

Engineering Technology Credit Transfer: MPTC Associate Degree to UWGB Bachelor's Degree

In accordance with the University of Wisconsin System guidelines for articulation agreements between UW System institutions and Wisconsin Technical College System (WTCS) districts, the following associates programs at Moraine Park Technical College (MPTC) will count for significant block credit transfers into the Mechanical and Electrical Engineering Technology programs at UW-Green Bay (UWGB). Each will be discussed separately with material required by the AIS 6.2 guidelines for developing program-to-program articulation agreements.

1. UW-Green Bay Mechanical Engineering Technology BS

Presented below is the curriculum for UWGB's Mechanical Engineering Technology Program.

UWGB Mechanical Engineering BS requirements

(without general education and graduation requirements, unless fulfilled by degree requirements)

Support Group (32-37 credits)

ET 101	Fundamentals of Engineering Technology (2 cr)
ET 130	Basic Electrical Circuits I (3 cr)
<i>either both</i>	
CHEM 211, 213	Principles of Chemistry I Lecture and Lab (5 cr)
CHEM 212, 214	Principles of Chemistry II Lecture and Lab (5 cr)
<i>or</i>	
ET 206	Chemistry for Engineers (5cr)
MATH 202	Calculus & Analytic Geometry I
MATH 203	Calculus & Analytic Geometry II
MATH 260	Introductory Statistics (4 cr)
PHYSICS 103 or 201	Fundamentals of Physics I (5 cr) or Principles of Physics I – either algebra or calculus based
PHYSICS 104 or 202	Fundamentals of Physics II (5 cr) or Principles of Physics II – either algebra or calculus based

Fundamentals Group (24 credits)

ENGR 213	Mechanics I: Statics (3 cr)
ENGR 214	Mechanics II: Dynamics (3 cr)
ET 105	Fundamentals of Drawing (3 cr)
ET 106	Parametric Modeling I (2 cr)
ET 116	Basic Manufacturing Processes (3 cr)
ET 118	Fluids I (2 cr)
ET 207	Parametric Modeling II (2cr)
ET 220	Mechanics of Materials (3 cr)
ET 221	Machine Components (3 cr)

Advanced Study Group (28 credits)

CHEM 320/PHYSICS 320	Thermodynamics & Kinetics (3 cr)
ENGR 301	Engineering Materials (4 cr)
ET 308	Finite Element Analysis (3 cr)
ET 318	Fluids II (2 cr)
ET 322	Design Problems (3 cr)
ET 324	Motors & Drives (3 cr)

ET 360	Project Management (3 cr)
ET 390	Mechatronics (4 cr)
<i>One of</i>	
ET 410	Capstone Project (3 cr)
ET 400	Co-op/Internship in Engineering Technology (3 cr)

A. MPTC Mechanical Design Technology 10-606-1 Associate's Degree

Rationale for how programs are related: The Associates program in Mechanical Design Technology is a good fit for the fundamentals group of courses in UW-Green Bay's Mechanical Engineering Technology (MET) program. Students completing the associate's degree will meet the desired learning outcomes for the fundamentals course array and some of the supporting courses in UWGB's BS MET degree. Presented below are the curriculum for MPTC's Associate program and the array of courses in the UWGB program that the Associate program will fulfill in a block transfer.

Proposed Articulated Block of Courses

Note that the two lists below, MPTC Associate's degree requirement and block list of classes that the associate's will fulfill, are not equivalent course lists. The MPTC list is the required course list for the associate's degree and the UWGB list is the fundamentals and supporting course block that the MPTC degree will fulfill.

MPTC Mechanical Design Technology Associate			UWGB Courses		
Course #	Course name	Credits	Course #	Course name	Credits
10-103-159	Computer Literacy	1	ET 101	Funds Eng Tech	2
10-606-176	CAD 2-D, Autocad	3	ET 105	Fund. Of Drawing	3
10-617-114	CAD 3-D, Solidworks	3	ET 106	Parametric Model I	2
10-623-162	Manufacturing Processes	3	ET 116	Basic Man. Processes	3
10-804-113	Coll. Tech. Math 1A	3	ET 207	Parametric Model. II	2
10-804-114	Coll. Tech. Math 1B	2	ET 220	Mechanics of Materials	3
10-890-101	College 101	2	ET 221	Machine Components	3
10-606-116	Machine Elements	3	First Year Seminar		3
10-606-132	Materials of Industry	3	Social Science		3
10-617-115	Jig and Fixture Design	3	Social Science		3
10-801-136	English Comp. 1	3	Humanities		3
10-804-116	Coll. Tech. Math 2	4	ENG COMP 100		3
10-809-195	Economics	3	MATH 104 (Math Competency)		3
10-606-107	Component Design	4	Communications		3
10-606-112	Int. Man. Plan.-Mech. Design	2	Elective Credit Block		29
10-606-128	Design Statics	3			73
10-623-196	Geo. Dim. And Toler.	3			
<i>One of:</i>	10-801-196 Oral/Inter. Comm.	3			
<i>of:</i>	10-801-197 Technical Report	3			
10-809-166	Intro. to Ethics	3			
10-606-111	Int. Man. Prod.-Mech. Design	2			
10-606-125	Product Design	4			
10-606-130	Strength of Materials	3			
10-617-149	Tool Design	4			
<i>One of:</i>	10-809-198 Intro. Psychology	3			
<i>of:</i>	10-809-199 Psych Human Rel.	3			
	Elective credits	3	Direct Course Equivalent		
		<u>73</u>	General Education Course		

Courses still needed at UWGB

Course		Credits
MATH 202	Calculus & Analytic Geometry I	4
MATH 203	Calculus & Analytic Geometry II	4
MATH 260	Introductory Statistics	4
PHYSICS 103	Fundamentals of Physics I	5
Physics 104	Fundamentals of Physics II	5
ET 118	Fluids 1	2
ET 130	Basic Electrical Circuits 1	3
ET 206	<i>Chemistry for Eng.</i>	5
	<i>Or BOTH</i>	
	<i>CHEM 211/213 Principles of Chemistry 1 (lec & lab)</i>	5
	<i>CHEM 212/214 Principles of Chemistry 2 (lec & lab)</i>	5
ET 213	Mechanics 1: Statics	3
ET 214	Mechanics 2: Dynamics	3
Advanced study group		28
Remaining general education & graduation requirements		

2. UW-Green Bay Electrical Engineering Technology BS

Presented below is the curriculum for UWGB's Electrical Engineering Technology Program.

