

University of Wisconsin-Stout

**B.S. MANUFACTURING ENGINEERING TRANSFER ARTICULATION**

University of Wisconsin-Green Bay and Northeast Wisconsin Technical College

Pre-Manufacturing Engineering Programs at University of Wisconsin-Green Bay and Northeast Wisconsin Technical College

<i>Northeast Wisconsin Technical College</i>			<i>University of Wisconsin-Green Bay</i>			<i>University of Wisconsin-Stout</i>		
<b>GENERAL EDUCATION</b>								
<b>Communication Skills</b>								
10-801-175 OR 10-801-195	English Composition 1 Written Communication	3	ENG COMP 100	College Writing	3	ENGL 101	Freshman English Composition	3
10-801-185	English Composition 2	3	ENG COMP 105	Expository Writing	3	ENGL 102	Freshman English Reading & Writing	3
10-801-198 OR 10-801-196	Speech Oral/Interpersonal Communications	3	COMN 133	Fundamentals of Public Address	3	SPCOM 100	Fundamentals of Speech	2
<b>Analytical Reasoning</b>								
			MATH 202	Calculus and Analytic Geometry I	4	MATH 156	Calculus and Analytical Geometry I	4
			MATH 203	Calculus and Analytic Geometry II	4	MATH 157	Calculus and Analytical Geometry II	4
<b>Humanities and Social Sciences</b>								
Approved NWTC Fine Arts & Humanities (9 credits) and Social/Behavioral Sciences (9 credits) courses can be used to meet UW-Stout requirements. Course options include: 10-809-172 Race Ethnic & Diversity 3 cr 10-809-166 Intro to Ethics 3 cr 10-809-196 Intro to Sociology 3 cr 10-809-198 Intro to Psychology			Approved UW-GB Fine Arts & Humanities (9 credits) and Social/Behavioral Sciences (9 credits) courses can be used to meet UW-Stout requirements			<b>Humanities &amp; the Arts</b> <i>Minimum of two (2) areas from the approved general education listings. Note: A single depth requirement must be met in either Humanities and the Arts or Social &amp; Behavioral Sciences</i>		9
						<b>Social &amp; Behavioral Sciences</b> <i>Minimum of two (2) areas from the approved general education listings. Note: A single depth requirement must be met in either Humanities and the Arts or Social &amp; Behavioral Sciences</i>		9
<b>Natural Science</b>								
			CHEM 211	Principles of Chemistry I	5	CHEM 135	College Chemistry	5
<b>Health Enhancement and Physical Well - Being</b>								
			PHY ED	Any PHY ED activity class	2	<i>Elective from approved General Education listing</i>		2
<b>Technology</b>								
						<i>Elective from approved General Education listing</i>		2
<b>Total General Education Credit Hours: 43</b>								

**PROFESSIONAL STUDIES**

**Mathematics and Basic Sciences**

			MATH 305	Ordinary Differential Equations	3	MATH-250	Differential Equations/Linear Algebra	3
						STAT 330	Probability and Statistics for Eng.	3
			CHEM 212	Principles of Chemistry II	5	CHEM-341	Chemistry of Materials 1 credit CHEM elective	4
			PHYSICS 201	Principles of Physics I	5	PHYS-281	University Physics I	5
			PHYSICS 202	Principles of Physics II	5	PHYS-282	University Physics II	5

**Engineering Core**

10-623-170	Intro to Engineering Materials	3	ENGR 201	Engineering Materials	4	MFGT-150	Intro. to Engineering Materials 1 credit MFGE elective	3
10-623-173	Engineering Mechanics	3	ENGR 313 ENGR 314	Mechanics I Mechanics II	3 3	MECH-293	Engineering Mechanics 3 credit MECH elective	3
10-632-174	Mechanics of Materials	3				MECH-294	Mechanics of Materials	3
						ELEC-290	Circuits & Devices	4
						MFGE-275	Thermodynamics and Heat Transfer	2

**Process, Assembly, and Product Engineering**

10-606-113 and 10-606-126	CAD	2				CADD-112	Engineering Drawing I	3
10-606-157	Geometric Dimension/Tolerance Solidworks Fund and Drawings	2				CADD-436	CAD Problems (solid modeling)	3
						MFGE-441	Design of Jigs, Fixtures, and Tooling	3
						MFGE-405	Capstone I: Product/System Design	3

**Materials and Manufacturing Processes**

10-623-171	Polymer & Composite Processes	3				MFGT-251	Polymer & Composite Proc.	3
10-623-172	Material Removal & Forming Processes	3				MFGT-252	Material Removal & Forming Proc.	3
10-623-175	Casting & Joining Processes	3				MFGT-253	Casting & Joining Proc.	3
						MFGE-351	Mfg Process Engineering I	3
						MFGE-352	Mfg Process Engineering II	3

**Manufacturing Integration Methods and System Design**

						MFGE-325	Computer Aided Manufacturing	3
						MFGE-363	Controls & Instrumentation	4
						MFGE-391	Fluid Mechanics	2
						MFGE-415	Industrial Robotics	2
						MFGE-410	Capstone II: Mfg Sys. Design	3
						MFGE-440	Design & Simulation of Mfg.	3

							Systems	
<b>Manufacturing Competitiveness</b>								
						INMGT-300	Engineering Economy	2
						INMGT-422	Quality Engineering	3
						INMGT-335	Lean Manufacturing Systems	4
<b>Professional Selective (1 credit minimum)</b>								
<i>Typically used for an internship or co-operative work experience</i>								
							<b>Total Professional Credit Hours:</b>	<b>89</b>
							<b>TOTAL CREDIT HOURS:</b>	<b>132</b>

Pre-Engineering/Manufacturing Engineering

1. If courses have been substituted for those specified in the program plan, they would be reviewed on a case-by-case basis and determined how they apply to the degree at UW-Stout.
2. Elective courses taken at UW-GB or NWTC for the program will be reviewed on a case-by-case basis and determined how they apply to the degree at UW-Stout.
3. Courses which have been completed with a grade of D are acceptable to meet program requirements unless the UW-Stout major requires a higher acceptable grade. UW-Stout courses requiring a minimum grade of C for transfer are primarily those in the Math, Physics, Science and Professional Studies areas.
4. The attached 2004 program plan sheet reflects the requirements in the Manufacturing Engineering program that pertains to this agreement.

**NOTES:**

UWGB

NWTC

Other notes:

1. UW-Stout requirement of a general education technology class can be satisfied by the student either taking a UW-Stout GE-Technology course that is offered online or by individual advisement of a UWGB or NWTC course that would sufficiently satisfy the intent of the requirement.
2. Professional Selective can be satisfied by a number of options by advisement but students should be encouraged to complete an internship or co-op experience. Prior work experience can also be used to satisfy the requirement if the work was engineering design related.