

College of Science, Technology, Engineering, and Mathematics

Manufacturing Technology BS

(106-127 credits)

Why study Manufacturing Technology/DFM option?

The DFM option focuses on select areas of the manufacturing field, CNC machining, CAD, quality assurance, and methods of metallic and non-metallic materials processing in the design and fabrication of consumable items. This option prepares the student to enter and progress in industry in a variety of areas including, quality assurance, inventory control, production line supervision or process management.

Other Degree Options

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

Career Opportunities

Students graduating from this program can successfully enter careers in a broad range of fields as manufacturing technicians, applications technicians, quality technicians, as well as research technicians and technical sales and service.



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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

Fall 1

General Elective (5 cr.)
ENGL 101 (5 cr.)
MATH 142 (5 cr.)

Q2

General Elective (3 cr.)
ENGL 201 (5 cr.)
METC 110 (5 cr.)

Q3

BACR (5 cr.)
BACR (5 cr.)
MENG 217 or TECH 217 (4 cr.)

Second Year

Q5

General Elective (2 cr.)
General Elective (2 cr.)
General Elective (5 cr.)
PHYS 131 (4 cr.)
PHYS 161 (1 cr.)

Q6

CHEM 121 (GEQR) or 171 & 1
General Elective (5 cr.)
PHYS 132 (4 cr.)
PHYS 162 (1 cr.)

Q7

BACR (5 cr.)
Diversity (5 cr.)
General Elective (2 cr.)
General Elective (5 cr.)

Third Year

Q9

MNTC 208 (4 cr.)
MNTC 301 (5 cr.)
TECH 330 (4 cr.)
TECH 403 (4 cr.)

Q10

MNTC 402 (5 cr.)
TECH 331 (4 cr.)
TECH 393 (4 cr.)
TECH 462 (4 cr.)

Q11

MENG 353 (5 cr.)
TECH 456 (4 cr.)
TECH 458 (4 cr.)

Fourth Year

Q13

METC 340 (5 cr.)
MNTC 320 (5 cr.)
TECH 452 (4 cr.)

Q14

General Elective (5 cr.)
DNTC 490 (4 cr.)
METC 341 (4 cr.)
TECH 454 (4 cr.)

Q15

General Elective (5 cr.)
DNTC 491 (4 cr.)
DNTC 495 (4 cr.)

