

**Bachelor of Science in Manufacturing Engineering  
 Manufacturing Engineering**

The 2026-2027 list of core courses can be found in the 2026-2027 Undergraduate Catalog: [www.utrgv.edu/catalog](http://www.utrgv.edu/catalog) > See 'Bachelors Degree Program Regulations'

Symbols Key										
Campus: B - Offered in Brownsville; E - Offered in Edinburg; O - Offered Online; T - Travel Required										
Bolted Course Number*: Program Admission Requirement										
Min Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.										
Core: 010 - Communication; 020 - Mathematics; 030 - Life and Physical Sciences; 040 - Language, Philosophy & Culture; 050 - Creative Arts; 060 - American History; 070 - Government/Political Science; 080 - Social and Behavioral Sciences;										
Core: 090 - Applied Communication and Literacies; Humanities; Leadership; Science Labs; Interdisciplinary; Technologies; Language Diversity & Writing										
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
1	Fall	3	B/E/O	Choose 1	Communication	C	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details Option: ENGL 1301	
1	Fall	4	B/E/O	MATH 2413	Calculus I	C	020	MATH 2412 with a grade of 'C' or better; or passing the Precalculus Exemption Test administered by the Department of Mathematics.	A grade of C or better in MATH 2413 Calculus I in no more than 3 attempts.	
1	Fall	3	B/E	CSCI 1380	Introduction to Programming in Python	C	090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.		
1	Fall	3	B/E	CHEM 1309	Chemistry for Engineers	C		Minimum grade of C is required in one of the following courses: MATH 1314, MATH 1414, MATH 2412, MATH 2413 or MATH 2487.		
1	Fall	1	B/E	CHEM 1109	Chemistry for Engineers Lab	C	090	Credit/registration in CHEM 1309		
1	Fall		B/E/O	UNIV	1301 Learning Framework 1101 Academic and Career Success 1001/1300 Living and Working by Design				As required, based on a number of factors such as credit hours earned, TSI status, high school rank, major declaration, etc.	
1	Fall	14	<b>Semester Total Hours</b>							
1	Spring	3	B/E/O	Choose 1	Communication	C	010	For all 010 courses: Satisfactory scores on English portion of ACT test and TSI examination or ENGL 0301. For ENGL 1302, a grade of "C" or better in ENGL 1301.	See General Education Core for more details Options: ENGL 1302 or ENGL 1305	
1	Spring	4	B/E/O	MATH 2414	Calculus II	C		MATH 2413 with a grade of 'C' or better.		
1	Spring	1	E	MANE 1101	Introduction to Manufacturing Engineering					
1	Spring	3	E/O	MANE 3332	Engineering Statistics	C		MATH 2413 and credit for or enrollment in MATH 2414.		
1	Spring	2	E	MANE 1204	Manufacturing Engineering Graphics					
1	Spring	3	B/E/O	Choose 1	Social and Behavioral Sciences		080		See General Education Core Curriculum for options	
1	Spring	16	<b>Semester Total Hours</b>							
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
2	Fall	3	E	MANE 3351	Manufacturing Engineering Analysis	C		MATH 2414 and CSCI 1380.		
2	Fall	4	B/E/O	PHYS 2425	Physics for Scientists and Engineers I	C	030/090	MATH 2413.	1 hour lab to count for 090 Core	
2	Fall	3	E	MANE 4311	Quality Control	C		MANE 3332.		
2	Fall	3	E	MECE 2340	Engineering Materials	C		A grade of 'C' or better in CHEM 1309 and CHEM 1109 or CHEM 1312 and CHEM 1112; a grade of 'C' or better or concurrent enrollment in MECE 2140.		
2	Fall	1	E	MECE 2140	Engineering Materials Laboratory			A grade of 'C' or better in CHEM 1309 and CHEM 1109 or CHEM 1312 and CHEM 1112; a grade of 'C' or better or concurrent enrollment in MECE 2340.		
2	Fall	3	O	MANE 3300	Computer-Aided Design	C		Either MANE 1204 or MECE 1221 or ENGR 1304.		
2	Fall	17	<b>Semester Total Hours</b>							
2	Spring	4	B/E/O	MATH 2415	Calculus III			MATH 2414 (or MATH 2488) with a grade of 'C' or better.		
2	Spring	3	E	MANE 4340	Operations Research	C		Grade of 'C' or better in MANE 3351.		
2	Spring	4	B/E/O	PHYS 2426	Physics for Scientists and Engineers II	C	030/090	PHYS 2425 and MATH 2414.	1 hour lab to count for 090 Core	
2	Spring	3	E	MANE 3337	Engineering Economics	C		Credit/registration in MANE 2332 or MANE 3332.		
2	Spring	3	E	MANE 3340	Fundamentals of Industrial Engineering	C		Credit/registration in MANE 2332 or MANE 3332.		
2	Spring	17	<b>Semester Total Hours</b>							

Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
3	Fall	3	B/E/O	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1301 or HIST 2327	
3	Fall	3	E	MANE 4331	Manufacturing Planning and Control	C		Grade of 'C' or better in MANE 4340.		
3	Fall	4	E	MANE 2403	Engineering Mechanics	C		Grade of 'C' or better in PHYS 2425.		
3	Fall	3	B/E/O	MATH 3341	Differential Equations			MATH 2414 (or MATH 2488) with a grade of 'C' or better.		
3	Fall	3	E	MANE 3364	Manufacturing Processes	C		MECE 2140 and 2340.		
3	Fall	1	E	MANE 3164	Manufacturing Processes Lab	C		Credit for [MECE 2140, MECE 2340, and MANE 3332] and credit for/registration in MANE 3364.		
3	Fall	17	<b>Semester Total Hours</b>							
3	Spring	3	B/E/O	Choose 1	American History		060		See General Education Core for more details. Options: HIST 1302 or HIST 2328	
3	Spring	3	B/E	MECE 3321	Mechanics of Solids			A grade of C or better in MATH 2414, MECE 2340, and MECE 2301 or MANE 2403. Must be officially admitted to the Mechanical Engineering major or Manufacturing Engineering major.		
3	Spring	3	E/O	MANE 43XX or MANE 33XX	Prescribed Elective I				Choose any advanced MANE courses not used to fulfill other requirements.	
3	Spring	1	E	MANE 4173	Product Design and Mass Customization	C		MANE 3337.		
3	Spring	3	E	MANE 3302	Computer-Aided Manufacturing			Credit/registration in MANE 3364.		
3	Spring	3	E	MANE 4444	Modern Manufacturing Processes			C or better in MANE 3364 and MANE 3164.		
3	Spring	16	<b>Semester Total Hours</b>							
Year	Semester	Credit Hours	Campus	Course Number	Course Title	Minimum Grade	Core	Prerequisite	Additional Notes	
4	Fall	3	B/E/O	POLS 2305	U.S. Federal Govt & Politics		070			
4	Fall	3	B/E/O	Choose 1	Creative Arts		050		See General Education Core Curriculum for options	
4	Fall	3	E	EECE 2317	Electrical and Electronic Systems			Grade of C or better in PHYS 2426.		
4	Fall	3	E	MANE 4361	Senior Design I			Grade of 'C' or better in [MANE 3337 and MANE 3340] and credit for/registration in [MANE 4173, MANE 4311, MANE 4352 and MANE 4331].		
4	Fall	3	B/E/O	MANE 33XX-43XX	Prescribed Elective II				Choose any advanced MANE courses not used to fulfill other requirements.	
4	Fall	3	E	MANE 4352	Manufacturing Simulation	C		Grade of 'C' or better in MANE 2332 or MANE 3332.		
4	Fall	18	<b>Semester Total Hours</b>							
4	Spring	3	B/E/O	POLS 2306	Texas Government & Politics		070			
4	Spring	3	E/O	MANE 43XX or MANE 33XX	Prescribed Elective III				Choose any advanced MANE courses not used to fulfill other requirements.	
4	Spring	4	E	MANE 4322	Robotics & Industry Automation			MATH 2415 and MANE 3351.		
4	Spring	3	B/E/O	PHIL 2326	Ethics, Technology and Society		040			
4	Spring	3	E	MANE 4362	Senior Design II			MANE 4361.		
4	Spring	16	<b>Semester Total Hours</b>							

131 **TOTAL HOURS**  
(42) **Advanced minimum credit hours**