

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		Upper Division Courses for all Chemistry majors and concentrations		
WRTC 000	3	ENG 111 College Comp I	ENG 111 + ENG 112 are both required to receive transfer credit for WRTC 103	CHEM 241, 242 & 287L	2-8	If you have completed CHEM 241-242 at VCCS, enroll only in CHEM 287L
WRTC 103*	3	ENG 112 College Comp II or 113 Tech Prof Writing		CHEM 270	3	Inorganic Chemistry
JMU General Education Requirements*	3	Any UCGS Art or Humanities	These two courses must come from two different disciplines.	CHEM 288L	2	Organic/Inorganic Lab
	3	Any UCGS Art, Humanities, or Literature		CHEM 331	3	Physical Chemistry I
	3	Any UCGS Social & Behavioral Science	This course can't be history	CHEM 351 + 351L	4	Analytical Chemistry with lab
CHEM 131 + 135L	4	CHM 111 Chemistry I	Chemistry lab must be in person to be awarded credit at JMU for CHEM 135L	CHEM 361	3	Biochemistry
MATH 235	4	MTH 263 Calc I	Prerequisite: MTH 161+162 or MTH 167	Upper Division Courses specific to chosen major and concentration		
JMU General Education Requirements*	3	Any UCGS History		There are several majors and major concentrations within the JMU Department of Chemistry and Biochemistry. They are: • Biophysical Chemistry major • Chemistry major with the following concentrations: ○ General Program ○ ACS Certified Chemistry ○ ACS Certified Biochemistry ○ ACS Certified Materials ○ Chemistry – Business Program ○ Chemistry Education / Secondary Education Your major and concentration will determine the upper-level coursework needed for your degree. The number of additional required hours in chemistry, biology, and/or math can range from 25 to 40 depending on your major and concentration. Academic advisors in the JMU department of chemistry and biochemistry will work with students to determine the best option for their academic and career interests.		
CHEM 132 + 136L	4	CHM 112 Chemistry II	Chemistry lab must be in person to satisfy CHEM 136L at JMU			
MATH 236	4	MTH 264 Calculus II				
PHYS 240 + 240LPHYS 250 + 250L	8	PHY 241 - 242 Univ Physics I & II				
CHEM 000**	5	CHM 241 Organic Chem I and CHM 245 Organic Chem Lab I	Students must take both CHM 241-242 to be eligible to receive transfer credit for organic chemistry at JMU.			

CHEM 241, 242 and 242L**	5	CHM 242 Organic Chem II and CHM 246 Organic Chem Lab II	Similarly, students must take both CHM 245-246 to receive transfer credit for the organic chemistry lab.	
Math prerequisites, major requirements, and/or electives	Up to 18	MTH 161+162 or MTH 167 if needed as prerequisites for MTH 263 Calculus If all prerequisites and other college requirements are complete, select up to 9 credits from: • BIO 101 General Bio I • BIO 102 General Bio II • BIO 206 Cell Biology • MTH 155 Statistical Reasoning or MTH 245 Statistics I • Additional transfer courses	Use some of these credits for prerequisites for Calculus if needed. Students choosing the Biophysical chemistry major or the Chemistry major-Biochemistry concentration should consider taking BIO 101 and BIO 150. Pre-professional students should take BIO 101, BIO 102, BIO 256, and MTH 155 or 245 Students not needing any of the courses above can take transfer courses that interest them. JMU encourages CST 100 or CST 110 if possible.	
CREDITS PRE-TRANSFER: 60-62				CREDITS POST-TRANSFER:

* 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.

** If possible, students are encouraged to consider waiting to take Organic Chemistry and the associated labs at JMU. See additional details in the section below called "What should I consider when selecting courses?"

TRANSFER GUIDANCE

Admission to the Chemistry Major at JMU

Students who meet the requirements for guaranteed admission to JMU are guaranteed admission to the Chemistry major.

- 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 math later in your VCCS studies and don't have time to finish the full set of coursework for the associate degree in chemistry? That's ok! Try to complete general chemistry and as much math as possible before you transfer. It will likely take you a little longer than 2 years after transfer and/or some summer classes, but you still have a pathway to a chemistry degree at JMU!

IMPORTANT LINKS & DATES:

- **University Transfer Center:** www.jmu.edu/transfer
- **Register Intent to Transfer:** Transfer applicants from a VCCS institution intending to apply through the Guaranteed Admission Agreement (GAA) must review requirements and submit a Letter of Intent prior to applying: www.jmu.edu/admissions/apply/transfer-GAA.shtml
- **Admission Application:** By March 1 for Fall or October 15 for Spring at www.jmu.edu/admissions/apply/apply-online.shtml
- **Financial Aid:** 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?

- 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 schedule an appointment with a [JMU Next transfer advisor](#) in your first semester or first year.



IS THIS DEGREE RIGHT FOR ME?

The Chemistry and Biophysical Chemistry majors require strong math skills as well as a willingness to persist through challenges. There is a focus on in-person hands-on laboratory work, as well as lecture classes. Expect to take 1-3 lab courses per semester, with each requiring 3-5 hours in lab per week. While not a requirement, original undergraduate research is available to all students starting as early as the first semester at JMU. We are a relatively small department (200 total students, 25 faculty) with an emphasis on establishing community between students, as well as between students, faculty and staff. We also place a high value on inclusive behaviors and social justice.

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 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?

Explore potential careers, salary ranges, and job outlooks at www.TransferVirginia.org

PROGRAM SUCCESSES & HIGHLIGHTS

Because our department focuses 100% on undergraduate students, there are nearly limitless opportunities to gain hands-on research experience in both laboratory courses and research projects. This provides technical and communication skills that are highly valued by employers, graduate schools, and pre-professional health schools. In recent years, about 50% of our graduates move directly into the workplace, 30% enter graduate school with full tuition waivers and assistantships, and 20% enter professional school (medicine, pharmacy, law, etc) within 6 months of graduation.

Nearly all our students complete the Chemistry major and other graduation requirements in 4 years or less, depending on credits transferred. Those who stay longer are often completing second majors.

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!

There are 7 concentrations to choose from within the Chemistry major, including 4 that are certified by the American Chemical Society (ACS). All concentrations are pretty similar for the first two years. The General, Chemistry Business and Chemical Education Concentrations are great for students who plan to enter the chemical industry, work for or run their own business, apply to a pre-professional health program (medical, pharmacy, etc), or become a high school teacher. The ACS concentrations have additional lecture and laboratory requirements and prepare students for graduate school in many science areas: ACS Biochemistry, ACS Chemistry, ACS Materials Chemistry, ACS Chemical Education.

Past Chemistry and Biophysical Chemistry students have chosen double majors in related majors like biology, physics, engineering, as well as completely different fields like theater or art. Many students choose minors to match their interests in areas like business, biochemistry, math, honors, and the pre-health professions (pre-med, pre-pharmacy, etc). Many transfer students will need to choose at least one minor for financial aid purposes.

Chemistry and Biophysical Chemistry undergraduates can work for credit or for pay as Learning Assistants in lecture and/or lab courses, as well as participate in paid summer research experiences at JMU or other universities.