James Madison University Bachelor of Science in Geology (B.S.)* or Bachelor of Arts in Earth Science (B.A.)*

TRANSFER GUIDE
Catalog Years: 2024-2027

Associate Transfer Degree Plan in Environmental Science

COURSE REQUIREMENTS

Complete at VCCS				Complete at JMU		
BACHELOR'S DEGREE REQUIREMENT	**SATISFIED BY**			**BACHELOR'S DEGREE REQUIREMENT**		
Course	**Credits**	**CC Course**	**Notes**	**Course**	**Credits**	**Notes**
UNST 000	1-2	SDV 100 or 101		**Required for both the BS Geology and BA Earth Science degrees:**		
WRTC OOO	3	ENG 111 College Comp I	ENG 111 + ENG 112 (Both must be completed for transfer credit for WRTC 103)	GEOL 230	4	Evolution of Earth
WRTC 103**	3	ENG 112 College Comp II or 113 Tech Prof Writing		GEOL 291	1	Writing and Communication in the Geosciences
JMU General Education Requirements**	3	Any UCGS Art or Humanities	PHI 100 recommended, which is required for the B.A. degree in Earth Science. These two courses must come from two different disciplines.	GEOL 377	3	Earth Surface Processes
JMU General Education Requirements**	3	Any UCGS Humanities, Art, or Literature		GEOL 387	4	Stratigraphy, Structure, and Tectonics
JMU General Education Requirements**	3	Any UCGS Social & Behavioral Science (not history)		GEOL 491/494/497/499 Research Requirement	2-6	Students choose an approved independent research project or internship (research with JMU faculty, internships at government agencies or companies, honors thesis, etc.)
JMU General Education Requirements**	3	Any UCGS History				
JMU General Education Requirements**	4	BIO 101 General Biology	= BIO 140 + 140L	**Additional Requirements for the BS in Geology:**		
CHEM 131 + 131L	4	CHM 111 General Chemistry I		GEOL 280	4	Mineralogy
GEOL 110 + 110L or GEOL 115 + 115L	4	GOL 105 Physical Geology or GOL 110 Earth Systems: An Environmental Geology Perspective		GEOL 300	4	Petrology - Taken after GEOL 280
				GEOL 388	4	Advanced Stratigraphy, Structure, and Tectonics - Taken after GEOL 387
Calculus I	3-4	MTH 261 Applied Calc or MTH 263 Calc I	If pursuing B.S. in Geology, take MTH 263 (= MATH 235 at JMU) If pursuing B.A. in Earth Science, take MTH 261 or 263 (=MATH 205 or 235 at JMU)	GEOL 399: Field Geology	4-6	A required summer course of at least 4 weeks in length. Students may take the JMU course or a course approved at another university.

