

# 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.

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

# B.S. in Mechanical Engineering Entering in 2016

(REVISED 05-03-16)

Name: \_\_\_\_\_

ID# \_\_\_\_\_

Year of Anticipated Graduation: \_\_\_\_\_

Date: \_\_\_\_\_

Advisor: \_\_\_\_\_

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

**General Education + Elective Requirements-----29 HOURS**

**GENERAL EDUCATION REQUIREMENTS----- 25 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 Civ and the Speculative Mind	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 \_\_\_\_\_

**STUDIES IN SCIENCE, FAITH, & TECHNOLOGY (SSFT)----- 2 HOURS**

Choose one course from the following:

SSFT 208 Science, Technology, & Society	2	_____	_____
SSFT 210 Science & Religion	2	_____	_____
SSFT 212 Science, Faith, Technology, & Origins	2	_____	_____

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

Choose one social science course from the following:

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

**QUANTITATIVE/LOGICAL REASONING----- 0 HOURS**

Satisfied by major-related requirements.

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

Satisfied by major-related requirements.

**PHYSICAL EDUCATION----- 2 HOURS**

PHYE 101 (men) / 111 (women)	1	_____	_____
PHYE 102 (men) / 112 (women)	1	_____	_____

**GENERAL ELECTIVES----- 4 HOURS**

_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

**MAJOR-RELATED REQUIREMENTS-----39-40 HOURS**

CHEM 105 Chemistry for Engineers	4	_____	_____
ELEE 210 Electrical Engineering	3	_____	_____
ENGR 156 Introduction to Engineering	2	_____	_____
ENGR 274 Mathematical Methods in Engineering	3	_____	_____
ENGR 402 Engineering Economy	1	_____	_____

**Math/Science Elective 3 or 4**

(ASTR 206, 207; BIOL 101,102; CHEM 102, 227, 241, 345;

MATH 210, 213, 222, 331; PHYS 232, 234)

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-----2.00**

**MQPA Courses-----MECE; ROBO; ELEE 210; ENGR 156, 390, and 402**

**Major Requirements-----99 HOURS**

**MECHANICAL ENGINEERING REQUIREMENTS----- 48 HOURS**

	Cr.	Sem. Taken	Grade
MECE 120 Numerical Comp. for Mech. Engr.	3	_____	_____
MECE 201 Fundamentals of Material Science	3	_____	_____
MECE 208 Eng. Graph. w/ Solid Modeling	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 Machine Com	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	_____	_____
MECE 402 Capstone Design II	3	_____	_____
MECE 451 Capstone Design Lab I (SI)	1	_____	_____
MECE 452 Capstone Design Lab II (SI)	1	_____	_____

**Select a minimum of 3 credit hours from each system area:----- 12 HOURS**

At least 6 credit hours must be 400 level classes.

**MECHANICAL SYSTEMS ELECTIVES:**

MECE 314 Kinematics & Dynamics of Mach.	3	_____	_____
MECE 328 Biomechanics	3	_____	_____
MECE 390 Special Mechanical Engineering Topics	1-4	_____	_____
MECE 407 Control Systems	3	_____	_____
MECE 408 Mechanical Vibrations	3	_____	_____
MECE 415 Finite Element Analysis	3	_____	_____
MECE 417 Design of Optimal Structures	3	_____	_____
MECE 418 Human-Powered Vehicle Design	3	_____	_____
MECE 498 Honors in Mechanical Engineering	1-3	_____	_____
ROBO 301 Introduction to Robotics	3	_____	_____
ROBO 302 Mobile Robots	3	_____	_____

**THERMAL SYSTEMS ELECTIVES:**

MECE 321 Advanced Thermodynamics	3	_____	_____
MECE 391 Special Mechanical Engineering Topics	1-4	_____	_____
MECE 414 Principles of HVAC	3	_____	_____
MECE 416 Survey of Alternative Energy Systems	3	_____	_____
MECE 421 Applied Fluid Mechanics	3	_____	_____
MECE 499 Honors in Mechanical Engineering	1-3	_____	_____

**MECHANICAL OR THERMAL SYSTEMS ELECTIVES\*:**

MECE 260/360/460 Independent Study	1-3	_____	_____
MECE 270/370/470 Independent Research	1-3	_____	_____

\* A combined total of up to three credit hours for independent study, independent research, and honors courses can be applied towards the mechanical engineering elective requirements.

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

<u>Fall</u>		<u>Credits</u>	Freshman Year		<u>Spring</u>	<u>Credits</u>
Mathematics 161.....		4	Mathematics 162.....			4
Physics 101.....		4	Physics 102.....			4
Humanities 102.....		3	Writing 101.....			3
Chemistry 105.....		4	Mech Engr 120.....			3
Physical Education 101 (men)/111 (women).....		<u>1</u>	Engr 156.....			2
		16	Physical Education 102 (men)/112 (women).....			<u>1</u>
						17

<u>Fall</u>		<u>Credits</u>	Sophomore Year		<u>Spring</u>	<u>Credits</u>
Mathematics 261.....		4	Mathematics 262.....			3
Mech Engr 201.....		3	Mech Engr 210.....			3
Mech Engr 208.....		3	Mech Engr 212.....			3
Mech Engr 211.....		3	Mech Engr 214.....			3
Mech Engr 251.....		1	Mech Engr 252.....			1
Humanities 202.....		<u>3</u>	Humanities 200.....			<u>3</u>
		17				16

<u>Fall</u>		<u>Credits</u>	Junior Year		<u>Spring</u>	<u>Credits</u>
Mech Engr 311.....		3	Mech Engr 312.....			3
Mech Engr 325.....		3	Mech Engr 316.....			3
Mech Engr 351.....		1	Mech Engr 326.....			3
Math/Science Elective*.....		3	Mech Engr 352.....			1
Engineering 274.....		3	Elec Engr 210.....			3
SSFT.....		<u>2</u>	Foundations of Social Science Course.....			<u>3</u>
		15				16

<u>Fall</u>		<u>Credits</u>	Senior Year		<u>Spring</u>	<u>Credits</u>
Mech Engr 401.....		3	Mech Engr 402.....			3
Mech Engr 451.....		1	Mech Engr 452.....			1
ME Electives*.....		9	ME Electives*.....			3
Humanities 301.....		<u>3</u>	Humanities 303.....			3
		16	Engr 402.....			1
			General Elective*.....			<u>4</u>
						15

\*The math/science elective, the general elective, and the mechanical engineering electives 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