Articulation Agreement

Waukesha County Technical College (WCTC)
School of Applied Technologies
AAS Architectural Drafting/Construction Technology (10-614-5)
AAS Automation Systems Technology (10-664-1)
AAS Electrical Engineering Technology (10-662-1)
AAS Electronic Systems Technology (10-663-4)
AAS Manufacturing Engineering Technology (10-623-3)
AAS Manufacturing Integration Engineering Technology (10-664-4)
AAS Mechanical Design Technology (10-606-1)
AAS Mechanical Engineering Technology (10-606-2)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

Effective Date: 2/1/2025 Next Review Date: 2/1/2030

☒New Agreement ☐Revised Agreement

Agreement Description and Rationale:
This agreement is entered into by Waukesha County Technical College (WCTC) and the University of Wisconsin-Milwaukee to better facilitate the transfer of students who successfully complete an appropriate Associate of Applied Science (AAS) degree and wish to pursue the Bachelor of Science in Engineering (BSE).

WCTC offers AAS degrees for students interested in careers in technology. The graduates from these programs are highly skilled and practicing their skills in industry. Many consider earning a bachelor's degree to further advance their abilities and career. The BS in Engineering is designed so that those who have earned an AAS can continue their education and recognizes their previous education and experience in a technology field.

Admission Requirements/Conditions:
Students must meet all standard UWM admissions requirements to be eligible for participation in this agreement. Information on transfer admissions requirements may be found at transfer.uwm.edu.

Articulation Transfer Agreement Terms:
The terms of this agreement apply to WCTC students who successfully complete one of the identified associate degrees listed above, meet the conditions set forth herein for UWM's College of Engineering & Applied Science, and enroll in the BS in Engineering. Technical degrees not listed here may also apply under the general terms of this agreement, subject to review of the technical coursework and approval by CEAS faculty.

The listed AAS degrees will transfer to UWM's BS in Engineering in accordance with the following:

- The WCTC AAS degree must be posted on an official transcript in order for this agreement to be applied.
  - Students actively enrolled in the AAS degree and expecting to complete it prior to enrollment may be admitted under the general terms of this agreement, pending receipt of a final, degree-bearing transcript.
  - Without associate degree completion, course-by-course transfer rules will be referenced, and some equivalencies identified in this agreement may no longer apply.
- A minimum of 60 credits earned toward the AAS degree will transfer as stipulated in Appendix A.

- Course equivalencies specified in this articulation agreement are subject to change in the event that either curriculum for the AAS degree or Engineering BS program undergoes revision.

All credits applied to associate degree requirements, including credits accepted in transfer or awarded through prior learning assessment, will be recognized by UWM and transfer as applied by the associate degree-awarding institution.

Program-to-program transfer courses/credits are accepted only for the UWM program/degree specified in this agreement. A change of major/degree/program may invalidate these courses/credits for transfer unless they are approved within some other transfer agreement for a different major/degree/program at UWM.

Coursework taken in addition to what is required for the associate degree will be evaluated on a course-by-course basis and transferred in accordance with routine UWM transfer policy. A maximum of 72 credits can be transferred from WCTC to UWM. Information on the transferability of specific, non-articulating courses may be found in Transferology (www.transferology.com) or UWM's Transfer Equivalency Database (TED) (ted.uwm.edu). For UWM General Education Requirement (GER) transfer equivalencies, refer to Appendix B.

Graduation Requirements/Policies:
In addition to meeting all General Education and major requirements, students must satisfy the following to receive the Engineering BS at UWM:

- Students must maintain an average GPA of at least 2.00 on all work attempted at UWM and all courses offered by the College of Engineering & Applied Science. Students majoring in the Engineering BS must maintain an average GPA of at least 2.00 in all 300-level and above courses in Engineering.
- In order to provide maximum flexibility while preserving the institutional identity of a UWM degree, the College requires residence:
    1. during the last 30 credits,
    2. during 45 of the last 60 credits, or
    3. during any 90 credits of a student's undergraduate career.

