Articulation Agreement

Waukesha County Technical College (WCTC)
School of Applied Technologies
Architectural Drafting/Construction Technology (10-614-5)
Automation Systems Technology (10-664-1)
Electrical Engineering Technology (10-662-1)
Electronic Systems Technology (10-663-4)
Manufacturing Engineering Technology (10-623-3)
Mechanical Design Technology (10-606-1)
Mechanical Engineering Technology (10-606-2)
School of Business
Front End Web Development (10-201-5)
IT-Computer Support Specialist (10-154-3)
IT-Cybersecurity Specialist (10-151-2)
IT-Data & Analytics Specialist (10-156-3)
IT-Network Specialist (10-150-2)
IT-Web & Software Developer (10-152-7)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BA Computer Science

Effective Date: 06/01/2023   Next Review Date: 06/01/2028

☒New Agreement   ☐Revised Agreement

Agreement Description and Rationale:
This agreement is entered into by Waukesha County Technical College and University of Wisconsin-Milwaukee to better facilitate the transfer of students who successfully complete an appropriate Associate of Applied Science degree to the Bachelor of Art in Computer Science.

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 BA in Computer Science 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.

In addition, the following conditions will apply:
- It is expected that students will have proficiency in algebra when entering the program. Math placement level of 30 can be earned with a satisfactory score on the Math Placement Test or a C or better grade in one of the following courses:

UWM MATH Courses	WCTC Math Equivalencies
MATH 105 Introductory College Algebra	804-118 Intermediate Algebra w/ Apps
MATH 108 Algebraic Literacy II	N/A
MATH 116 College Algebra	804-195 College Algebra w/ Apps

o   Students can be admitted to the program with a lower math placement, but the number of required credits listed in Appendix A will increase and time to degree may be extended.

Articulation Transfer Agreement Terms:
The terms of this agreement apply to WCTC students who successfully complete the identified associate degrees, meet the conditions set forth herein for UWM's College of Engineering & Applied Science, and enroll in the Computer Science BA. 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 BA in Computer Science 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 Computer Science BA 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 Computer Science BA 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 Computer Science must maintain an average GPA of at least 2.00 in all 300-level and above courses in Computer Science.
- 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 BA in Computer Science appear in Appendix A. Some coursework may be combined to meet requirements within the Computer Science BA. 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 2021 academic year. The terms of this agreement may be applied to degrees completed prior to 2022 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 either 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   Waukesha County Technical College

Signatures on file.

_____   _____
Andrew Daire, Ph.D.,   Date   Richard G. Barnhouse,   Date
Provost/Vice Chancellor of Academic Affairs   President

_____   _____
Brett Peters, Ph.D.,   Date   Brad Piazza,   Date
Dean, College of Engineering & Applied Science   Vice President of Learning

Official notices regarding this agreement should be sent to:

University of Wisconsin-Milwaukee   Waukesha County Technical College

Chris Head   Cara Bowman
Assistant Director of Transfer Services   Career Pathways Coordinator
P.O. Box 729   800 Main Street
Milwaukee, WI 53201-0729   Pewaukee, WI 53072
head@uwm.edu   cbowman@wctc.edu
414-229-2754   262-695-6526

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
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
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)	806-143 College Physics 1	3	PHYSICS 121/XN (lab)	
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
Area 1	AAS degree completion	15		
Area 2			Minor, certificate, or courses in one dept	15
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	Block transfer of remaining AAS credits	27		
TOTAL CREDITS	*Recommended substitution.	60		62

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

Waukesha County Technical College (WCTC)
School of Applied Technologies
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
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)	806-143 College Physics 1	3	PHYSICS 121/XN (lab)	
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
Area 1	AAS degree completion	15		
Area 2			Minor, certificate, or courses in one dept	15
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	Block transfer of remaining AAS credits	27		
TOTAL CREDITS	*Recommended substitution.	60		62

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
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	Waived by completion of Calculus 1	--		
Quantitative Literacy-Part B	Met by Math Requirement	--		
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)	806-187 Calculus-Based Physics 1	3	PHYSICS 209/214	
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus	804-198 Calculus 1	4	MATH 231	
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar	AAS degree completion	1	EAS 200	
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
Area 1	AAS degree completion	15		
Area 2			Minor, certificate, or courses in one dept	15
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	809-196 Intro to Sociology	3	SOCIOL 101	
	804-156 Calculus 2	4	MATH 232	
	804-167 Calculus 3	4	MATH 233	
	806-188 Calculus-Based Physics 2	3	PHYSICS 210/215	
	Block transfer of remaining AAS credits	21		
TOTAL CREDITS	*Recommended substitution.	70		57

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
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)			Various courses (see Appendix B)	3
Social Science (6 credits)	801-196 Oral/Interpersonal Comm	3	COMMUN 105	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
Area 1	AAS degree completion	15		
Area 2			Minor, certificate, or courses in one dept	15
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	Block transfer of remaining AAS credits	30		
TOTAL CREDITS	*Recommended substitution.	60		65

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

Waukesha County Technical College (WCTC)
School of Business
<u>**Front End Web Development (10-201-5)**</u>
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BA Computer Science

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. <u>Transfer results will differ based on individual students' transcripts.</u>

