

A.S. Engineering

ADVANCE Program Milestones

ADVANCE Milestone Requirements: All ADVANCE students must adhere to the following requirements. For Milestones #1-#3, failure to meet these milestones will prevent a student from matriculating to Mason and/or result in termination from ADVANCE. For Milestones #4-#6, failure to meet these milestones may delay matriculation to Mason.

1. Students must complete their NOVA degree within 4 years of being admitted into ADVANCE. Students are highly encouraged to be continuously enrolled at NOVA/Mason to support progress towards degree completion.
2. Students must maintain a minimum 2.5 cumulative GPA at NOVA and must have a minimum 2.5 GPA upon matriculation to Mason.
3. Students who wish to enroll at Mason for the fall semester must apply for NOVA graduation by March 1 for spring graduation or June 1 for summer graduation. Students who wish to enroll at Mason for the spring semester must apply for NOVA graduation by October 1 for winter graduation.
4. Students must begin developmental coursework in no later than the first semester in ADVANCE at NOVA.
5. Students must take first college-level MTH course and ENG 111 in the semester immediately following the completion of any MDE or EDE courses (excluding summer).
6. In the first 30 credits, students must:
 - a. Complete ENG 111 and ENG 112 with a C or better.
 - b. Complete the first college-level MTH course with a C or better.

ADVANCE Program-Specific Requirements: All ADVANCE students in this degree program must adhere to the following requirements prior to matriculation. Failure to do so may prevent a student from matriculating into this program at Mason or progressing in coursework at Mason.

1. Engineering students must begin the calculus sequence within the first 30 credits and complete Calculus I and II with a B or better.

	NOVA DEGREE REQUIREMENT	Credits	Courses	MASON TRANSFER EQUIVALENT	MASON CORE/DEGREE EQUIVALENT
1	SDV Course	1	SDV 100 College Success Skills OR SDV 101 Orientation to Engineering	UNIV 100	General Elective
2	ENG 111	3	ENG 111 College Composition I	ENGH 101	Written Comm
3	CST Course	3	CST 100 Principles of Public Speaking OR CST 110 Introduction to Communication	COMM 100 COMM 101	Oral Comm
4	Humanities/Fine Arts #1	3	ART 100 Art Appreciation OR ART 101 History and Appreciation of Art I OR ART 102 History and Appreciation of Art II OR CST 130 Introduction to Theatre OR CST 151 Film Appreciation I OR MUS 121 Music Appreciation I	ARTH 101 ARTH 200 ARTH 201 THR 101 ENGH L372 MUSI 101	Arts
5	MTH 263	4	MTH 263 Calculus I	MATH 113	Quantitative
6	Social/Behavioral Sciences #1	3	HIS 101 History of Western Civilization I OR HIS 102 History of Western Civilization II OR HIS 112 History of World Civilization II	HIST 101 HIST 102 HIST 125	Western Civ
7	EGR 121	2	EGR 121 Foundations of Engineering	ENGR 107	Major
8	ENG 112	3	ENG 112 College Composition II	ENGH XXX	General Elective
9	MTH 264	4	MTH 264 Calculus II	MATH 114	Major
10	PHY 231	5	PHY 231 General University Physics I	PHYS 160-161-266	Nat Science
11	Technical Elective #1	4	CHM 111 General Chemistry I	CHEM 211-213	Nat Science
12	Technical Elective #2	4	EGR 125 Introduction to Engineering Methods	ENGR 125T	Info Tech
13	Technical Elective #3	3	CIV 280 Introduction to Environmental Engineering	CEIE L355	Major
14	MTH 265	4	MTH 265 Calculus III	MATH 213	Major
15	PHY 232	5	PHY 232 General University Physics II	PHYS 260-261-XXX	Major
16	Social/Behavioral Sciences #2	3	ECO 202 Principles of Microeconomics	ECON 103	Soc/Behav

