Pre-Energy Systems Engineering

Fall
- MTH 251 Differential Calculus (4cr, FWSpSu)
- CH 201 Chemistry for Engineers (3cr, F)
- WR 121 English Composition (3cr, F)

Winter
- ENGR 112 Engr. Computing (MATLAB) (3cr, FWSpSu)
- MTH 252 Integral Calculus (4cr, FWSpSu)
- CH 202 Chemistry for Engineers (3cr, W)

Spring
- MTH 254 Vector Calculus (4cr, FWSpSu)
- CH 205 Chemistry for Engineers Lab (1cr, Sp)
- PH 211 Physics w/ Calculus (4cr, FSSpSu)

Fall
- MTH 256 Differential Equations (4cr, FWSpSu)
- ENGR 211 Statics (3cr, FWSpSu)
- PH 212 Physics w/ Calculus (4cr, FW)

Winter
- MTH 306 Matrix & Power Series Methods (4cr, FWSpSu)
- ST 314 Statistics For Engineers (3cr, FWSpSu)
- WR 327 Technical Writing (3cr, FWSpSu)

Spring
- ENGR 201 Electrical Fundamentals (3cr, FWSpSu)
- IE 212 Computational Methods for Industrial Engineering (4cr, WSu)
- ENGR 212 Dynamics (3cr, FWSpSu)

+ Chemistry option: can be CH 231+261 lab, and then CH 232+262 lab

† See your advisor before taking Accounting
* Restricted Electives: Students completing the ESE degree must complete 6 credits in this category. 3 of these credits can be at the 200-level, and the other 3 must be 300-level or above. Choices for 200-level include ENGR 248, ENGR 213, and ENGR 203.
** Soph = Sophomore standing in engineering required to enroll in this class.
Shaded courses are prerequisites for junior year courses, recommended for completion prior to entry into the professional program.
Su Courses listed in red as being available during a term, may or may not actually be offered.
† Bacc Core Elective courses are taken to complete OSU's baccalaureate core curriculum (http://catalog.oregonstate.edu/bcc.aspx) and need only be taken sometime before graduation. For ESE majors, the seven Bacc Core Elective courses consist of one course each in the areas of western culture (WC), cultural diversity (CD), literature and the arts (LA), biological science (BIO), difference, power and discrimination (DPD), contemporary global issues (CGI), and science, technology and society (STS).
Energy Systems Engineering – Non MECOP
Professional Program located at OSU Cascades Campus

Fall
- SUS 350 Sustainable Communities (CGI Synthesis)
- ME 311 Intro. Thermal Fluid Sciences
- IE 425 Industrial Systems Optimization
- ENGR 390 Engineering Economy

Winter
- ESE 355 Energy Regulation
- ME 312 Thermodynamics
- ST 314
- MTH 256

Spring
- ESE 360 Energy Consumption Analysis
- BA 352 Managing Individual & Team Perf.
- MGMT 364 Project Management
- COMM 111

Fall
- ESE 470 Energy Distribution Systems
- ME 331 Intro. Fluid Mechanics
- ESE 450 Energy Generation Systems

Winter
- ESE 471 Energy Storage Systems
- ME 332 Heat Transfer
- ESE 360 Energy Consumption Analysis

Spring
- BACC CORE Elective
- MTH 256, ENGR 212 & ME 311
- ME 331
- BA 357 Operations Management

See advisor for list of approved restricted electives
Access to shaded courses requires entrance to the ESE professional program.
Courses listed in red as being available during a term, may or may not actually be offered.
Bacc Core Elective courses are taken to complete OSU’s baccalaureate core curriculum and need only be taken sometime before graduation.
For ESE majors, the seven Bacc Core Elective courses consist of one course each in the areas of western culture (WC), cultural diversity (CD), literature and the arts (LA), biological science (BIO), difference, power and discrimination (DPD), contemporary global issues (CGI), and science, technology and society (STS).

Note: some students may need 1 or 2 more credits to reach 180. Track your Minimum Credits Requirement in MyDegrees.
Energy Systems Engineering – Non MECOP
Professional Program located at OSU Cascades Campus

Fall
- SUS 350 Sustainable Communities (CGI Synthesis) (4cr, F)
- ME 311 Intro. Thermal Fluid Sciences (4cr, F)
- ST 314
- MTH 256, ENGR 212
- BA 215 or BA 217
- ESE 360 Energy Distribution Systems (4cr, F)
- ESE 470 Energy Consumption Analysis (4cr, F)
- CM 111
- *Restricted Elective (3 or 4 cr, F, W, Sp, Su)

Winter
- ESE 355 Energy Regulation (4cr, W)
- ME 312 Thermodynamics (4cr, W)
- MTH 256, ENGR 212
- BA 357 Operations Management (4cr, W)
- BA 352 Managing Individual & Team Perf.‡ (4cr, Sp)
- BA 351
- OR
- ESE 450 Energy Generation Systems (4cr)
- ESE 471 Energy Storage Systems (4cr, W)
- BA 356
- BA 354
- BA 353
- OR

