

ADVANCE

A NOVA | MASON PARTNERSHIP

A.S. Engineering /
B.S. Civil and Infrastructure Engineering
Pathway
2020-2021

A.S. Engineering

ADVANCE Program Milestones

1. Students must take SDV 100 or SDV 101 in the first semester at NOVA.
2. Students must begin Developmental coursework in the first semester in ADVANCE at NOVA.
3. Students must take first college-level MTH course and ENG 111 in the semester immediately following the completion of any MTT or ENF courses (excluding summer).
4. 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.
 - c. Engineering students must begin the calculus sequence and complete Calculus I and II with a B or better.
5. Students must complete at least six degree-applicable credits with a C or better each fall and spring semester.
6. Students must maintain a 2.5 cumulative GPA.
7. Students must apply for NOVA graduation and complete their Associate's degree.

	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	ELECTIVE
2	ENG 111	3	ENG 111 College Composition I	ENGH 101	Written Comm
3	Social/Behavioral Sciences #1	3	HIS 101 History of Western Civilization I OR	HIST 101	Western Civ
			HIS 102 History of Western Civilization II OR HIS 112 History of World Civilization II	HIST 102 HIST 125	
4	MTH 263	4	MTH 263 Calculus I	MATH 113	Quantitative Reasoning
5	EGR 121	2	EGR 121 Foundations of Engineering	ENGR 107	Major
6	CST Course	3	CST 100 Principles of Public Speaking OR	COMM 100	Oral Comm
			CST 110 Introduction to Communication	COMM 101	
7	Technical Elective #1	4	CHM 111 General Chemistry I	CHEM 211-213	Nat Science
8	ENG 112	3	ENG 112 College Composition II	ENGH XXX	Elective
9	MTH 264	4	MTH 264 Calculus II	MATH 114	Major
10	Humanities/Fine Arts #1	3	ART 100 Art Appreciation OR	ARTH 101	Arts
			ART 101 History and Appreciation of Art I OR	ARTH 200	
			ART 102 History and Appreciation of Art II OR	ARTH 201	
			CST 130 Introduction to Theatre OR	THR 101	
			CST 151 Film Appreciation I OR MUS 121 Music Appreciation I	ENGH L372 MUSI 101	
11	Social/Behavioral Sciences #2	3	ECO 202 Principles of Microeconomics	ECON 103	Soc/Behav
12	MTH 265	4	MTH 265 Calculus III	MATH 213	Major
13	Technical Elective #2	3	CIV 225 Soil Mechanics AND	CEIE L331	Major
			CIV 226 Soil Mechanics Lab		
14	Technical Elective #3	3	CIV 280 Intro to Environmental Engineering	CEIE L355	Major
15	PHY 231	5	PHY 231 General University Physics I	PHYS 160-161-266	Nat Science
16	Humanities/Fine Arts #2	3	ENG 236 Introduction to the Short Story OR	ENGH 202	Literature
			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		
17	Technical Elective #4	3	EGR 240 Solid Mechanics (Statics)	CEIE 210	Major
18	PHY 232	5	PHY 232 General University Physics II	PHYS 260-261-XXX	Major

19	Technical Elective #5	3	CIV 240 Fluid Mechanics and Hydraulics	CEIE 240	Major
20	Technical Elective #6	3	EGR 246 Mechanics of Materials	CEIE L310 or ME 212	Major
21	MTH 267	3	MTH 267 Differential Equations	MATH 214	Major
A. S. ENGINEERING DEGREE		68			
TOTAL					

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*	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	Information Technology	3	CDS 130 Computing for Scientists	Info Tech
28	Civil Engineering	3	CEIE 340 Water Resources Engineering	Major
29	Gen Ed: Written Communication (UL)	3	ENGH 302 Advanced Composition (Natural Science Section)	Written Comm
30	Physics	1	PHYS 266 Introduction to Thermodynamics	Major
31	Civil Engineering	3	CEIE 311 Structural Analysis	Major
32	Civil Engineering	3	CEIE 360 Introduction to Transportation Engineering	Major
33	Civil Engineering	3	CEIE 370 Construction Systems	Major
34	Biology	3	BIOL 107 Intro Biology II Lecture OR BIOL 177 Ecological Applications	Major
35	Civil Engineering	1	CEIE 409 Professional Practice and Management in Engr	Major
36	Technical Electives	3	CEIE 4xx Technical Core Electives**	Major
37	Technical Electives	3	CEIE 4xx Technical Core Electives**	Major
38	Technical Electives	3	CEIE 4xx Technical Core Electives**	Major
39	Technical Electives	3	CEIE 4xx Technical Electives**	Major
40	Technical Electives	3	CEIE 4xx Technical Electives**	Major
41	Technical Electives	3	CEIE 4xx Technical Core Electives**	Major
	Technical Electives	3	CEIE 4xx Technical Electives**	Major
42	Technical Electives	3	CEIE 4xx Technical Electives**	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 131

Denotes a course that must be taken at George Mason University. Please see your Success Coach to enroll.

*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 will receive a lower-level General Education waiver and do not need to take this course. Please see your Success Coach for more information.

**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>

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.