Transfer course/credit articulation tables showing how the identified AAS degrees from WCTC transfer to UWM's BS in Engineering appear in Appendix A. Some coursework may be combined to meet requirements within the Engineering BS. Also, some courses that ordinarily do not transfer may do so under the terms of this agreement. Without associate degree completion, some coursework/equivalencies outlined in this agreement may not transfer as indicated.

Institutional Commitment:
This agreement is based on curricula in place for the 2024-25 academic year. The terms of this agreement may be applied to degrees completed prior to 2024 upon individual review to ensure consistency in the curriculum. This agreement is valid for a period of five years. Both WCTC and UWM agree to provide periodic updates in the instance that requirements for any of the programs change. At the end of the effective period, the terms of the agreement will be reviewed, updated as necessary, and continued if agreed upon by both parties.

In the instance either school wishes to end the agreement, 180-day advanced notice is required. Any students who have applied, been admitted, and/or have matriculated while the agreement was active will be allowed to continue under its original terms.

WCTC and UWM will make the terms of this agreement public and may develop marketing materials for its promotion. Each institution will provide advising as appropriate to interested students regarding this agreement. The two institutions agree to provide information necessary to aid in the successful transfer of these students and their academic credits.

Both institutions reserve the right to review and approve marketing materials created for the promotion of this agreement and will adhere to stated standards for the use of their respective names and logos. Furthermore, each institution assumes responsibility for communicating and marketing this agreement to its student population. Links to this agreement may be provided and should be maintained regularly, with notification to the other institution.

Approved by:

The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee

03/19/2025

Andrew Daire, Ph.D. Date
Provost/Vice Chancellor of Academic Affairs

03/20/2025

Brett Peters, Ph.D., Date
Dean, College of Engineering & Applied Science

Waukesha County Technical College

DocuSigned by:
14A1072F134E489...
3/24/2025

Brad Piazza, Ph.D., Date
Provost/Vice President of Learning

Signed by:
39E83A03A0854F9...
3/24/2025

Michael Shiels, Date
Dean, School of Applied Technologies

Signed by:
84CE1138B8F0468...
3/21/2025

Andrea Wolf, Date
Dean, School of Business

Official notices regarding this agreement should be sent to:

University of Wisconsin-Milwaukee

Chris Head
Assistant Director of Transfer Services
P.O. Box 729
Milwaukee, WI 53201-0729
head@uwm.edu
414-229-2754

Waukesha County Technical College

Margo Leone
Coordinator—Academic Affairs
800 Main Street
Pewaukee, WI 53072
mleone@wctc.edu
262-691-516

A copy of this agreement will be uploaded to: https://uwm.edu/registrar/students/articulation-agreements/.

Appendix A.1: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Applied Technologies
AAS Architectural Drafting/Construction Technology (10-614-5)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

The following table outlines a typical transfer scenario, showing how the associate degree curriculum applies to the bachelor's degree and which requirements remain to complete at UWM. To maximize credit transfer, some substitutions may be identified. While every effort is made to maximize credit transfer, lack of alignment between degree programs and levels may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional courses			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			Met by Math & Natural Sci Req	--
Quantitative Literacy-Part B			Met by Math & Natural Sci Req	--
World Language			Two yrs HS (or 2 semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			ENGLISH 310	3
	801-198 Speech*	3	COMMUN 103	
Natural Science (6 credits)			Met by Math & Natural Sci Reqs	--
(including one lab)	806-143 (credits count below)	--	PHYSICS XN & 121	
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psych of Human Relations	3		
Cultural Diversity			May be met by GER course above	--
Math & Natural Science Req				
Calculus & Analytic Geometry I			MATH 231	4
Calculus &Analytic Geometry II			MATH 232	4
Probability and Statistics			IND ENG 367	3
Math Electives (7 credits)			MATH 115 (prereq for MATH 231) COMPSCI 317, 318, ELECENG 234, MATH 205, 233, 234, 240, 305, 313, 315, 341, MTHST 216, 361, 362	4 3
Natural Science (12 credits, including one lab)	806-143 College Physics 1	3	PHYSICS XN & 121 (lab) BIO SCI 150, 152, 202, 203, CHEM 102, 104, 105, PHYSICS 122, 123, 209, 210, 214, 215	9
Major Requirements				
Introduction to Solid Mechanics			CIV ENG 203	4
Intro to Python Programming			COMPSCI 202	3
Professional Seminar	Met by AAS degree completion	1	EAS 200	
Introduction to Engineering	Met by AAS degree completion	3	IND ENG 111	
Computer Aided Design	Met by AAS degree completion	3	IND ENG 112	
Engineering Economics			IND ENG 360	3
Product Realization			MECHENG 405	3
Engineering Materials			MATLENG 201	4

