

James Madison University Bachelor of Science in Computer Science

Associate Transfer Degree Plan in Computer Science

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	1-2		SDV 100 or 101		CS 159	3	Advanced Programming. Will be the only CS course in 1st semester if transfer credit is not received for this course; CS 227 may be taken at the same time if needed. Prerequisite: B- or better in CS 149 equivalent.
WRTC 000	3	PUA	ENG 111		CS 240	3	Algorithms and Data Structures
WRTC 103**	3	UA	ENG 112 or 113		CS 261	3	Computer Systems I
JMU General Education Requirements**	3	PUA	Any UCGS Humanities or Fine Arts		CS 327	3	Discrete Structures II
JMU General Education Requirements**	3	UA	Any UCGS Humanities, Fine Arts, or Lit	Must come from a different group than prior requirement.	CS 345	3	Software Engineering
JMU General Education Requirements**	3	PUA	Any UCGS History		CS 361	3	Computer Systems II
JMU General Education Requirements**	3	PUA	Any UCGS Social/ Behavioral Science	This course may not be a history course.	CS 430	3	Programming Languages
JMU General Education Requirements**	4	PUA	BIO 101, CHM 111, PHY 241, GOL 105, GOL 106, or GOL 110		CS 412 or 452	3	Algorithms courses, take only one

MATH 235	4	PUA	MTH 263	If needed, complete MTH 161-162 or MTH 167 prior to Calculus I	Systems elective: CS 432, 450, 455, 456 or 470	3	Course options can be found in JMU undergraduate catalog
MATH 220	3	UA	MTH 245		CS electives at 300 level or above	9	Chosen in consultation with JMU advisor in CS
CS 149 Introduction to Programming	3		CSC 221	* At JMU CS 149 and CS 159 are taught in Python and Java respectively. Students not exposed to one or both languages in CSC221 or CSC222 may need additional coursework at JMU to gain experience with those languages.	Electives	24	Students must earn at least 60 credits from a 4-year institution to graduate
CS 000 or CS 159	4		CSC 222	* JMU will review students CSC 222 and 223 on a student-by student basis for CS 159 and 240 credit			
CS 000 or CS 240	4		CSC 223	* Must earn a B average across CSC 221-222 to be eligible for full admission to the Computer Science program at JMU			
CS 227	3		CSC 208 or MTH 288				
CS 000	3		CSC 205 or CSC 215	CSC 215 can be reviewed on an individual basis for CS 261 credit			
Electives	13		Additional CSC courses or open electives	Take courses as needed to complete the 60 minimum credits for the associate degree			

CREDITS PRE-TRANSFER: 60

CREDITS POST-TRANSFER: 60

* **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. Email transferadvising@jmu.edu if you have questions.

TRANSFER GUIDANCE

Admission into JMU Computer Science

Incoming students are fully admitted to the JMU Computer Science major if they receive transfer credit for CS 149 and CS 159 with an average GPA of 3.0 between the two courses.

- Students who do not meet the course or GPA requirements can still declare the major but will need to take one or both courses at JMU before being admitted to the CS program. Completing the degree could take longer in this case.
- Students must complete an approved transferable associate degree from VCCS 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.

Please create an account through the 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. 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:** Deadline is March 1 for Fall or October 15 for Spring. <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.

WHAT SHOULD I CONSIDER WHEN SELECTING COURSES?

- JMU CS courses tend to be programming-intensive. The introductory programming sequence (CS149/CS159) gives students a lot of programming practice. This means that students coming out of those courses are expected to be capable of programming independently in later courses. The best way to ease your transition into the JMU CS department is to take every opportunity to build your programming skills before you arrive. Take your programming courses seriously and look for opportunities for extra practice outside of class.
- Mastering outcomes in CSC 222-223 at your community college is necessary to your success in the Computer Science major at JMU. CSC 222 will be reviewed on a student-by-student basis. Based on that review, you can receive credit for CS 159 at JMU, which will position you for full admission to the Computer Science program and will give you an opportunity to complete the

degree within four semesters. Your learning in CSC 223 will be evaluated for eligibility to receive transfer credit for CS 240 at JMU.

- 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 a JMU transfer advisor within your first year. College Connect is available in your account of www.TransferVirginia.org

IS THIS DEGREE RIGHT FOR ME?

Computer science is a good match for people who gain satisfaction from building things and seeing them work. There is a tremendous sense of accomplishment in creating software that solves real problems. Computer science is a good match for people who want to change the world. Many of the most fundamental changes in the human condition over the last 50 years have been driven by progress in computer science. Computer science also encompasses some of the deepest intellectual questions facing humanity: What are the fundamental limits of computation? Can machines replicate, or even surpass, the operations of the human mind?

Computer science can also be challenging. Courses tend to be project-based and succeeding requires persistence, discipline and good time management.

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

PROGRAM SUCCESSES & HIGHLIGHTS

Six months after graduation, no students in a recent computer science graduating class were still seeking employment or education: 91% were fully employed, 8% were pursuing advanced degrees, and 1% were employed part-time. While not required for the major, nearly all our students complete at least one summer internship. Our college hosts a Career and Internship Fair each semester tailored to College of Integrated Science and Engineering students, and we offer many opportunities within the department to connect students to recruiters, career opportunities, and preparation for interviewing.

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!

While the CS program does not provide academic credit for internships, a large majority of our students find good-paying internship opportunities during their time at JMU. We have opportunities within the department for students to participate in undergraduate research with our faculty, including presenting their accomplishments at conferences and co-authoring articles. Students also have opportunities for paid positions within our department through our Teaching Assistants program and CS Ambassadors. We have a partnership with Virginia Tech where students can earn a master's degree from Virginia Tech in as little as one year after completing your CS bachelor's degree at JMU. Finally, there are several minors that overlap with our CS curriculum, including the Logic and Reasoning, Math, and Robotics minors.