

University of Mary Washington Bachelor of Science in Biochemistry

Associate Transfer Degree Plan in Chemistry

COURSE REQUIREMENTS

Complete at VCCS				Complete at UMW		
BACHELOR'S DEGREE REQUIREMENT	SATISFIED BY			BACHELOR'S DEGREE REQUIREMENT		
Course	Credits	CC Course	Notes	Course	Credits	Notes
	1-2	SDV 100 College Success Skills or 101 Orientation		CHEM 111 General Chemistry I w/lab	4	In person lab required, counts as Quantitative Reasoning Gen Ed
	3	ENG 111 College Comp I		MATH 121 Calculus I	4	Counts as Quantitative Reasoning Gen Ed Co-requisite for PHYS 105.
	3	ENG 112 College Comp II or 113 Tech Prof Writing		CHEM 112 General Chemistry II w/lab	4	In person lab required
	3	Any UCGS Art or Humanities	These two courses must come from two different disciplines.	MATH 122 Calculus II	3	Co-requisite for PHYS 106
	3	Any UCGS Art, Humanities, or Literature		PHYS 101-102 General Physics I and II w/lab OR PHYS 105-106 University Physics I or II w/lab	8	Counts as Natural Science Gen Ed PHYS 105-106 preferred
	3	Any UCGS Social & Behavioral Science (not History)		CHEM 211 Organic Chemistry I w/ lab	4	In person lab required
CHEM 111 General Chemistry I w/lab	4	CHM 111 Chemistry I	In person lab required	CHEM 212 Organic Chemistry II w/lab	4	In person lab required
MATH 121 Calculus I	4	MTH 263 Calc I		Introductory Biology Course – either BIOL 121 or BIOL 125	4	offered fall semester and summer term (BIOL 121) prerequisite for BIOL 132 or BIOL 126

						in-person lab required
	3	Any UCGS History		Introductory Biology II Course – either BIOL 132 or BIOL 126	4	offered spring semester and summer term (BIOL 132) prerequisite for BIOL 340 and 341 in person lab required
CHEM 112 General Chemistry II w/lab	4	CHM 112 Chemistry II		CHEM 383A Physical Chemistry I lecture	3	Prerequisites: <i>Prerequisites: MATH 122, PHYS 102 or PHYS 106, and a grade of C or better in CHEM 112 Fall semester</i>
	4	MTH 264 Calculus II				
PHYS 101-102 General Physics I and II w/lab OR PHYS 105-106 University Physics I or II w/lab	8	PHY 241 - 242 Univ Physics I & II OR PHY 201 - 202 College Physics I & II	Either sequence fulfills the prerequisite for CHEM 383.			
CHEM 211 Organic Chemistry I w/ lab	5	CHM 241 Organic Chem II and CHM 241 Organic Chem Lab II		CHEM 317 Biochemistry I lecture	3	offered fall semesters prerequisite: CHEM 212 with a grade of C or above Digital intensive Gen. Ed. VCCS CHEM 260 will not count in major
CHEM 212 Organic Chemistry I w/ lab	5	CHM 242 Organic Chem II and CHM 246 Organic Chem Lab II		CHEM 319 Biochemistry I laboratory	1	offered fall semesters and occasionally spring semesters co-requisite: CHEM 317 Writing intensive Gen Ed VCCS CHEM 261 will not count in the major
Introductory Biology Course – BIOL 121-132 or BIOL 125-126	Up to 9	If students have completed all prerequisites and other college requirements, they can select up to 9 credits from: BIO 101 General Biology I BIO 102 General Biology II BIO 206 Cell Biology	BIO 101-102 in person lab required BIO 206 Cell Biology will not count in the major at UMW. BIO 256 General Genetics will not count in the major at UMW.	CHEM 318	3	offered spring semesters prerequisite: CHEM 317 with a grade of C or above

		MTH 155 or 245 Statistics Additional transfer courses.				
	Up to 9	Math prerequisites (MTH 161 PreCalculus I / MTH 162 PreCalculus II, MTH 167 PreCalculus with Trigonometry), World Languages, or other college requirements.		CHEM 319	4	prerequisites: CHEM 212, CHEM 253 and CHEM 254 Writing Intensive Gen Ed. Fall semester only
				CHEM 320	2	offered spring semesters co-requisite: CHEM 318 Writing intensive Gen Ed
				Senior Seminar CHEM 453	2	offered spring semesters prerequisite: graduating majors with major GPA of 2.0 or higher or with permission of the department Speaking Intensive Gen Ed
				BIOL 340 Cellular Biology	4	offered fall semesters prerequisites: CHEM 112 with grade of C- or above, BIOL 126 or 132 with a grade of C- or above VCCS BIO 206 will NOT transfer as BIOL 340
				Genetics with Lab (BIOL 341)	4	offered spring semesters prerequisites: CHEM 112 with grade of C- or above, BIOL 126 or 132 with a grade of C- or above VCCS BIO 256 will NOT transfer as BIOL 341
				Upper level Biology course – complete one of the following courses: BIOL 342, 440, 443, 444, or 471 (approval required)	3-4	offerings and prerequisites vary depending on course

				World Language at the 201 level	3	See details under “What should I consider when selecting courses” below.
CREDITS PRE-TRANSFER: 60-62				CREDITS POST-TRANSFER: 58-60		

TRANSFER GUIDANCE

Guaranteed Admission to University of Mary Washington

By meeting the following criteria, you are eligible for admission. Separate admission to the Chemistry program is not required.

