

# Klamath Community College Associate of Applied Science in Advanced Manufacturing Engineering Technology to Oregon Institute of Technology Bachelor of Science in Manufacturing Engineering Technology

# Articulation Agreement 2021 - 2022 Catalog

It is agreed that students transferring with Klamath Community College's (KCC) Associate of Applied Science in Advanced Manufacturing Engineering Technology to Oregon Institute of Technology's (Oregon Tech) Bachelor of Science in Manufacturing Engineering Technology (BMAN) 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 KCC and Oregon Tech, and is subject to a yearly reevaluation by both schools for continuance. This agreement is dated July 9, 2021.

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.

Admission to Oregon Tech is not guaranteed. Students must apply for admission to Oregon Tech in accordance with the then-existing rules, policies and procedures of Oregon Tech. Dual Enrollment is possible according to an existing Memorandum of Understanding. 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. In order to utilize this agreement students must be attending KCC during the above catalog year. Students must enroll at Oregon Tech within three years of this approval.

Klamath Community College		Oregon Institute of Technology	
Docusigned by: Jeanne Laftaie	1/21/2022	Carluen Drags Starr	11/18/2021
Jeanne LaHaie, Dean		Carleen Drago Starr, Directo	r
Instruction		Educational Outreach and Partnerships	
Jamie Jennings	1/24/2022	-Docusigned by: tim Pasang	1/20/2022
Jamie Jennings, CAO/Vice President		Tim Pasang, Department Ch	air
Academic Affairs		Manufacturing and Mechanical Engineering Technology	
		Tom kuysur	1/20/2022
		Tom Keyser, Dean	
		College of Engineering, Technol	ogy, and Management
		Docusigned by: Windy (vie	12/28/2021
		Wendy Ivie	
		University Registrar	

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## Klamath Community College Degree Courses & Oregon Tech Equivalent Credits

Klamath Community College Course Number & Title	Qtr. Units	Oregon Institute of Technology Course Number & Title	Qtr. Units
CAS 133 - Introduction to Computing Skills CAS 133L - Introduction to Computing Skills Lab	4	MIS 101 - Word Processing Software Lab <sup>1</sup> MIS 102 - Spreadsheet Lab <sup>1</sup> MIS 103 - Presentation Graphics Software Lab <sup>1</sup>	
CGS 100 - College Survival and Success	3	Elective <sup>1</sup>	
CHE 221 - General Chemistry I (Preprofessional) <sup>2</sup> CHE 221L - General Chemistry I Lab <sup>2</sup>	5	CHE 221 - General Chemistry	4
Electives <sup>2</sup> MTH 112 - Elementary Functions MTH 251 - Calculus I MTH 252 - Calculus II PHY 212 - General Physics II (Calculus-based) PHY 212L - General Physics II Lab	4 4 4 4 1	MATH 112 - Trigonometry MATH 251 - Differential Calculus MATH 252 - Integral Calculus PHY 222 - General Physics with Calculus	4 4 4 4
Humanities (Arts and Letters) Electives <sup>3</sup>	6	Humanities Elective <sup>3</sup>	6
MTH 111 - College Algebra <sup>2</sup>	5	MATH 111 - College Algebra	4
MET 241 - CAD for Mechanical Design I MET 241L - CAD for Mechanical Design I Lab	3	MET 241 - CAD for Mechanical Design I	2
MET 242 - CAD for Mechanical Design II MET 242L - CAD for Mechanical Design II Lab	3	MET 242 - CAD for Mechanical Design II	2
MET 243 - CAD for Mechanical Design III MET 243L - CAD for Mechanical Design III Lab	3	MET 375 - Solid Modeling <sup>4</sup>	3
MFG 120 - Manufacturing Process I MFG 120L - Manufacturing Process I Lab	4	MFG 120 - Introductory Machining Processes	4
MFG 121 - Manufacturing Process II MFG 121L - Manufacturing Process II Lab and MFG 122 - Manufacturing Process III MFG 122L - Manufacturing Process III Lab	8	MFG 341 - Numerical Control Programming <sup>4</sup>	3
MFG 280 - Cooperative Work Experience	2	Elective <sup>1</sup>	
PHY 211 - General Physics I (Calculus- based) <sup>2</sup> PHY 211L - General Physics I Lab <sup>2</sup>	5	PHY 221 - General Physics with Calculus	4
Social Science Elective <sup>5</sup>	3	Social Science Elective <sup>5</sup>	3
SPE 111 - Fundamentals of Public Speaking	3	SPE 111 - Public Speaking	4
TEX 280 - Coop Work Exp: Seminar	1	Elective <sup>1</sup>	
WRI 121 - English Composition I	4	WRI 121 - English Composition	4
WRI 122 - English Composition II or WRI 227 – Technical Communication	4	WRI 122 - Argumentative Writing or WRI 227 – Technical Report Writing	4
Total KCC Degree Credits 1	83	Total Oregon Tech Degree Credits	63

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## Courses not required for Klamath Community College's AAS in Advanced Manufacturing Engineering Technology but are required for Oregon Tech's BS in Manufacturing Engineering Technology and can be taken at KCC or Oregon Tech.