Technical Electives	Met by AAS degree completion	9	Any CEAS Course	
300-level Technical Electives			Any CEAS Course 300-level or above	12
General Electives				
Free Electives (30 credits)	Remaining AAS degree requirements	29		
	806-136 English Composition 1	3	ENGLISH 101	
TOTAL CREDITS	* Recommended Substitution	60		65

Appendix A.2: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Applied Technologies
AAS Automation Systems Technology (10-664-1)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

The following table outlines a typical transfer scenario, showing how the associate degree curriculum applies to the bachelor's degree and which requirements remain to complete at UWM. To maximize credit transfer, some substitutions may be identified. While every effort is made to maximize credit transfer, lack of alignment between degree programs and levels may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional courses			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			Met by Math & Natural Sci Req	--
Quantitative Literacy-Part B			Met by Math & Natural Sci Req	--
Foreign Language			Two yrs HS (or 2 semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			ENGLISH 310	3
	801-198 Speech*	3	COMMUN 103	
Natural Science (6 credits)			Met by Math & Natural Sci Req	--
(including one lab)	806-143 (credits count below)	--	PHYSICS XN & 121	
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psych of Human Relations	3		
Cultural Diversity			May be met by GER course above	--
Math & Natural Science Requirement				
Calculus & Analytic Geometry I			MATH 231	4
Calculus &Analytic Geometry II			MATH 232	4
Probability and Statistics			IND ENG 367	3
Math Electives (7 credits)			MATH 115 (prereq for MATH 231) COMPSCI 317, 318, ELECENG 234, MATH 205, 233, 234, 240, 305, 313, 315, 341, MTHST 216, 361, 362	4 3
Natural Science (12 credits, including one lab)	806-143 College Physics 1*	3	PHYSICS XN & 121 (lab) BIO SCI 150, 152, 202, 203, CHEM 102, 104, 105, PHYSICS 122, 123, 209, 210, 214, 215	9
Major Requirements				
Introduction to Solid Mechanics			CIV ENG 203	4
Intro to Python Programming	Met by AAS degree completion	3	COMPSCI 202	
Professional Seminar	Met by AAS degree completion	1	EAS 200	
Introduction to Engineering	Met by AAS degree completion	3	IND ENG 111	
Computer Aided Design			IND ENG 112	3
Engineering Economics			IND ENG 360	3
Product Realization			MECHENG 405	3
Engineering Materials			MATLENG 201	4

Technical Electives	Met by AAS degree completion	9	Any CEAS Course	
300-level Technical Electives			Any CEAS Course 300-level or above	12
General Electives				
Free Electives (30 credits)	Remaining AAS degree requirements	29		
	806-136 English Composition 1	3	ENGLISH 101	
TOTAL CREDITS	* Recommended Substitution	60		65

Appendix A.3: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Applied Technologies
Electrical Engineering Technology (10-662-1)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

