ADVANCE
A NOVA | MASON PARTNERSHIP

A.S. Engineering /
B.S. Civil and Infrastructure Engineering
Pathway
2021-2022

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:

[1]For 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.

[2]For 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 unrepeated 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.