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



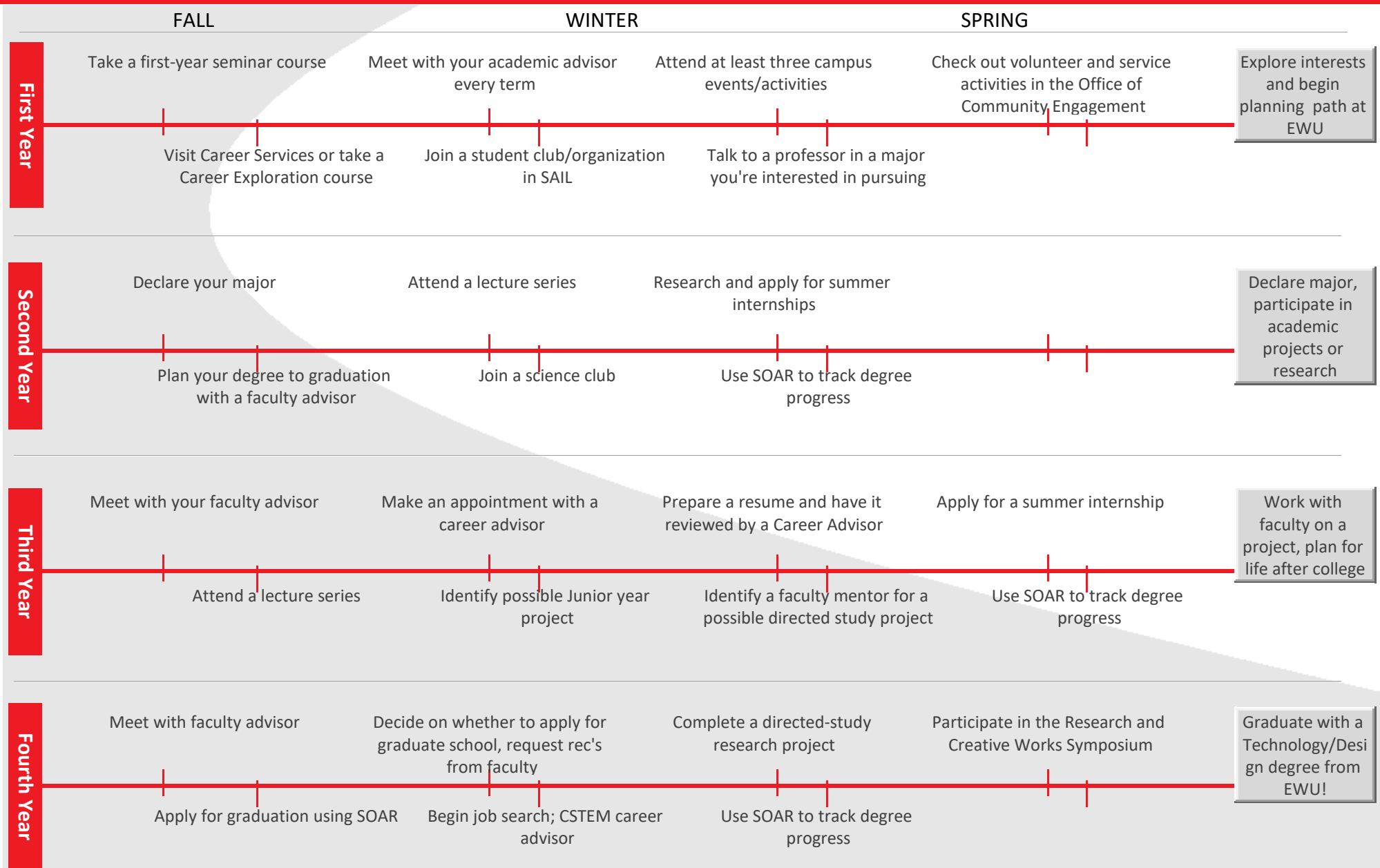
Flight Plan to Success

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

Manufacturing 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: TECH DESN
 Major Declaration Form: Technology - Design, BS-TECH, DESN
 Math proficiency needed: MATH 142

Bachelor of Science in Manufacturing Technology
 DFM option
 2019-2020 Catalog Year

First year courses and prerequisites	Notes	Previously offered **
Q1 General Elective (5 cr.)		
Q1 ENGL 101 COLL COMP: EXPOSITN & ARGUMNT (5 cr.) Prerequisite: Writing Placement Test or General Advising.□		F18, W19, S19
Q1 MATH 142 PRECALCULUS MATH II (5 cr.) Prerequisite: MATH 141 or equivalent.		F18, W19, S19
Q2 General Elective (3 cr.)		
Q2 ENGL 201 COLL COMP: ANALYSIS/RES/DOCMNT (5 cr.) Prerequisite: ENGL 101, Writing Placement Test or general advising.		F18, W19, S19
Q2 METC 110 ENGINEERING GRAPHICS (5 cr.) Prerequisite: METC 102 or permission of instructor.□	Note: two years of high school drafting is highly recommended.□□	F18, W19, S19
Q3 BACR (5 cr.)		
Q3 BACR (5 cr.)		
Q3 MENG 217 or TECH 217 (4 cr.) (5 cr.)		

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 142. If you place lower, your custom MAP may change.

This list of courses is for information purposes only. All students are required to follow the catalog requirements for the year they declared a major.

Second year courses and prerequisites

Notes

Previously offered **

Q5	General Elective (2 cr.)		
Q5	General Elective (2 cr.)		
Q5	General Elective (5 cr.)		
Q5	PHYS 131 INTRODUCTORY PHYSICS I (4 cr.) Prerequisite: MATH 142.	Note: concurrent enrollment in PHYS 161 is recommended. <input type="checkbox"/>	F18
Q5	PHYS 161 MECHANICS LABORATORY (1 cr.) Prerequisite: MATH 142.		F18, W19
Q6	CHEM 121 (GEGR) or 171 & 171L (lab) (GEGR) (5 cr.)		
Q6	General Elective (5 cr.)		
Q6	PHYS 132 INTRODUCTORY PHYSICS II (4 cr.) Prerequisite: PHYS 131.	Note: programs that require PHYS 132 often require the associated lab (PHYS 162), for which enrollment is separate. <input type="checkbox"/>	W19
Q6	PHYS 162 HEAT & OPTICS LABORATORY (1 cr.) Prerequisite: MATH 142.		W19, S19
Q7	BACR (5 cr.)		
Q7	Diversity (5 cr.)		
Q7	General Elective (2 cr.)		
Q7	General Elective (5 cr.)		