The following table outlines a typical transfer scenario, showing how the associate degree curriculum applies to the bachelor's degree and which requirements remain to complete at UWM. To maximize credit transfer, some substitutions may be identified. While every effort is made to maximize credit transfer, lack of alignment between degree programs and levels may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional courses			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			Met by Math & Natural Sci Req	--
Quantitative Literacy-Part B	804-198 (credits count below)	--		
Foreign Language			Two yrs HS (or 2 semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			ENGLISH 310	3
	801-198 Speech*	3	COMMUN 103	
Natural Science (6 credits)			Met by Math & Natural Sci Req	--
(including one lab)	806-187 (credits count below)	--	PHYSICS 209 & 214	
Social Science (6 credits)	809-196 Intro to Sociology	3	SOCIOL 101	
	809-199 Psych of Human Relations	3		
Cultural Diversity			May be met by GER course above	--
Math & Natural Science Requirement				
Calculus & Analytic Geometry I	804-198 Calculus 1	4	MATH 231	
Calculus &Analytic Geometry II	804-156 Calculus 2	4	MATH 232	
Probability and Statistics			IND ENG 367	3
Math Electives			COMPSCI 317, 318, ELECENG 234, MATH 205, 233, 234, 240, 305, 313, 315, 341, MTHST 216, 361, 362	7
Natural Science (12 credits, including one lab)	806-187 Calculus-Based Physics 1	3	PHYSICS 209 & 214 BIO SCI 150, 152, 202, 203, CHEM 102, 104, 105, PHYSICS 120, 121, 122, 123, 210, 215	9
Major Requirements				
Introduction to Solid Mechanics			CIV ENG 203	4
Intro to Python Programming	Met by AAS degree completion	3	COMPSCI 202	
Professional Seminar	Met by AAS degree completion	1	EAS 200	
Introduction to Engineering	Met by AAS degree completion	3	IND ENG 111	
Computer Aided Design			IND ENG 112	3
Engineering Economics			IND ENG 360	3
Product Realization			MECHENG 405	3
Engineering Materials			MATLENG 201	4
Technical Electives	Met by AAS degree completion	9	Any CEAS Course	

300-level Technical Electives			Any CEAS Course 300-level or above	12
General Electives				
Free Electives (30 credits)	Remaining AAS degree requirements	21	Various course options	3
	806-136 English Composition 1	3	ENGLISH 101	
TOTAL CREDITS	* Recommended Substitution	60		60

Appendix A.4: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Applied Technologies
Electronic Systems Technology (10-663-4)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

The following table outlines a typical transfer scenario, showing how the associate degree curriculum applies to the bachelor's degree and which requirements remain to complete at UWM. To maximize credit transfer, some substitutions may be identified. While every effort is made to maximize credit transfer, lack of alignment between degree programs and levels may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional courses			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			Met by Math & Natural Sci Req	--
Quantitative Literacy-Part B			Met by Math & Natural Sci Req	--
Foreign Language			Two yrs HS (or 2 semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			ENGLISH 310	3
	809-166 Intro to Ethics	3	PHILOS 241	
Natural Science (6 credits)			Met by Math & Natural Sci Req	--
(including one lab)			Met by Math & Natural Sci Req	--
Social Science (6 credits)	801-196 Oral/Interpersonal Comm	3	COMMUN 105	
	809-199 Psych of Human Relations	3		
Cultural Diversity			May be met by GER course above	--
Math & Natural Science Requirement				
Calculus & Analytic Geometry I			MATH 231	4
Calculus &Analytic Geometry II			MATH 232	4
Probability and Statistics			IND ENG 367	3
Math Electives			MATH 115 (prereq for MATH 231) COMPSCI 317, 318, ELECENG 234, MATH 205, 233, 234, 240, 305, 313, 315, 341, MTHST 216, 361, 362	4 3
Natural Science (12 credits, including one lab)			BIO SCI 150, 152, 202, 203, CHEM 102, 104, 105, PHYSICS 120, 121, 122, 123, 209, 210, 214, 215	12
Major Requirements				
Introduction to Solid Mechanics			CIV ENG 203	4
Intro to Python Programming	Met by AAS degree completion	3	COMPSCI 202	
Professional Seminar	Met by AAS degree completion	1	EAS 200	
Introduction to Engineering	Met by AAS degree completion	3	IND ENG 111	
Computer Aided Design			IND ENG 112	3
Engineering Economics			IND ENG 360	3
Product Realization			MECHENG 405	3
Engineering Materials			MATLENG 201	4
Technical Electives	Met by AAS degree completion	9	Any CEAS Course	

