

UNIVERSITY OF SOUTHERN MAINE – Department of Engineering
Course Offering Plan - Fall 2015 to Summer 2019

Required courses

| Course | F15 | S16 | F16 | S17 | F17 | S18 | F18 | S19 | Title | Cr. | Prerequisites | Coord. |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|--|-----|------------------------------------|-----------|
| EYE 112 | x | x | x | x | x | x | x | x | Built Environment: Energy | 3+ | ENG 100 (co-req) | Davis |
| EGN 160 | x | | x | | x | | x | | Intro to Programming: The C Language | 4 | None | Lück |
| EGN 210 | x | xs | x | xs | x | xs | x | xs | Technical Writing (cross-listed ITP 210) | 3 | ENG 100 | tech |
| EGN 248 | x | x | c | x | c | x | c | x | Intro to Diff-Eq and Linear Algebra | 4 | MAT 153 | Jankowski |
| EGN 260 | | | x | | x | | x | | Materials Science for Engineers | 3 | CHY 113, MAT 153, PHY 123 | Smith |
| EGN 301 | | x | | x | | x | | x | Junior Design Proj, the Eng Profession | 3 | Advisor permission | Smith |
| EGN 304 | | x | | x | | x | | x | Engineering Economics | 3 | MAT 152 | Ghorashi |
| EGN 402 | x | xs | x | xs | x | xs | x | xs | Senior Design Project | 3 | EGN 301, Ethics, instr. perm. | |
| ELE 216 | x | | x | | c | x | | c | Circuits I: Steady-State Analysis | 3 | MAT 153, PHY 123 | Lück |
| ELE 217 | | x | | xs | | xs | | xs | Circuits II: System Dynamics | 3 | ELE 216, EGN 248 (co-req) | Lück |
| ELE 219 | | x | | xs | | xs | | xs | Circuits Laboratory | 1 | ELE 217 (co-req) | Lück |
| ELE 323 | x | | x | | x | | x | | Electromechanical Energy Conversion | 3 | ELE 217 | Lück |
| ELE 172 | | | x | | x | | x | | Digital Logic | 4+ | None | Jankowski |
| ELE 271 | | x | | x | | x | | x | Microprocessor Systems | 4+ | ELE 172, EGN 160 | Lück |
| ELE 314 | x | | x | | x | | x | | Linear Signals and Systems* | 3 | ELE 217, EGN 248 | Jankowski |
| EGN 325 | | x | | x | | x | | x | Control Systems* | 3 | ELE 217, EGN 248 | Ghorashi |
| EGN 329 | | | x | | x | | x | | Electromech. & Control Systems Lab | 1 | ELE 323, ELE 219, EGN 325 (co-req) | Lück |
| ELE 342 | x | | x | | x | | x | | Electronics I: Devices and Circuits* | 4+ | ELE 217, ELE 219 | Guvench |
| ELE 343 | | x | | x | | x | | x | Electronics II: Electronic Design | 4+ | ELE 342 | Guvench |
| ELE 351 | | | x | | x | | x | | Electromagnetic Fields* | 3 | ELE 217, MAT 252, EGN 248 | Smith |
| ELE 486 | | x | | x | | x | | x | Digital Signal Processing | 3 | EGN 160, ELE 314 | Jankowski |
| ELE 489 | | | x | | x | | x | | Analog and Digital Signals Laboratory | 1 | ELE 219, ELE 486 (co-req) | Jankowski |
| MEE 150 | c | x | c | x | c | x | c | x | Applied Mechanics: Statics | 3 | MAT 152, PHY 121 | Ghorashi |
| MEE 230 | | x | | x | | x | | x | Thermodynamics I: Laws and Properties | 3 | MAT 153, PHY 121 | Lin |
| MEE 251 | x | c | x | c | x | c | x | c | Strength of Materials | 3 | MEE 150, MAT 153 | Ghorashi |
| MEE 259 | x | | x | | x | | x | | Statics and Strength of Materials Lab | 1 | MEE 251 (co-req) | Ghorashi |
| MEE 270 | | x | | x | | x | | x | Applied Mechanics: Dynamics | 3 | MEE 150, MAT 252 (co-req) | Ghorashi |
| MEE 331 | | | x | | x | | x | | Thermodynamics II: Flows and Cycles | 3 | MEE 230 | Lin |
| MEE 339 | | | x | | x | | x | | Thermodynamics Laboratory | 1 | MEE 331 (co-req) | Lin |
| MEE 360 | x | | x | | x | | x | | Fluid Mechanics | 3 | MEE 270, EGN 248, MAT 252 | Lin |
| MEE 372 | x | | x | | | x | | x | Computer-Aided Design of Mach Elem | 4+ | MEE 251 | Ghorashi |
| MEE 373 | | x | | x | | | x | | Design of Machines and Mechanisms | 4+ | MEE 270, MAT 252, EGN 248, EGN 160 | Ghorashi |
| MEE 374 | x | | | x | | x | | x | Theory and Applications of Vibrations* | 3 | ELE 217, EGN 248 | Smith |
| MEE 379 | | | | x | | x | | x | Dynamics and Vibrations Laboratory | 3 | MEE 270, MEE 259, MEE 374 (co-req) | Smith |
| MEE 432 | | x | | x | | x | | x | Heat Transfer | 3 | MEE 230, MEE 360 | Lin |
| MEE 439 | | | | x | | x | | x | Fluid Mech. and Heat Transfer Lab | 1 | MEE 339, MEE 432 (co-req) | Lin |

