

Grove City College Status Sheet

Status Sheets are provided as a convenience for the student and may be helpful for recording completed courses. However, the College Bulletin is the controlling authority on all requirements. Questions should be directed to your academic advisor or the Registrar.

(WI)=Writing Intensive, (SI)=Speaking Intensive, (IL)=Information Literacy courses.

B.S. in Mechanical Engineering Entering in 2022

(REVISED 09-29-2022)

Name: _____

ID# _____

Year of Anticipated Graduation: _____

Date: _____

Advisor: _____

TOTAL HOURS REQUIRED FOR THIS DEGREE-----128 HOURS

General Education + Elective Requirements----- 31 HOURS

GENERAL EDUCATION REQUIREMENTS-----24 HOURS

HUMANITIES CORE-----15 HOURS

	Cr.	Sem. Taken	Grade
HUMA 102 Civ and the Biblical Revelation (IL)*	3	_____	_____
HUMA 200 Western Civilization	3	_____	_____
HUMA 202 Civilization and Literature	3	_____	_____
HUMA 301 Civilization and the Arts	3	_____	_____
HUMA 303 Christianity and Civilization	3	_____	_____

*The year-long sequence of RELI 211 and 212 may substitute for this course.

WRITING REQUIREMENT-----3 HOURS

WRIT 101 Found. of Academic Discourse (IL)	3	_____	_____
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STUDIES IN SCIENCE, FAITH, & TECHNOLOGY (SSFT)-----2 HOURS

Choose one course from the following:

COMP 205/SSFT 205 Ethics, Faith, and the Conscious Mind			
PHIL 243 Science and the Human: Inquiry, Design, & the Person			
SSFT 210 Science & Religion			
SSFT 212 Science, Faith, Technology, & Origins			
	2	_____	_____

FOUNDATIONS OF THE SOCIAL SCIENCES-----3 HOURS

Choose one course from the following:

ECON 120 Foundations of Economics		PSYC 101 Foundations of Psychology	
HIST 120 Foundations of History		PSYC 200 Cross-Cultural Psychology	
HIST 141 World Geography		SOCI 101 Foundations of Sociology	
HIST 204 Hist/Phil Foundations of Education		SOCI 103 Found. of Cultural Anthr.	
POLS 101 Foundations of Political Science		SOCW 101 Found. of Social Work	
	3	_____	_____

QUANTITATIVE/LOGICAL REASONING-----0 HOURS

Satisfied by major-related requirements.

NATURAL SCIENCES (with labs)-----0 HOURS

Satisfied by major-related requirements.

PHYSICAL EDUCATION-----1 HOURS

PHYE 100 Healthful Living	1	_____	_____
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GENERAL ELECTIVES-----7 HOURS

MAJOR-RELATED REQUIREMENTS-----36 HOURS

CHEM 105 Chemistry for Engineers	4	_____	_____
OR			
CHEM 111 General Chemistry I	3	_____	_____
CHEM 113 General Chemistry I Lab	1	_____	_____
ELEE 210 Electrical Engineering	3	_____	_____
ENGR 156 Introduction to Engineering	2	_____	_____
ENGR 274 Math Methods in Engineering	3	_____	_____
ENGR 402 Engineering Economy	1	_____	_____
MATH 161 Calculus I	4	_____	_____
MATH 162 Calculus II	4	_____	_____
MATH 261 Calculus III	4	_____	_____
MATH 262 Differential Equations	3	_____	_____
PHYS 101 General Physics I	4	_____	_____
PHYS 102 General Physics II	4	_____	_____

Minimum CQPA and MQPA required for graduation-----2.00

MQPA Courses-----MECE; ROBO; ELEE 210; ENGR (excluding 480)

Major Requirements-----97 HOURS

MECHANICAL ENGINEERING REQUIREMENTS-----48 HOURS

	Cr.	Sem. Taken	Grade
MECE 107 Engineering Graphics	2	_____	_____
MECE 109 Intro to Solid Modeling	2	_____	_____
ENGR 120 Numerical Computing for Engineers	3	_____	_____
MECE 201 Fundamentals of Material Science	3	_____	_____
MECE 210 Design for Manufacturing	3	_____	_____
MECE 211 Mechanics I	3	_____	_____
MECE 212 Mechanics II	3	_____	_____
MECE 214 Thermodynamics	3	_____	_____
MECE 251 Mechanical Systems Lab I (IL)	1	_____	_____
MECE 252 Mechanical Systems Lab II	1	_____	_____
MECE 311 Mechanics of Materials	3	_____	_____
MECE 312 Stress Analysis/Design of Mach. Comp.	3	_____	_____
MECE 316 System Dynamics	3	_____	_____
MECE 325 Fluid Mechanics	3	_____	_____
MECE 326 Heat Transfer	3	_____	_____
MECE 351 Instrumentation Lab (WI)	1	_____	_____
MECE 352 Thermal / Fluids Lab	1	_____	_____
MECE 401 Capstone Design I	3	_____	_____
ENGR/ROBO 451 Capstone Design Laboratory I	1	_____	_____
ENGR/ROBO 452 Capstone Design Laboratory II (SI)	3	_____	_____

MECHANICAL ENGINEERING ELECTIVES:-----13 HOURS

Select a minimum of 3 credit hours from each systems area. At least 6 credit hours must be 400-level courses with a maximum of 4 hours from one and two credit courses.

