TRANSFER GUIDE

Catalog Years: 2025-2027

Bridgewater College: BS in Engineering

Associate Transfer Degree Plan in Engineering

COURSE REQUIREMENTS

Complete at Community College				Complete at Bridgewater College		
BACHELOR'S DEGREE REQUIREMENT				**BACHELOR'S DEGREE REQUIREMENT**		
Course	Credits	CC Course	Notes	Course	Credits	Notes
Elective credit	1-2	SDV 100 or 101		CL 150	1	See below for more info
Writing Intensive	3	ENG 111		CL 400	1-3	
CL 200	3	ENG 112 OR 113		CSCI 101 or 130	3 - 4	
Creative/Artistic Practices	3	Any UCGS Art	These two courses must come from two different disciplines.	CSCI 102	4	Only required for mechatronics concentration
Study of Human Narrative	3	Any UCGS Art, Hum or Lit		MATH 233	4	Calculus III Differential Equations One of these may be taken at BC
Study of the Past	3	Any UCGS History		MATH 331	3	
Scientific Study of People/Society	3	Any UCGS Social and Behavioral Science		ENGR 304	3	Statics
CHEM 161	4	CHM 111	General Chemistry I	ENGR 305	3	Elective in the Major: Dynamics Required for ME conc.
MATH 133	4	MTH 263	Calculus II Choose MTH 167 (Pre-calculus with Trig.) for pre-requisite	ENGR 306	3	Signals and Systems Required course
MATH 134	4	MTH 264	Calculus II	ENGR 331 ENGR 332	3 3	Electives in the Major: Fluid Mechanics, Thermodynamics Both required for ME conc.
CSCI 210	3	MTH 288	Elective for the major; required for mechatronics concentration	ENGR 333	3	Heat and Mass Transfer Only required for ME conc.

MATH 210	3	MTH 266	Linear Algebra	ENGR 334	4	Elective in the Major: Mechanics of Materials Required for ME conc.
MATH 233 MATH 331	3-4	MTH 265 or MTH 267	Calculus III, Differential Equations Choose one of these to take before transferring to BC	ENGR 336	3	Elective in the Major: Mechanical Design Required for ME conc.
PHYS 221	4	PHY 241	General Physics I	ENGR 339	3	Elective in the Major: Mechanical Vibrations Required for ME conc.
				ENGR 401X	3	Elective in the Major: Computational Applied Physics
PHYS 222	4	PHY 242	General Physics II	ENGR 461	3	Elective in the Major: Electronics Required for mechatronics concentration
ENGR 303W	4	EGR 271	Circuits	ENGR 464	3	Elective in the Major: Digital Electronics Required for mechatronics concentration
ENGR 304 ENGR 305 ENGR 331	6	EGR 240 EGR 245 EGR 248	Choose 2 of these to take before transferring: Statics, Dynamics, Thermodynamics	ENGR 477	3	Elective in the Major: Mechatronics Required for mechatronics concentration
ENGR 101	2	EGR 121	Foundations of Engineering I	ENGR 478	3	Elective for the major: Control Systems Required for mechatronics concentration
ENGR 102	3	EGR 122	Foundations of Engineering II	ENGR 488	3	Senior Project I
				ENGR 489	3	Senior Project II
					0- 18	Free electives or concentration credits listed above to reach minimum of 120 credit hours minimum
Pre-transfer Hrs.	63-65			Post-Transfer Hrs.	60	

This guide is for use by students transferring to Bridgewater College completing an A.S. degree in Engineering from a VCCS college. Students not completing a concentration require 21 credits of engineering major electives in addition to the required courses. After transferring, 37 – 39 credits of coursework are needed to complete the major and FILA requirements. The remaining 16-18 credits are free elective credit. Completing a concentration in mechatronics or mechanical engineering requires one additional course (CSCI 102 for mechatronics or ENGR 333 for mechanical engineering) and requires appropriate choice of engineering electives to satisfy the concentration requirements.

TRANSFER GUIDANCE

Guaranteed Program Admission Agreement

• Applicable Associate Degrees: AA and AS

• Minimum GPA requirement: 2.5/4.0

• Course requirements: Students must earn a grade of 'C' or higher in VCCS courses for credit to be transferred into Bridgewater.

