

Grand Rapids Community College
Plastics & Polymer Engineering Technology A.A.S.
Transfer Guide & Articulation Agreement

Manufacturing Engineers get involved on the ground level of the production of a variety of industrial and consumer goods and develop the expertise to see production through to completion. Their knowledge of process design, analysis, planning, supervision, manufacturing methods, and equipment is used from start to finish. The location of every machine, the movement of each tool or part, the order of operation, and the selection of the machines themselves are all decisions that Manufacturing Engineers make as part of the total production process. Students learn to identify and select materials based on production requirements and work closely with computer-aided design equipment. Employment opportunities exist across the spectrum of manufacturing industries. Specific position titles such as Manufacturing Engineer, Process Engineer, Production Engineer, Tool Engineer, Quality Engineer, and Industrial Engineer often are given to the individual performing Manufacturing Engineering functions.

General Admission Criteria

To be admitted to this degree, students must have completed 57 semester hours of college course work with an overall 2.50 GPA or department approval is required. Successful completion of a course requires a grade of "C" or higher for any credits taken at an institution other than Ferris. Students will need to submit official transcripts from all accredited colleges/universities with their application. If re-admission is required, students are subject to the latest check sheet requirements. This program requires a computer laptop; see advisor for laptop specifications.

Course Requirements

Grand Rapids Community College			
Course	Ferris Equiv.	GRCC Course Titles	Cr. Hrs.
EG 110	ETEC 140	Industrial Graphics w/ CAD	3
MN 219	PLTS General Cr.	Survey of Polymer Technology	3
MN 220	PLTS General Cr.	Basic Plastic Processes	4
MA 110	MATH General Cr.	College Algebra	4
EN 100 or EN 101	ENGL 150 ENGL 150	College Writing or English Composition 1	3
EN 102	ENGL 250	English Composition 2	3
MN 165	PLTS 223	Plastics Testing	4
MN 233	PLTS General Cr.	Injection Molding	3
MN 242	PLTS 211	Applied Injection Molding	4
MA 108	MATH 120	Trigonometry	2
PH 125	PHYS 211	College Physics	4
DR 241	CDTD General Cr.	Mold Design and Theory	3
COM 131	COMM 121	Fundamentals of Public Speaking	3
MN 244	PLTS 121	Advanced Plastic Processes	4
MN 119	MFGT General Cr. and MFGT 150	Intro to Machine Operations	4
DR 258 or DR 260 or DR 150	CDTD General Cr. or APPS 305 or APPS 305	Pro Engineering OR Catia OR Solidworks	3
PS 110	PLSC 121	Survey of American Government (required for GRCC AAAS)	3
TE 114	MATL 240	Material Science	4
MN 217	MECH General Cr.	Hydraulics	4
WE Elective	RMLS General Cr.	Required for GRCC Graduation	1
Total GRCC Credits			66

Ferris State University		
Course	FSU Course Titles	Cr. Hrs.
Gen-Ed*	Cultural Awareness	9
Gen-Ed*	Social Awareness	6
MATH 220	Analytical Geometry/Calculus	4
MECH 340	Statics and Strengths	4
MFGE 311	Industrial Engineering	4
MFGE 312	CNC and CAM	4
MFGE 321	Metrology	3
MFGE 322	Production Processes	3
MFGE 324	Principles of Process Planning I	3
MFGE 326	Process Tolerance Design and Analysis	2
MFGE 341	Quality Science Statistics	3
MFGE 342	Statistical Process Engineering	3
MFGE 393	Internship in Manufacturing Engineering	4
MFGE 411	Principles of Process Planning II	2
MFGE 421	Automation and System Design	4
MFGE 422	Manufacturing Facilities Planning	3
MFGE 423	Engineering Economics	2
MFGE 442	Design of Experiments	3
WELD 416	Production Welding Processes	2
Total Ferris Credits		68

TOTAL CREDITS required for BS: 134

*These courses can be completed at GRCC, however, students must consult with Ferris Faculty Advisor prior to completing the courses due to the timeline and sequencing needed to complete the degree.

Contact Information

Ferris Statewide, FSU-Grand Rapids
 (616) 451-4777 or fsugr@ferris.edu
www.ferris.edu/statewide

Big Rapids Campus
College of Engineering Technology
<http://www.ferris.edu/HTMLS/colleges/>
 231-591-3773

Delivery Locations

This degree and the Ferris courses are offered at the following locations:

- Ferris State University, Big Rapids Campus, Big Rapids MI
- Select courses may be delivered online and/or in a mixed delivery format (i.e. a mix of online and face-to-face instruction at the Ferris Main Campus or at an off-campus location)

Online Orientation

Orientation is required for students who register for an online *course*. They must first demonstrate competency in FerrisConnect skills. This may be done by taking a tutorial and quiz or by submitting a waiver request (for those who have already taken and passed online courses). First check with the department that offers the class to determine their particular needs regarding registration for online course work and/or your Ferris advisor.

Advising Notes

It is recommended that potential applicants meet with an advisor to review the degree, course schedule, and have any questions answered prior to completing an application. **Students who are completing the MACRAO Stamp may have different general education course requirements for the particular degree selected. Meeting with a Ferris advisor prior to the selection of any electives or general education classes shown above could reduce the chance of completing a course that will not apply toward the selected degree.** Once admitted, students must continue to meet with an advisor as they work towards graduation.

Indemnification

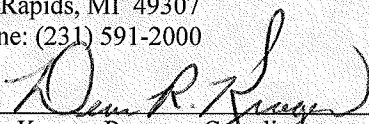
To the extent permitted by law, Ferris State University and Grand Rapids Community College agree to indemnify and hold one another harmless from any and all claims initiated by student participants, their parents, survivors, or agents, arising from any negligent acts or omission on the part of either institution or any of their employees.

Articulation Agreement


This Agreement shall commence as of February 14, 2014, and shall be for an initial term of four years, unless Ferris or Grand Rapids Community College terminate this Agreement in accordance with the terms of this Agreement, or unless either party is in material breach of any term of this Agreement. Termination by either party requires ninety (90) days prior written notice. Ferris or Grand Rapids Community College may terminate this Agreement by providing the other party with written notice, by first class mail, of the termination of the Agreement.

Ferris State University, Manufacturing Engineering Technology B.S. Grand Rapids Community College, Plastics and Polymer Engineering Technology A.A.A.S

Ferris State University
1201 S. State Street
Big Rapids, MI 49307
Phone: (231) 591-2000

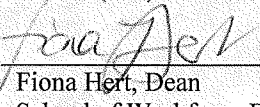


Dean Krager, Program Coordinator
School of Design and Manufacturing

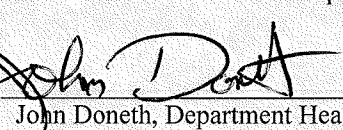


Larry Schult, Dean
College of Engineering Technology

Grand Rapids Community College
143 Bostwick Avenue N.E.
Grand Rapids, MI 49503
Phone: (616) 234-4000



Fiona Hert, Dean
School of Workforce Development



John Doneth, Department Head
Manufacturing

Effective February 2014