Technical elective courses

| Course | F15 | S16 | F16 | S17 | F17 | S18 | F18 | S19 | Title | Cr. | Prerequisites | Coord. |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|------------------------------|----------|
| EGN 317 | | | | | x | | | | Introduction to Robotics | 3+ | EGN 160, EGN 248 | Lück |
| EGN 446 | | x | | | | x | | | Micro Electromechanical Systems | 3+ | EGN 260, ELE 217, EGN 248 | Guvench |
| EGN 481 | | | x | | | | x | | SPC (new) | 3+ | MAT 380 | Davis |
| ELE 327 | x | | | x | | | | x | Energy and Power Systems* | 3+ | ELE 323, EGN 248 | Lück |
| ELE 444 | | | x | | | | x | | Analog Integrated Circuits and Design | 3+ | ELE 343 | Guvench |
| MEE 352 | x | | | | x | | | | Analysis and Design of Composite Struct | 3+ | MEE 251, EGN 248 | Ghorashi |
| MEE 361 | | | | x | | | | x | Physical Metallurgy* | 3 | EGN 260 | Smith |
| MEE 375 | | | | | | x | | | Engineering Acoustics* | 3+ | ELE 217, EGN 248 | Lin |
| EGN 403 | x | xs | x | xs | x | xs | x | xs | Advanced Design Project | 3 | ≥ B in EGN 402, instr. perm. | |
| EGN 497 | x | xs | x | xs | x | xs | x | xs | Independent Study | 3 | Instructor permission | |

Engineering tool series

| Course | F15 | S16 | F16 | S17 | F17 | S18 | F18 | S19 | Title | Cr. | Prerequisites | Coord. |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|---------------|-----------|
| EGN 181 | | x | | | | x | | | Engineering Tools: <i>Mathematica</i> | 1 | None | Jankowski |
| EGN 182 | | | x | | | | x | | Engineering Tools: <i>SolidWorks</i> | 1 | None | Ghorashi |
| EGN 183 | | | | x | | | | x | Engineering Tools: <i>LabView</i> | 1 | None | Guvench |
| EGN 184 | x | | | | x | | | | Engineering Tools: Industrial Power | 1 | None | |
| EGN 186 | x | | | | x | | | | Engineering Tools: <i>MATLAB</i> | 1 | None | Lin |
| EGN 187 | | x | | | | x | | | Engineering Tools: <i>Pspice</i> | 1 | None | Guvench |
| EGN 188 | | | | x | | | | x | Engineering Tools: Materials Processing | 1 | None | Smith |

* Major-specific course available as an elective by other majors.

x: regular offering; may be offered in other semesters, contingent upon enrollment.

s: offered also in the summer.

c: an equivalent may be offered at SMCC.

+: Includes an additional contact hour for an integrated laboratory component.