

	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes	
FIRST YEAR	FALL	3	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
		4	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.
		3	CSCI 1380	Introduction to Programming in Python	C	090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.	
	SPRING	3	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	CHEM 1109	Chemistry for Engineers Lab	C	090	Credit/registration in CHEM 1309	
			UNIV	1301 Learning Framework 1101 Academic and Career Success 1001 Living and Working by Design				As required, based on credit hours earned, TSI status, High School rank, major declaration.
<b>14 Semester Total Hours</b>								
SECOND YEAR	FALL	3	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
		4	MATH 2414	Calculus II	C		MATH 2413 with a grade of 'C' or better.	
		1	MANE 1101	Introduction to Manufacturing Engineering				
	SPRING	3	MANE 3332	Engineering Statistics	C		MATH 2413 and credit for or enrollment in MATH 2414.	
		2	MANE 1204	Manufacturing Engineering Graphics				
		3	Choose 1	Social and Behavioral Sciences		080		See General Education Core Curriculum for options
<b>16 Semester Total Hours</b>								
	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes	
FIRST YEAR	FALL	3	MANE 3351	Manufacturing Engineering Analysis	C		MATH 2414 and CSCI 1380.	
		4	PHYS 2425	Physics for Scientists and Engineers I	C	030	MATH 2413.	1 hour lab to count for 090 Core
		3	MANE 4311	Quality Control	C		MANE 3332.	
	SPRING	3	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.	
		1	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.	
		3	MANE 3300	Computer-Aided Design	C		Either MANE 1204 or MECE 1221 or ENGR 1304.	
<b>17 Semester Total Hours</b>								
SECOND YEAR	FALL	4	MATH 2415	Calculus III			MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
		3	MANE 4340	Operations Research	C		Grade of 'C' or better in MANE 3351.	
		4	PHYS 2426	Physics for Scientists and Engineers II	C	030	PHYS 2425 and MATH 2414.	1 hour lab to count for 090 Core
	SPRING	3	MANE 3337	Engineering Economics	C		Credit/registration in MANE 2332 or MANE 3332.	
		3	MANE 3340	Fundamentals of Industrial Engineering	C		Credit/registration in MANE 2332 or MANE 3332.	
		<b>17 Semester Total Hours</b>						

The 2024-2026 list of core courses can be found in the 2024-2026 Undergraduate Catalog: [www.utrgv.edu/catalog](http://www.utrgv.edu/catalog) > See 'Bachelors Degree Program Regulations'

**Symbols Key**

**Minimum Grade:** A - Excellent; B - Good; C - Satisfactory; D - Below Average; CR - Credit; P - Passing; S - Satisfactory.  
**Bolded Course #:** Program Admission Requirement

**General Education Core (GEC) Sections:** 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; 090 - Applied Communication and Literacies; 090 - Humanities; 090 - Leadership; 090 - Science Labs; 090 - Interdisciplinary; 090 - Technologies; 090 - Language Diversity & Writing.

	H	Course #	Course Title	Min. Grade	GEC Prerequisite	Additional Notes	
THIRD YEAR	FALL	3	Choose 1	American History		060	See General Education Core for more details. Options: HIST 1301 or HIST 2327
		3	MANE 4331	Manufacturing Planning and Control	C		Grade of 'C' or better in MANE 4340.
		4	MANE 2403	Engineering Mechanics	C		Grade of 'C' or better in PHYS 2425.
		3	MATH 3341	Differential Equations			MATH 2414 (or MATH 2488) with a grade of 'C' or better.
		3	MANE 3364	Manufacturing Processes	C		MECE 2140 and 2340.
		1	MANE 3164	Manufacturing Processes Lab	C		Credit for [MECE 2140, MECE 2340, and MANE 3332] and credit for/registration in MANE 3364.
<b>17 Semester Total Hours</b>							
THIRD YEAR	SPRING	3	Choose 1	American History		060	See General Education Core for more details. Options: HIST 1302 or HIST 2328
		3	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	MANE 43XX or MANE 33XX	Prescribed Elective I			Choose any advanced MANE courses not used to fulfill other requirements.
		1	MANE 4173	Product Design and Mass Customization	C		MANE 3337.
		3	MANE 3302	Computer-Aided Manufacturing			Credit/registration in MANE 3364.
		3	MANE 4444	Modern Manufacturing Processes			C or better in MANE 3364 and MANE 3164.
<b>16 Semester Total Hours</b>							
	H	Course #	Course Title	Min. Grade	GEC Prerequisite	Additional Notes	
FOURTH YEAR	FALL	3	POLS 2305	U.S. Federal Govt & Politics		070	
		3	Choose 1	Creative Arts		050	See General Education Core Curriculum for options
		3	EECE 2317	Electrical and Electronic Systems			Grade of C or better in PHYS 2426.
		3	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].
		3	MANE 33XX-43XX	Prescribed Elective II			Choose any advanced MANE courses not used to fulfill other requirements.
		3	MANE 4352	Manufacturing Simulation	C		Grade of 'C' or better in MANE 2332 or MANE 3332.
<b>18 Semester Total Hours</b>							
FOURTH YEAR	SPRING	3	POLS 2306	Texas Government & Politics		070	
		3	MANE 43XX or MANE 33XX	Prescribed Elective III			Choose any advanced MANE courses not used to fulfill other requirements.
		4	MANE 4322	Robotics & Industry Automation			MATH 2415 and MANE 3351.
		3	PHIL 2326	Ethics, Technology and Society		040	
3	MANE 4362	Senior Design II			MANE 4361.		
<b>16 Semester Total Hours</b>							
<b>131 TOTAL HOURS</b>							
<b>(42) Advanced minimum credit hours</b>							