Computer Science Program: Software Engineering Option
Curriculum Requirements
Catalog Year 2021-22 and 2022-23

FRESHMAN YEAR

First Semester			R	L	C	Second Semester			R	L	C
ENL	101	Critical Writing & Reading I	3	0	3	ENL	102	Critical Writing & Reading II	3	0	3
CIS	180	Object-Oriented Programming I	3	2	4	CIS	181	Object-Oriented Programming II	3	2	4
EGR	111	Intro to Engineering & Computing	3	2	3			University Studies [1]	3	0	3
MTH	153	Calc for Appl Science Engineering I	4	0	4	MTH	154	Calc for Appl Science Engineering II	4	0	4
					14						**14**

SOPHOMORE YEAR

First Semester			R	L	C	Second Semester			R	L	C
MTH	181	Discrete Structures I	3	0	3	MTH	182	Discrete Structures II	3	0	3
CIS	190	Intro. To Procedural Programming	3	2	4	CIS	264	Software Qual. Assurance & Test	3	0	3
CIS	272	Introduction to Computing Systems	3	2	4	CIS	280	Software Specification & Design	3	2	4
		Laboratory Science I [2,4]	3	3	4			Laboratory Science II [3,4]	3	3	4
								Free Elective			1
					15						**15**

JUNIOR YEAR

First Semester			R	L	C	Second Semester			R	L	C
CIS	360	Algorithms & Data Structure	3	2	4	CIS	340	Large Software Systems	3	0	3
CIS	440	Software Process and Proj. Mgmt	3	0	3	CIS	362	Empirical Methods for CS	3	0	3
CIS	381	Social & Ethical Aspects of CS [5]	3	0	3			Science Elective [4,7]	3	0	3
ENL	266	Technical Communications	3	0	3			University Studies [1]	3	0	3
MTH		Math Elective [6]	3	0	3			University Studies [1]	3	0	3
					16						**15**

SENIOR YEAR

First Semester			R	L	C	Second Semester			R	L	C
CIS	498	Software Engineering Project I	3	2	4	CIS	499	Software Engineering Project II	2	2	3
CIS	461	Formal Methods in Soft Eng.	3	0	3	CIS		SE Technical Elective [8]	3	0	3
CIS		SE Technical Elective [8]	3	0	3	CIS		SE Technical Elective [8]	3	0	3
CIS		SE Technical Elective [8]	3	0	3			University Studies [1]	3	0	3
		University Studies [1]	3	0	3			Free Elective	3	0	3
					16						**15**

Total Credits = 120   R = Recitation & Lecture (hours) L = Laboratory (hours)   C = Number of Credits

[1]See University Studies requirements for Clusters 3 and 4.
[2]Must be either PHY 113 or CHM 151/161 or BIO 121/131.
[3]Must be a continuation of Laboratory Science I (PHY 114 or CHM 152/162 or BIO 122/132).
[4]Ideally one of these courses should also meet University Studies Cluster 2A.
[5]Meets the University Studies Cluster 2B requirement.
[6]Chosen from MTH 211 or MTH 213 or MTH 221 or MTH 331. Speak with your advisor for guidance.
[7]Any course in BIO, CHM, MAR, MLS, or PHY.
[8]Must be taken from approved list of courses.

University of Massachusetts Dartmouth ■ College of Engineering ■ www.umassd.edu/engineering/cis
285 Old Westport Road ■ North Dartmouth ■ MA 02747-2300 ■ 508.999.8265 ■ ABET Accredited

Rev. 6/6/2023 jm