

Mapping of Courses to Applicable Program Outcomes (MfgE)

Manufacturing Engineering	Ability to apply mathematics, science, and engineering	Ability to design and conduct experiments as well as to analyze and interpret data	Ability to design a system, component, or process to meet desired needs	Ability to function on multi-disciplinary teams	Ability to identify, formulate, and solve engineering problems	Understanding of professional and ethical responsibility	Ability to communicate effectively	Broad education necessary to understand the impact of engineering solutions in a global and societal context	Recognition of the need for, and an ability to engage in, lifelong learning	Knowledge of contemporary issues	Ability to use the techniques, skills, and modern engineering practice necessary for engineering	Understanding of the behavior and properties of materials as they are altered and influenced by processing in manufacturing	Understanding of the design of tooling, and the equipment, necessary for their manufacture and control	Understanding of the creation of competitive advantage through manufacturing planning, strategy, and control	Understanding of the analysis, synthesis, and control of manufacturing operations using statistical and calculus based methods, simulation and information technology	Ability to measure manufacturing process variables in a manufacturing laboratory and make technical inferences about the process
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(aa)	(bb)	(cc)	(dd)	(ee)
COURSE	ALL ENGINEERING PROGRAMS OUTCOMES											MANUFACTURING PROGRAM OUTCOMES				
IE 285			X		X	X	X	X								
ENGR 112	X				X						X					
ENGR 248	X						X				X					X
ENGR 390	X				X											
IE 337	X	X	X							X	X	X	X			X
IE 355	X	X			X						X				X	
IE 356	X	X	X		X		X				X		X		X	
IE 366	X			X	X	X	X	X			X					
IE 367				X	X		X				X				X	
IE 368	X		X		X		X			X					X	
IE 412			X	X	X		X	X		X	X				X	
IE 415	X	X		X	X		X		X		X				X	
IE 425	X			X	X						X				X	
IE 497/ IE 498			X	X		X	X		X				X			
IE 338	X		X								X	X				X
IE 436	X	X			X					X	X		X			X
IE 437			X		X						X	X		X		X
ENGR 440	X	X								X	X	X	X			X