2023 - 2024 Old Dominion University Catalog
Modeling & Simulation Engineering (BSCE) Dual Degree with Computer Science (BSCS) (with VCCS Equivalencies)

The five-year plan is a suggested curriculum to complete this degree program in five years. It is just one of several plans that will work and is presented only as broad guidance to students. Each student is strongly encouraged to develop a customized plan in consultation with their academic advisor. Additional information can also be found in Degree Works.

YEAR 1 - FRESHMAN (33 CREDITS)

FALL SEMESTER (16 credits)

General Education and Major Coursework:	VCCS Equivalency:
ENGN 110	EGR 120, 121, 122, 124*
CHEM 121N/122N	CHM 111*
MATH 211	MTH 173, 263, or 273*
ENGL 110C (C or better required)	ENG 111*
Human Creativity	Transfer Equivalency Guide

SPRING SEMESTER (17 credits)

General Education and Major Coursework:	VCCS Equivalency:
ECE 111	ITE 119*
CHEM 123N	CHM 112*
MATH 212	MTH 174, 264, or 274*
ENGN 150	EGR 125 or 126*
PHYS 231N	PHY 221, 231 or 241*

YEAR 2 - SOPHOMORE (32 CREDITS)

FALL SEMESTER (16 credits)

General Education and Major Coursework:	VCCS Equivalency:
MATH 307 (280)	MTH 267, 279, 289, or 291*
ECE 201**	EGR 260 or 271*
COMM 101R	CST 100 or 105*
PHYS 232N	PHY 222, 232 or 242*
ENGL 211C or 231C (C or better required)	ENG 112, 113, 115, 131, or 137*

SPRING SEMESTER (16 credits)

General Education and Major Coursework:	VCCS Equivalency:
ECE 202**	EGR 261 or 272*
ECE 287**^	EGR 262 or EGR 271 + 272*
CS 250	CSC 210 or ITP 232*
CS 252	ITN 171 or 271*
CS 381	
Human Behavior	Transfer Equivalency Guide

YEAR 3 - JUNIOR (33 CREDITS)

FALL SEMESTER (17 credits)

General Education and Major Coursework:	VCCS Equivalency:
ECE 241	EGR 265, 270, or 277*
ECE 302	
CS 330	
CS 390	
CS 315	
Literature	Transfer Equivalency Guide

SPRING SEMESTER (16 credits)

General Education and Major Coursework:	VCCS Equivalency:
ECE 313	
ECE 341	
ECE 304	
CS 361	
CS 450 or CS 418	

YEAR 4 - SENIOR (33 CREDITS)

FALL SEMESTER (15 credits)

Major Coursework:	VCCS Equivalency:
MATH 316	
ECE 306	
CS 350	
ENMA 480 (Satisfies Philosophy and Ethics)	
ECE Technical Elective I	

SPRING SEMESTER (18 credits)

General Education and Major Coursework:	VCCS Equivalency:
ECE 320	
ECE 346	
ECE 348	
CS 417	
CS 355	
CS Upper Level Elective I	

YEAR 5 (31 CREDITS)

FALL SEMESTER (17 credits)

General Education and Major Coursework:	VCCS Equivalency:
ECE 406	
ECE 443	
ECE 484W (C or better required)	
ECE 486	
CS 410	
CS Upper Level Elective II	

SPRING SEMESTER (14 credits)

General Education and Major Coursework:	VCCS Equivalency:
ECE 487	
CS 471	
CS 411W	
CS Upper Level Elective III	
Interpreting the Past	Transfer Equivalency Guide

TOTAL CREDIT HOURS: 162

This 4-year plan does not include 6 credits in Language and Culture, but this requirement may be waived; see ODU catalog for details.

The General Education requirements in Information Literacy and Research, Impact of Technology, and Philosophy and Ethics are met through the major.

Modeling & Simulation Engineering & Computer Science majors must earn a grade of C or better in all 200-level ECE courses and all CS courses prior to taking the next course in the sequence.

The Upper Division General Education requirement is met through the built-in minor in Computer Science and through the completion of a second major/degree.
ECE 111 and other ECE required courses satisfy the Computer Science Information Literacy & Research requirement of CS 121G. ENGN 150 satisfies the CS 150 requirement in Computer Science curriculum. ECE 304 satisfies the STAT 330 rquirement in Computer Science curriculum. ENMA 480 satisfies the Computer Science Philosophy & Ethics requirement. ECE 346 satisfies the CS 170 requirement in the Computer Science curriculum. ECE 443 satisfies the CS 270 requirement in the Computer Science curriculum.

** C or better required for transfer.*

*** CHEM 120 is for online program students only*

***From John Tyler Community College only: EGR 251 = ECE 201; EGR 261 = ECE 202; EGR 255 + EGR 263 = ECE 287*
& from Germanna Community College: EGR 251 = ECE 201; EGR 252 = ECE 202; EGR 255 + EGR 261 = ECE 287
& from Northern Virginia Community College: EGR 251 = ECE 201; EGR 252 = ECE 202; EGR 265 = ECE 241

^ EGR 271 (4 cr) + EGR 272 (4 cr) = ECE 201 (3 cr) + ECE 202 (3 cr) + ECE 287 (2 cr) requirements. Both EGR 271 & EGR 272 must be completed to receive credit for ECE 287.

^^Non-major Engineering Elective includes options of any three-credit course from BME, CEE, CS, ENMA (except ENMA 480), MAE, & MSIM.. Consider looking into VCCS equivalents.

Requirements for graduation include a minimum cumulative grade point average of 2.00 overall and in the major and 120 credit hours, which must include both a minimum of 30 credit hours overall and 12 credit hours in upper-level courses in the major program from Old Dominion University, completion of ENGL 110C, ENGL 211C or 231C, and a writing intensive (W) course in the major with a grade of C or better, and completion of Senior Assessment.