

College of Science, Technology, Engineering, and Mathematics

Mechanical Engineering Technology BS

(146-147 credits)

Why Study Mechanical Engineering Technology?

Mechanical Engineering Technology is among one of the country's high demand occupations, and has one of the lowest unemployment rates. The current economy thrives on innovation, and mechanical engineering tech majors are at the forefront, constantly developing not only new and exciting products, but also technologies that improve society and the world. Be part of the future! Mechanical engineering technology is one of the broadest disciplines in engineering technology. A graduate with a BSMET can expect a wide range of options. Majors are in high demand in the biomechanical field, aeronautics, energy transfer, robotics, automation, composite materials, and alternative energy.

Other Degree Options

Minors in Applied Technology, Construction Management, Manufacturing, and Mechanical Engineering

Career Opportunities

HVAC Engineer, Manufacturing Engineer, Materials, Robotics and Automation, Mechanical Engineer



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<http://www.ewu.edu/cstem>

This is an example of a four year class schedule. Academic Advisors are there to help create individualized plans.

First Year	Q1	Q2	Q3
	ENGL 101 (5 cr.)	ENGL 201 (5 cr.)	BACR (5 cr.)
	MATH 141 (5 cr.)	MATH 142 (5 cr.)	BACR (5 cr.)
	METC 110 (5 cr.)	MENG 217 (4 cr.)	MATH 161 (5 cr.)
Second Year	Q5	Q6	Q7
	PHYS 131 (4 cr.)* (GECR) or 1	MENG 201 (4 cr.)* or CSCD 2	BACR (5 cr.)
	MATH 162 (5 cr.)	PHYS 132 (GECR) or 152 (GE	PHYS 133 or 153 (4 cr.)
	PHYS 161 (1 cr.)	CHEM 151 (5 cr.)	PHYS 163 (1 cr.)
	PHYS 162 (1 cr.)	MNTC 301 (5 cr.)	
Third Year	Q9	Q10	Q11
	MENG 300 (5 cr.)	BACR (5 cr.)	MENG 353 (5 cr.)
	METC 340 (5 cr.)	MENG 207 (4 cr.)	MENG 385 (5 cr.)
	METC 388 (5 cr.)	METC 341 (4 cr.)	METC 342 (4 cr.)
	TECH 393 (4 cr.)	METC 387 (5 cr.)	
Fourth Year	Q13	Q14	Q15
	MENG 407 or METC 417 or	Diversity (4 cr.)	MENG 407 or METC 417 or
	MENG 452 (2 cr.)	MENG 407 or METC 417 or	METC 415 (5 cr.)
	MENG 493 (1 cr.)	MENG 412 (2 cr.)	METC 490B (3 cr.)
	TECH 403 (4 cr.)	METC 456 (2 cr.)	METC 495 (3 cr.)
		METC 490A (2 cr.)	
	METC 495 (3 cr.)		

Listed is a Sample Four Year Plan. Individual plans will vary based on placement test scores and class availability.

