

George Mason University BS in Mechanical Engineering

Associate Transfer Degree Plan in Engineering

TRANSFER GUIDE

Catalog Years: 2024-2025

COURSE REQUIREMENTS

Complete at Virginia Community College				Complete at George Mason University		
BACHELOR'S DEGREE REQUIREMENT		SATISFIED BY		BACHELOR'S DEGREE REQUIREMENT		
Course	Credits	CC Course	Notes	Course	Credits	Notes
General Elective: UNIV 100	1	SDV 100		Gen Ed: Upper Level Written Comm ENGH 302	3	
General Elective: ENGH ---	3	ENG 111		Major & Gen Ed: Oral Comm	3	COMM 100 or COMM 101
Gen Ed: Written Comm ENGH 101	3	ENG 112	Admission Requirement			
Gen Ed: Arts	3	ART 100, ART 101, ART 102, CST 130, CST 151, MUS 121	Course options listed are Passport and/or UCGS courses. Additional options may be available. Can be waived with degree completion.	ECE 330	3	
Gen Ed: Literature	3	ENG 225, ENG 245, ENG 246, ENG 250, ENG 255, ENG 258, ENG 275	Course options listed are Passport and/or UCGS courses. Additional options may be available. Can be waived with degree completion.	ME 311	1	
Gen Ed: Global History	3	HIS 101, HIS 102, HIS 111, HIS 112	HIS 112 recommended. Course options listed are Passport and/or UCGS courses. Additional options may be available. Can be waived with degree completion.	ME 313	3	
Major & Gen Ed: Soc & Behav Science, ECON 103	3	ECO 202		ME 321	1	
Major and Gen Ed: Quant MATH 113	4	MTH 263	Students must earn an A or B in MTH 263	ME 322	3	
Major: MATH 114	4	MTH 264	Students must earn an A or B in MTH 264	ME 323	3	
Major: MATH 213	4	MTH 265		ME 331	3	

Major: MATH 214	3	MTH 267		ME 341 or ME 342	3	
Major & Gen Ed: Natural Science, PHYS 160/161	4	PHY 241		ME 351	3	
Major & Gen Ed: Natural Science, PHYS 260/261	4	PHY 242		ME 352	3	
Major: CHEM 211/213	4	CHM 111		ME 432	4	
General Elective: ENGR 107	2	EGR 121	NOVA students & advisors: Consult the current ME ADVANCE pathway	ME 443	3	Gen Ed: Apex & Writing Intensive
Major: ME 151	3	EGR 122		ME 444	3	
Major: ENGR 125T	4	EGR 125		ME 453	2	
Major: ME 211	3	EGR 240		Approved Math or Science elective	3-4	
Major: ME 231	3	EGR 245		Upper Level General Electives	12	300 or 400 level
Major: ME 212	3	EGR 246				
Major: ME 221	3	EGR 248				
CREDITS PRE-TRANSFER: 67				CREDITS POST-TRANSFER: 59-60		

TRANSFER GUIDANCE

Transfer Admission Requirements: Mechanical Engineering

- Transfer applicants must have completed the equivalent of MATH 113 Calculus I (4 credits) and Math 114 Calculus II (4 credits) with grades of A or B in each MATH course before applying to Mason. MTH 263 and MTH 264 are the VCCS equivalents of MATH 113 and MATH 114, respectively.
- Transfer applicants must present a 2.5 or higher cumulative GPA for regular admission. GAA applicants must present a minimum 2.85 GPA.
- Prior to application, VCCS applicants must complete ENG 111 and ENG 112.
- For more information about Guaranteed Admission Agreement Requirements, visit: <https://www.vccs.edu/transfer-programs/>

IMPORTANT LINKS & DATES:

- **Office of Transfer Services:** <https://www.gmu.edu/admissions-aid/apply-now/how-apply/transfer/office-transfer-services>
- **Admission Application:** By Oct 1 or March 1 at <https://www.gmu.edu/admissions-aid/apply-now>

- **Financial Aid:** <https://www.gmu.edu/financial-aid>
- **FAFSA - Free Application for Federal Student Aid:** March 1 for Fall admission and October 1 for Spring admission 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 within your first year. College connect available in your account of www.TransferVirginia.org

IS THIS DEGREE RIGHT FOR ME?

Mechanical engineering students take courses in a wide range of fields, including computer programming and electrical circuits. The education received from Mason's mechanical engineering program will prepare graduates to help solve both current and future societal problems. As a student, you gain experience working in teams to conceive, design, and produce

solutions to sponsor-dictated mechanical engineering problems. Our dedicated labs provide opportunities to study fluid mechanics, heat transfer, mechanics and materials science.

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

- **Associate Transfer Degree Completion:** Students who complete a VCCS transfer associate degree (AS, AA, AA&S, & AFA) will receive a waiver of the Foundation and Exploration (lower division) Mason Core general education categories. To be eligible for the waiver, the students must provide the Mason Office of Admissions with a final, official transcript reflecting the degree conferral date. As a prerequisite for ENGH 302, ENGH 101 is not waived. Students must complete ENGH 100 or ENGH 101, or an equivalent, with a C or higher.
- **Dual Enrollment – Completion of Associate Degree in HS:** Applicants are required to apply as freshmen
- **Credit for Prior Learning:** Credit by exam may be used to fulfill General Education and/or major requirements. See: <https://www.gmu.edu/admissions-aid/apply-now/how-apply/transfer/transfer-credit-policy>
- **Catalog Year:** Catalog year determined by first term of attendance at Mason.

IS THIS COLLEGE RIGHT FOR ME?

- Located in Fairfax within the National Capital Region. Mason enrolls 26,000 undergraduate students, pursuing 80 in-demand majors, from 50 states and 130 countries.
 - 4,000 new transfer students choose Mason each year. Mason is consistently ranked as one of the most diverse universities in the U.S.
 - Transfer students are welcome to live among our 7700-student residential community or off-campus. The Office of Contemporary Student Services is dedicated to the support of off-campus transfers.
 - 66% of Mason students receive financial aid
 - 22 Division I men's and women's teams and 475+ student organizations
- Learn more about our college at www.TransferVirginia.org

DID YOU KNOW THAT...

- The role of the mechanical engineer is ever expanding as they find innovative solutions for today's challenges and look to the future for problems yet to be identified. For example, to meet the growing demands of worldwide energy needs spurred by population growth and dwindling supplies of fossil fuels, mechanical engineers seek innovations in nuclear energy, biofuels, wind, and tidal energies to build an energy portfolio that exploits these seemingly limitless resources. From design to manufacturing and product realization, mechanical engineers are cognizant of stealth threats due to ever-present cyber threats. Mechanical engineers oversee the operations and management of large systems along with the fiscal and human resources needed to run them.

- Our graduates have skills that are crucial in a wide range of fields, such as aerospace, automotive, biotechnology, computers, construction, consumer products, energy, electronics, government, nanotechnology, and robotics.

WHAT CAN I DO WITH THIS DEGREE?

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

Graduates of the program should be able to:

- demonstrate success as a mechanical engineer or in their chosen career field;
- advance their educational pursuits through graduate education, professional registration, or similar means;
- advance their careers by engaging in professional society participation and community service outreach.

PROGRAM SUCCESSES & HIGHLIGHTS

- Students have the opportunity to work with private companies, such as Micron Technology, Vulcan Materials, and Vision Point Systems. They also develop relationships with industry, government agencies, and contractors in Washington, D.C., and throughout the Virginia-Maryland metro area. Students also benefit from the help of our advisory board, which has arranged special tours of the Renwick Gallery, Naval Surface Warfare Center, Alban Caterpillar, Dewberry headquarters, and Micron's Advanced Manufacturing Facility.
- The capstone design courses provide students an industry-like experience that includes technical, business, and professional skill development. Projects often include engineering proposal development, design, simulation, analyses, fabrication, test and related program management activities.
- Our mechanical engineering faculty members are leaders in the areas of thermal and fluid sciences, micro/nano mechanics, photonics, tribology, and energy-water nexus. Our faculty members have in-depth knowledge and practical experience in mechanical engineering, and help graduates excel in their careers by mentoring students on their senior capstone projects, implementing the latest techniques and technologies in the classroom, and working on interdisciplinary research projects of consequence.

DO MORE WITH YOUR DEGREE!

- **Aerospace Engineering Concentration:** Students can earn this designation by completing 12 credits of specified courses in place of the 300/400 electives. Courses in both aeronautics and astronautics are offered each semester and will be available to mechanical engineering students in their senior year
- **Bachelors/Accelerated Master's:** Students can use up to 12 graduate credits towards both a bachelor's and master's degree, reducing the time to earn the MS degree by up to a year. Master's options include applied and engineering physics, applied information technology, bioengineering, civil and infrastructure engineering, computational science, data analytics engineering, electrical engineering, operations research, and systems engineering.