300-level Technical Electives			Any CEAS Course 300-level or above	12
General Electives				
Free Electives (30 credits)	Remaining AAS degree requirements	32		
	806-136 English Composition 1	3	ENGLISH 101	
TOTAL CREDITS		60		68

Appendix A.5: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Applied Technologies
Manufacturing Engineering Technology (10-623-3)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

The following table outlines a typical transfer scenario, showing how the associate degree curriculum applies to the bachelor's degree and which requirements remain to complete at UWM. To maximize credit transfer, some substitutions may be identified. While every effort is made to maximize credit transfer, lack of alignment between degree programs and levels may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional courses			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			Met by Math & Natural Sci Req	--
Quantitative Literacy-Part B	804-189 Intro Statistics	3	MTHSTAT 215	
Foreign Language			Two yrs HS (or 2 semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			ENGLISH 310	3
	801-198 Speech*	3	COMMUN 103	
Natural Science (6 credits)			Met by Math & Natural Sci Req	--
(including one lab)			Met by Math & Natural Sci Req	--
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psych of Human Relations	3		
Cultural Diversity			May be met by GER course above	--
Math & Natural Science Requirement				
Calculus & Analytic Geometry I			MATH 231	4
Calculus &Analytic Geometry II			MATH 232	4
Probability and Statistics			IND ENG 367	3
Math Electives			MATH 115 (prereq for MATH 231) COMPSCI 317, 318, ELECENG 234, MATH 205, 233, 234, 240, 305, 313, 315, 341, MTHST 216, 361, 362	4 3
Natural Science (12 credits, including one lab)			BIO SCI 150, 152, 202, 203, CHEM 102, 104, 105, PHYSICS 120, 121, 122, 123, 209, 210, 214, 215	12
Major Requirements				
Introduction to Solid Mechanics			CIV ENG 203	4
Intro to Python Programming			COMPSCI 202	3
Professional Seminar	Met by AAS degree completion	1	EAS 200	
Introduction to Engineering	Met by AAS degree completion	3	IND ENG 111	
Computer Aided Design	Met by AAS degree completion	3	IND ENG 112	
Engineering Economics			IND ENG 360	3
Product Realization			MECHENG 405	3
Engineering Materials			MATLENG 201	4
Technical Electives	Met by AAS degree completion	9	Any CEAS Course	

300-level Technical Electives			Any CEAS Course 300-level or above	12
General Electives				
Free Electives (30 credits)	Remaining AAS degree requirements	29		
	806-136 English Composition 1	3	ENGLISH 101	
TOTAL CREDITS	* Recommended Substitution	60		68

Appendix A.6: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Applied Technologies
Manufacturing Integration Engineering Technology (10-664-4)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

The following table outlines a typical transfer scenario, showing how the associate degree curriculum applies to the bachelor's degree and which requirements remain to complete at UWM. To maximize credit transfer, some substitutions may be identified. While every effort is made to maximize credit transfer, lack of alignment between degree programs and levels may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional courses			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			Met by Math & Natural Sci Req	--
Quantitative Literacy-Part B			Met by Math & Natural Sci Req	--
Foreign Language			Two yrs HS (or 2 semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			ENGLISH 310	3
	801-198 Speech*	3	COMMUN 103	
Natural Science (6 credits)			Met by Math & Natural Sci Req	--
(including one lab)			Met by Math & Natural Sci Req	--
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psych of Human Relations	3		
Cultural Diversity			May be met by GER course above	--
Math & Natural Science Requirement				
Calculus & Analytic Geometry I			MATH 231	4
Calculus &Analytic Geometry II			MATH 232	4
Probability and Statistics			IND ENG 367	3
Math Electives			MATH 115 (prereq for MATH 231) COMPSCI 317, 318, ELECENG 234, MATH 205, 233, 234, 240, 305, 313, 315, 341, MTHST 216, 361, 362	4 3
Natural Science (12 credits, including one lab)			BIO SCI 150, 152, 202, 203, CHEM 102, 104, 105, PHYSICS 120, 121, 122, 123, 209, 210, 214, 215	12
Major Requirements				
Introduction to Solid Mechanics			CIV ENG 203	4
Intro to Python Programming	Met by AAS degree completion	3	COMPSCI 202	
Professional Seminar	Met by AAS degree completion	1	EAS 200	
Introduction to Engineering	Met by AAS degree completion	3	IND ENG 111	
Computer Aided Design	Met by AAS degree completion	3	IND ENG 112	
Engineering Economics			IND ENG 360	3
Product Realization			MECHENG 405	3
Engineering Materials			MATLENG 201	4
Technical Electives	Met by AAS degree completion	9	Any CEAS Course	

300-level Technical Electives			Any CEAS Course 300-level or above	12
General Electives				
Free Electives (30 credits)	Remaining AAS degree requirements	29		
	806-136 English Composition 1	3	ENGLISH 101	
TOTAL CREDITS	* Recommended Substitution	60		65

Appendix A.7: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Applied Technologies
Mechanical Design Technology (10-606-1)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

The following table outlines a typical transfer scenario, showing how the associate degree curriculum applies to the bachelor's degree and which requirements remain to complete at UWM. To maximize credit transfer, some substitutions may be identified. While every effort is made to maximize credit transfer, lack of alignment between degree programs and levels may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional courses			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			Met by Math & Natural Sci Req	--
Quantitative Literacy-Part B			Met by Math & Natural Sci Req	--
Foreign Language			Two yrs HS (or 2 semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			ENGLISH 310	3
	809-166 Intro to Ethics	3	PHILOS 241	
Natural Science (6 credits)			Met by Math & Natural Sci Req	--
(including one lab)	806-143 (credits count below)	--	PHYSICS XN & 121 (lab)	
Social Science (6 credits)	801-196 Oral/Interpersonal Comm	3	COMMUN 105	
	809-199 Psych of Human Relations	3		
Cultural Diversity			May be met by GER course above	--
Math & Natural Science Requirement				
Calculus & Analytic Geometry I			MATH 231	4
Calculus &Analytic Geometry II			MATH 232	4
Probability and Statistics			IND ENG 367	3
Math Electives			MATH 115 (prereq for MATH 231) COMPSCI 317, 318, ELECENG 234, MATH 205, 233, 234, 240, 305, 313, 315, 341, MTHST 216, 361, 362	4 3
Natural Science (12 credits, including one lab)	806-143 College Physics 1	3	PHYSICS XN & 121 (lab) BIO SCI 150, 152, 202, 203, CHEM 102, 104, 105, PHYSICS 122, 123, 209, 210, 214, 215	9
Major Requirements				
Introduction to Solid Mechanics			CIV ENG 203	4
Intro to Python Programming	Met by AAS degree completion	3	COMPSCI 202	
Professional Seminar	Met by AAS degree completion	1	EAS 200	
Introduction to Engineering	Met by AAS degree completion	3	IND ENG 111	
Computer Aided Design	Met by AAS degree completion	3	IND ENG 112	
Engineering Economics			IND ENG 360	3
Product Realization			MECHENG 405	3
Engineering Materials			MATLENG 201	4

Technical Electives	Met by AAS degree completion	9	Any CEAS Course	
300-level Technical Electives			Any CEAS Course 300-level or above	12
General Electives				
Free Electives (30 credits)	Remaining AAS degree requirements	26		
	806-136 English Composition 1	3	ENGLISH 101	
TOTAL CREDITS		60		62

Appendix A.8: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Applied Technologies
Mechanical Engineering Technology (10-606-2)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

