

**2009-10 APPROVED ELECTIVES LIST  
FOR STUDENTS in MECHANICAL ENGINEERING or  
ENERGY SYSTEMS ENGINEERING**

**COLLEGE OF ENGINEERING  
UNIVERSITY OF WYOMING**

<p><b>NOTE:</b> Electives are governed by the approved list in effect at the time a course is taken. Students should check the current list before enrolling in a course to confirm that the course is an approved elective.</p>
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**SCIENCE ELECTIVES**

**ASTRONOMY**

ASTR 2310 General Astronomy (4)

**ATMOSPHERIC SCIENCE**

ATSC 2100 Atmospheric Change: Composition and Climate (3)  
ATSC 4010 Atmospheric Processes (3)  
ATSC 4015 Physical Meteorology II (3)  
ATSC 4020 Physical Meteorology Lab (1)  
ATSC 4100 Atmospheric Dynamics I (4)  
ATSC 4160 Synoptic Meteorology (3)  
ATSC 4320 The Ocean Environment (3)  
ATSC 4330 Introduction to Micrometeorology (3)  
ATSC 4400 The Physical Basis of Climate (3)

**BIOLOGY**

LIFE 1003 Current Issues in Biology (4)  
LIFE 1010 General Biology (4)  
LIFE 2002 Global Ecology (3)  
LIFE 2022 Animal Biology (4)  
LIFE 2023 Biology for Plants and Fungi (4)  
LIFE 2050 Biology of Aging and Human Development (3)  
LIFE 2400 General Ecology (3)

Plus all Biology courses that have LIFE 1010 as a prerequisite.

**CHEMISTRY**

CHEM 1030 General Chemistry II (4)  
CHEM 1050 General Chemistry & Quantitative Analysis I (4)  
CHEM 1060 General Chemistry & Quantitative Analysis II (4)

Plus all Chemistry courses that have CHEM 1020, 1030, 1050, or 1060 as a prerequisite.

**GEOLOGY**

GEOL 1100 Physical Geology (4)  
GEOL 2000 Foundations of Geology (4)  
GEOL 2005 Foundations of Geology II (4)  
GEOL 2010 Mineralogy (5)  
GEOL 2020 Intro to Petrology (3)  
GEOL 2050 Principles of Petrology (3)  
GEOL 2070 Intro to Oceanography (4)

Plus all Geology courses that have GEOL 1100 or 2000 as a prerequisite.

**MOLECULAR BIOLOGY**

MOLB 2210 General Microbiology (4)

**PHYSICS**

- PHYS 1210 Engineering Physics I (4) (*if completed before or concurrently with ES 2120*)  
PHYS 2310 Physics III: Waves and Optics (4)  
PHYS 2320 Physics IV: Modern Physics (3)  
PHYS 4340 Semiconductor Materials and Devices (3)  
Plus all Physics courses that have PHYS 1210 or 1310 as a prerequisite.

**PLANT, SOIL, AND INSECT SCIENCES**

- AECL 2010 Intro to Soil Science (4)  
AECL 2020 Ecological Web: Agron. & Hort. Plant Biology  
SOIL 4130 Chemistry of the Soil Environment (4)

**ZOOLOGY**

All Zoology courses that have LIFE 1010 as a prerequisite.

**MATHEMATICS ELECTIVES\***

- MATH 2250 Elementary Linear Algebra (only if taken prior to ME 3010)  
MATH 3310 Applied Differential Equations II  
MATH 4230 Introduction to Complex Analysis  
MATH 4250 Mathematical Theory of Probability  
MATH 4400 Vector Calculus  
MATH 4440 Partial Differential Equations I  
MATH 4500 Linear Algebra and Matrix Theory (with advisor's permission)  
STAT 4220 Basic Engineering Statistics

**BUSINESS ELECTIVES\***

- ACCT 1010 Principles of Accounting I (Note: enrollments are limited)  
BADM 1040 Legal Environment of Business  
CE 3900 Engineering Economics and Professional Ethics  
DSCI 3210 Production and Operations Management  
DSCI 4260 Project Management  
ES 4910 Survey of Engineering Management  
FIN 3250 Managerial Finance

\* Other courses not shown may be suitable, but prior approval by the student's academic advisor is required for any course not on this list.