

# Energy Engineering Management

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**New B.S. Degree Program at  
OSU-Cascades in Bend, Oregon**



**OSU | Cascades**

# Energy Engineering Management

- What is Energy Engineering Management (EEM)?
- What are the different job opportunities?
- What are the degree requirements?



# What is EEM?

- Hybrid of mechanical & industrial engineering
  - plus business management
  - and new energy-related courses

[video1](#)



# What is EEM degree?

- New OSU B.S. degree
  - sponsored by Mechanical, Industrial, & Manufacturing Engineering
  - implements clean technologies as well as manages conventional energy sources
  - will be ABET accredited (need graduates first)



# Where will EEM be located?

- Program only offered at OSU-Cascades campus in beautiful Bend, OR
  - first two years at Central Oregon Community College or OSU Corvallis or approved CC
  - final two years of pro school in Bend, OR



[video2](#)



# What are the job opportunities?

- New EEM degree well received by industry
  - Bend local energy companies
  - MECOP for student internships

[video3](#)



# Potential EEM Jobs

- Energy Facility Operations Manager
- Energy Project Engineer
- Process Engineer
- Systems Engineer
- Equipment Engineer
- Energy Efficiency Engineer
- Certified Energy Manager
- Certified Energy Auditor
- Energy Distribution Manager
- Energy Smart Planner
- Business Solutions Engineer
- Automation Engineer
- Energy Conservation Engineer
- Energy Broker

# Pre-Energy Engineering Management (OSU Cascades)

## FRESHMAN YEAR

## SOPHOMORE YEAR

FALL

WINTER

SPRING

FALL

WINTER

SPRING

GE 101  
Introduction to  
Engineering  
(3 cr)

HHP 295  
Health &  
Fitness  
(3 cr)

GE 102  
Engineering  
Problem Solving  
and Technology  
(3 cr)

ENGR 211  
Statics  
(3 cr)

ENGR 201  
Electrical  
Fundamentals  
1 (3 cr)

ENGR 212  
Dynamics  
(3 cr)

CH 221  
Chemistry  
(5 cr)

CH 222  
Chemistry  
(5 cr)

BA 217  
Accounting  
Fundamentals  
(4 cr)

SP 111 or  
SP 114  
Fundamentals of  
Public Speaking  
(3 cr)

CIS 161  
Computer  
Science I  
(4 cr)

ENGR 202  
Electrical  
Fundamentals 2  
(3 cr)

MTH 251  
Calculus I  
(4 cr)

MTH 252  
Calculus II  
(4 cr)

MTH 253  
Calculus III  
(4 cr)

MTH 254  
Vector Calculus  
I  
(4 cr)

MTH 256  
Applied  
Differential  
Equations (4cr)

MTH 461  
Introduction to  
Mathematical  
Methods of  
Statistics<sup>1</sup>  
(4 cr)

WR 121  
English  
Composition  
(3 cr)

PH 211  
General  
Physics I  
(5 cr)

PH 212  
General  
Physics II  
(5 cr)

PH 213  
General  
Physics III  
(5 cr)

WR 122 or  
WR 227 English  
Composition  
(3 cr)

ECON 201  
Perspective  
Social Processes &  
Institutions  
(3 cr)

Perspective  
Western  
Culture  
(3 cr)

Perspective  
Cultural  
Diversity  
(3 cr)

Difference, Power &  
Discrimination  
(3 cr)

BioScience  
Elective  
(4 cr)

Perspective  
Literature &  
Arts  
(3 cr)

# Pre-Energy Engineering Management (OSU Corvallis)

## FRESHMAN YEAR

## SOPHOMORE YEAR

FALL

WINTER

SPRING

FALL

WINTER

SPRING

ENGR 111  
Engineering  
Orientation I  
(3 cr)

ENGR 112  
Engineering  
Orientation II  
(3 cr)

HHS 231 & 241  
Lifetime Fitness  
(3 cr)

ENGR 211  
Statics  
(3 cr)

ENGR 201  
Electrical  
Fundamentals I  
(3 cr)

ENGR 212  
Dynamics  
(3 cr)

CH 201  
Chemistry for  
Engineering  
Majors  
(3 cr)

CH 202 (W)  
& 205 (3)  
Chemistry for  
Engineering Majors  
(4 cr)

BA 215  
Money and  
Investment  
Management  
(4 cr)

COMM 111 or  
COMM 114  
Public Speaking  
(3 cr)

IE 212  
Computational  
Methods for  
Industrial  
Engineers (4cr)

ENGR 202  
Electrical  
Fundamentals II  
(3 cr)

MTH 251  
Differential  
Calculus  
(4 cr)

MTH 252  
Integral  
Calculus  
(4 cr)

MTH 254  
Vector  
Calculus I  
(4 cr)

MTH 256  
Applied  
Differential  
Equations (4cr)

MTH 306 Matrix  
and Power Series  
Methods (4 cr)

ST 314  
Introduction to  
Statistics for  
Engineers  
(3 cr)

WR 121  
English  
Composition  
(3 cr)

ECON 201  
Perspective  
Social Processes  
& Institutions  
(3 cr)

PH 211  
General Physics  
with Calculus  
(4 cr)

PH 212  
General  
Physics with  
Calculus  
(4 cr)

PH 213  
General  
Physics with  
Calculus  
(4 cr)

WR 327  
Technical  
Writing  
(3 cr)

Perspective  
Western  
Culture  
(3 cr)

