

**PROGRAM OUTCOMES MAPPED TO OBJECTIVES AND CURRICULUM**

Outcomes	Supported Objectives		Supporting Courses	Outcome Assessment	
	S	M		Tool	Freq. Once per
1. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have the ability to apply knowledge of mathematics, science, and mechanical and manufacturing engineering principles to design and problem solving.	1 2 3 5		CHEM 210; MATH 221, 222, 311, 325; PHYS 234, 235; ECE 201; MME 200, 210, 220, 222, 241, 242, 330, 331, 340, 314, 350, 351, 402, 403, 410, 420, 430, 440, 450, 454, 456, 460, 462, 472, 480, 481.	MME 302 MME 470 MME 420 MME 440 FE exam	2 years 2 years 2 years 2 years 1 year
2. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have the ability to design and conduct experiments, as well as to analyze and interpret data related to mechanical and manufacturing engineering.	1 2 5	3	CHEM 210; PHYS 234, 235; ECE 201; STAT 353 MME 210, 300, 330, 331, 350, 351, 401,403, 411, 450,460, 464, 470, 480, 481	MME 330 MME 401 MME 460 FE exam	3 years 3 years 3 years 1 year
3. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have the ability to identify and specify mechanical and manufacturing processes, components and systems.	1 2 3	5	MME 101, 341, 351, 360, 4801, 481	MME 101 MME 341 MME 351 MME 360 MME 460 MME 480 / 481 FE exam	2 years 2 years 2 years 2 years 2 years 2 years 1 year
4. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have the ability to function in multi-disciplinary and cross-functional teams.	4	2 3	Area A Gen Ed Area C Gen Ed CHEM 210; PHYS 234, 235; MME 101, 480, 481.	MME 101 MME 480 / 481 CHEM 210	3 years 3 years 3 years
5. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have the ability to identify, formulate, and solve mechanical and manufacturing engineering problems.	3 5	1 2	PHYS 234,235,333,435; ECE 201; MME 200, 210, 220, 222, 241, 242, 300, 302, 330, 331, 340, 341, 350, 411, 420, 450, 460, 464, 480, 481	MME 302 MME 340 MME 464	3 years 3 years 3 years

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6. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have an understanding of professional and ethical responsibility.	2 3 4	5	PHIL 194' MME 101,444, 480, 481;	MME 101 MME 444 MME 481 FE exam	3 years as offered 3 years 1 year
7. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have the ability to communicate effectively.	2 3 4	5	ENGL 191; CMST 192; Other Gen Ed Courses; MME 220, 222, 241, 242, 330, 331, 341, 351, 401, 420, 464, 480, 481.	MME 222 MME 341 MME 401 MME 464	3 years 3 years 3 years 3 years
8. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have an understanding of the competitive and integrated nature of the mechanical and manufacturing environment.	3 4	2	MME 320,330,331,340, 341,350,360,410,420, 430,440,450,454,456, 460,462,472,480,481.	MME 330 MME 331 MME 402 MME 450	3 years 2 years 2years 2 years
9. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have the broad education necessary to understand the social, economic, environmental, and global impact of engineering solutions.	2 4	3 5	ECON 195; PHIL 194; MME 101,360,480,481.	MME 101 MME 360 MME 480 / 481 FE exam	3 years 3 years 3years 1 years
10. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have recognition of the need, and an ability to engage in life-long learning.	5	4	PHIL 194; ECE 102 MME 101, 351, 480, 481	MME 101 MME 481 FE exam	3 years 2 years 1 year
11. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have knowledge of contemporary issues as they relate to the practice of mechanical and manufacturing engineering.	4	2 3 5	Some Gen Ed Courses; MME 101,480,481.	MME 480 / 481 FE exam Exit survey Alumni survey	3 years 1 year 1 year 1 year

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12. Graduates from the Department of Mechanical and Manufacturing Engineering at St. Cloud State University will have an ability to use the techniques, skills, and modern engineering tools necessary for mechanical and manufacturing engineering practice.	1 2 3	4 5	PHYS 333,435; STAT 353 ECE 102 MME 200, 220, 222, 242, 340, 341, 350, 360, 401, 403, 430, 470, 480, 481	STAT 353 MME 350 MME 403 MME 430 MME 480 / 481 FE exam Exit survey	3 years 3 years 2 years 2 years 2 years 1 year 1 year

Note:

S designates a strong support of an outcome to an objective.

M designates a medium support of an outcome to an objective