The following table outlines a typical transfer scenario, showing how the associate degree curriculum applies to the bachelor's degree and which requirements remain to complete at UWM. To maximize credit transfer, some substitutions may be identified. While every effort is made to maximize credit transfer, lack of alignment between degree programs and levels may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional courses			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			Met by Math & Natural Sci Req	--
Quantitative Literacy-Part B	804-198 (credits count below)	--	MATH 231	--
Foreign Language			Two yrs HS (or 2 semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			ENGLISH 310	3
	801-198 Speech*	3	COMMUN 103	
Natural Science (6 credits)			Met by Math & Natural Sci Req	--
(including one lab)	806-187 (credits count below)	--	PHYSICS 209 & 214	
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psych of Human Relations	3		
Cultural Diversity			May be met by GER course above	--
Math & Natural Science Requirement				
Calculus & Analytic Geometry I	804-198 Calculus 1	4	MATH 231	
Calculus &Analytic Geometry II	804-156 Calculus 2	4	MATH 232	
Probability and Statistics			IND ENG 367	3
Math Electives			COMPSCI 317, 318, ELECENG 234, MATH 205, 233, 234, 240, 305, 313, 315, 341,MTHST 216, 361, 362	7
Natural Science (12 credits, including one lab)	806-187 Calculus-Based Physics 1	3	PHYSICS 209 & 214 BIO SCI 150, 152, 202, 203, CHEM 102, 104, 105, PHYSICS 120, 121, 122, 123, 210, 215	9
Major Requirements				
Introduction to Solid Mechanics	Met by AAS degree completion	4	CIV ENG 203	
Intro to Python Programming	Met by AAS degree completion	3	COMPSCI 202	
Professional Seminar	Met by AAS degree completion	1	EAS 200	
Introduction to Engineering	Met by AAS degree completion	3	IND ENG 111	
Computer Aided Design	Met by AAS degree completion	3	IND ENG 112	
Engineering Economics			IND ENG 360	3
Product Realization			MECHENG 405	3
Engineering Materials			MATLENG 201	4
Technical Electives	Met by AAS degree completion	9	Any CEAS Course	

300-level Technical Electives			Any CEAS Course 300-level or above	12
General Electives				
Free Electives (30 credits)	Remaining AAS degree requirements	20	Various course options	4
	806-136 English Composition 1	3	ENGLISH 101	
TOTAL CREDITS		66		54

Appendix B: University General Education Requirements (GER)

Waukesha County Technical College (WCTC)
School of Applied Technologies
AAS Architectural Drafting/Construction Technology (10-614-5)
AAS Automation Systems Technology (10-664-1)
AAS Electrical Engineering Technology (10-662-1)
AAS Electronic Systems Technology (10-663-4)
AAS Manufacturing Engineering Technology (10-623-3)
AAS Manufacturing Integration Engineering Technology (10-664-4)
AAS Mechanical Design Technology (10-606-1)
AAS Mechanical Engineering Technology (10-606-2)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BS Engineering

General Education Requirements (GER) give structure to each student's education while providing the student the greatest possible freedom to design an individual academic program. These requirements include two major categories: **competency** and **distribution**.

Competency requirements are designed to assure proficiency in oral and written communication (OWC Parts A & B), quantitative literacy (QL Parts A & B), & foreign languages.

Distribution requirements are designed to provide students with a broad body of knowledge in the areas of the arts, humanities, natural sciences, and social sciences as a foundation for specialization.

The table below outlines the University of Wisconsin-Milwaukee's GER requirements. Note that College of Letters and Science majors must complete GER coursework beyond what is listed here. Some programs/majors will require specific coursework for certain competency and distribution requirements. Consult with an advisor early in your academic career to ensure that you choose the best coursework for your intended program of study.