- Earn a transfer associate degree
- Earn a minimum GPA of 3.0 for your associate degree
- Earn grades of "C" or higher in all your courses for the associate degree to be eligible to transfer those credits
- Contact UMW before taking any online lab

Please create an account through the www.TransferVirginia.org portal to indicate your intent to use this guarantee for admission to [the university of Mary Washington].

IMPORTANT LINKS & DATES:

- **University Transfer Center:** <https://www.umw.edu/admissions/transfer/>
- **Register Intent to Transfer:** After the first 45 credits, submit to admit@umw.edu: <https://www.umw.edu/admissions/wp-content/uploads/sites/6/2023/01/Letter-of-intent-VCCS-Sept-2020.pdf> Additional details are available at [TransferVirginia.org](https://www.TransferVirginia.org).
- **Admission Application:** Apply by October 15 for spring admission, March 1 for summer admission, and April 1 for fall admission. Additional details and a transfer checklist are available at <https://www.umw.edu/admissions/transfer/>
- **Financial Aid:** <https://www.umw.edu/financialaid/>
- **FAFSA - Free Application for Federal Student Aid:** Apply by April 1 to ensure you receive the maximum aid for which you are eligible. FAFSA will still be accepted after the April 1 deadline. The required forms are found at [here](#)

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 University of Mary Washington within your first year. College Connect available in your account at www.TransferVirginia.org.
- UMW requires proficiency in a second language as part of the general education requirements. This can be satisfied in a number of ways including completing four years of language in high school, transferring credits from a community college, or completing a sequence of language courses through the 201 level at UMW. American Sign Language is accepted for transfer as a second language. All of the options for satisfying this requirement

are found in the UMW Catalog: <https://catalog.umw.edu/undergraduate/general-education/general-education-course-list/>

IS THIS DEGREE RIGHT FOR ME?

- Chemistry is known as the "central science" because it connects all of the other sciences- biology, physics, astronomy, physics, earth and environmental sciences, geology, engineering etc.
- A biochemistry degree can prepare you for over 40 career fields. You can explore those here: <https://www.acs.org/careers/chemical-sciences/fields.html>
- Biochemists work in all job sectors, from academic jobs, government jobs, nonprofit agencies and the chemical industry.
- The Department of Chemistry of the University of Mary Washington is an American Chemical Society (ACS) approved program.
- Our program is based upon a modern curriculum and is supported by well-equipped laboratories that supplement and extend classroom instruction.

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

- **Associate Transfer Degree Completion:** Transfer students with a VCCS transferable degree have completed the UMW general education requirements except second language competency, digital intensive, diverse and global perspectives, After Mary Washington, and beyond the classroom general education requirements. Several of these requirements are integrated into the chemistry major. UMW does allow students to satisfy these requirements through qualifying transfer coursework.
- **Dual Enrollment - Completion of Associate Degree in HS:** Students participating in dual enrollment programs are considered as freshman applicants. Dual enrollment courses taken at the high school are treated identically with the same course when taken on a college campus; dual enrollment status does not affect the transferability of the course.
- **Credit for Prior Learning:** UMW accepts credit for AP, IB, CLEP, Cambridge, and other qualifying previous coursework. Equivalencies are provided here: <https://academics.umw.edu/registrar/transfer-information/transferring-credit-ap-ib-or-previous-coursework/> Virginia Community College System courses which receive guaranteed equivalent credit are provided here: <https://academics.umw.edu/registrar/transfer-information/resources-and-publications/babs-transfer-credit-guide/transferrable-credit/virginia-community-college-system-vccs/>
- **Catalog Year:** Students must complete general education requirements associated with the academic year that they enroll at UMW. Students complete major requirements associated with the academic year in which they declare their major.

IS THIS COLLEGE RIGHT FOR ME?

- UMW will feel like home. Our campus is gorgeous, green, and full of opportunity. Join a club sports team. Audition for a musical. Lead the way in the Student Government Association. Train with our esports team. Or sit back, relax, and take it all in from the cozy comfort of Ball Circle.
- UMW is a small university located in Fredericksburg, VA. We offer small class sizes and courses are taught by faculty committed to student learning and success.
- UMW offers high impact experiences beyond the classroom, including undergraduate research opportunities and internships. (<https://cas.umw.edu/chemistry/research-and-internships/>)
- UMW is located between Washington, DC, and Richmond, VA, in the largest technology corridor in Virginia.
- Learn more about our college at www.TransferVirginia.org

DID YOU KNOW THAT...

- UMW has a co-enrollment agreement with Germanna Community College which allows Germanna students to take up to five courses at UMW to transfer back to their Germanna associate degree program. This allows students to receive UMW course experiences at Germanna tuition rates. Students must submit a letter of intent after completing 15 credits at

Germanna: <https://www.umw.edu/admissions/wp-content/uploads/sites/6/2022/05/Germanna-CoEnrollment-Form2022.pdf>

- 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 have exhausted your financial aid at that college and have limited your future financial aid at UMW.

WHAT CAN I DO WITH THIS DEGREE?

Explore possible careers, salaries, and job outlook at www.TransferVirginia.org and <https://www.acs.org/careers/chemical-sciences.html>

OTHER THAN CLASSES, ARE THERE OTHER PROGRAM REQUIREMENTS?

- Students must earn at least 30 credits at UMW as a degree-seeking student (not including physical education credits).
- Students must earn a GPA of 2.0 in both their major and overall coursework in order to complete their degree.