MECHANICAL ENGINEERING (B.S.M.E.)

This program is accredited by the Engineering Accreditation Commission of ABET, http://www.abet.org.

Note: Pre-advising is required to register in any ME course.

Required course work includes the university requirements (see regulation J-3 (https://catalog.uidaho.edu/general-requirements-academic-procedures/j-general-requirements-baccalaureate-degrees)), completion of the Fundamentals of Engineering (FE) examination and:

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<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tr>
<td>CHEM 111</td>
<td>General Chemistry I</td>
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<td>CHEM 111L</td>
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<td>COMM 101</td>
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<td>ME 313</td>
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<td>ME 322</td>
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<td>ME 325</td>
<td>Machine Component Design I</td>
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<td>ME 330</td>
<td>Experimental Methods for Engineers</td>
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<td>Intermediate Mechanics of Materials</td>
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<td>ME 424</td>
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<td>Senior Lab</td>
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<td>ME 435</td>
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<td>Introduction to Ethics</td>
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Select one from the following: 3-4

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<td>Principles of Macroeconomics</td>
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<td>ECON 202</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>ECON 272</td>
<td>Foundations of Economic Analysis</td>
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Technical Elective requirements for Mechanical Engineering

Select 15 credits from the following: 1

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<tbody>
<tr>
<td>BE 421</td>
<td>Image Processing and Computer Vision</td>
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<tr>
<td>BE 425</td>
<td>Introduction to Biomedical Engineering</td>
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<td>BE 462</td>
<td>Electric Power and Controls</td>
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<td>ENGR 360</td>
<td>Engineering Economy</td>
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<td>ENTR 414</td>
<td>Entrepreneurship</td>
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<td>Stochastic Models</td>
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<td>Introduction to Analysis I</td>
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<td>ME 401</td>
<td>Engineering Team Projects</td>
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<td>ME 404</td>
<td>Special Topics</td>
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<td>ME 410</td>
<td>Principles of Lean Manufacturing</td>
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<td>ME 412</td>
<td>Gas Dynamics</td>
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<td>ME 414</td>
<td>HVAC Systems</td>
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<td>ME 420</td>
<td>Fluid Dynamics</td>
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<td>ME 421</td>
<td>Advanced Computer Aided Design</td>
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<td>ME 422</td>
<td>Applied Thermodynamics</td>
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<td>ME 423</td>
<td>Human Factors and Ergonomics in Product Design</td>
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<td>ME 436</td>
<td>Sustainable Energy Sources and Systems</td>
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<td>ME 438</td>
<td>Sustainability and Green Design</td>
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<td>Fundamentals of Computational Fluid Dynamics</td>
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<td>Experimental Methods in Fluid Dynamics</td>
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<td>Fatigue and Fracture Mechanics</td>
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<td>ME 464</td>
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<td>ME 481</td>
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<td>ME 490</td>
<td>Solid Modeling, Simulation and Manufacturing Capstone</td>
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<td>ME 519</td>
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<td>ME 521</td>
<td>Design Synthesis with Solid Modeling</td>
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<td>ME 525</td>
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<td>ME 529</td>
<td>Combustion and Air Pollution</td>
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<td>ME 539</td>
<td>Advanced Mechanics of Materials</td>
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<td>ME 540</td>
<td>Continuum Mechanics</td>
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<td>ME 541</td>
<td>Mechanical Engineering Analysis</td>
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<td>ME 544</td>
<td>Conduction Heat Transfer</td>
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<td>ME 547</td>
<td>Thermal Radiation Processes</td>
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ME 548  Elasticity
ME 549  Finite Element Analysis
ME 550  Advanced Computation Fluid Dynamics
ME 571  Building Performance Simulation for Integrated Design
ME 580  Linear System Theory
MSE 412  Mechanical Behavior of Materials
MSE 415  Materials Selection and Design
MSE 417  Instrumental Analysis
MSE 423  Corrosion
MSE 438  Fundamentals of Nuclear Materials
NE 437  Radiation Effects on Materials
NE 438  Fundamentals of Nuclear Materials
NE 450  Principles of Nuclear Engineering
OM 378  Project Management
OM 439  Systems and Simulation
OM 456  Quality Management
PHYS 305  Modern Physics
PHYS 351  Introductory Quantum Mechanics I
PHYS 411  Advanced Physics Lab
PHYS 428  Numerical Methods
PHYS 443  Optics
PHYS 464  Materials Physics and Engineering
PHYS 465  Nuclear and Particle Physics
PHYS 484  Astrophysics
STAT 301  Probability and Statistics
STAT 431  Statistical Analysis
Any Approved 400/500 Level Course in another Engineering Discipline

A maximum of 6 credits of the following may be selected:
ME 307  Group Mentoring I
ME 308  Group Mentoring II
ME 401  Engineering Team Projects
ME 407  Group Mentoring III

Total Hours 113-114

1 Fifteen credits of technical electives are required from the list. The breakdown of credits will be as follows: six credits must be an ME upper division course, three credits must be an upper division Math, Statistics or Physics course, the remaining six credits may be any course listed.

Courses to total 128 credits for this degree, not counting ENGL 101, MATH 143, and other courses that might be required to remove deficiencies.

To advance to upper-division courses, a student majoring in mechanical engineering must earn certification: the student may accumulate no more than three grades of D or F in the mathematics, science or engineering courses used to satisfy certification requirements. Included in this number are courses transferred from other institutions, multiple repeats of a single course, and single repeats in multiple courses.

In addition, students must also earn at least five grades of 'B' or better in these mathematics, science or engineering courses: