

# James Madison University Bachelor of Science in Engineering

## Associate Transfer Degree Plan in Engineering

### COURSE REQUIREMENTS

Complete at VCCS					Complete at JMU		
BACHELOR'S DEGREE REQUIREMENT		SATISFIED BY			BACHELOR'S DEGREE REQUIREMENT		
Course	Credits	Gen ED*	CC Course	Notes	Course	Credits	Notes
UNST 000	1		SDV 100 or 101		ENGR 301	3	Bridge course for transfers
WRTC 000	3	PUA	ENG 111		ENGR 311	4	Fluid Mechanics
WRTC 103**	3	UA	ENG 112 or 113		ENGR 313	4	Circuits and Instrumentation
JMU General Education Requirements**	3	PUA	Any Humanities or Fine Arts		ENGR 322	3	Engineering Management II: Engineering Project Management
JMU General Education Requirements**	3	UA	Any Humanities, Fine Arts, or Literature	Must come from a different group than prior requirement.	ENGR 331	3	Engineering Design III
JMU General Education Requirements**	3	PUA	Any History		ENGR 312	4	Thermodynamics and Heat Transfer
JMU General Education Requirements**	3	PUA	Any Social/Behavioral Science	This course may not be a history course.	ENGR 314	4	Materials and Mechanics
MATH 235	4	PUA	MTH 263	If needed, complete MTH 161-2 or MTH 167 prior to taking Calculus I	ENGR 332	3	Engineering Design IV
MATH 236	4		MTH 264		ENGR 411	3	Fundamentals of Sustainable Engineering and Design
MATH 237	4	UA	MTH 265		ENGR 412	3	Sustainable Engineering and Design II
MATH 238	6		MTH 266	Courses transfer as MATH 300 + MATH 336 (3 credits each), and together can be used to satisfy the MATH 238 requirement (4 credits)	ENGR 413	3	Systems Analysis
			MTH 267		ENGR 431	3	Engineering Design V
PHYS 240 + 240L	4	PUA	PHY 241		ENGR 432	3	Engineering Design VI
PHYS 250 + 250L	4		PHY 242		3 ENGR electives	9	Must be approved by advisor

CHEM 131 + 131L	4	PUA	CHM 111		4-5 JMU electives	13	The JMU engineering major requires 129 credits. 65 must come from a 4-year institution.
CHEM 132 + 132L	4	UA	CHM 112				
ENGR 000	2		EGR 121	These 5 courses together will qualify you for junior-level engineering courses at JMU. All are required, but some transfer as electives because they do not match courses offered at JMU.			
ENGR 112	3		EGR 122				
ENGR 212 + ENGR 000	3		EGR 240				
	3		EGR 245				
ENGR 000	3		EGR 125/CSC 221 or EGR 206				

CREDITS PRE-TRANSFER: 67

CREDITS POST-TRANSFER: 65

\* **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.

\*\* Students who complete an approved transferable associate degree will qualify for a full waiver of general education requirements at JMU no matter which courses they use to satisfy their associate degree requirements. Students who will not be earning an approved transferable associate degree should complete core community college requirements with courses that also satisfy "cluster" 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](http://www.jmu.edu/transfer/vccs-transfer/genedequiv.shtml). Email [transferadvising@jmu.edu](mailto:transferadvising@jmu.edu) with questions.

## TRANSFER GUIDANCE

### Admission into JMU Engineering

If you meet the following criteria, you will be admitted into the engineering major at JMU:

- 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. 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](http://www.jmu.edu/admissions/apply/transfer-gaa.shtml).
- Students must complete the curriculum for the Virginia Community College System's Associate Transfer Degree Plan in Engineering for admission into JMU Engineering.
- A minimum grade of C is required in MTH 263, 264, 265, 266 and 267, PHY 241 and 242, CHM 111 and 112, and all engineering coursework at your Virginia community college.
- Students who have not completed all required courses for admission to the JMU engineering program can still declare the major but will need to complete remaining coursework prior to being fully admitted to the program. Completing the degree could take longer in this case. To talk about how your courses will map to the engineering major at JMU, contact a JMU advisor at [transferadvising@jmu.edu](mailto:transferadvising@jmu.edu).