MECHANICAL SYSTEMS ELECTIVES:

MECE 260/360/460** Independent Study	1-3	_____	_____
MECE 270/370/470** Independent Research	1-3	_____	_____
MECE 303 Computer-Aided Manufacturing	3	_____	_____
MECE 390 Special Mechanical Engineering Topics	1-4	_____	_____
MECE 408 Mechanical Vibrations	3	_____	_____
MECE 410 Kinematics & Dynamics of Mach.	3	_____	_____
MECE 415 Finite Element Analysis	3	_____	_____
MECE 418 Human-Powered Vehicle Design	3	_____	_____
MECE 428 Biomechanics	3	_____	_____
MECE 498 Honors in Mechanical Engineering	1-3	_____	_____
ENGR 411 Control Systems	3	_____	_____
ROBO 301 Industrial Robotics	3	_____	_____
ROBO 302 Mobile Robots	3	_____	_____

THERMAL SYSTEMS ELECTIVES:

MECE 260/360/460** Independent Study	1-3	_____	_____
MECE 270/370/470** Independent Research	1-3	_____	_____
MECE 321 Advanced Thermodynamics	3	_____	_____
MECE 391 Special Mechanical Engineering Topics	1-4	_____	_____
MECE 414 Principles of HVAC	3	_____	_____
MECE 416 Survey of Renewable Energy Systems	3	_____	_____
MECE 421 Applied Fluid Mechanics	3	_____	_____
MECE 499 Honors in Mechanical Engineering	1-3	_____	_____

TECHNICAL ELECTIVES:

MECE 260/360/460** Independent Study	1-3	_____	_____
MECE 270/370/470** Independent Research	1-3	_____	_____
ENGR 301 Ethics in Engineering and Robotics	1	_____	_____
ENGR 304 Design of Experiments	1	_____	_____
ENGR 305 Introduction to LabVIEW	1	_____	_____
ENGR 331 Engr. Mgt. & Cross-Cultural Comm	3	_____	_____
ENGR 390 Special Engineering Topics	3	_____	_____
ENGR 412 Modern Control Theory	3	_____	_____

** A combined total of up to three credit hours for independent study, independent research, faculty-mentored research, and honors courses can be applied towards the Engineering Electives requirement.

SAMPLE FOUR-YEAR PLAN for the BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Freshman Year

<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
CHEM 105 Chem for Engr/CHEM 111&113 Gen. Chem.....	4	ENGR 156 Intro to Engineering.....	2
MATH 161 Calculus I.....	4	MATH 162 Calculus II	4
MECE 107 Engineering Graphics.....	2	ENGR 120 Numerical Computing for Engineers.....	3
MECE 109 Intro to Solid Modeling.....	2	PHYS 101 General Physics I.....	4
HUMA 102 Civ and the Biblical Revelation.....	3	WRIT 101 Foundations of Academic Discourse.....	<u>3</u>
PHYE 100 Healthful Living.....	<u>1</u>		16
	16		

Sophomore Year

<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
MATH 261 Calculus III.....	4	MATH 262 Differential Equations	3
MECE 201 Fundamentals of Material Science.....	3	MECE 210 Design for Manufacturing.....	3
MECE 211 Mechanics I.....	3	MECE 212 Mechanics II.....	3
MECE 251 Mechanical Systems Lab I.....	1	MECE 214 Thermodynamics.....	3
PHYS 102 General Physics II.....	4	MECE 252 Mechanical Systems Lab II.....	1
SSFT course*.....	<u>2</u>	HUMA 202* Civilization and Literature.....	<u>3</u>
	17		16

Junior Year

<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
MECE 311 Mechanics of Materials.....	3	MECE 312 Stress Analysis/Design of Mach. Comp.....	3
MECE 325 Fluid Mechanics.....	3	MECE 316 System Dynamics.....	3
MECE 351 Instrumentation Lab.....	1	MECE 326 Heat Transfer.....	3
General Elective.....	3	MECE 352 Thermal / Fluids Lab.....	1
ENGR 274 Math Methods in Engineering.....	3	ELEE 210 Electrical Engineering.....	3
HUMA 200* Western Civilization.....	<u>3</u>	Foundations of Social Science course*.....	<u>3</u>
	16		16

Senior Year

<u>Fall</u>	<u>Credits</u>	<u>Spring</u>	<u>Credits</u>
MECE 401 Capstone Design I.....	3	ENGR/ROBO 452 Capstone Design Project II.....	3
ENGR/ROBO 451 Capstone Design Project I.....	1	Mechanical Engineering Electives*.....	4
Mechanical Engineering Electives*.....	9	ENGR 402 Engineering Economy.....	1
HUMA 301* Civilization and the Arts.....	<u>3</u>	HUMA 303* Christianity and Civilization.....	3
	16	General Elective*.....	<u>4</u>
			15

*Marked courses are not restricted to the time slots as shown in this suggested schedule.

NOTE: Scheduling time conflicts may occur for students who deviate from the above plan. Any exception to the classes listed on the other side of the page must have prior written approval of the department chairman.

TOTAL CREDIT HOURS REQUIRED = 128