

2024-2025  
Academic Year

# Manufacturing Engineering, BS



ABET accredited

Admissions info- <https://engineeringdesign.wvu.edu/>

Course offerings subject to change

Academic advising available - see contact info below

Major Credits: 151-155 (GURs not included)

Pre-major coursework in grey areas

Fall

Winter

Spring

First Year	<b>MATH 124 (5) Calculus I, <u>FWS</u></b>	<b>MATH 125 (5) Calculus II, <u>FWS</u></b>	<b>MATH 224 (5) Multiv. Calc and Geom., <u>FWS</u></b>
	<b>PHYS 161 (5) Physics w/ Calculus I, <u>FW</u></b>	<b>PHYS 162 (5) Physics w/ Calculus II, <u>WS</u></b>	PHYS 163 (5) Physics w/ Calculus III, <u>FS</u>
	<b>ENGR 101 (3) Eng., Design, &amp; Society <u>FWS</u></b>	<b>ENGR 115 (4) Innovation in Design, <u>WS</u></b>	<b>CHEM 161 (5) Gen. Chemistry I, <u>FWS</u></b>

Pre-major courses in **BOLD** are required for major admissions.

Second Year	<b>MATH 204 (4) Elem. Linear Algebra, <u>FWS</u></b>	<b>APPLY TO MAJOR</b>	<b>MAJOR COURSES BEGIN</b>
	<b>ENGR 170 (4) Intro Material Science, <u>FW</u></b>	MATH 331 (4) Differential Equations, <u>FWS</u>	MFGE 231 (4) Intro to Manuf. Processes, <u>FS</u>
	<b>ENGR 214 (4) Statics, <u>FW</u></b>	ENGR 225(4) Mechanics of Materials, <u>WS</u>	MFGE 261 (4) Intro to CAD, <u>S</u>
		MATH 345 or 341 (4) Statistics <u>FWS</u>	MFGE 250 (4) Intro to Automation, <u>S</u>

Third Year	PME 371 (5) Intro to Plastics, <u>FS</u>	MFGE 341(4) Quality & Cont. Improvement, <u>FW</u>	PME 342 (4) Design of Experiment, <u>WS</u>
	ENGR 351 (4) Electronics for Engineers, <u>FS</u>	MFGE 333 (4) Design for Manufacture, <u>W</u>	MFGE 381 (4) Manufacturing Process Plan, <u>S</u>
	MFGE 332 (4) Intro to CAM & CNC, <u>FW</u>	MFGE 340 (4) Numerical Methods, <u>W</u>	ENGR 352 (4) Intro Automation & Control, <u>S</u>
			MFGE 365 (4) Machine Design, <u>W</u>

Fourth Year	MFGE 491 (3) Project Research (WP), <u>F</u>	MFGE 492 (3) Project Proposal (WP), <u>W</u>	MFGE 493 (4) Project Implementation, <u>S</u>
	MFGE 463 (4) Design of Tooling, <u>F</u>	Tech Elective	PME 372 (5) Intro to Composites, <u>WS</u>
	MFGE 453 (4) Industrial Robotics, <u>F</u>		
	Choose one of: MFGE 454 or 434, if both, count second as tech elective. 6-10 credits required for tech elective.		

## Engineering & Design

516 High Street, Bellingham, WA 98229

[ENGD@wwu.edu](mailto:ENGD@wwu.edu) | 360.650.3380

<http://engineeringdesign.wvu.edu>

Pre-major Advisor:

Lisa Ochs [lisa.ochs@wwu.edu](mailto:lisa.ochs@wwu.edu)

## Notes and Excetions

Students must complete **General University Requirements (GURs)** in addition to major courses

Students not enrolled in MATH 124 and PHYS 161 fall quarter, may not finish in four years

Math 341 may be substituted for MATH 345

Students must complete at minimum 6 credits of technical electives

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## Major Admissions

Students must first be accepted by the university. **The program accepts major applications during winter quarter.** Accepted students start major coursework spring quarter. Transfer students may apply at the same time if pre-requisite coursework is completed or in progress.

Required coursework to apply		Required short answer portion	Admissions statistics
MATH 124	Calculus I	Applicants are required to answer a set of short answer questions. The questions ask about the applicant's career goals, interest in the program, leadership and teamwork experience, and academic challenges and/or successes.  <b>Applications due: Winter Quarter</b> See website for due date. Accepted students start major coursework spring quarter. Applicants are notified of decisions before spring quarter registration begins.	<b>Academic Years 2018-2024</b>  
MATH 125	Calculus II		
MATH 224	Multivariable Calculus & Geometry I		
MATH 204	Linear Algebra		
CHEM 161	General Chemistry I		
PHYS 161	Physics w/ Calculus I		
PHYS 162	Physics w/ Calculus II		
ENGR 101*	Engineering, Design, and Society		
ENGR 115	Engineering, Innovation, & Design		
ENGR 170	Intro to Materials Science & Engineering		
ENGR 214	Statics		
* may be waived for transfer students, ask advisor			
Students may be enrolled in no more than 4 of the required courses at time of application.			
Recommended but not required to apply		Transfer students	
ENGR 225	Mechanics of Materials	Transfer students are encouraged to contact the pre-major advisor to discuss course equivalencies and recommended time to transfer.	
MATH 331	Differential Equations		
MATH 345 or 341	Engineering Statistics		
PHYS 163	Physics w/ Calculus III		

## Technical Electives

Students are required to complete 6-10 credits of technical electives. See website for approved list of courses. Faculty advisors must approve courses not on this list.

## Faculty Contact Information

Associate Professor David Gill, [gilld2@wwu.edu](mailto:gilld2@wwu.edu)  
 Associate Professor Sura Alqudah, [alqudas@wwu.edu](mailto:alqudas@wwu.edu)

Associate Professor Tarek Algeddawy, [algeddt@wwu.edu](mailto:algeddt@wwu.edu)  
 Professor Derek Yip-Hoi, [yiphoi@wwu.edu](mailto:yiphoid@wwu.edu)

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