Spring
- ESE 360 Energy Consumption Analysis (4cr, Sp)
- ME 331 Intro. Fluid Mechanics (4cr, F)
- ME 332 Heat Transfer (4cr, W)
- ME 331
- ME 332
- ME 333
- ME 334
- MTH 256
- ENGR 212
- ENGR 407 MECOP Seminar
- ESE 450 Energy Generation Systems (4cr)
- ESE 497 Capstone Design (4cr, F)
- OR

Summer
- MTH 256, ENGR 212
- ME 311
- BA 352
- BA 356
- BA 354
- BA 353
- OR

Note: some students may need 1 or 2 more credits to reach 180. Track your Minimum Credits Requirement in MyDegrees.

- See advisor for list of approved restricted electives
- Access to shaded courses requires entrance to the ESE professional program.
- Courses listed in red as being available during a term, may or may not actually be offered.
- † Bacc Core Elective courses are taken to complete OSU’s baccalaureate core curriculum (http://catalog.oregonstate.edu/bcc.aspx) and need only be taken sometime before graduation.
- For ESE majors, the seven Bacc Core Elective courses consist of one course each in the areas of western culture (WC), cultural diversity (CD), literature and the arts (LA), biological science (BIO), difference, power and discrimination (DPD), contemporary global issues (CGI), and science, technology and society (STS).
Pre-Energy Systems Engineering

**First year**

**Fall**
- MTH 103: Algebraic Reasoning (4cr, FWSp)
- WR 121: English Composition (3cr, FWSpSu)
- BACC CORE Elective†: WC, CD, LA, DPD, BIO, CGI, STS

**Winter**
- MTH 111: College Algebra (4cr, FWSpSu)
- HHS 231: Lifetime Fitness for Health (2cr, FWSpSu)
- PAC course (1cr, FWSpSu)

**Spring**
- MTH 112: Elementary Functions (4cr, FWSpSu)
- COMM 111 or 114 (3cr, FWSpSu)
- Biology + Lab (4cr, FWSpSu)

**Second year**

**Fall**
- MTH 251: Differential Calculus (4cr, FWSpSu)
- CH 201: Chemistry for Engineers (3cr, FW)
- BACC CORE Elective†: WC, CD, LA, DPD, BIO, CGI, STS

**Winter**
- MTH 252: Integral Calculus (4cr, FWSpSu)
- CH 202: Chemistry for Engineers (3cr, WSp)
- CH 205: Laboratory for CH 202 (1cr, WSp)

**Spring**
- MTH 254: Vector Calculus (4cr, FWSpSu)
- PH 211: Physics w/ Calculus (4cr, FWSpSu)
- ENGR112: Introduction to Engineering Computing (3cr, FWSpSu)

**Third year**

**Fall**
- MTH 256: Differential Equations (4cr, FWSpSu)
- MTH 306: Matrix & Power Series Methods (4cr, FWSpSu)
- ENGR 211: Computational Methods for Industrial Engr (3cr, W, Su)
- PH 212: Physics w/ Calculus (4cr, FWSp)
- Restricted Elective: 2xx Level (3cr, WSpSu)

**Winter**
- MTH 252: Integral Calculus (4cr, FWSpSu)
- IE 212: Computational Methods for Industrial Engr (3cr, W, Su)
- PH 213: Physics w/ Calculus (4cr, WSpSu)
- BACC CORE Elective†: WC, CD, LA, DPD, BIO, CGI, STS
- ENGR 201: Electrical Fundamentals 1 (3cr, FWSpSu)

**Pro School**
- MTH 252: Integral Calculus (4cr, FWSpSu)
- ST 314: Statistics for Engineers (3cr, FWSpSu)
- ENGR 202: Electrical Fundamentals 2 (3cr, WSpSu)
- BA 215: Technical Writing (3cr, FWSpSu)

† See your advisor before taking Accounting.
* Initial Math placement is dependent on ALEKS placement score.
** Soph = Sophomore standing in engineering required to enroll in this class.
- Lightly shaded courses are prerequisites for junior year courses, and recommended for completion prior to entry into the professional program.
- Grades in dark-shaded courses are used to determine pre-Core GPA and are required for entry into the professional program.
- Courses listed in red as being available during a term, may or may not actually be offered.
- Bacc Core Elective courses are taken to complete OSU's baccalaureate core curriculum (http://catalog.oregonstate.edu/bcc.aspx) and need only be taken sometime before graduation. For ME majors, the seven Bacc Core Elective courses consist of one course each in the areas of western culture (WC), cultural diversity (CD), literature and the arts (LA), biological science (BIO), difference, power and discrimination (DPD), contemporary global issues (CGI), and science, technology and society (STS).