Clackamas Community College
Associate of Science Engineering Transfer
to
Oregon Institute of Technology
Bachelor of Science in Mechanical Engineering

Articulation Agreement
2018 - 2019 Catalog

It is agreed that students transferring from Clackamas Community College (Clackamas) to Oregon Institute of Technology's (Oregon Tech) Bachelor of Science in Mechanical Engineering (BME) will be given full credit for all selected courses listed below. This agreement is based on the evaluation of the rigor and content of the general education and technical courses at both Clackamas and Oregon Tech and is subject to a yearly reevaluation by both schools for continuance. This agreement is dated July 1, 2018.

Baccalaureate students must complete a minimum of 60 credits of upper-division work before a degree will be awarded. Upper-division is defined as 300-and 400-level classes at a bachelor's degree granting institution. Baccalaureate students at Oregon Tech must complete 45 credits from Oregon Tech before a degree will be awarded.

Students are responsible for notifying the Oregon Tech Admissions and Registrar's Office when operating under an articulation agreement to ensure their credits transfer as outlined in this agreement. Dual enrollment is possible according to an existing Memorandum of Understanding. In order to utilize this agreement students must be attending Clackamas during the above catalog year. Students must enroll at Oregon Tech within three years of this approval.

Clackamas Courses & Oregon Tech Equivalent Credits

Clackamas Community College Course Number & Title	Qtr. Units	Oregon Institute of Technology Course Number & Title	Qtr. Units
Humanities elective [1]	3	Humanities elective [1]	3
CH-221 General Chemistry	5	CHE 201 General Chemistry CHE 204 General Chemistry Lab	3 1
CH-222 General Chemistry	5	CHE 202 General Chemistry CHE 205 General Chemistry Lab	3 1
EC-201 Principles of Economics: MICRO **or** EC-202 Principles of Economics: Intro to MACRO	4	ECO 201 Principles of Microeconomics **or** ECO 202 Principles of Macroeconomics	3
CDT-103 Computer Aided Drafting I	3	MET 241 CAD for Mechanical Design I	2
ENGR-111 Introduction to Engineering ENGR-112 Engineering Programming	3 3	ENGR 111 MMET Orientation ENGR 266 Engineering Computation	2 3
ENGR-211 Statics	4	ENGR 211 Engineering Mechanics: Statics	4
ENGR-212 Dynamics	4	ENGR 212 Engineering Mechanics: Dynamics	3
ENGR-213 Strength of Materials	4	ENGR 213 Engineering Mechanics: Strength of Materials	4
ENGR-221 Electrical Circuit Analysis ENGR-222 Electrical Circuit Analysis II	4 4	ENGR 236 Fundamentals of Electric Circuits	3
ENGR-231 Properties of Materials	4	MECH 260 Engineering Materials I	3
MTH-251 Calculus I	5	MATH 251 Differential Calculus	4
MTH-252 Calculus II	5	MATH 252 Integral Calculus	4
MTH-254 Vector Calculus	5	MATH 254 Vector Calculus I	4
MTH-256 Differential Equations [2]	4	MATH 321 Applied Differential Equations I [2]	4
PH-211 General Physics with Calculus	5	PHY 221 General Physics with Calculus	4
PH-212 General Physics with Calculus	5	PHY 222 General Physics with Calculus	4
PH-213 General Physics with Calculus	5	PHY 223 General Physics with Calculus	4
Social Science elective [3]	3	Social Science elective [3]	3
COMM-111 Public Speaking	4	SPE 111 Public Speaking	3
WR-121 English Composition	4	WRI 121 English Composition	3
WR-122 English Composition	4	WRI 122 Argumentative Writing	3
WR-227 Technical Report Writing	4	WRI 227 Technical Report Writing	3
Total Clackamas Credits [4]	**103**	**Total Oregon Tech Degree Credits [4]**	**81**

Courses required for Oregon Tech's Bachelor of Science in Mechanical Engineering and can be taken at either Clackamas or Oregon Tech.

Clackamas Community College Course Number & Title	Qtr. Units	Oregon Institute of Technology Course Number & Title	Qtr. Units
COMM-219 Small Group Discussion [2]	4	SPE 321 Small Group and Team Communication [2]	3
MTH-261 Linear Algebra [2]	4	MATH 341 Linear Algebra I [2]	4
Social Science elective [3]	6	Social Science elective [3]	6
WLD-150 Welding Processes	4	MFG 103 Introductory Welding Processes	3
Additional Clackamas Credits [4]	**18**	**Additional Oregon Tech Credits**	**16**
Total Articulated Credits [4]	**122**	**Total Articulated Degree Credits**	**97**

In addition to the above courses, the courses listed below are also required for the Bachelor of Science in Mechanical Engineering and should be completed at Oregon Tech.

Oregon Institute of Technology Course Number & Title	Qtr. Units
ENGR 326 Electric Power Systems	3
ENGR 355 Thermodynamics	3
ENGR 491 MMET Senior Projects I	3
ENGR 492 MMET Senior Projects II	3
ENGR 493 MMET Senior Projects III	3
HUM 125 Introduction to Technology, Society and Values[2]	3
MATH 451 Numerical Methods I	4
MECH Elective [5]	12
MECH 313 Thermodynamics II	3
MECH 315 Machine Design I	3
MECH 316 Machine Design II	3
MECH 318 Fluid Mechanics I	4
MECH 323 Heat Transfer I	3
MECH 351 Finite Element Analysis	3
MECH 360 Engineering Materials II	3
MECH 363 Engineering Instrumentation	3

Fluid Mechanics II Requirement MECH 417 Fluid Mechanics II OR MECH 418 Fluid Mechanics II	3
MECH 436 Classical Control Systems	3
MECH 437 Heat Transfer II	2
MECH 480 Mechanical Vibrations	3
MET 242 CAD for Mechanical Design II	2
MET 375 Solid Modeling	3
MFG 120 Manufacturing Processes I	4
MFG 314 Geometric Dimensioning and Tolerancing	3
MGT 345 Engineering Economy	3
PHIL 331 Ethics in Professions[2]	3
Statistics Requirement Choose from: MATH 361 Statistical Methods I MATH 465 Mathematical Statistics	4
WRI 327 Advanced Technical Writing	3
Additional Oregon Tech Credits [6]	**95**
Total Degree Credits [7]	**192**

1. Students can transfer up to 9 credit hours of Humanities electives (Arts & Letters). **No more than 3 credits of activity or performing based humanities courses are accepted.** Choose from the following Clackamas prefixes: ART, ENG, HUM, MUS, PHL, R, TA, Second-year Foreign Languages or other courses designated as Humanities electives by the Oregon Tech Registrar's Office.
2. Does not count toward 60 upper-division credit requirement.
3. Students can transfer up to 6 credit hours of Social Science electives. Choose from the following Clackamas course prefixes: ANT, EC, GEO, HST, PS, PSY, SOC, SSC, and WS or other courses designated as Social Science electives by the Oregon Tech Registrar's Office.
4. Excess credits will transfer to Oregon Tech as general elective credit; these credits will **not** be used toward the Bachelor of Science in Mechanical Engineering degree.
5. Oregon Tech requires a total of at least 12 credits of Mechanical Electives.
6. Baccalaureate degree students must complete a minimum of 60 upper-division credits before a degree will be awarded. Upper-division is defined as 300- and 400-level classes at a bachelor's degree granting institution. A minimum of 45 credits must be from Oregon Tech.
7. Oregon Tech's Bachelor of Science in Mechanical Engineering requires 192 total credits.

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