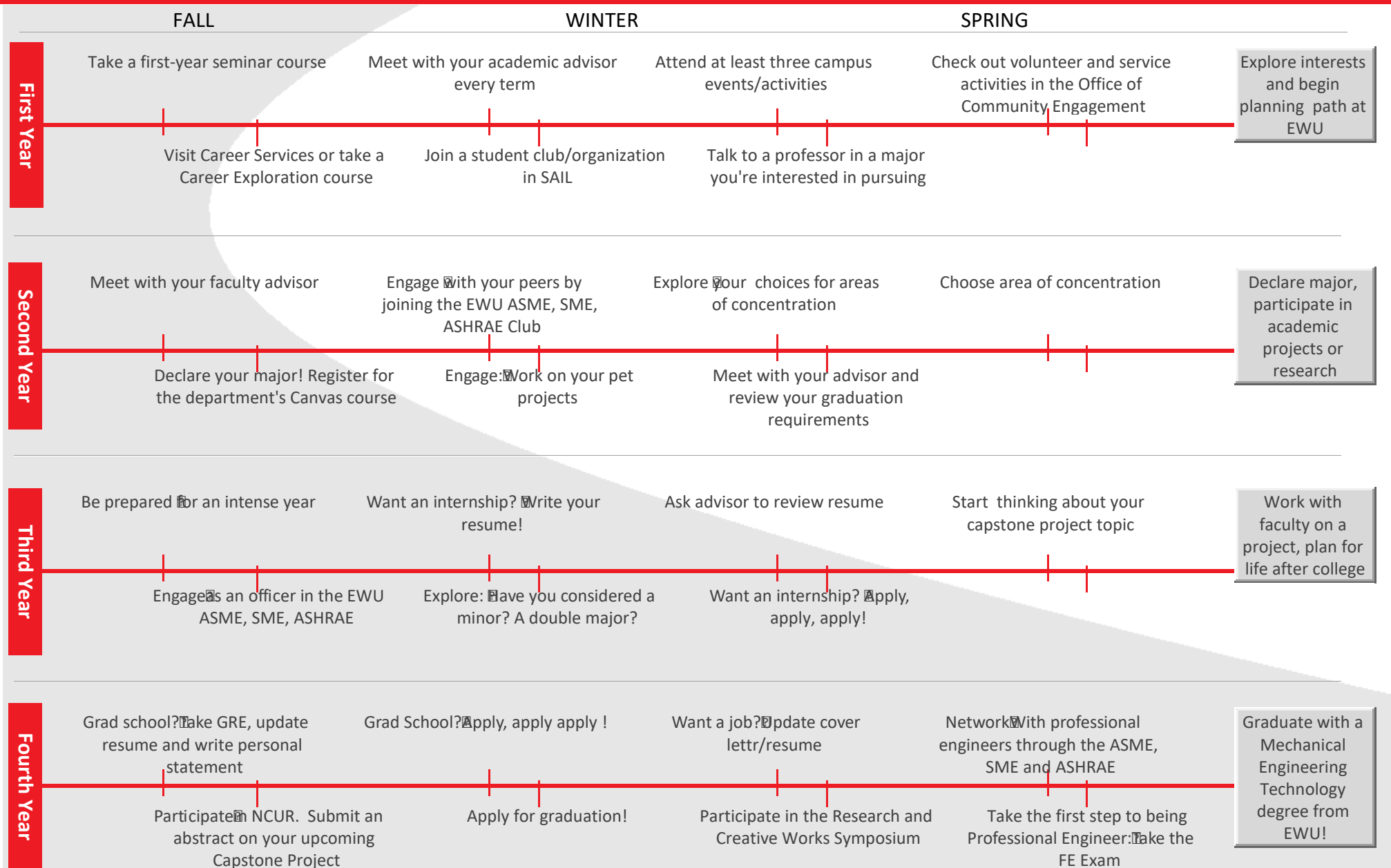


Flight Plan to Success

The following milestones will help you succeed and improve your experience at EWU.

Mechanical Engineering Technology, BS

College of Science, Technology, Engineering, and Mathematics
Engineering & Design



All recommended activities can occur at any time during a student's time at EWU



Student's name: _____ EWU ID: _____

College of Science, Technology, Engineering, and Mathematics
 SOAR Department: Engr & Des | SOAR Major: ME TECH
 Major Declaration Form: Mechanical Engineering Tech, BS-METECH
 Math proficiency needed: MATH 161