Klamath Community College Course Number & Title	Qtr. Units	Oregon Institute of Technology Course Number & Title	Qtr. Units
Humanities Elective <sup>3</sup>	3	Humanities Elective <sup>3</sup>	3
MTH 243 - Statistics I MTH 244 - Statistics II	8	MATH 361 - Statistical Methods <sup>4</sup>	4
Social Science Elective <sup>5</sup>	6	Social Science Elective <sup>5</sup>	6
SPE 215 - Small Group Communication: Process and Theory	3	SPE 321 - Small Group and Team Communication <sup>4</sup>	3
WLD 101 - Welding Processes & Applications	3	MFG 103 - Introductory Welding Processes	3
Additional KCC Degree Credits 1	23	Additional Oregon Tech Degree Credits	19
Total KCC Degree Credits <sup>1</sup>		Total Oregon Tech Degree Credits	82

### In addition to the above courses, the courses listed below are also required for the BS in Manufacturing Engineering Technology and should be completed at Oregon Tech.

Oregon Institute of Technology Course Number & Title	Qtr. Units	
ANTH 452 - Globalization		
Engineering Science Elective		
ENGR 111 - MMET Orientation		
ENGR 211 - Engineering Mechanics: Statics		
ENGR 213 - Engineering Mechanics: Strength of Materials		
ENGR 236 - Fundamentals of Electric Circuits	3	
ENGR 266 - Computer Programming for Engineers	3	
ENGR 326 - Electric Power Systems	3	
ENGR 415 - Occupational Safety		
ENGR 491 - MMET Senior Projects I		
ENGR 492 - MMET Senior Projects II		
ENGR 493 - MMET Senior Projects III		
Manufacturing Electives		
MATH 362 - Statistical Methods II		
MECH 260 - Engineering Materials I	3	

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MECH 315 - Machine Design I		
MECH 316 - Machine Design II		
MECH 360 - Engineering Materials II		
MECH 363 - Engineering Instrumentation		
MECH 426 - Fluid Power Systems		
MFG 112 - Introduction to Manufacturing Processes		
MFG 313 - Manufacturing Analysis and Planning		
MFG 314 - Geometric Dimensioning and Tolerancing	3	
MFG 331 - Industrial Controls	3	
MFG 342 - Computer Aided Machining	3	
MFG 333 - Statistical Methods for Quality Improvement	3	
MFG 343 - Manufacturing Tool Design		
MFG 344 - Design of Manufacturing Tooling		
MFG 447 - Lean Manufacturing	3	
MFG 453 - Automation and Robotics in Manufacturing		
MFG 454 - Thermal Systems for Manufacturing		
MGT 345 - Engineering Economy		
Project Management Requirement: ENGR 445 - Engineering Project Management or MGT 335 - Project Management		
WRI 327 - Advanced Technical Writing		
Additional Oregon Tech Credits 6		
Total Oregon Tech Degree Credits 7		

- 1. Excess credits will transfer to Oregon Tech as general elective credit with the exception of developmental course work; these credits will not be used toward the BMAN.
- 2. To maximize useable credits toward the BMAN, the listed course is recommended.
- 3. Students can transfer up to nine (9) credit hours of Humanities electives into the BMAN; these courses should be designated as Humanities electives by Oregon Tech. However, only three (3) humanities credits can be studio/performance based. Choose from the following KCC prefixes: ART, ENG, MUS, PHL, THR, or Languages (second year/200-level only).
- 4. Does not count toward the 60 upper-division credit requirement.

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- 5. Students can transfer up to nine (9) credit hours of Social Science electives into the BMAN; these courses should be designated as Social Science elective by Oregon Tech. Choose from the following KCC prefixes: ATH, ECO, GEO, HST, POL, PSY, or SOC.
- 6. 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.
- 7. Oregon Tech's BMAN requires 192 credits.