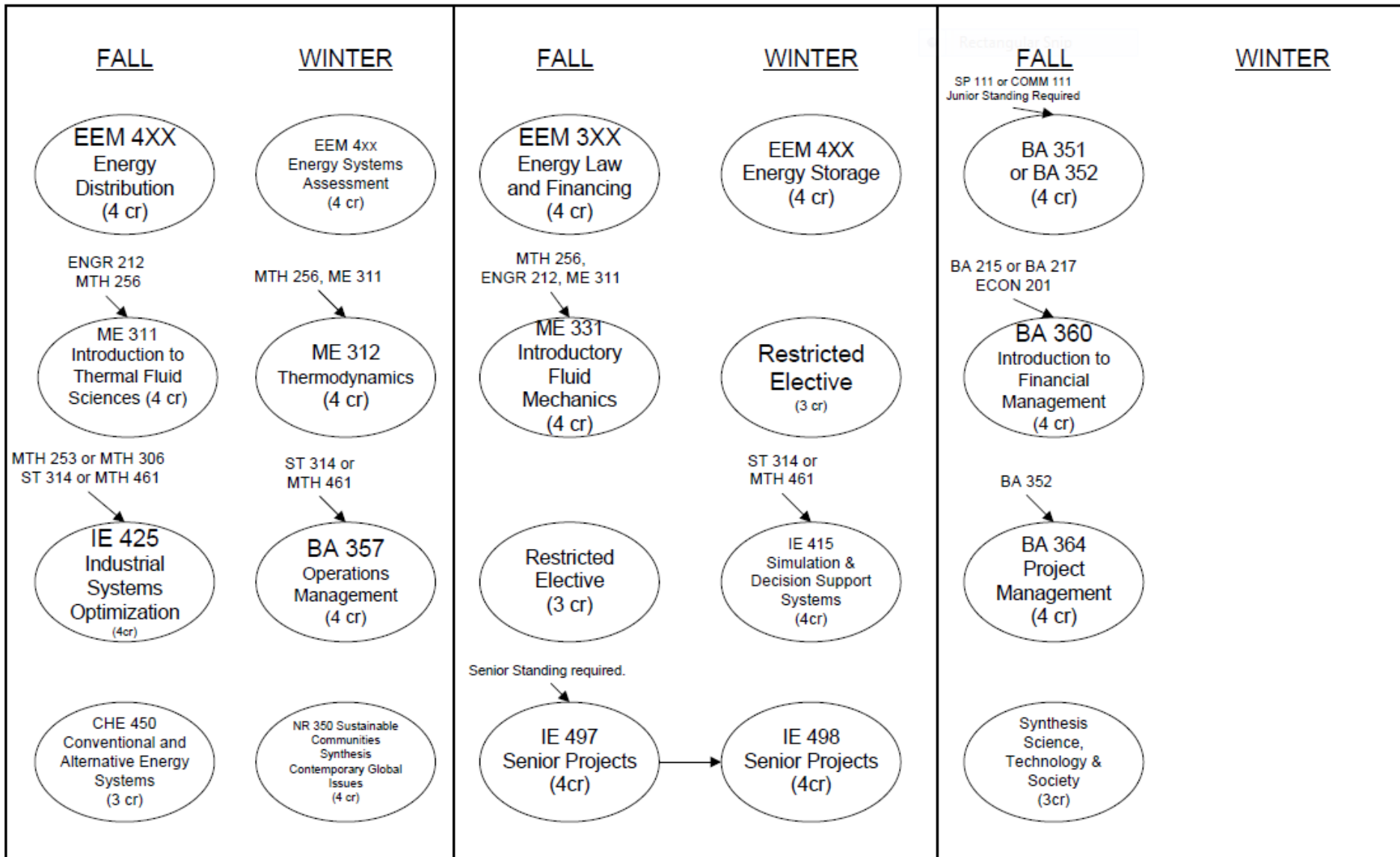
Perspective  
Cultural  
Diversity  
(3 cr)

Difference, Power &  
Discrimination  
(3 cr)

Perspective  
Literature &  
Arts  
(3 cr)

BioScience  
Elective  
(4 cr)

# Energy Engineering Management MECOP



# Energy Engineering Management – Non MECOP

FALL

WINTER

SPRING

FALL

WINTER

**EEM 4XX**  
Energy  
Distribution  
(4 cr)

**EEM 4xx**  
Energy Systems  
Assessment  
(4 cr)

**BA 360 (online)**  
Introduction to  
Financial  
Management  
(4 cr)

**EEM 3XX**  
Energy Law  
and Financing  
(4 cr)

**EEM 4XX**  
Energy Storage  
(4 cr)

**BA 360**  
Introduction to  
Financial  
Management  
(4 cr)

**BA 357**  
Operations  
Management  
(4 cr)

**BA 351 or  
BA 352**  
(4 cr)

**Restricted  
Elective**  
(3 cr)

**IE 415**  
Simulation &  
Decision Support  
Systems  
(4cr, W)

**ME 311**  
Introduction to  
Thermal Fluid  
Sciences (4 cr)

**ME 312**  
Thermodynamics  
(4 cr)

**BA 364**  
Project  
Management  
(4 cr)

**ME 331**  
Introductory Fluid  
Mechanics  
(4 cr)

**Restricted  
Elective**  
(3 cr)

**IE 425**  
Industrial  
Systems  
Optimization  
(4cr, F)

**NR 350 Sustainable  
Communities  
Synthesis  
Contemporary Global  
Issues**  
(4 cr)

**Synthesis**  
Science,  
Technology &  
Society  
(3cr)

**IE 497**  
Senior Projects  
(4cr)

**IE 498**  
Senior Projects  
(4cr)

**CHE 450**  
Conventional and  
Alternative Energy  
Systems  
(3 cr)



# Future of EEM

- Flexible degree to meet global market needs
- Long-term job as new challenges and clean technologies emerge
- Exciting field and career!



# Who to contact about EEM

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