

Major Offered At:

CORVALLIS

Blue Mountain Community College

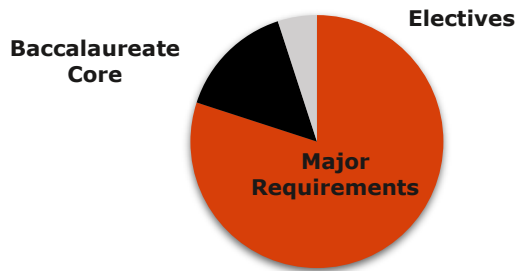
Manufacturing Engineering –Systems Option (MfgE-SYS)

Manufacturing engineers design processes and facilities for making the many products that we take for granted. They choose the best way to make a product — and develop the necessary machining tools, automation procedures, and quality control workflows. Oregon State’s MFGE-SYS program is closely aligned with industry. Students can also choose a dual major with industrial engineering.

Examples of what MFGE engineers can do:

- Developing new sensor technologies for energy efficient freeze drying of ice cream
- Designing silicon chip manufacturing processes to reduce cost and improve product quality
- Implementing laser cutting and welding for producing rock-climbing equipment
- Identifying the most cost-effective facility layout for composite aircraft manufacturing

Your Bachelor’s Degree (BS) in the College of Engineering



- A minimum of 180 credits are required for graduation; 60 must be upper division (300 and 400-level courses).
- A maximum of 135 credits earned at a community college may be applied toward a bachelor’s degree at OSU.
- Some courses can count towards your major and the Baccalaureate Core. Advisors can assist in selection.
- Other options available: Product Development (not required)
- More info at mime.oregonstate.edu/manufacturing-engineering-undergraduate-program

Courses Required for Manufacturing Engineering Major, Systems option

This list is comprehensive. Speak with OSU advisor for more information

| Manufacturing Engr.- Systems Core Requirements | Blue Mountain Equivalent Course | OSU Course | Notes |
|--|---------------------------------|-------------|---------------------------------|
| Spreadsheets for Ind. & Manuf. Engr | | IE 112 | Must be taken at OSU |
| Comp. Methods for Industrial Engr | | IE 212 | Must be taken at OSU |
| Intro to Ind. & Manufacturing Engr | | IE 285 | Must be taken at OSU |
| Intro to Engineering Computing | -- | ENGR 112 | |
| Electrical Fundamentals I | -- | ENGR 201 | |
| Statics | -- | ENGR 211 | |
| Dynamics | -- | ENGR 212 | |
| Strength of Materials | -- | ENGR 213 | |
| Engr. Graphics & 3-D Modeling | -- | ENGR 248 | |
| Intro to MIME | -- | MIME 101 | |
| Intro to Manufacturing Processes | -- | ME 250 | |
| Differential Calculus | MTH 251 | MTH 251 | |
| Integral Calculus | MTH 252 | MTH 252 | |
| Vector Calculus I | MTH 254 | MTH 254 | |
| Applied Differential Equations | MTH 256 | MTH 256 | |
| Linear Algebra I | -- | MTH 341 | Must be taken at OSU |
| Intro to Statistics for Engineers | -- | ST 314 (LD) | (LD) = Lower Division Transfer |
| General Physics (Calculus) | PH 211 | PH 211 | |
| General Physics (Calculus) | PH 212 | PH 212 | |
| General Physics (Calculus) | PH 213 | PH 213 | |
| Chemistry for Engineers | CH 221 | CH 201 | Transfers in as CH 231 + CH 261 |
| Chemistry for Engineers | CH 222 | CH 202 | Transfers in as CH 232 + CH 262 |
| Chemistry for Engineers lab | CH 222 | Ch 205 | Transfers in as CH 232 + CH 262 |

Courses Required for Manufacturing Engr. Major - Systems option, Cont.

| Manufacturing Engr.- Systems Core Requirements | Blue Mountain Equivalent Course | OSU Course | Notes |
|--|---------------------------------|----------------------|--------------------------------|
| Public Speaking Argument and Critical Discourse | COM 111 | COMM 111 COMM 114 | |
| Technical Writing | WR 227 | WR 327 (LD) | (LD) = Lower Division Transfer |

Important Notes & Resources

Important Notes for the College of Engineering and Manufacturing Engineering Major, Systems Option:

- Grade requirements: Grade of C or better in all major coursework.
- See a sample degree plan by searching "Manufacturing Engineering" at admissions.oregonstate.edu/find-your-major
- A dual major in Mechanical Engineering is also possible
- MfgE-SYS students: You can transfer **ANY** term. Talk with an OSU MfgE-SYS advisor **TWO TERMS** before you intent to transfer to discuss your specific timeline.
- MfgE-SYS can participate in two six-month paid internships with MECOP: mecopinc.org

Resources and OSU Information:

- Students do not have to complete a transfer degree in order to transfer to OSU.
 - If you've completed the Oregon AAOT, all requirements of the Baccalaureate Core are complete except for Synthesis Courses and Writing Intensive Courses.
- Preparing to apply to OSU? See admissions info: transfer.oregonstate.edu
- Want to take classes at both OSU and an Oregon community college? Check out the Degree Partnership Program: partnerships.oregonstate.edu/students
- Schedule your OSU campus tour and meet with an advisor at visitosu.oregonstate.edu/visit-campus

General Education Courses (called the Baccalaureate Core)

- Complete one course in each Perspective category with no more than two in the same department.
Full listing of Blue Mountain courses that fulfill Bacc Core requirements: admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-blue-mountain-community-college

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|----------------------------|--|--|
| SKILLS COURSES | Math Writing I Writing II Speech (Writing III) Fitness | Completed as part of the major WR 121. Required to transfer. Completed as part of the major Completed as part of the major HPE 295 |
| PERSPECTIVE COURSES | Biological Science Physical Science Additional Biological or Physical Science Cultural Diversity Literature and the Arts Social Processes and Institutions Western Culture | Choose one course from BaccCore link above Completed as part of the major Completed as part of the major Choose one course from BaccCore link above Choose one course from BaccCore link above Choose one course from BaccCore link above Choose one course from BaccCore link above |
| DPD COURSE | Difference, Power, & Discrimination | Choose one course from BaccCore link above |
| SYNTHESIS COURSES | Contemporary Global Issues Science, Technology, & Society | Upper division course, take through OSU Upper division course, take through OSU |

Advising Contacts

Academic advisors at your community college and OSU are available to answer your questions and assist you in creating a transfer plan. **See your community college advisor first and use this Transfer Guide to help you plan.** It is important to speak with your OSU academic advisor early on, and often, to ensure correct course selection and sequencing. See visitosu.oregonstate.edu/visit-campus to schedule your personalized visit.

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| Blue Mountain Community College | bluecc.edu/enrollment-services/advising |
| OSU MfgE- Systems Engineering | MIME Advisor, MIME.advising@oregonstate.edu |
| OSU College of Engineering Main Office | askengineering@oregonstate.edu |