• Maximum credits applicable for transfer: 68

Testing requirements: Bridgewater College is test optional. Students using the GAA are not required to submit standardized test scores for admittance

IMPORTANT LINKS & DATES:

- Transfer Info, Application, & Financial Aid Information: www.bridgewater.edu/transfer
- Deposit: On or before June 1
- FAFSA-Free Applications for Federal Student Aid: For highest aide, submit by March 1. Visit www.Studentaid.gov for more info
- Admissions Applications: No Deadline- Rolling Admissions

WHAT SHOULD I CONSIDER WHEN SELECTING COURSES?

- Connect with the department chair of Engineering and Physics at Bridgewater at the start of your first semester for help choosing the correct courses for your program.
- Calculus I and II (MTH 263 and 264) which must be taken before transferring to BC, have pre-calculus as a pre-requisite. Choose MTH 167 (Pre-Calculus with Trigonometry).
- The engineering major at BC has optional concentrations in Mechanical Engineering and Mechatronics. Most electives that count for the concentrations also count towards the elective requirement (21 credits) for the major.
- The computer programming requirement for BC can only be satisfied by a 4 credit course in Java or a 3 or 4 credit course in Python. It is safest to wait until transferring to take programming.

IS THIS DEGREE RIGHT FOR ME?

- Apply mathematical skills in pre-calculus, trigonometry, calculus and differential equations, as well as computational skills such as Excel and computer programming, to a broad range of real-life situations
- Experience hands-on learning in labs and project-based courses, guided by engineering faculty with expertise in industry
- Develop the ability to identify, formulate, and solve complex engineering problems
- Demonstrate knowledge and skills acquired through Bridgewater College's liberal arts curriculum, including critical thinking, working collaboratively and professional communication.
- Learn from faculty who have professional experience in the engineering world

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

- Associate Transfer Degree Completion: The completion of an Associate Degree results in all lower-division general education requirements being met, except for CL 150 (a transfer orientation class that introduces students to the BC Academic community) and CL 400 (a senior portfolio class).
- Credit for Prior Learning: AP, IB, and CLEP are evaluated for credits
- Dual Enrollment – Completion of Associate Degree in HS: The completion of an Associate Degree concurrent with high school results in course work towards your degree and most general education courses satisfied. Students will be enrolled as a freshman for orientation and engagement purposes.

IS THIS COLLEGE RIGHT FOR ME?

- Small class sizes with academic advisors in each department. All in-person.
- 22 NCAA DIII Sports + NACE Esports Team
- Commuting or on-campus housing.
- Robust career services, academic support services, and clubs and activities.

DID YOU KNOW THAT…

- BC awards merit scholarships to transfer students based on the cumulative GPA from community college course work. www.bridgewater.edu/admissions-aid
- 100% of students receive financial assistance.
- There are 55 different majors and minors.
- The Student:Faculty ratio is 13:1, with the average class size being 19.
- May term includes special experiential classes and internships, like short term study abroad

WHAT CAN I DO WITH THIS DEGREE?

- Enter challenging and rewarding careers in engineering, such as mechanical engineering, robotics, aerospace, electrical systems and technology, nuclear power and manufacturing
- Graduate with career-ready skills in 3D modeling, mathematics, computer-aided design and fabrication, electronics and control systems, and mechanical design.

PROGRAM SUCCESSES & HIGHLIGHTS

- Our students have obtained summer research grants to study various engineering and physics topics with BC faculty members, including mechatronics, 3D printing, and gravitational waves.
- Students graduating with BS degrees from the department of Engineering and Physics have secured careers in fields of mechanical engineering, software engineering, fiber optics, acoustics, medical technology, and the nuclear industry

WHAT ARE MY CHANCES FOR GETTING ACCEPTED?

• Students that maintain at least a 2.5 GPA, show proficiency in college level Mathematics and English, and are in good academic standing have a high possibility of being admitted to BC.

DO MORE WITH YOUR DEGREE!

• Pursue graduate study in Mechatronics, Civil, Electrical, Mechanical, Aerospace, and Systems Engineering

• This major prepares you for highly-paid jobs, including: Aerospace Engineer, Automotive engineer, Biomedical engineer, Entrepreneur, Intellectual property attorney, Manufacturing Engineer, Project manager, Petroleum engineer, Product designer, Thermal engineer

OTHER THAN CLASSES, ARE THERE OTHER PROGRAM REQUIREMENTS?

For students pursuing graduate school, we recommend participating in summer research opportunities (with stipends funded by BC) and other scholarly activities, such as attending conferences and publishing articles with professors. See www.bridgewater.edu/academics/research