The University of Texas Rio Grande Valley

FIRST YEAR

FALL

!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	3	Choose 1	Communication (Core)	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.	
	3	CSCI 1380	Introduction to Programming	C	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 or MATH 2413 with a grade of "C" or higher.	
	1	CHEM 1109	Chemistry for Engineers Lab (Core)	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.

14 Semester Total Hours

SPRING

!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	3	Choose 1	Communication (Core)	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				
	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 (Core)		080		See General Education Core Curriculum for options

16 Semester Total Hours

SECOND YEAR

FALL

!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	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	
	3	MECE 2340	Engineering Materials			A grade of 'C' or better in CHEM 1309 and CHEM 1109; 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; a grade of 'C' or better or concurrent enrollment in MECE 2340.	
	3	MANE 3300	Computer-Aided Design	C		MANE 1204	

17 Semester Total Hours

SPRING

!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	4	MATH 2415	Calculus III			MATH 2414 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
	3	MANE 3337	Engineering Economics	C		Credit/registration in MANE 3332.	
	3	MANE 3340	Fundamentals of Industrial Engineering	C		Credit/registration in MANE 3332.	

17 Semester Total Hours

!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	3	Choose 1	American History (Core)		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 with a grade of 'C' or better.	
	3	MANE 3364	Manufacturing Processes	C		MECE 2140 and 2340.	
	1	MANE 3164	Manufacturing Processes Lab			Credit for MECE 2140 and credit/registration in MANE 3364. MECE 2340 may not be taken concurrently.	

THIRD YEAR — FALL — 17 Semester Total Hours

!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	3	Choose 1	American History (Core)		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 and MANE 2403.	
	3	MANE 43XX or MANE 33XX	Prescribed Elective I				Advanced MANE course not being used to fulfill other degree 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 4365	Tool Design			Grade of 'C' or better in [MANE 3300, MANE 3337, MANE 3340, and MANE 3364].	

THIRD YEAR — SPRING — 16 Semester Total Hours

!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	3	POLS 2305	U.S. Federal Govt & Politics		070		
	3	Choose 1	Creative Arts (Core)		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 43XX or MANE 33XX	Prescribed Elective II				Advanced MANE course not being used to fulfill other degree requirements
	3	MANE 4352	Manufacturing Simulation	C		Grade of 'C' or better in MANE 3332.	

FOURTH YEAR — FALL — 18 Semester Total Hours

!	H	Course #	Course Title	Min. Grade	GEC	Prerequisite	Additional Notes
	3	POLS 2306	Texas Government & Politics		070		
	3	MANE 43XX or MANE 33XX	Prescribed Elective III				Advanced MANE course not being used to fulfill other degree requirements
	4	MANE 3437	Thermal and Fluid Sciences			Grade of 'C' or better in either [MANE 2403 or MECE 2301 or ENGR 2301] and credit/registration in MATH 3341.	
	3	PHIL 2326	Ethics, Technology and Society		040		
	3	MANE 4362	Senior Design II			MANE 4361.	

FOURTH YEAR — SPRING — 16 Semester Total Hours

CORE: The 2022-2023 list of core courses can be found in the 2022-2023 Undergraduate Catalog: www.utrgv.edu/catalog > See 'Core Curriculum'

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
(42 advanced minimum credit hours)

Approved: Monday, October 31, 2022
Revised: Thursday, October 20, 2022