Bachelor of Science in Mechanical Engineering Technology
 2018-2019 Catalog Year

First year courses and prerequisites	Notes	Previously offered **
Q1 ENGL 101 COLL COMP: EXPOSITN & ARGUMNT (5 cr.) Prerequisite: Writing Placement Test or General Advising.	Satisfies: university competencies, writing.	F17, W18, Sp18, Su18
Q1 MATH 141 PRECALCULUS I (5 cr.) Prerequisite: a grade \geq C in MATH 114 or equivalent course or a satisfactory score on the mathematics placement assessment (MPA).	Satisfies: completion of this course with a grade \geq C satisfies the university proficiencies in mathematics.	F17, W18, Sp18, Su18
Q1 METC 110 ENGINEERING GRAPHICS (5 cr.) Prerequisites: METC 102, two years of high school drafting or equivalent.		F17, W18, Sp18, Su18
Q2 ENGL 201 COLL COMP: ANALYSIS/RES/DOCMT (5 cr.) Prerequisite: ENGL 101, Writing Placement Test or general advising.	Satisfies: university proficiencies, writing.	F17, W18, Sp18, Su18
Q2 MATH 142 PRECALCULUS MATH II (5 cr.) Prerequisite: MATH 141 or equivalent.	Satisfies: completion of this course with a grade \geq C satisfies the university proficiencies in mathematics.	F17, W18, Sp18, Su18
Q2 MENG 217 3D PARAMETRIC COMPUTER DESIGN (4 cr.) Prerequisite: METC 110 or High School AUTOCAD or permission of instructor		F17, W18, Sp18, Su18
Q3 BACR (5 cr.)		
Q3 BACR (5 cr.)		
Q3 MATH 161 CALCULUS I (5 cr.) Prerequisites: MATH 142.	Satisfies: completion of this course with a grade \geq C satisfies the university proficiencies in mathematics. Note: for the university proficiencies, this course may be substituted for MATH 107.	F17, W18, Sp18, Su18

I have discussed this academic plan with the student listed above. Advisor name: _____ Advisor signature: _____

* See the catalog for prerequisites and other details.

** Future course offerings may differ from the past. Check the course schedule for future courses.

To follow this MAP, you should place into MATH 161. If you place lower, your custom MAP may change.

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Second year courses and prerequisites	Notes	Previously offered **
Q5 PHYS 131 (4 cr.)* (GECR) or 151 (4 cr.)* (GECR) (5 cr.)		
Q5 MATH 162 CALCULUS II (5 cr.) Prerequisite: MATH 161.		F17, W18, Sp18, Su18
Q5 PHYS 161 MECHANICS LABORATORY (1 cr.) Prerequisite: MATH 142.		F17, W18
Q5 PHYS 162 HEAT & OPTICS LABORATORY (1 cr.) Prerequisite: MATH 142.		W18, Sp18
Q6 MENG 201 (4 cr.)* or CSCD 255 or CSCD 409 (5 cr.)		
Q6 PHYS 132 (GECR) or 152 (GECR) (4 cr.)		
Q6 CHEM 151 GENERAL CHEMISTRY (5 cr.) Prerequisites: ≥C in MATH 141 or concurrent enrollment; ≥C in CHEM 100 or ≥C in CHEM 161 or one year of high school chemistry.	Satisfies: a BACR for natural sciences. Note: quantitative and qualitative laboratory work is included.	F17, W18, Sp18
Q7 BACR (5 cr.)		
Q7 PHYS 133 or 153 (4 cr.)		
Q7 PHYS 163 ELECTRONICS LAB I (1 cr.) Prerequisite: MATH 142.		Sp18

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Third year courses and prerequisites	Notes	Previously offered **
Q7 MNTC 301 METALLIC PROCESSES (5 cr.) Prerequisite: junior standing or permission of instructor.		F17, W18, Sp18, Su18
Q9 MENG 300 LABORATORY ANALYSIS & REPORTS (5 cr.) Prerequisite: PHYS 133 or PHYS 153, MATH 162; and declared into one of the following: Mechanical Engineering, Mechanical Engineering Technology, Electrical Engineering; or permission of instructor.		F17, W18, Sp18
Q9 METC 340 STATICS (5 cr.) Prerequisites: MATH 142 and PHYS 131, both with grade $\geq C$.		F17
Q9 METC 388 THERMODYNAMICS & HEAT TRANSFER (5 cr.) Prerequisite: PHYS 132 or PHYS 152; MATH 162; TCOM 205 or MENG 300 (may be taken concurrently); and a declared Mechanical Engineering Technology major.		F17
Q10 BACR (5 cr.)		
Q10 MENG 207 ELECTRICITY (4 cr.) Prerequisites: MATH 162, PHYS 153 or PHYS 133 .		F17, W18, Sp18
Q10 METC 341 STRENGTH OF MATERIALS (4 cr.) Prerequisite: METC 340.		W18
Q10 TECH 393 TECHNOLOGY WORLD CIVILIZATION (4 cr.) Prerequisite: ENGL 101.	Satisfies: a university graduation requiremen global studies.	F17, W18, Sp18, Su18
Q11 MENG 353 INDUSTRIAL MATERIALS (5 cr.) Prerequisite: CHEM 121 or CHEM 151; ENGL 201 (grade $\geq C$); MATH 107 or MATH 142 (grade $\geq C$).		F17, W18, Sp18, Su18
Q11 MENG 385 ROBOTICS & AUTOMATION (5 cr.) Prerequisite: grades $\geq C$ in all of the following, MENG 207 or MNTC 208; MENG 201 or CSCD 255; and a declared in Mechanical Engineering or Mechanical Engineering Technology major or permission of instructor.	Note: three hours lecture, four hours laboratory per week.	F17, W18, Sp18
Q11 METC 342 DYNAMICS (4 cr.) Prerequisite: METC 340 and MATH 162.		Sp18

