

Virginia Commonwealth University Bachelor of Science in Mathematical Sciences with a concentration in mathematics (accelerated B.S. and M.S.)

Associate Transfer Degree Plan in Mathematics

TRANSFER GUIDE

Catalog Years: 2023-2025

COURSE REQUIREMENTS

Complete at VCCS					Complete at		
BACHELOR'S DEGREE REQUIREMENT		SATISFIED BY			BACHELOR'S DEGREE REQUIREMENT		
Course	Credits	Gen ED*	CC Course	Notes	Course	Credits	Notes
UNIV 101	1-2		SDV 100 College Success Skills or 101 Orientation		<p>The accelerated B.S. and M.S. program allows qualified students in the mathematics concentration to earn both the B.S. in Mathematical Sciences and the M.S. in Mathematical Sciences with a concentration in mathematics in a minimum of five years by completing approved graduate courses during the senior year of their undergraduate program. Students in the program may count up to nine hours of graduate courses toward both the B.S. and M.S. degrees. Thus, the two degrees may be earned with a minimum of 141 credits rather than the 150 credits necessary if the two degrees are pursued separately.</p>		
UNIV 111-112	3	PUA	ENG 111 College Comp I	UNIV 111 is waived and students receive 3 credits for UNIV 112.	Foreign language 101-102 (by course or placement)	0-6	This requirement can be waived if students completed 3 or more years of a foreign language at high school.
UNIV 200	3	UA	ENG 112 College Comp II		MATH 310	3	Take at VCU unless MTH 266 is taken at CC.
General Education	3	PUA	Any UCGS Art or Humanities	These two courses must come from two different disciplines.	MATH 300	3	Take at VCU unless MTH 288 is taken at CC.
General Education	3	UA	Any UCGS Art, Humanities, or Literature		MATH 255 OR CMSC 245 OR EGRE 245	3	
General Education	3	PUA	Any UCGS Social & Behavioral Science	Cannot be a history course.	MATH 407	3	
General Education	3	PUA	Any UCGS History		MATH 490	3	
BIOL/Z 151 Or CHEM/Z 101	4	PUA	BIO 101 or CHM 111	Select first class in two-semester sequence.	MATH 301	3	Take at VCU unless MTH 267 is taken at CC.

MATH 200	4	PUA	MTH 263 Calc I	A minimum score of 3 on the AP Calculus AB or BC exam will result in credit for MATH 200.	MATH 350 or MATH 356	3	
BIOL/Z 152 Or CHEM/Z 102	4	UA	BIO 102 or CHM 112	Select second class in two-semester sequence.	MATH 401	3	
General Education	3-4	UA	Any UCGS course		MATH 409	3	
MATH 201	4		MTH 264 Calc II		Select one from: MATH 427, MATH 428, OR MATH 429	3	
MATH 307	4		MTH 265 Calc III		Concentration electives	0-6	Six additional upper-level credits in the mathematical sciences (MATH, STAT, OPER, CMSC) or the completion of a minor or a double major.
MATH 310 Or MATH 301 Or MATH 300	3		MTH 266 Linear Alg, or MTH 267 Diff Equations, or MTH 288 Discrete Math		A maximum of 12 graduate credits may be taken prior to completion of the baccalaureate degree. These graduate credits may substitute for major requirements and required major electives for the undergraduate degree and are shared with the graduate program, meaning that they will be applied to both undergraduate and graduate degree requirements. The graduate mathematics courses that may be taken as an undergraduate once a student is admitted to the program are below.		
MATH 310 Or MATH 301 Or MATH 300	3		MTH 266 Linear Alg, or MTH 267 Diff Equations, or MTH 288 Discrete Math		MATH 502 or MATH 610	3	
STAT 212	3		MTH 245 Statistics		MATH 507	3	
PHYS 201 or PHYS 207	4		PHY 201 or PHY 241	Fulfills natural science elective requirement.	MATH 550 or MATH 602	3	
VCU equivalents	5-6		Math prerequisites (MTH 161 PreCalculus I / MTH 162 PreCalculus II, MTH 167 PreCalculus with Trigonometry)	Or electives if students place into MATH 263 Calculus I	MATH 556	3	
			Additional transfer electives, if needed to meet 60 credits.		Complete requirements for M.S.	21	

CREDITS PRE-TRANSFER: 60

CREDITS POST-TRANSFER: 81

* **A** = Completion of the Associate Degree satisfies this General Education Requirement. **U** = This course satisfies a Uniform Certificate of General Studies requirement.
P = This course satisfies a Passport requirement.

TRANSFER GUIDANCE

This degree program is covered by VCU's Guaranteed Admission Agreement.

By meeting the following criteria, you are guaranteed admission to the BS in Mathematical Sciences:

- Earn a transfer associate degree.
- Earn a minimum GPA of 2.5 for your associate degree.
- Earn grades of "C" or higher in all community college courses. VCU will accept credit for repeated courses for "D" or "F" grades.