Math prerequisites if needed	0-6	Possible courses: MTH 161, 162, 167	If taking MTH 263 above, MTH 161+162 or MTH 167 may be needed as a prerequisite. If taking MTH 261 above, MTH 161 may be needed as a prerequisite.	Upper-Level Geology Electives	12	Choose from four elective concentrations: 1. Environmental and Engineering Geology 2. Life, Ocean, and Climate 3. Solid Earth and Tectonics 4. General Geology
Second math course	3-4	Possible courses: MTH 154, 155, 161, 162, 167, 245 or 264	Students pursuing a B.S. in Geology, take MTH 155, 245 or 264 in addition to MTH 263. Students pursuing a B.A. in Earth Science need two total math courses: MTH 261/263, plus a prerequisite or other math.			
Additional coursework in biology, chemistry and/or physics	8-12	**Geology B.S. - 12 cr** ● CHM 112 General Chemistry II ● PHY 201 & PHY 202 College Physics I + II or PHY 241 & PHY 242 University Physics I + II **Earth Science B.A. - 8 cr** ● PHY 201 or PHY 241 College / Univ Physics I ● 2nd course in biology, chemistry or physics: BIO 102, CHEM 112, PHY 202 or PHY 242	Complete additional science coursework specific to your intended major. The courses you take will depend on whether you intend to major in geology or earth science at JMU.	**Additional Requirements for the BA in Earth Science:**		
				Degree requirement		Intermediate level world language (232), if not completed at VCCS
				GEOL 167	3	History and Philosophy of the Geosciences
				GEOL 211	3	Oceanography (GOL 111 at VCC)
				GEOL 307 or ASTR 220	3	Planetary Geology
				GEOL 320	4	Meteorology
				GEOL 367	4	Genesis of Solid Earth Materials
				GEOL 477	4	Contemporary Issues in Geosciences
Degree requirements or electives	2-15	World Languages, GOL 111, and/or transfer electives	Students pursuing a B.A. in Earth Science must fulfill world language through the intermediate level (202 at VCCS; 232 at JMU). If you can't complete this requirement before transfer, sequences in world languages or science can be completed at JMU. GOL 111 = GEOL 211, Intro to Oceanography, which may help students pursuing the B.A. Earth Science major. You can also complete other transfer electives to reach the minimum 60 credit hours required for the associate degree.	**University electives**: Additional electives or courses toward another major or minor may be needed in either the BA Earth Science or the BS Geology majors to reach the minimum credit requirements for graduation (30 from JMU; 60 from a 4-year; 120 total credits).		
CREDITS PRE-TRANSFER: 60-62				**CREDITS POST-TRANSFER: 60**		

* If you aren't sure whether the Earth Science or Geology major is right for you, read the transfer guidance below to learn more about each major.

** Students who complete an approved transferable associate degree will qualify for a full waiver of general education requirements at JMU. Students who will not be earning an approved transferable associate degree should complete core community college requirements with courses that also satisfy area requirements in JMU's general education program. For example, the WRTC 103 requirement can only be filled with ENG 111-112 at VCCS. Learn more about JMU general education equivalents offered at VCCS at www.jmu.edu/transfer/vccs-transfer/genedequiv.shtml. Email transferadvising@jmu.edu with questions.

TRANSFER GUIDANCE

Admission into the Geology or Earth Science majors at James Madison University:

Students who meet the requirements for guaranteed admission to JMU are guaranteed admission into the Geology or Earth Science major. You do not necessarily need to have taken all courses on the transfer guide to be able to complete the major within two years of transferring to JMU with your associate degree. This guidance may help with your planning:

- Students must complete an approved transferable associate degree from their Virginia community college with a minimum GPA of 3.0 for guaranteed admission to JMU. Students who do not qualify for guaranteed admission are encouraged to apply to JMU through the regular admission process. For additional details about requirements for guaranteed admission, please see the JMU letter of intent for your community college: www.jmu.edu/admissions/apply/transfer-gaa.shtml.
- Have you discovered a love of geology or environmental science later in your VCCS studies and don't have time to finish the course recommendations listed above? That's ok! Try to complete GOL 105 or 110 and some science cognates (chemistry and/or physics) and calculus 1 or statistics before transfer, if possible.

IMPORTANT LINKS & DATES:

- **University Transfer Center:** https://www.jmu.edu/transfer/
- **Register Intent to Transfer:** Students can notify JMU of their interest in transferring through College Connect at www.TransferVirginia.org. Transfer applicants from a VCCS institution intending to apply through the Guaranteed Admission Agreement (GAA) must submit a Letter of Intent prior to applying. Requirements and forms are available at: https://www.jmu.edu/admissions/apply/transfer-GAA.shtml**.**
- **Admission Application:** By March 1 for Fall or October 15 for Spring at https://www.jmu.edu/admissions/apply/apply-online.shtml
- **Financial Aid:** https://www.jmu.edu/financialaid
- **FAFSA - Free Application for Federal Student Aid:** Deadline is March 1. Learn more at studentaid.gov.

