

2024 - 2025 Old Dominion University Catalog

Bachelor of Science in Mechanical Engineering (BSME) (with VCCS Equivalencies)

Sample four year curriculum with a suggested ordering of courses. Students may re-order as needed.

* indicates not automatically waived with transferrable associates degree, C or better required for transfer. Courses in green are waived by the completion of an Associate degree (Not eligible for Applied Associate degrees). A.S. in Engineering recommended for ease of transfer.

YEAR 1 - FRESHMAN (30 CREDITS)

FALL SEMESTER (15 credits)

General Education and Major Coursework:

[ENGN 121](#)
ENGL 110C (C or better required)
MATH 211 (C or better required)
CHEM 121N/122N (C or better required)

VCCS Equivalency:

(EGR 121 + ITE 152)* or waived w/ AS
ENG 111 or ENGL 114*
MTH 173, (MTH 175 + 176), 263, or 273*
CHM 111 or (CHEM 111 +112+ 113)*

SPRING SEMESTER (15 credits)

General Education and Major Coursework:

ENGN 122
[COMM 101R](#)
MATH 212 (C or better required)
PHYS 231N (C or better required)

VCCS Equivalency:

EGR 125 or 126*
[Transfer Equivalency Guide](#)
MTH 174, 264, or 274*
PHY 221, 231, or 241*

YEAR 2 - SOPHOMORE (33 CREDITS)

FALL SEMESTER (17 credits)

General Education and Major Coursework:

PHYS 232N
MATH 312 (285)
MAE 204 (C or better required)
MAE 201 (C or better required)
MAE 203 (1 credit)
MAE 230

VCCS Equivalency:

PHY 222, 232 or 242*
MTH 265, 275 or 277*
EGR 140 or 240*
CAD 238, 241, 242, 243; or EGR 122*

SPRING SEMESTER (16 credits)

General Education and Major Coursework:

MAE 205 (C or better required)
MAE 220 (C or better required)
MAE 225 (1 credit)
MATH 307 (280)
ENGL 231C (C or better required)
[Interpreting the Past](#)

VCCS Equivalency:

EGR 245*
EGR 246*
EGR 247*
MTH 267, 279, 289 or 291*
ENG 113, 115 or 131; or ENGL 137*
[Transfer Equivalency Guide](#)

YEAR 3 - JUNIOR (31 CREDITS)

FALL SEMESTER (16 credits)

General Education and Major Coursework:

MAE 303 (C or better required)
MAE 305
MAE 311 (C or better required)
MAE 340

VCCS Equivalency:

[Transfer Equivalency Guide](#)
[Transfer Equivalency Guide](#)

[Literature](#)
[Human Creativity](#)

SPRING SEMESTER (15 credits)

General Education and Major Coursework:

MAE 332 (C or better required)
MAE 336
MAE 315
[Philosophy and Ethics \(ENMA 480 preferred\)](#)
[Human Behavior](#)

VCCS Equivalency:

[Transfer Equivalency Guide](#)

YEAR 4 - SENIOR (30 CREDITS)

FALL SEMESTER (15 credits)

Major Coursework:

MAE 433
MAE 434W (C or better required)
MAE 436
**MAE Option Course
STAT 330

VCCS Equivalency:

MTH 283

SPRING SEMESTER (15 credits)

Major Coursework:

MAE 435
**MAE Option Course
**MAE Option Course
***Upper-Division General Education
***Upper-Division General Education

VCCS Equivalency:

TOTAL CREDIT HOURS: 124

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 four-year plan is a suggested curriculum to complete this degree program in four 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.

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

****MAE Option Course** In the senior year, students should select their three elective courses to support a chosen speciality area. Examples include:

- 1)Power/Energy: 3 courses from MAE 411, 412, 413, 414, 417, 438, 440
- 2) Mechanical Systems Design: 3 courses from MAE 404, 422, 431, 438, 440, or 441
- 3) Aerospace: 3 courses from MAE 403, 406, 417, 420 (or 440), 438, 460
- 4) Alternative combinations may be selected

*****Upper Division General Education** (choose 1)

Option D (suggested): 6 hours of elective upper-division work from outside of and not required by the student's major and college.

Option A: Any University-approved minor (minimum of 12 hours determined by the department), second degree, or second major

Option B: Any University-approved interdisciplinary minor (specifically 12 hours, 3 can be in the major)

Important Notes: Graduates of this program are eligible to take the Fundamentals of Engineering (FE) exam in Virginia and many other states. Course prerequisites are strictly enforced. Please refer to the University Catalog for prerequisites of all courses.

Requirements for graduation include a minimum cumulative grade point average of 2.00 overall and in the major, a grade of C or better in all courses required for the major, including prerequisite courses, 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 221C or 231C, and a writing intensive (W) course in the major with a grade of C or better, and completion of Senior Assessment.