

**Major Offered At:**

**CORVALLIS**

## Tillamook Bay Community College

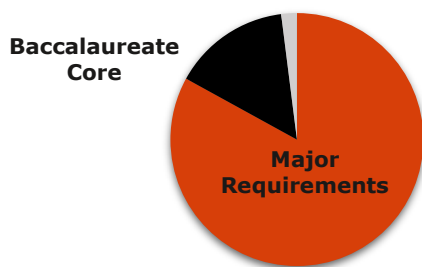
### Manufacturing Engineering – Product Development Option (MfgE-PD)

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-PD program is closely aligned with industry. Students can choose a dual major with mechanical engineering.

Examples of what MFGE engineers can do:

- Designing precision machines for efficient, high quality smartphone manufacturing
- Developing new alloys using metal powders for 3D printing of nuclear reactor components
- Designing silicon chip manufacturing processes to reduce cost and improve product quality
- Implementing laser cutting and welding for producing rock-climbing equipment

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



**Electives**

- 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: Manufacturing Systems (not required)
- More info at [mime.oregonstate.edu/industrial-engineering-undergraduate-program](http://mime.oregonstate.edu/industrial-engineering-undergraduate-program)

### Courses Required for Manufacturing Engineering Major, Prod. Dev. option

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

Manufacturing Engr.- Prod. Dev. Core Requirements	Tillamook Bay Equivalent Course	OSU Course	Notes
Intro to Engineering Computing	--	ENGR 112	
Electrical Fundamentals I	--	ENGR 201	
Electrical Fundamentals I	--	ENGR 202	
Statics	--	ENGR 211	
Dynamics	--	ENGR 212	
Strength of Materials	--	ENGR 213	
Engr. Graphics & 3-D Modeling	--	ENGR 248	
Intro to MIME	--	MIME 101	
Micro or Macro Economics	EC 201 or EC 202	ECON 201/202	Complete 1 (one) course
Differential Calculus	MTH 251	MTH 251	
Integral Calculus	MTH 252	MTH 252	
Vector Calculus I	MTH 254	MTH 254	
Applied Differential Equations	--	MTH 256	
Linear Algebra I	--	MTH 341	
Intro to Statistics for Engineers	--	ST 314 (LD)	(LD) = Lower Division Transfer
General Physics (Calculus)	--	PH 211	
General Physics (Calculus)	--	PH 212	
General Physics (Calculus)	--	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
Public Speaking	COMM 111	COMM 111	
Argument and Critical Discourse	COMM 112	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, Product Development 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](https://admissions.oregonstate.edu/find-your-major)
- A dual major in Industrial Engineering is also possible
- MfgE-PD students: You can transfer **ANY** term. Talk with an OSU MfgE-PD advisor **TWO TERMS** before you intent to transfer to discuss your specific timeline.
- MfgE-PD can participate in two six-month paid internships with MECOP: [mecopinc.org](https://mecopinc.org)
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### 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](https://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](https://partnerships.oregonstate.edu/students)

## 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 Tillamook Bay courses that fulfill Bacc Core requirements: [admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-tillamook-bay-community-college](https://admissions.oregonstate.edu/baccalaureate-core-course-equivalencies-tillamook-bay-community-college)

<b>SKILLS COURSES</b>	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 HE 295 or PE 295
<b>PERSPECTIVE COURSES</b>	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
<b>DPD COURSE</b>	Difference, Power, & Discrimination	Choose one course from BaccCore link above
<b>SYNTHESIS COURSES</b>	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](https://visitosu.oregonstate.edu/visit-campus) to schedule your personalized visit.

<b>Tillamook Bay Community College</b>	<a href="https://tillamookbaycc.edu/programs-services/degree-partnership-program">tillamookbaycc.edu/programs-services/degree-partnership-program</a>
<b>OSU MfgE- PD Engineering</b>	MIME Advisor, <a href="mailto:MIME.advising@oregonstate.edu">MIME.advising@oregonstate.edu</a>
<b>OSU College of Engineering Main Office</b>	<a href="mailto:askengineering@oregonstate.edu">askengineering@oregonstate.edu</a>