WHAT SHOULD I CONSIDER WHEN SELECTING COURSES?

- GOL 106 is not recommended, as students should take the more advanced historical geology at JMU. GOL 135, Field Studies, is a great experience at VCCS but will not satisfy the upper-level field requirement in Geology at JMU.
- Create a schedule for all required courses, pay attention to prerequisites and when courses are offered, complete your first math and English courses in your first year. For help, see Transfer Steps and Resource Center at www.TransferVirginia.org.
- Connect with an advisor at your community college and James Madison University within your first year. College Connect available in your account at www.TransferVirginia.org.

IS THIS DEGREE RIGHT FOR ME?

Geology: This degree ideal for students with interests in climate science, environmental and engineering geology, and solid Earth processes like volcanoes, earthquakes, and plate tectonics. The Geology degree includes specialized upper-level courses involving modern analytical equipment, data analysis and visualization, and field experiences. Each student in this degree program completes a research project on a topic of interest, mentored by one or more faculty members, with opportunities for collaborations outside the university. Research opportunities include paid summer research programs outside JMU and potential internships at government agencies and private companies. The Geology degree has a 4-6 credit hour summer field capstone course requirement that is generally taken between the 3rd and 4th year, or in the summer after the 4th year. Any approved field course can be used to fulfill the requirement. Students of varied abilities are welcome to participate in field courses.

Earth Science: This degree is ideal for students with interests in environmental and climate science including meteorology and ocean sciences, public policy and outreach, and high school teaching. This degree includes flexible general elective credits which can be used towards fulfilling a minor or second major in a related topic of interest. Electives can include study abroad or field courses, if interested. Each student in this degree program completes a research project on a topic of interest, mentored by one or more faculty members, with opportunities for collaborations outside the university. Research opportunities include paid summer research programs outside JMU and potential internships at government agencies and private companies.

Minors in Climate Science, Environmental Science, Environmental Studies, Environmental Humanities, Environmental Management, and Environmental Information Systems: A minor can be earned in addition to one of the degrees above and may help transfer students fulfill the JMU credit hour requirement. See https://www.jmu.edu/environment/index.shtml for descriptions of these minors.

WHAT IS THE IMPACT ON MY DEGREE OF WORK I HAVE ALREADY COMPLETED?

- **Associate Transfer Degree Completion:** An approved transferable associate degree from a Virginia Community College will waive general education requirements at JMU. The list of approved transferable associate degrees can be found at www.jmu.edu/transfer/vccs-transfer/asdegrees.shtml.
- **Dual Enrollment – Completion of Associate Degree in HS:** Students who complete a transferable associate degree from a Virginia Community College through Dual Enrollment (DE) will not be eligible for guaranteed admission but will receive the general education waiver at JMU. DE associate degree earners who want to make progress toward their intended major should follow the curriculum in this guide.
- **Credit for Prior Learning:** Credit for prior learning may be awarded differently at JMU than at your previous institution. JMU accepts and reviews AP, IB CIE, and CLEP examinations for all students with eligible scores. JMU will complete an independent review of the test score to apply credit to your JMU student record. Other credit for prior learning is awarded on a per case basis for the ADP and RN-BSN programs in consultation with the department of expertise. Credit for learning acquired in military service is awarded by the registrar's office using the ACE

guide credit recommendation for study/experience listed on the military transcript and in consultation with the department of expertise.

- **Catalog Year:** Catalog year determined by first semester of attendance at JMU

IS THIS COLLEGE RIGHT FOR ME?

JMU is a mid to large size institution that behaves more like a smaller institution. Faculty and staff hold students as the top priority. JMU has a 96% satisfaction rate. 88% of classes have fewer than 50 students. JMU is the #1 most recommended public University in the US by the Wall Street Journal and Times Higher Education; JMU is the #1 Best College for Employment in Virginia according to U.S. Department of Education statistics compiled by Zippia. JMU has the highest post-graduation job levels of all Virginia colleges. Learn more about our college at www.jmu.edu and www.TransferVirginia.org.

