



Mechanical

Program Code:

TE_MEC

Academic Area:

Science, Technology, Engineering and Mathematics

Type:

Associate in Science

Program Statement

This concentration prepares students to work as technicians and mechanical designers. Students learn aspects of mechanical engineering such as computer-aided design, fluid systems, materials science, and strength of materials.

Program Information

- Students gain hands-on experience with mechanical systems (hydraulics, pneumatics and mechanisms), materials, and computer-aided design.
- Students should be in a Math (MTH) course every semester until they have completed their sequence.
- For students with adequate mathematical preparedness, and interested in transfer, PHY 211: General Physics I and PHY 212: General Physics II can be substituted for PHY 101: Technical Physics I and PHY 102: Technical Physics II.
- Completing courses in the summer will reduce fall and spring semester course loads.
- Oral Communication General Education Competency Infused.

After Bristol

- Graduates may work as mechanical/CAD designers, and manufacturing, industrial and design technicians.
- If you are considering transferring to a four-year institution, speak with your advisor and visit Transfer Services for additional information.

Degree Requirements

General Education Courses

Course #	Title	Credits
CSS 101	College Success Seminar	1
ENG 101	Composition I: College Writing	3
ENG 102	Composition II: Writing about Literature	3
	HST 113 or HST 114	3
	Human Expression Elective	3
	Multicultural and Social Perspectives Elective	3



Program Courses

Course #	Title	Credits
CAD 101	Computer Aided Drafting	3
CAD 111	Mechanical Design with Solidworks	3
EGR 151	Electrical Machinery	3
EGR 171	Fluid Systems	4
EGR 172	Material Science	4
EGR 251	Statics	3
EGR 254	Mechanics of Materials and Structures	4
	EGR 102 or EGR 103	3

Program Electives

Course #	Title	Credits
	Mechanical Technology Program Electives	3-4
PHY 101	Technical Physics I	4
PHY 102	Technical Physics II	4
	Two-course Math Sequence	7-8

Recommended Program Electives

Course #	Title	Credits
	Design Electives	
	Experiential Education Elective	
	Manufacturing Electives	
	Sustainability/Green Energy Electives	
	Transfer Electives	

Recommended Course Sequence - Semester 1

Course #	Title	Credits
CSS 101	College Success Seminar	1
ENG 101	Composition I: College Writing	3
	EGR 102 or EGR 103	3
EGR 172	Material Science	4
	MTH 152, MTH 172 or MTH 214	3-4



Recommended Course Sequence - Semester 2

Course #	Title	Credits
ENG 102	Composition II: Writing about Literature	3
EGR 171	Fluid Systems	4
CAD 101	Computer Aided Drafting	3
PHY 101	Technical Physics I	4
	MTH 172, MTH 214 or MTH 215	4

Recommended Course Sequence - Semester 3

Course #	Title	Credits
EGR 151	Electrical Machinery	3
EGR 251	Statics	3
PHY 102	Technical Physics II	4
	HST 113 or HST 114	3
	Multicultural and Social Perspectives Elective	3

Recommended Course Sequence - Semester 4

Course #	Title	Credits
EGR 254	Mechanics of Materials and Structures	4
CAD 111	Mechanical Design with Solidworks	3
	Human Expression Elective	3
	Program Elective	3-4
	Total credits:	60-63

Category Descriptions

HST 113 or HST 114

Credits: 3

Choose one of the following:

Course #	Title	Credits
HST 113	United States History to 1877	3
HST 114	United States History from 1877	3

Human Expression Elective

Credits: 3

Choose one Human Expression elective.



The following electives are recommended: ARC 201, COM 101, COM 114, PHL 152 or World Language.

Multicultural and Social Perspectives Elective

Credits: 3

Choose one of the following:

Course #	Title	Credits
ART 106	Survey of Art History II: Modern Art	3
GVT 111	U.S. Government	3
GVT 112	Comparative Government	3
HST 111	The West and the World I	3
HST 112	The West and the World II	3
HST 113	United States History to 1877	3
HST 114	United States History from 1877	3
HST 257	History of Modern East Asia (China and Japan)	3
SOC 101	Principles of Sociology	3
SOC 212	The Sociology of Social Problems	3
SOC 252	The Sociology of Human Relations	3

EGR 102 or EGR 103

Credits: 3

Choose one of the following:

Course #	Title	Credits
EGR 102	Introduction to Sustainable and Green Energy Technologies	3
EGR 103	Computer Skills for Engineers and Technicians	3

Mechanical Technology Program Electives

Credits: 3-4

Choose one of the following:



Course #	Title	Credits
CAD 172	Mechanical Design Using Inventor	3
CHM 113	Fundamentals of Chemistry I	4
EGR 111	Fundamentals of Manual Machining	4
EGR 112	Automated Machining	3
EGR 115	Manufacturing Processes, Measurements and Quality	3
EGR 183	Energy Efficiency and Conservation Measures	3
EGR 211	Programmable Control Systems	4
EGR 241	Clean Water Technology I	4
EGR 255	Thermodynamics	3
EGR 264	Oceanographic Technology	3
EGR 282	Wind Power Technology	4
EGR 284	Solar Power	4
EGR 299	Engineering Projects	4
INT 210	Internship Experience I	3
	SCI 251 and HON 260	4

Two-course Math Sequence

Credits: 7-8

Choose one two-course math sequence.

Course #	Title	Credits
	MTH 152 and MTH 172	7
	MTH 214 and MTH 215	8

Design Electives

Course #	Title	Credits
CAD 172	Mechanical Design Using Inventor	3
EGR 299	Engineering Projects	4

Experiential Education Elective

Course #	Title	Credits
INT 210	Internship Experience I	3

Manufacturing Electives

Course #	Title	Credits
EGR 115	Manufacturing Processes, Measurements and Quality	3
EGR 211	Programmable Control Systems	4

Sustainability/Green Energy Electives



Course #	Title	Credits
EGR 183	Energy Efficiency and Conservation Measures	3
EGR 282	Wind Power Technology	4
EGR 284	Solar Power	4

Transfer Electives

Course #	Title	Credits
CHM 113	Fundamentals of Chemistry I	4
EGR 255	Thermodynamics	3