Please create an account through the [www.TransferVirginia.org](http://www.TransferVirginia.org) portal to register your intent to pursue guaranteed admission to JMU.

### 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](http://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 1 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](http://studentaid.gov).

### WHAT SHOULD I CONSIDER WHEN SELECTING COURSES?

- Complete the required sequence of engineering, math, and science courses approved for the JMU curriculum with a grade of C or better for admission into the Engineering program with third year standing. Additional engineering courses taken at other institutions will be assessed on a case-by-case basis for transfer credit.

- 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](http://www.TransferVirginia.org)
- Connect with an advisor at your community college and a JMU transfer advisor within your first year. College Connect is available in your account of [www.TransferVirginia.org](http://www.TransferVirginia.org)

### IS THIS DEGREE RIGHT FOR ME?

The JMU Engineering degree program provides an opportunity for exploration of numerous engineering careers. A significant exploration opportunity resides in an immersive engineering experience: a faculty directed team-based project that spans the junior and senior years.

### 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 coursework for the associate transfer degree plan in engineering will prepare students to enter the JMU Engineering program with third-year standing.
- **Dual Enrollment – Completion of Associate Degree in HS:** Students who complete the associate transfer plan in engineering will be eligible to enter the JMU Engineering program with third-year standing. Students who complete a general associate degree without engineering coursework will need four years to complete an engineering degree at JMU based on the necessary sequencing of courses. Students with an associate degree and some engineering coursework are encouraged to talk with a JMU transfer advisor to see how their previous coursework will impact their time to degree.
- **Credit for Prior Learning:** How credit for prior learning is awarded at JMU may be different than at your previous institution. JMU accepts and reviews AP, IB and CIE for all students with eligible scores. JMU will complete an independent review of the test score to apply credit to your JMU student record. CLEP exams will be considered for credit only for the Adult Degree Program (ADP). 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 less 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](http://www.jmu.edu) and [www.TransferVirginia.org](http://www.TransferVirginia.org).

#### DID YOU KNOW THAT...

- ENGR 301 at JMU is an engineering “bridge course” dedicated to transfer student success. In ENGR 301 students receive an introduction to our program, have potential knowledge gaps identified and addressed, and receive training in our machine shop.
- Half of the credits required for your JMU degree must come from a 4-year institution. For engineering at JMU, 129 credits are required for graduation, so you’ll need to complete 65 credits at JMU after transferring from a community college (unless you have credits from a different 4-year institution).
- 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.

#### WHAT CAN I DO WITH THIS DEGREE?

Explore possible careers, salaries, and job outlook at [www.TransferVirginia.org](https://www.transfervirginia.org).

#### PROGRAM SUCCESSES & HIGHLIGHTS

Our alumni have been employed in more than 420 companies spanning sustainable design, process design, product design, process engineering, project management and systems engineering. A wide range of graduate school options include master’s and doctoral programs in civil engineering, environmental engineering, industrial engineering, materials engineering, mechanical engineering, and systems engineering.

Over 35 different graduate programs have recruited students from our program. We have ongoing relationships with University of Virginia and Virginia Tech for direct graduate school admission opportunities for our students.

#### WHAT ARE MY CHANCES FOR GETTING ACCEPTED?

- JMU accepted 67% of transfer applicants for Fall 2021
- 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. The competitive GPA for transfer applicants is a 3.0.
- Learn more about applying at <https://www.jmu.edu/transfer/> or [www.TransferVirginia.org](https://www.TransferVirginia.org).

#### DO MORE WITH YOUR DEGREE!

Many engineering majors complete minors in math, general business, and other related fields. There is also room for 9 elective credits in the major, which allows students to explore professional interests. The program also hosts several student organizations including American Welding Society (AWS), National Society of Black Engineers (NSBE), Society of Automotive Engineers (SAE), Society of Hispanic Professional Engineers (SHPE), and Society for Women Engineers (SWE).

#### OTHER THAN CLASSES, ARE THERE OTHER PROGRAM REQUIREMENTS?

The JMU engineering program does not have program requirements outside of coursework, but there are many opportunities to extend learning through co-curricular activities, internships, etc.