DID YOU KNOW THAT…

- There is no limit to the number of credits you can transfer to JMU, but 50% of the credits required for graduation in your major must be taken at a 4-year college or university, and 25% must be taken at JMU. (Most JMU majors require 120 credits, so 60 must come from a 4-year and 30 must be taken at JMU.)
- Completing your Associate transfer degree post-high school satisfies all lower division general education requirements and increases the chance of completing your bachelor's degree.
- Exceeding 3 years or 90 credits at your community college means you may have exhausted your financial aid at that college and have limited your future financial aid at JMU.
- Students who may be eligible for Virginia's Two-Year College Transfer Grant should transfer in the fall or spring immediately following the completion of their associate degree. Learn more about the state transfer grant here: https://www.schev.edu/financial-aid/financial-aid/federal-state-financial-aid/two-year-college-transfer-grant

WHAT CAN I DO WITH THIS DEGREE?

Either the Geology or the Earth Science major can prepare you for a range of different career opportunities. The U.S. Bureau of Labor Statistics offers great resources for learning about careers in geology and environmental sciences.

Explore possible careers, salaries, and job outlook at www.TransferVirginia.org.

PROGRAM SUCCESSES & HIGHLIGHTS

The Department of Geology and Environmental Science has an excellent collection of modern analytical equipment for laboratory and field work and is known as a premier undergraduate geosciences program with nationally recognized faculty in a range of research subdisciplines.

Geology: JMU Geology students are highly sought after for field and analytical skills, as well as research and teaching experience provided through our program. Students graduating from JMU with a B.S. in Geology either enter graduate school or immediately find employment in environmental and engineering consulting firms, the energy industry, or public outreach and teaching positions. Students admitted to graduate programs in the geosciences typically have tuition fully waived and are also provided a stipend for being a research or teaching assistant.

Earth Science: Students graduating from JMU with a B.A. in Earth Science can enter a wide range of careers or graduate programs according to their interests. These have included environmental law, environmental public policy and outreach, and high school and middle school teaching.

WHAT ARE MY CHANCES FOR GETTING ACCEPTED?

- Generally, two-thirds of transfer applicants are admitted to JMU. Competitive applicants will have mostly As & Bs and have completed at least one class in each of our four core areas (English, mathematics, lab science, and social science).
- JMU defines a transfer student as a student that has graduated from high school (or holds a GED equivalency) AND has taken courses in college after high school graduation.
- Learn more about applying at https://www.jmu.edu/transfer/ or www.TransferVirginia.org.

DO MORE WITH YOUR DEGREE!

Geology: Students choose one of three concentration options for upper-level electives to focus their interests. These are: 1) Life, Ocean, and Climate Science, 2) Environmental and Engineering Geology, and 3) Solid Earth and Tectonics. Students may also choose to minor in related disciplines including astronomy, data analytics, mathematics, environmental science, and anthropology. Undergraduate students have opportunities to serve as paid course assistants and to participate in spring break and summer field programs. As part of the required research experience, students may choose to present their findings at regional or national meetings, gaining further experience and connections that place them at an advantage for admission into graduate programs and employment.

Earth Science: Undergraduate students have opportunities to serve as paid course assistants and/or participate in spring break and summer field programs. This degree includes flexible general elective credits which can be used towards fulfilling a minor or second major in a related topic of interest. Some students elect this degree together with an Education minor for preparation to be middle or high school Environmental and Earth Science teachers. As part of the required research experience, students may choose to present their findings at regional or national meetings, gaining further experience and connections that place them at an advantage for admission into graduate programs and employment.

OTHER THAN CLASSES, ARE THERE OTHER PROGRAM REQUIREMENTS?

GEOL 399, the field course for the BS in Geology, is a summer course, so it requires students to pay for summer school. We offer many scholarships to help offset the cost thanks to very generous JMU alumni.