

Bachelor of Science in Manufacturing Engineering

		I	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes	
FIRST YEAR	FALL		3	Choose 1	Communication (Core)	C	010	For all 010 courses: Satisfactory scores on ENGL portion of ACT test or TSI reading/writing exams or ENGL 0301. For ENGL 1302/1388, a grade of "C" or better in ENGL 1301/1387.	See General Education Core for more details Options: ENGL 1301 or ENGL 1305 or ENGL 1387(H)	
			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.		
			3	CSCI 1380	Computer Science I			090	Concurrent enrollment or credit for MATH 1314 or higher level mathematics course.	
			3	CHEM 1309	Chemistry for Engineers	C			MATH 1314, MATH 1414, MATH 2412, MATH 2413 or MATH 2487 with a grade of "C" or higher.	Other option: CHEM 1311
			1	CHEM 1109	Chemistry for Engineers Lab (Core)	C		090	Credit/registration in CHEM 1309	Other option: CHEM 1111
					UNIV 1301	Learning Framework				Only if required, based on ACT/SAT and high school rank.
14 Semester Total Hours										
FIRST YEAR	SPRING		3	Choose 1	Communication (Core)			010	For all 010 courses: Satisfactory scores on ENGL portion of ACT test or TSI reading/writing exams or ENGL 0301. For ENGL 1302/1388, a grade of "C" or better in ENGL 1301/1387.	See General Education Core for more details Options: ENGL 1302 or ENGL 1388 (H) or ENGL 1305
			4	MATH 2414	Calculus II	C			MATH 2413 (or MATH 2487) with a grade of 'C' or better.	
			1	MANE 1101	Introduction to Manufacturing Engineering					
			3	MANE 2332	Engineering Statistics	C			MATH 2413 (or MATH 2487).	
			2	MANE 1204	Manufacturing Engineering Graphics					
			3	Choose 1	Social and Behavioral Sciences (Core)				080	
16 Semester Total Hours										
		I	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes	
SECOND YEAR	FALL		3	MANE 3351	Manufacturing Engineering Analysis				MATH 2414 (or MATH 2488) and CSCI 1380 (or CSCI 1387).	
			4	PHYS 2425	Physics for Scientists and Engineers I	C		030	MATH 2413 (or MATH 2487) and concurrent enrollment in MATH 2414 (or MATH 2488).	1 hour of lab to count for 090 Core
			3	MANE 4311	Quality Control				MANE 2332.	
			3	MECE 2340	Engineering Materials				A grade of 'C' or better in CHEM 1309 and CHEM 1109 or CHEM 1312 and CHEM 1112, and credit/registration 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, and credit/registration in MECE 2340	
			3	MANE 3300	Computer-Aided Design				Either MANE 1204 or MECE 1221.	
17 Semester Total Hours										
SECOND YEAR	SPRING		4	MATH 2415	Calculus III				MATH 2414 (or MATH 2488) with a grade of 'C' or better.	
			3	MANE 4340	Operations Research				MANE 3351.	
			4	PHYS 2426	Physics for Scientists and Engineers II			030	PHYS 2425.	1 hour of lab to count for 090 Core
			3	MANE 3337	Engineering Economics				Credit/registration in MANE 2332.	
			3	MANE 3340	Fundamentals of Industrial Engineering				Credit/registration in MANE 2332.	
17 Semester Total Hours										

		I	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
THIRD YEAR	FALL	3		Choose 1	American History (Core)		060		See General Education Core for more details. Options: HIST 1301 or HIST 1387 or HIST/MASC 2327
		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		ELEE 2317	Electrical and Electronic Systems			PHYS 2426.	
		3		MANE 3364	Manufacturing Processes			Course or Test: MECE 2140. May not be taken concurrently. AND Course or Test: MECE 2340. May not be taken concurrently.	
		1		MANE 3164	Manufacturing Processes Lab			Credit for MECE 2140 and credit/registration in MANE 3364. MECE	
		17 Semester Total Hours							
THIRD YEAR	SPRING	3		Choose 1	American History (Core)		060		See General Education Core for more details. Options: HIST 1302 or HIST 1388 or HIST/MASC 2328
		3		MECE 3321	Mechanics of Solids			A grade of C or better in MATH 2414 (or MATH 2488) and MECE 2301 or MANE 2403.	
		3		MANE X3XX	Technical Elective I				
		3		MANE 3302	Computer-Aided Manufacturing			Credit/registration in MANE 3364.	
		3		MANE 4365	Tool Design			MANE 3300.	
		3		Choose 1	Creative Arts (Core)		050		See General Education Core Curriculum
		18 Semester Total Hours							
		I	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
FOURTH YEAR	FALL	3		Choose 1	Government/Political Science (Core)		070		See General Education Core for more details Options: POLS 2305 or POLS 2385 (H)
		3		MANE 4331	Manufacturing Planning and Control			Credit/registration in MANE 4340.	
		1		MANE 4173	Product Design and Mass Customization			MANE 3337.	
		3		MANE 4361	Senior Design I			(MANE 3337 and credit/registration in MECE 3321) or (Grade of 'C' or better in MECE 3304 and MECE 3320, and credit/registration in MECE 3380, MECE 3360 and MECE 4350).	
		3		MANE 43XX	Technical Elective II				
		3		MANE 4352	Manufacturing Simulation			Grade of 'C' or better in MANE 2332	
		16 Semester Total Hours							
FOURTH YEAR	SPRING	3		Choose 1	Government/Political Science (Core)		070		See General Education Core for more details Options: POLS 2306 or POLS 2386 (H)
		3		MANE 43XX	Technical Elective III				
		4		MANE 3437	Thermal and Fluid Sciences			Grade of 'C' or better in either MANE 2403, or MECE 2301, and credit/registration in MATH 3341.	
		3		Choose 1	Language, Philosophy & Culture (Core)		040		See degree plan. Recommended: PHIL 2326
		3		MANE 4362	Senior Design II			MANE 4361.	
		16 Semester Total Hours							

**CORE: The 2019-2020 list of core courses can be found at: www.utrgv.edu > Academics > Undergraduate > General Education Core
www.utrgv.edu/core**

Symbols Key

Critical (!): sequence sensitive course.

Minimum Grade: A - Excellent; B - Good; C - Satisfactory; D - Below Average;

CR - Credit; P - Passing; S - Satisfactory.

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.

131 TOTAL HOURS

(60) TOTAL ADVANCED HOURS

Approved: Wednesday, March 27, 2019

Revised: Wednesday, June 5, 2019