17	Humanities/Fine Arts #2	3	ENG 236 Introduction to the Short Story OR ENG 241 Survey of American Literature I OR ENG 242 Survey of American Literature II OR ENG 251 Survey of World Literature I OR ENG 252 Survey of World Literature II OR ENG 253 Survey of African-American Literature I	ENGH 202	Literature
18	MTH 267	3	MTH 267 Differential Equations	MATH 214	Major
19	Technical Elective #4	3	EGR 240 Solid Mechanics (Statics)	CEIE 210	Major
20	Technical Elective #5	3	CIV 240 Fluid Mechanics and Hydraulics	CEIE 240	Major
21	Technical Elective #6	3	EGR 246 Mechanics of Materials	CEIE L310 or ME 212	Major

A. S. ENGINEERING DEGREE TOTAL 69

For academic policies and procedures, please see NOVA catalog - <http://www.nvcc.edu/catalog/index.html>

B.S. Civil & Infrastructure Engineering

	MASON DEGREE REQUIREMENT	Credits	Course		MASON CORE/DEGREE EQUIVALENT
22	Gen Ed: Global Understanding	3	Approved Global Understanding course ¹		Global
23	Statistics	3	STAT 344 Probability and Statistics for Engineers		Major
24	Civil Engineering	3	CEIE 203 Geomatics and Engineering Graphics		Major
25	Civil Engineering	3	CEIE 301 Engineering & Econ Models on Civil Engineering		Writing Intensive
26	Civil Engineering	3	CEIE 340 Water Resources Engineering		Major
27	Gen Ed: Written Communication (Upper-level)	3	ENGH 302 Advanced Composition (Natural Science Section)		Written Comm
28	Physics	1	PHYS 266 Introduction to Thermodynamics		Major
29	Civil Engineering	3	CEIE 311 Structural Analysis		Major
30	Civil Engineering	3	CEIE 331 Soil Mechanics		Major
31	Civil Engineering	3	CEIE 360 Introduction to Transportation Engineering		Major
32	Civil Engineering	3	CEIE 370 Construction Systems		Major
33	Biology	3	BIOL 177 Ecological Applications		Major
34	Civil Engineering	1	CEIE 409 Professional Practice and Management in Engr		Major
35	Technical Electives	3	CEIE 4xx Technical Core Electives ²		Major
36	Technical Electives	3	CEIE 4xx Technical Core Electives ²		Major
37	Technical Electives	3	CEIE 4xx Technical Core Electives ²		Major
38	Technical Electives	3	CEIE 4xx Technical Electives ²		Major
39	Technical Electives	3	CEIE 4xx Technical Electives ²		Major
40	Technical Electives	3	CEIE 4xx Technical Core Electives ²		Major
41	Technical Electives	3	CEIE 4xx Technical Electives ²		Major
42	Technical Electives	3	CEIE 4xx Technical Electives ²		Major
43	Gen Ed: Synthesis/Civil Engineering	1	CEIE 490 Senior Design Project I		Synthesis
44	Gen Ed: Synthesis/Civil Engineering	3	CEIE 491 Senior Design Project II		Synthesis

B.S. CIVIL & INFRASTRUCTURE ENGINEERING DEGREE TOTAL 132

Important Academic Information:

¹For approved Mason Core courses, please visit - <https://catalog.gmu.edu/mason-core/>. If ADVANCE students have at least a 2.85 GPA at the time of matriculation to Mason, students may receive a lower-level General Education waiver and do not need to take this course. Please see your Success Coach for more information.

²For approved CEIE Technical Electives and Technical Core Electives, please visit - <https://catalog.gmu.edu/colleges-schools/engineering/civil-environmental-infrastructure/civil-infrastructure-engineering-bs/#requirementstext>

Additional General Notes & Resources:

- ADVANCE students who earn at least a 2.85 cumulative GPA and no more than 9 credits of unrepeatd D/F grades may be eligible to receive a waiver for any lower-level Mason Core courses not already completed. To be eligible for the core waiver, students must also complete the requirements of the AA or AS degree listed on their pathway, and apply to graduate from NOVA by the deadline (see milestone #3). Students must meet these criteria by the time of matriculation to Mason and provide the Office of Admissions a final, official transcript reflecting the degree conferral date.
- For academic policies and procedures, please see Mason catalog - <https://catalog.gmu.edu/policies/>
- Students seeking a bachelor's degree must apply at least 45 credits of upper-level courses (numbered 300 or above) toward graduation requirements.