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Q11

METC 387 FLUID MECHANICS (5 cr.)

Prerequisites: grades \geq C in all of the following, PHYS 132 or PHYS 152, MATH 162; TCOM 205 or MENG 300 (may be taken concurrently); and a declared Mechanical Engineering Technology major.

Note: laboratory work is included.

Sp18

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Fourth year courses and prerequisites	Notes	Previously offered **
Q13 MENG 407 or METC 417 or METC 468 or MNTC 404 (5 cr.)		
Q13 MENG 452 ENGINEERING ECONOMICS (2 cr.) Prerequisite: junior standing; and a declared Mechanical Engineering or Mechanical Engineering Technology major or permission of instructor.		F17, W18, Sp18
Q13 MENG 493 SENIOR SEMINAR (1 cr.) Prerequisite: senior standing or permission of instructor; and a declared Mechanical Engineering or Mechanical Engineering Technology major.	Note: graded Pass/Fail.	F17, W18
Q13 TECH 403 COMP-AIDED DESIGN & PROJ MGMT (4 cr.) Prerequisites: MATH 107 or permission of the instructor.		F17, Sp18
Q14 Diversity (4 cr.)		
Q14 MENG 407 or METC 417 or METC 468 or MNTC 404 (5 cr.)		
Q14 MENG 412 FUNDAMENTALS OF ENGINEERING (2 cr.) Prerequisite: senior standing; MENG 241 or METC 341; MENG 242 or METC 342; MENG 380 or METC 388; and declared into one of the following: Mechanical Engineering, Mechanical Engineering Technology; or permission of instructor.		F17, W18, Sp18
Q14 METC 456 ENGINEERING ETHICS (2 cr.) Prerequisite: junior standing and a declared Mechanical Engineering or Mechanical Engineering Technology major or permission of instructor.		F17, W18, Sp18
Q14 METC 490A SENIOR CAPSTONE (2 cr.) Prerequisites: MENG 217, MATH 162, METC 341 (may be taken concurrently), MNTC 301 and senior standing. Must be a declared Mechanical Engineering Technology major.	Satisfies: a university graduation requirement'senior capstone.	W18
Q14 METC 495 INTERNSHIP (3 cr.) Prerequisites: junior or senior status and permission of the instructor, department chair and dean and a declared Mechanical Engineering Technology major.	Note: Graded Pass/Fail. A maximum of 5 credits may be earned toward electives for a Technology major. Students considering electives for a Technology minor should consult with their departmental advisor. METC 491 may be substituted if internship cannot be found	F17, W18, Sp18, Su18

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Q15	MENG 407 or METC 417 or METC 468 or MNTC 404 (5 cr.)	
Q15	METC 415 DESIGN OF MACHINE ELEMENTS (5 cr.) Prerequisites: METC 341, MENG 353, MATH 162 or permission of instructor, and a declared Mechanical Engineering Technology major.	Sp18
Q15	METC 490B SENIOR CAPSTONE DESIGN LAB II (3 cr.) Prerequisite: METC 490A. Must be a declared Mechanical Engineering Technology major.	Satisfies: a university graduation requirement'senior capstone. Sp18
Q15	METC 495 INTERNSHIP (3 cr.) Prerequisites: junior or senior status and permission of the instructor, department chair and dean and a declared Mechanical Engineering Technology major.	Note: Graded Pass/Fail. A maximum of 5 credits may be earned toward electives for a Technology major. Students considering electives for a Technology minor should consult with their departmental advisor. METC 491 may be substituted if internship cannot be found F17, W18, Sp18, Su18

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