Stat Comp 183 (Multivariate Statistical Model) • *HI*: HI 192 (Knowledge Representation & Health Decision Support System)	3 3	5 3	Stat 122 HI 191
	Elective 1	3		
		20		

2nd Semester

	Subject	Units	Hours/Week	Prerequisite
	Math 174 (Numerical Analysis I)	3	3	CMSC 21, Math 121.1
	CMSC 142 (Design & Analysis of Algorithms)	3	3	CMSC 123
	CMSC 198 (Special Problem)	3	3	CMSC 197, CMSC 199
	Elective 2	3		
	PI 100	3	3	
		15		

Electives

Subject	Units	Hrs/Wk.	Prerequisite
CMSC 143 (Graph Algorithms)	3	3	
CMSC 155 (Compiler Design and Construction)	3	5	
CMSC 170 (Introduction to Artificial Intelligence)	3	3	
CMSC 172 (Robot Modeling)	3	3	
CMSC 173 (Machine Learning)	3	5	CMSC 176, Stat 121
CMSC 175 (Information Technology Project Management)	3	3	
CMSC 180 (Parallel Computing)	3	3	
CMSC 181 (IT Service Management)	3	3	CMSC 128.1
CMSC 191 (Special Topics) – *may be taken twice but should be of different topics*	3	3	
HI 193.2 (Genetic Algorithms and Genetic Programming)	3	3	
Stat 186 (Time Series Analysis)	3	5	
Stat 187 (Applied Bayesian Inference)	3	5	
Stat Comp 181.1 (Linear Models in Statistical Computing I)	3	5	
Stat Comp 181.2 (Linear Models in Statistical Computing II)	3	5	
Stat Comp 185 (Stochastic Models)	3	5	
Math 126 (Real Analysis)	3	3	
Math 162 (Theory of Interests)	3	3	
Math 164 (Life Contingencies)	3	3	
Math 165 (Finite Differences)	3	3	
Math 180.1 (Operations Research I)	3	3	
Math 180.2 (Operations Research II)	3	3	
Math 181 (Linear and Integer Programming)	3	3	
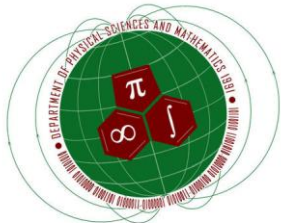
GE Courses

Subject	Units	Hrs/Wk.	Prerequisite
Required GE Courses			
Wika 1 (Wika, Kultura at Lipunan)	3	3	
Comm 10 (Critical Perspectives in Communication)	3	3	
Kas 1 (Kasaysayan)	3	3	
Ethics 1 (Ethics and Moral Reasoning for Everyday Life)	3	3	
STS (Science, Technology and Society)	3	3	
Math 10 (Math, Culture and Society)	3	3	
Elective GE Courses			
PhilArts 1 (Philippine Arts and Culture)	3	3	
SAS 1 (Self and Society)	3	3	
Science 10 (Probing the Physical World)	3	3	
Natural Science II (Living Systems: Concepts and Dynamics)	3	3	
Arts 1 (Critical Perspectives in the Arts)	3	3	

Total No. of Units: 158