

ADVANCE

A NOVA | MASON PARTNERSHIP

A.S. Engineering/B.S. Civil & Infrastructure
Engineering

2019-20

A.S. Engineering Pathway

2019-2020

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 MTE 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 SEQUENCE	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 HIS 102 History of Western Civilization II OR HIS 112 History of World Civilization II	HIST 101 HIST 102 HIST 125 Western Civ
4	MTH 263	4	MTH 263 Calculus I	MATH 113 Quantitative Reasoning
5	EGR 121	2	EGR 121 Foundations of Engineering	ENGR 107 DEGREE
6	CST Course	3	CST 100 Principles of Public Speaking OR CST 110 Introduction to Communication	COMM 100 COMM 101 Oral Comm
7	Technical Elective #1	4	CHM 111 College 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 DEGREE
10	Humanities/Fine Arts #1	3	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 200 ARTH 201 THR 101 ENGH L372 MUSI 101 Arts
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 DEGREE
13	Technical Elective #2	3	CDS 130 Computing for Scientists	CDS 130 Info Tech
14	Technical Elective #3	3	CIV 280 Intro to Environmental Engineering	CEIE L355 DEGREE
15	PHY 231	5	PHY 231 General University Physics I	PHYS 160-161-266 NAT SCIENCE
16	Humanities/Fine Arts #2	3	REL 100 Introduction to the Study of Religion OR REL 231 Religions of the World I	RELI 100 RELI 212 Global
17	Technical Elective #4	3	EGR 240 Solid Mechanics (Statics)	CEIE 210 DEGREE
18	PHY 232	5	PHY 232 General University Physics II	PHYS 260-261-XXX DEGREE
19	Technical Elective #5	3	CIV 240 Fluid Mechanics and Hydraulics	CEIE 240 DEGREE
20	Technical Elective #6	3	EGR 246 Mechanics of Materials	CEIE L310 or ME 212 DEGREE
21	MTH 267	3	MTH 267 Differential Equations	MATH 214 DEGREE
A. S. ENGINEERING DEGREE TOTAL		68		

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

MASON DEGREE REQUIREMENT SEQUENCE	Credits	Course	MASON CORE/DEGREE EQUIVALENT
22	3	Gen Ed: Literature Approved Literature course*	Literature
23	3	Statistics STAT 344 Probability and Statistics for Engineers	DEGREE
24	3	Civil Engineering CEIE 203 Geomatics and Engineering Graphics	DEGREE
25	3	Civil Engineering CEIE 301 Engineering & Econ Models on Civil Engineering	Writing Intensive
26	0	Civil Engineering CEIE 304 Junior Engineering Competency Exam	DEGREE
27	3	Civil Engineering CEIE 331 Soil Mechanics	DEGREE
28	3	Civil Engineering CEIE 340 Water Resources Engineering	DEGREE
29	3	Gen Ed: Written Communication (UL) ENGH 302 Advanced Composition (Natural Science Section)	Written Comm
30	1	Physics PHYS 266 Introduction to Thermodynamics	DEGREE
31	3	Civil Engineering CEIE 311 Structural Analysis	DEGREE
32	3	Civil Engineering CEIE 360 Introduction to Transportation Engineering	DEGREE
33	3	Civil Engineering CEIE 370 Construction Systems	DEGREE
34	3	Biology BIOL 107 Intro Biology II Lecture OR BIOL 177 Ecological Applications	DEGREE
35	1	Civil Engineering CEIE 409 Professional Practice and Management in Engr	DEGREE
36	3	Technical Electives CEIE 4xx Technical Core Electives**	DEGREE
37	3	Technical Electives CEIE 4xx Technical Core Electives**	DEGREE
38	3	Technical Electives CEIE 4xx Technical Core Electives**	DEGREE
39	3	Technical Electives CEIE 4xx Technical Electives**	DEGREE
40	3	Technical Electives CEIE 4xx Technical Electives**	DEGREE
41	3	Technical Electives CEIE 4xx Technical Core Electives**	DEGREE
42	3	Technical Electives CEIE 4xx Technical Electives**	DEGREE
43	3	Technical Electives CEIE 4xx Technical Electives**	DEGREE
44	3	Gen Ed: Synthesis/Civil Engineering CEIE 490 Senior Design Project	Synthesis
B.S. CIVIL & INFRASTRUCTURE ENGINEERING DEGREE TOTAL		130	

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/>

**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