

ADVANCE

A NOVA | MASON PARTNERSHIP

A.S. Science/B.S. Chemistry – Analytical
Chemistry Concentration

2019-20

A.S. Science Pathway (Chemistry)

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.
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 XXX	UNIV 100	Elective
2 ENG 111	3	ENG 111 College Composition I	ENGH 101	Written Comm
3 HIS Course	3	HIS 101 History of Western Civilization I OR HIS 102 History of Western Civilization II	HIST 101 HIST 102	Western Civ
4 MTH 263	4	MTH 263 Calculus I	MATH 113	Quant
5 MTH 167 or Science	4	CHM 111 College Chemistry I	CHEM 211-213	NAT SCIENCE
6 ENG 112	3	ENG 112 College Composition II	ENGH XXX	Elective
7 CST Course	3	CST 100 Principles of Public Speaking OR CST 110 Introduction to Communication	COMM 100 COMM 101	Oral Comm
8 MTH 264	4	MTH 264 Calculus II	MATH 114	DEGREE
9 ITE 115 or General Education	4	CHM 112 College Chemistry II	CHEM 212-214	NAT SCIENCE
10 Science Course #1	5	PHY 231 General University Physics I	PHYS 160-161- 266	DEGREE
11 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
12 Social/Behavioral Sciences #1	3	ECO 201 Principles of Macroeconomics OR GEO 210 Introduction to Cultural Geography OR HIS 121 United States History I OR PLS 211 United States Government I OR PSY 200 Introduction to Psychology OR SOC 200 Principles of Sociology	ECON 104 GGS 103 HIST 121 GOVT 103 PSYC 100 SOCI 101	Soc/Behav
13 Math or Science #1	3	CHM 241 Organic Chemistry I-Lecture	CHEM L313	DEGREE
14 Math or Science #2 (with lab below)	2	CHM 245 Organic Chemistry I - Laboratory	CHEM L315	DEGREE
15 Science Course #2	5	PHY 232 General University Physics II	PHYS 260-261- XXX	DEGREE
16 Social/Behavioral Sciences #2	3	ECO 202 Principles of Microeconomics OR GEO 220 World Regional Geography OR PLS 241 International Relations I OR PSY 200 Introduction to Psychology OR SOC 200 Principles of Sociology OR SOC 211 Principles of Anthropology I	ECON 103 GGS 101 GOVT 132 PSYC 100 SOCI 101 ANTH 120	Soc/Behav

17	Humanities/Fine Arts #2	3	REL 231 Religions of the World I OR REL 232 Religions of the World II OR REL 233 Introduction to Islam	RELI 212 RELI 211 RELI 272	GLOBAL
18	Math or Science #3	3	CHM 242 Organic Chemistry II - Lecture	CHEM L314	DEGREE
19	Math or Science #2 (with lab above)	2	CHM 246 Organic Chemistry II - Laboratory	CHEM L318	DEGREE
A.S. SCIENCE DEGREE TOTAL		61			

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	
20	Gen Ed: Literature	3	Approved Literature course** (Upper-level)	Literature
21	Mathematics Courses	3	MATH 213 Analytical Geometry and Calculus III	DEGREE
22	Chemistry Courses	4	CHEM 321 Elementary Quantitative Analysis	DEGREE
23	Science Core Courses	4	EVPP 210 Environmental Biology: Molecules and Cells OR BIOL 213 Cell Structure and Function	DEGREE
24	Chemistry Courses	5	CHEM 331 Physical Chemistry I AND CHEM 336 Physical Chemistry Lab I	Writing Intensive
25	Chemistry Courses	4	CHEM 463 General Biochemistry I	DEGREE
26	Science Core Courses	4	GEOL 101 Introductory Geology I	DEGREE
27	Gen Ed: Written Communication (Upper level)	3	ENGL 302 Advanced Composition	Written Comm
28	Chemistry Courses	5	CHEM 332 Physical Chemistry I AND CHEM 337 Physical Chemistry II Lab	DEGREE
29	Chemistry Courses	5	CHEM 422 Instrumental Methods of Chemical Analysis AND CHEM 423 Instrumental Methods of Chemical Analysis Lab	DEGREE
30	Chemistry Courses	3	CHEM 427 Aquatic Environmental Chemistry OR CHEM 355 Undergraduate Research OR CHEM 451 Special Projects in Chemistry OR CHEM 452 Special Projects in Chemistry	DEGREE
31	Chemistry Courses	3	CHEM 424 Principles of Chemical Separation OR CHEM 425 Electroanalytical Chemistry	DEGREE
32	Science Core Courses	3	GEOL 306 Soil Science	DEGREE
33	Chemistry Courses	3	CHEM 441 Properties and Bonding of Inorganic Compounds	DEGREE
34	Chemistry Courses	2	CHEM 465 Biochemistry Lab OR CHEM 445 Inorganic Preparations and Techniques	DEGREE
35	Supporting Science Electives	3	Approved Supporting Science Elective*	DEGREE
36	Supporting Science Electives	3	Approved Supporting Science Elective*	DEGREE
37	Gen Ed: Synthesis	3	Approved Synthesis Course**	Synthesis
38	Gen Ed: Information Technology	3	Approved IT Course**	Info Tech
B.S. CHEMISTRY DEGREE TOTAL		127		

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

For academic policies and procedures, please see Mason catalog - <https://catalog.gmu.edu/policies/>

*For approved Supporting Science elective courses, please visit: <https://catalog.gmu.edu/colleges-schools/science/chemistry-biochemistry/chemistry-bs/#requirementstext>

**For approved Mason Core courses, please visit - <https://catalog.gmu.edu/mason-core/>

General Note: Students majoring in chemistry must complete the chemistry program requirements with a minimum GPA of 2.30 and present no more than two courses with a grade of 'D' (1.00) in CHEM coursework at graduation.

Students interested in Pre-Health Professions (Pre-Med, Pre-Dentistry, Pre-Podiatry, Pre-Optometry, Pre-Veterinary, Pre-Pharmacy, Pre-Physician Assistant, Pre-Occupational Therapy, and Pre-Physical Therapy) are strongly encouraged to meet with the Health Professions Advisor regarding the appropriate prerequisite courses for their field of choice. For more information, please visit: <https://prehealth.gmu.edu/>

Students seeking a bachelor's degree must apply at least 45 credits of upper-level courses (numbered 300 or above) toward graduation requirements