IMPORTANT LINKS & DATES:

- **University Transfer Center:** <https://transfer.vcu.edu/>.
- **Admission Application:** By March 15 for fall admission and November 1 for spring at <https://www.vcu.edu/admissions/apply/>.
- **Financial Aid:** <https://semss.vcu.edu/our-services/financial-resources-and-guidance/>.
- **FAFSA - Free Application for Federal Student Aid:** March 1 for fall semester at <https://studentaid.gov/h/apply-for-aid/fafsa>.

WHAT SHOULD I CONSIDER WHEN SELECTING COURSES?

- Complete your English courses and start your math sequence in your first year.
- Create a schedule for all required courses. Pay attention to prerequisites and when courses are offered. For help, see Transfer Steps and Resource Center at www.TransferVirginia.org.
- Connect with an advisor at your community college and the VCU Transfer Center (<https://transfer.vcu.edu/>) in your first semester.

IS THIS DEGREE RIGHT FOR ME?

- Math can be found in almost every sector of the world of work. Students majoring in math should consider if they want to use math skills directly or indirectly in the workplace. This may determine the types of experiences and further education necessary to prepare for an area of interest.
- People with math backgrounds may work in jobs with titles such as analyst, research associate, technical consultant, computer scientist, or systems engineer to name a few.
- Math majors develop many transferable skills: critical thinking, problem diagnosis and solving, computer skills, and quantitative skills. Other important skills to develop include good reasoning, persistence, and communication, both verbal and written.
- Students holding a B.S. and M.S. in Mathematical Sciences are better prepared for a career in a technical industry, for a career in teaching and/or for further studies in a quantitative Ph.D. program, such as mathematics, data sciences or statistics. An accelerated B.S. and M.S. degree in Mathematics offers a direct pathway toward high-paying positions in big tech companies and financial institutions.

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

- **Associate Transfer Degree Completion:** The completion of a transfer associate degree results in all lower-division general education requirements being met when you transfer to VCU.
- **Dual Enrollment – Completion of Associate Degree in HS:** The completion of an associate degree concurrent with high school results in 60 credits of coursework applied towards your degree and VCU's general education courses will be satisfied. High school students must apply to VCU as freshman applicants for orientation and engagement purposes.
- **Credit for Prior Learning:** VCU accepts AP, IB, Cambridge, CLEP, DANTES, and military credits.
- **Catalog Year:** VCU will honor the degree requirements of the VCU Undergraduate Bulletin in effect at the time of the student's first post-high school enrollment into an appropriate associate degree at the two-year institution. Students must stay enrolled at their community college and take no more than four years to complete their associate degree. Students must also enroll at VCU within one year of completing their associate degree.

IS THIS COLLEGE RIGHT FOR ME?

- Located in downtown Richmond, within two hours of the beach, the mountains and Washington DC, VCU provides top-ranked academic programs, research opportunities and an urban setting so students can live and learn in the real world.
 - VCU is a large, public research institution dedicated to the success and well-being of students and the Richmond community.
 - Diversity, inclusion and equity are deeply ingrained core values at VCU. If you are looking to connect with a broad range of people, come join us!
- Learn more about our college at www.TransferVirginia.org.

DID YOU KNOW THAT...

- Completing your associate transfer degree satisfies all lower division general education requirements and increases the likelihood you will complete your bachelor's degree?
- Exceeding 3 years or 90 credits at your community college could exhaust your financial aid there and reduce your future financial aid at VCU?

WHAT CAN I DO WITH THIS DEGREE?

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

PROGRAM SUCCESSES & HIGHLIGHTS

When you graduate, you will be prepared for a variety of technologically oriented jobs such as data analyst, research associate or technical consultant, to name a few, that span a wide array of professional areas. You will also be prepared to continue on to graduate studies to become an actuary, secondary school teacher, college professor or other STEM-focused professional in business, government or industry.

WHAT ARE MY CHANCES FOR GETTING ACCEPTED?

If you apply through general application instead of through the Guaranteed Admission Agreement, you will be considered for admission with all other transfer applicants.

Learn more about applying at www.TransferVirginia.org.

DO MORE WITH YOUR DEGREE!

In the Department of Mathematics and Applied Mathematics, you can pursue the Bachelor of Science in mathematical science, with a concentration in one of four areas: mathematics, applied mathematics, biomathematics and secondary teacher preparation.

OTHER THAN CLASSES, ARE THERE OTHER PROGRAM REQUIREMENTS?

All students must complete at least one VCU “REAL” experiential learning activity in order to graduate from VCU. Examples of REAL activities include: internships, research, and service learning. This requirement may be satisfied by completing a 300-level (or higher) REAL course or through an approved REAL co-curricular experience.

Learn more at <https://real.vcu.edu/>.