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

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To follow this MAP, you should place into MATH 142. If you place lower, your custom MAP may change.

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Third year courses and prerequisites	Notes	Previously offered **
Q9 MNTC 208 SURVEY OF ELECTRICITY (4 cr.) <i>Prerequisite: MATH 141, PHYS 100 or PHYS 131; all with grades ?C.</i>		F18, W19
Q9 MNTC 301 METALLIC PROCESSES (5 cr.) <i>Prerequisite: MATH 107, MATH 141 or MATH 161; and METC 110; all with grades ?C.</i>		F18, W19, S19
Q9 TECH 330 TECH PROB ANALYSIS & DESIGN I (4 cr.) <i>Prerequisites: ENGL 201 ?C.</i>		F18, W19
Q9 TECH 403 COMP-AIDED DESIGN & PROJ MGMT (4 cr.) <i>Prerequisites: MATH 107, MATH 141, MATH 142 or MATH 161; ? C.</i>		F18, S19
Q10 MNTC 402 MACHINE TOOL I (5 cr.) <i>Prerequisites: MENG 217 and MNTC 301; both with grades ?C.</i>		W19
Q10 TECH 331 TECH PROB ANALYSIS & DESIGN II (4 cr.) <i>Prerequisite: TECH 330 ?C.</i>		W19, S19
Q10 TECH 393 TECHNOLOGY WORLD CIVILIZATION (4 cr.) <i>Prerequisite: ENGL 201 ?C.</i>		F18, W19, S19
Q10 TECH 462 INDUSTRIAL SAFETY ENGINEERING (4 cr.) <i>Prerequisites: junior standing and ENGL 201 ?C.</i>		F18, W19
Q11 MENG 353 INDUSTRIAL MATERIALS (5 cr.) <i>Prerequisite: CHEM 121 or CHEM 151, or CHEM 171 and CHEM 171L; ENGL 201; MATH 141, MATH 142 or MATH 161; all ?C.</i>		F18, W19, S19
Q11 TECH 456 ENGR, ETHIC CONTRACT, PATENT (4 cr.) <i>Prerequisite: ENGL 201 ?C.</i>		F18, S19
Q11 TECH 458 QUALITY ASSURANCE (4 cr.) <i>Prerequisite: MATH 107 or MATH 141; ?C.</i>	Note: this course cannot be substituted for METC 468 in degrees that require that class.□□	W19, S19

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Fourth year courses and prerequisites	Notes	Previously offered **
Q13 METC 340 STATICS (5 cr.) Prerequisites: MATH 142 or MATH 161; PHYS 131 or PHYS 151; all with grades ?C.□		F18, W19
Q13 MNTC 320 NON-METALLIC PROCESSES (5 cr.) Prerequisites: MATH 141 and METC 110; all with grades ?C.		F18, W19
Q13 TECH 452 ENGINEERING ECONOMICS (4 cr.) Prerequisite: MATH 107 or MATH 141; ?C.	Note: this course cannot be substituted for MENG 452 in degrees that require that class.□□	F18, S19
Q14 General Elective (5 cr.)		
Q14 DNTC 490 SR. CAPSTONE: PRODUCTION LAB (4 cr.) Prerequisite: senior standing.	Note: the course will simulate a real world design team concept by utilizing a design group that contains members of different program majors.□□	W19, S19
Q14 METC 341 STRENGTH OF MATERIALS (4 cr.) Prerequisite: METC 340 or MENG 240, both with grades ?C.□		W19, S19
Q14 TECH 454 ENVIRONMENTAL ENGINEERING (4 cr.) Prerequisite: PHYS 100, PHYS 110 or PHYS 121; ENGL 201; MATH 107 or MATH 141; all ?C.		F18, W19
Q15 General Elective (5 cr.)		
Q15 DNTC 491 SENIOR PROJECT (4 cr.) Prerequisite: senior standing.		W19, S19
Q15 DNTC 495 INTERNSHIP (4 cr.) Prerequisite: junior or senior status and permission of the instructor, department chair and dean.	Note: Graded Pass/Fail. This course may be repeated.□□	F18, W19

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

* See the catalog for prerequisites and other details.

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To follow this MAP, you should place into MATH 142. If you place lower, your custom MAP may change.

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