GER Category	Min. Credits	Fulfilled by
Competency Requirements		
OWC-A	0-3	1. C or higher in ENGLISH 102 or equivalent 2. An appropriate score on the English Placement Test
OWC-B	3	An approved advanced course with a significant written or oral communication component.
QL-A	0-3	1. C or higher on approved math coursework at UWM or in transfer 2. Score of 30 or higher on the Mathematics Placement Test
QL-B	3	An approved course as determined by the major. QL Part B courses make significant use of quantitative tools in the context of other course material.
Foreign Language	0-6	1. Successfully passing two consecutive years of high school-level instruction in a single foreign language, 2. Successfully passing two consecutive semesters of college-level instruction in a single foreign language, or 3. Demonstrating foreign language ability equivalent to two semesters of a single foreign language by earning a satisfactory

		score on an approved placement, proficiency, departmental, or other examination.
Distribution Requirements		
Arts	3	A course in history, philosophy, theory, or practice of the creative and interpretive arts.
Humanities	6	Two courses from an approved list.
Natural Sciences	6	At least two courses; one must include laboratory or field experience illustrating the generation and testing of data and the application of concepts and knowledge to the solution of problems.
Social Sciences	6	Two courses from an approved list.
Cultural Diversity	0-3	As part of the distribution requirements, one course must pertain to the study of the life experiences of African Americans, Latino/Hispanic Americans, American Indians, or Asian Americans.

WCTC School GER Transfer Courses
The following list can be consulted to find WCTC courses that meet UWM GER requirements. This list is not meant to be exhaustive. There may be additional WCTC courses that are transferrable as GER equivalents. Please consult with an advisor; both Transferology (www.transferology.com) and the Transfer Equivalency Database (TED) (ted.uwm.edu) offer searchable databases that indicate GER status.

Competency—OWC-A:

801-223 English Composition 2

Competency—OWC-B:

801-197 Technical Reporting
801-204 Intro to Literature
801-243 Business Writing

Competency—QL-A:

804-115 & 116 College Technical Math 1 & 2
804-118 Intermediate Algebra w/ Apps
804-133 Math & Logic
804-195 College Algebra w/ Apps
804-196 Trigonometry w/ Apps
804-201 Intermediate Algebra
804-211 Quantitative Reasoning
804-212 College Algebra

Competency—QL-B:

804-189 Introductory Statistics
804-198 Calculus 1
804-213 Survey in Calculus

Competency—Foreign Language:

College coursework in a foreign language through the second semester.

Distribution—Arts:

201-118 Design Drawing & Color Theory

Distribution—Humanities:

801-198 Speech
801-204 Intro to Literature
801-209 Pop Culture, Media, & You
801-212 Pixels & Prose: Video Games as Literature
801-247 World Literature
804-133 Math & Logic
809-166 Intro to Ethics
809-223 Intro to World Religion

Distribution—Natural Sciences (+ indicates lab credit):

804-189 Introductory Statistics
804-198 Calculus 1
806-114 General Biology+
806-134 General Chemistry+
806-139 Survey of Physics
806-143 College Physics 1+
806-144 College Physics 2+
806-177 General Anatomy & Physiology+
806-178 Life Science Chemistry+
806-179 Advanced Anatomy & Physiology+
806-186 Biochemistry+
806-187 Calculus-Based Physics 1+
806-188 Calculus-Based Physics 2+
806-189 Basic Anatomy
806-197 Microbiology+
806-207 Anatomy & Physiology 1+
806-208 Anatomy & Physiology 2+

Distribution—Social Sciences:

102-100 Contemporary Business
504-101 Intro to Criminal Justice Studies
520-100 Intro to Human Services
520-105 Understanding Diversity
801-196 Oral/Interpersonal Communication
809-115 Global Cultural Awareness
809-143 Microeconomics
809-159 Abnormal Psychology
809-172 Intro Diversity Studies
809-174 Social Problems
809-188 Developmental Psychology
809-195 Economics
809-196 Intro to Sociology
809-197 Contemporary American Society
809-198 Intro to Psychology
809-199 Psychology of Human Relations
809-202 Macroeconomics
809-227 American Government
809-235 Multicultural America
809-245 Blood, Sex, Money, & Power
809-287 Prin of Macroeconomics

Cultural Diversity:

520-105 Understanding Diversity
809-172 Intro Diversity Studies
809-235 Multicultural America