UWGB Electrical Engineering BS requirements

(without general education and graduation requirements, unless fulfilled by degree requirements)

Support Group (20 credits)

ET 101	Fundamentals of Engineering Technology (2 cr)
MATH 202	Calculus & Analytic Geometry I (4 cr)
MATH 203	Calculus & Analytic Geometry II (4 cr)
PHYSICS 103 or 201	Fundamentals of Physics I or Principles of Physics I (5 cr) – either algebra or calculus based
PHYSICS 104 or 202	Fundamentals of Physics II or Principles of Physics II (5 cr)-either algebra or calculus based

Fundamentals Group (29 credits)

ET 105	Fundamentals of Drawing (3 cr)
ET 130	Basic Electrical Circuits I (3 cr)
ET 131	Basic Electrical Circuits II (3 cr)
ET 142	Introduction to Programming (3 cr)
ET 150	Codes, Safety, and Standards (2 cr)
ET 211	Digital Electronics (3 cr)
ET 232	Semiconductor Devices (3 cr)
ET 233	Linear Circuits (3 cr)
ET 240	Microcontrollers & Programmable Logic Controllers (3 cr)
ET 250	Signals and Systems (3 cr)

Advanced Study Group (31 credits)

ET 324	Motors and Drives (3 cr)
ET 340	Advanced PLCs (3 cr)
ET 342	Supervisory Control and Data Acq (3 cr)
ET 344	Human Machine Interface (3 cr)
ET 346	Electric Power Systems (3 cr)
ET 348	Electromagnetic Fields and Applications (3 cr)
ET 350	Data Communication and Protocols (3 cr)
ET 360	Project Management (3 cr)
ET 390	Mechatronics (4 cr)

One of

ET 410	Capstone Project (3 cr)
ET 400	Co-op/Internship in Engineering Technology (3 cr)

A. MPTC Mechtronics Associate's Program 10-620-2

Rationale for how programs are related: The Associate's program in Mechatronics is a good fit for the fundamentals group of courses in UW-Green Bay's Electrical Engineering Technology (ElecET) program. Students completing the Associate's degree will meet the desired learning outcomes for the fundamentals course array and some of the supporting courses in UWGB's BS ElecET degree. Presented below are the curriculum for MPTC's Associate's program and the array of courses in the UWGB program that the Associate's program will fulfill in a block transfer.

Proposed Articulated Block of Courses

Note that the two lists below, MPTC Associate's degree requirement and block list of UWGB classes that the Associate's will fulfill, are not equivalent course lists. The MPTC list is the required course list for the Associate's degree and the UWGB list is the fundamentals and supporting course block that the MPTC degree will fulfill.

MPTC Mechatronics Associate

Course #	Course name	Credits
10-103-159	Computer Literacy	1
10-620-101	DC Circuits	3
10-620-102	AC Circuits	3
10-801-136	English Comp. 1	3
10-804-113	Coll. Tech. Math 1A	3
10-804-114	Coll. Tech. Math 1B	2
10-890-101	College 101	2
10-620-103	Semiconductor Devices	3
10-620-104	Digital Electronics	3
10-620-115	AC-DC Machinery	4
10-804-116	Coll. Tech. Math 2	4
One of:	10-809-199 <i>Psych Human Rel.</i>	3
	10-809-198 <i>Intro. Psych</i>	
10-620-105	Ind. Hydraulics/Pneumatics 1	2
10-620-110	Int. Man. Plan.-Mechatronics	2
10-620-133	Data Acquisition Control	3
10-620-135	Basic PLC	3
10-620-150	PC Interfacing & Comm.	3
10-806-137	Comp. Tech. Physics	4
10-620-111	Int. Man. Production	2
10-620-136	Advanced PLC	3
10-620-146	Modern Controls	3
10-620-151	Robotics	3
10-801-197	Technical Reporting	3
10-809-166	Intro Ethics: Theory & App	3
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UWGB Courses

Course #	Course name	Credits
ET 101	Funds Engin. Tech.	2
ET 105	Fund. of Drawing	3
ET 130	Basic Elec. Circuits I	3
ET 131	Basic Elec. Circuits II	3
ET 142	Intro. To Program.	3
ET 150	Codes, Safety, Stand.	2
ET 232	Semiconductor Dev.	3
ET 240	Microcon. and PLCs	3
ET 250	Signals and Systems	3
ET 311	Digital Electronics	3
PHYSICS 104	Fund. of Physics II	5
MATH 104	Elem Func: Alg & Trig	4
	First Year Seminar	3
	English Competency	3
	Humanities	3
	Social Science	3
	Communications	3
	Elective Credit Block	16
		68
	Direct Course Equivalent	
	General Education Course	

Courses still needed at UWGB

Course	Credits
ET 233 Linear Circuits	3
MATH 202 Calculus & Analytic Geometry I	4
MATH 203 Calculus & Analytic Geometry II	4
PHYSICS 103 Fundamentals of Physics I	5
Advanced study group	31
Remaining general education & graduation requirements	