Bachelor of Science in Manufacturing Engineering

2014 - 2015 Catalog

The University of Texas-Pan American

This document provides a list of the UTPA courses required for the major and their equivalent UTRGV courses.
A significant number of courses have changed their course prefix, number, and title.
For any additional information, please visit the Academic Advising Center.

UTPA Courses	*Course Equivalents at UTRGV*
A – GENERAL EDUCATION CORE – 43 HOURS	
Natural Science – 6 hours	
PHYS 2401 Physics Science and Engineering I	PHYS 2425 Physics for Scientists and Engineers I
PHYS 2402 Physics Science and Engineering II	PHYS 2426 Physics for Scientists and Engineers II
Mathematics – 3 hours	
MATH 1460 Calculus I (or MATH 1487 Honors) three-hour lecture	MATH 2413 Calculus I (or MATH 2487) three-hour lecture
Humanities	
Philosophy and Modern/Classical Language Literature – 3 hours	
PHIL 2390 Professional Ethics	PHIL 2320 Professional Ethics
PHIL 2393 Engineering Ethics	PHIL 2326 Professional Ethics: Engineering
Social Science	
Other Social Sciences – 3 hours	
ECON 2301 Macroeconomics	ECON 2301 Principles of Macroeconomics
Computer Literacy – 5 hours	
CSCI 1380 Computer Science I	CSCI 1380 Computer Science I
B – MAJOR REQUIREMENTS – 58 HOURS (53 advanced minimum)	
MANE 2332 Engineering Statistics	MANE 2332 Engineering Statistics
MANE 3300 Computer-Aided Design (CAD)	MANE 3300 Computer-Aided Design
MANE 3302 Computer-Aided Manufacturing (CAM)	MANE 3302 Computer-Aided Manufacturing
MANE 3337 Engineering Economics	MANE 3337 Engineering Economics
MANE 3340 Fundamentals of Industrial Engineering	MANE 3340 Fundamentals of Industrial Engineering
MANE 3351 Manufacturing Engineering Analysis	MANE 3351 Manufacturing Engineering Analysis
MANE 3364/3164 Manufacturing Processes and Lab	MANE 3364/3164 Manufacturing Processes and Lab
MANE 4173 Production Design and Mass Customization	MANE 4173 Product Design and Mass Customization
MANE 4311 Quality Control	MANE 4311 Quality Control
MANE 4321 Automation Systems	MANE 4321 Automation Systems
MANE 4331 Manufacturing Planning and Control	MANE 4331 Manufacturing Planning and Control
MANE 4340 Operations Research	MANE 4340 Operations Research
MANE 4352 Manufacturing Simulation	MANE 4352 Manufacturing Simulation
MANE 4361 Senior Design I (or MECE 4361)	MANE 4361 Senior Design I (or MECE 4361 Senior Design Project I)
MANE 4362 Senior Design II (or MECE 4362)	MANE 4362 Senior Design II (or MECE 4362 Senior Design Project II)
Choose 6 hours of advanced Manufacturing Engineering.	
Choose one option from the following:	
4 hours: MANE 2405 Engineering Mechanics (or MECE 2405)	MANE 2403 Engineering Mechanics
6 Hours: MECE 2303 and 2304 Statics and Dynamics	MECE 2301 Statics and MECE 2302 Dynamics
Choose one option from the following:	
4 Hours: MANE 3437 Thermal and Fluid Sciences	MANE 3437 Thermal and Fluid Sciences
6 Hours: MECE 2335 Thermodynamics I and 3315 Fluid Mechanics	MECE 2335 Thermodynamics I and MECE 3315 Fluid Mechanics
C – SUPPORT COURSES – 25 hours (9 advanced)	
MATH 1460 Calculus I one-hour lecture	MATH 2413 Calculus I one-hour lecture
MATH 1470 Calculus II	MATH 2414 Calculus II
MATH 3349 Differential Equations	MATH 3341 Differential Equations
MECE 2340/2140 Engineering Materials	MECE 2340/2140 Engineering Materials and Lab

MECE 3321 Mechanics of Solids	MECE 3321 Mechanics of Solids
ELEE 3307 Electrical and Electronic Systems	ELEE 2317 Electrical and Electronic Systems
Choose one:	
CHEM 1307/CHEM 1107 Chemistry for Engineers and Lab	CHEM 1307/1107 Chemistry for Engineers and Lab
CHEM 1301/1101 General Chemistry I and Lab	CHEM 1311/1111 General Chemistry I and Lab
Choose one:	
MANE 1101 Introduction to Manufacturing Engineering	MANE 1101 Introduction to Manfacturing Engineering
ENGR 1101 Introduction to Engineering	Recommended alternative: MANE 1101 Introduction to Manufacturing Engineering
MECE 1101 Introduction to Mechanical Engineering	MECE 1101 Introduction to Mechanical Engineering
Choose one:	
MANE 1221 Manufacturing Graphics	MANE 1204 Manufacturing Engineering Graphics
MECE 1221 Engineering Graphics	MECE 1221 Engineering Graphics

TOTAL CREDIT HOURS FOR GRADUATION – 127 HOURS
TOTAL ADVANCED HOURS – 62 HOURS