

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

## Articulation Agreement 2020 - 2021 Catalog

It is agreed that students transferring with Lane Community College's (LCC) Associate of Applied Science in Manufacturing Technology to Oregon Institute of Technology's (Oregon Tech) Bachelor of Science in Manufacturing Engineering Technology (BMAN) program 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 LCC and Oregon Tech, and is subject to a yearly reevaluation by both schools for continuance. This agreement is dated July 20, 2020.

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. 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 LCC during the above catalog year. Students must enroll at Oregon Tech within three years of this approval.

Lane Community College 07/27/2020

Claudia Riumallo, Academic Advisor Advanced Technology Programs

07/31/2020

Grant Matthews, Associate Vice President CTE and Workforce Development Paul Jarrell 07/31/2020

Paul Jarrell, Ph.D. Provost and Executive Vice President Oregon Institute of Technology Orlen Dy Jrn 07/27/2020

Carleen Drago Starr, Director Educational Outreach and Partnerships 07/27/2020

Brian Monavec

Brian Moravec, Department Chair Manufacturing and Mechanical Engineering and Technology

Tom Kep

07/27/2020

Tom Keyser, Dean College of Engineering, Technology, and Management Wendy trie 07/27/2020

Wendy Ivie University Registrar LCC's AAS in Manufacturing Technology to Oregon Tech's BS in Manufacturing Technology 2020 - 2021 Catalog Page 2 of 5

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

Lane Community College Course Number & Title	Qtr. Units	Oregon Institute of Technology Course Number & Title	Qtr. Units
CNC 102 - CNC Setup and Operations CNC 103 - CNC Programming	6	MFG 341 - Numerical Control Programming <sup>1</sup>	3
COMM 219 - Small Group Communication <sup>2</sup>	4	SPE 321 - Small Group and Team Communication <sup>1</sup>	3
DRF 160 - Computer-Aided Drafting and Design <sup>2</sup>	4	MET 242 - CAD for Mechanical Design II	2
Elective <sup>2</sup> COMM 111 - Fundamentals of Public Speaking	4	SPE 111 - Public Speaking	3
MFG 153 - Manufacturing III	5	MFG 120 - Introductory Machining Processes	4
MTH 111 - College Algebra <sup>2</sup>	5	MATH 111 - College Algebra	4
MTH 112 - Trigonometry <sup>2</sup>	5	MATH 112 - Trigonometry	4
Program Core Courses CNC 101 - CNC Concepts CNC 108 - CNC Projects ENGR 280M - Co-op Ed: Manufacturing Technology MFG 101 - Safety and Basic Shop Practice MFG 102 - Shop Measurement and Coordinate System MFG 103 - Metal Cutting Basics MFG 151 - Manufacturing I MFG 152 - Manufacturing II MFG 209 - Advanced Manufacturing Processes MFG 241 - Solid Modeling I MFG 242 - Solid Modeling II MFG 254 - Manufacturing IV MFG 255 - Manufacturing V	3 3 3 3 3 3 6 4 6 3 3 12 6	Electives <sup>3</sup>	
WR 121 - Academic Composition <sup>2</sup>	4	WRI 121 - English Composition	3
Total LCC Degree Credits <sup>3</sup>	95	Total Oregon Tech Degree Credits	26

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

Lane Community College Course Number & Title	Qtr. Units	Oregon Institute of Technology Course Number & Title	Qtr. Units
CH 221 - General Chemistry I	6	CHE 201 - General Chemistry I CHE 204 - General Chemistry I Laboratory	4
ENGR 101 - Engineering Orientation	3	ENGR 111 - MMET Orientation	2
ENGR 102 - Engineering Orientation II	4	ENGR 266 - Engineering Computation	3
ENGR 115 - Engineering Graphics (Must be AutoCAD based)	3	MET 241 - CAD for Mechanical Design I	2
ENGR 211 - Statics	4	ENGR 211 - Engineering Mechanics: Statics	4

Total LCC Degree Credits <sup>3</sup>	174	Total Oregon Tech Degree Credits	88
Additional LCC Degree Credits <sup>3</sup>	79	Additional Oregon Tech Degree Credits	62
WR 227 - Technical Writing	4	WRI 227 - Technical Report Writing	3
WR 122 - Argument, Research, and Multimodal Composition	4	WRI 122 - Argumentative Writing	3
Social Science Electives <sup>5</sup>	9	Social Science Electives <sup>5</sup>	9
PH 211 - General Physics with Calculus PH 212 - General Physics with Calculus PH 213 - General Physics with Calculus	15	PHY 221 - General Physics with Calculus PHY 222 - General Physics with Calculus PHY 223 - General Physics with Calculus <sup>3</sup>	4 4 
MTH 252 - Calculus II (Integral Calculus)	5	MATH 252 - Integral Calculus	4
MTH 251 - Calculus I (Differential Calculus)	5	MATH 251 - Differential Calculus	4
Humanities Electives <sup>4</sup>	9	Humanities Electives <sup>4</sup>	9
ENGR 221 - Electrical Fundamentals I	4	ENGR 236 - Fundamentals of Electrical Circuits	3
ENGR 213 - Strength of Materials	4	ENGR 213 - Engineering Mechanics: Strength of Materials	4

### 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		
ANTH 452 - Globalization	3	
Engineering Science Elective - choose one: ENGR 212 - Engineering Mechanics: Dynamics ENGR 355 - Thermodynamics MECH 318 - Fluid Mechanics		
ENGR 326 - Electric Power Systems	3	
ENGR 415 - Occupational Safety	3	
ENGR 491 - MMET Senior Projects I	3	
ENGR 492 - MMET Senior Projects II	3	
ENGR 493 - MMET Senior Projects III	3	
MATH 361 - Statistical Methods I	4	
MATH 362 - Statistical Methods II	4	
MECH 260 - Engineering Materials I	3	
MECH 315 - Machine Design I	3	
MECH 316 - Machine Design II	3	
MECH 360 - Engineering Materials II	3	

MECH 363 - Engineering Instrumentation	3
MECH 426 - Fluid Power Systems	
MET 375 - Solid Modeling	
MFG Electives	
MFG 103 - Introductory Welding Processes	
MFG 112 - Introduction to Manufacturing Processes	
MFG 313 - Manufacturing Analysis and Planning	
MFG 314 - Geometric Dimensioning and Tolerancing	
MFG 331 - Industrial Controls	
MFG 333 - Statistical Methods for Quality Improvement	
MFG 342 - Computer Aided Machining	
MFG 343 - Manufacturing Tool Design	
MFG 344 - Design of Manufacturing Tooling	
MFG 447 - Lean Manufacturing	3
MFG 453 - Automation and Robotics	3
MFG 454 - Thermal Systems for Manufacturing	
MGT 345 - Engineering Economy	
Project Management Requirement - choose one: ENGR 445 - Engineering Project Management MGT 335 - Project Management	
WRI 327 - Advanced Technical Writing	3
Additional Oregon Tech Credits 6	
Total Oregon Tech Degree Credits 7	

- 1. Does not count toward the 60 upper-division credit requirement.
- 2. To maximize useable credits toward the BMAN, the listed course is recommended.
- 3. 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.
- 4. 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 LCC prefixes: ART, ENG, HUM, MUP, MUS, PHL, TA, or Languages (second year/200-level only).
- 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 LCC prefixes: ANTH, ECON, GEOG, HST, PS, PSY, or SOC.

LCC's AAS in Manufacturing Technology to Oregon Tech's BS in Manufacturing Technology 2020 - 2021 Catalog Page 5 of 5

- 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.