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)			Various courses (see Appendix B)	3
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming	152-168 JavaScript	3	COMPSCI 250	
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
AAS Technology Coursework	AAS degree completion	30		
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	104-102 Marketing Principles	3	BUS ADM 360	
	809-196 Intro to Sociology	3	SOCIOL 101	
	Block transfer of remaining AAS credits	9	Various course options (see advisor)	10
TOTAL CREDITS	*Recommended substitution.	63		57

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

Waukesha County Technical College (WCTC)
School of Business
<u>**IT-Computer Support Specialist (10-154-3)**</u>
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BA Computer Science

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. <u>Transfer results will differ based on individual students' transcripts.</u>

Degree Requirement	WCTC Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)			Various courses (see Appendix B)	3
Social Science (6 credits)	809-143 Microeconomics	3	ECON 103	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
AAS Technology Coursework	AAS degree completion	30		
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	809-196 Intro to Sociology	3	SOCIOL 101	
	Block transfer of remaining AAS credits	13	Various course options (see advisor)	9
TOTAL CREDITS	*Recommended substitution.	61		59

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

Waukesha County Technical College (WCTC)
School of Business
IT-Cybersecurity Specialist (10-151-2)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)			Various courses (see Appendix B)	3
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
AAS Technology Coursework	AAS degree completion	30		
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	Block transfer of remaining AAS credits	18	Various course options (see advisor)	7
TOTAL CREDITS	*Recommended substitution.	63		57

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

Waukesha County Technical College (WCTC)
School of Business
IT-Data & Analytics Specialist (10-156-3)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A	Met by 801-197 w/ C or better	--		
Oral and Written Comm-Part B	801-197 Technical Reporting	3	ENGLISH 206	
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			Various courses (see Appendix B)	3
			Various courses (see Appendix B)	3
Natural Science (6 credits)			Met by COMPSCI 150 in major	--
(including one lab)			Various courses (see Appendix B)	3
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
AAS Technology Coursework	AAS degree completion	30		
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	804-189 Introductory Statistics	3	MTHSTAT 215	
	Block transfer of remaining AAS credits	15	Various course options (see advisor)	7
TOTAL CREDITS	*Recommended substitution.	63		57

Appendix A.9: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Business
IT-Network Specialist (10-150-2)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A	Met by 801-197 w/ C or better	--		
Oral and Written Comm-Part B	801-197 Technical Reporting	3	ENGLISH 206	
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			Various courses (see Appendix B)	3
	801-198 Speech	3	COMMUN 103	
Natural Science (6 credits)			Met by COMPSCI 150 in major	--
(including one lab)			Various courses (see Appendix B)	3
Social Science (6 credits)	809-143 Microeconomics	3	ECON 103	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
AAS Technology Coursework	AAS degree completion	30		
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	Block transfer of remaining AAS credits	14	Various course options (see advisor)	11
TOTAL CREDITS	*Recommended substitution.	62		58

Appendix A.10: Program-to-Program Transfer Table

Waukesha County Technical College (WCTC)
School of Business
IT-Web & Software Developer (10-152-7)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A	Met by 801-197 w/ C or better	--		
Oral and Written Comm-Part B	801-197 Technical Reporting	3	ENGLISH 206	
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two semesters college)	--
Art			Various courses (see Appendix B)	3
Humanities (6 credits)			Various courses (see Appendix B)	3
	801-198 Speech	3	COMMUN 103	
Natural Science (6 credits)			Met by COMPSCI 150 in major	--
(including one lab)			Various courses (see Appendix B)	3
Social Science (6 credits)	809-143 Microeconomics	3	ECON 103	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming	152-168 JavaScript	3	COMPSCI 250	
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
AAS Technology Coursework	AAS degree completion	30		
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	Block transfer of remaining AAS credits	13	Various course options (see advisor)	12
TOTAL CREDITS	*Recommended substitution.	64		56

Appendix A.11: 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
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A			MATH 105 or higher	3
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)			Various courses (see Appendix B)	3
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
Area 1	AAS degree completion	15		
Area 2			Minor, certificate, or courses in one dept	15
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	804-189 Introductory Statistics	3	MTHSTAT 215	
	Block transfer of remaining AAS credits	30		
TOTAL CREDITS	*Recommended substitution.	60		68

Appendix A.12: 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
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	804-195 College Algebra w/ Apps*	3	MATH 116	
Quantitative Literacy-Part B			Met by Math Requirement	--
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)	806-143 College Physics 1	3	PHYSICS 121/XN (lab)	
Social Science (6 credits)	801-196 Oral/Interpersonal Comm	3	COMMUN 105	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus			MATH 211, 213, 221, or 231	4
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming			COMPSCI 250	3
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
Area 1	AAS degree completion	15		
Area 2			Minor, certificate, or courses in one dept	15
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	Block transfer of remaining AAS credits	27		
TOTAL CREDITS	*Recommended substitution.	60		62

Appendix A.13: 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
BA Computer Science

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 WCTC courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts in Humanities)	--
Quantitative Literacy-Part A	Waived by completion of Calculus 1	--		
Quantitative Literacy-Part B	Met by Math Requirement	--		
Foreign Language			Two years HS (or two 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 COMPSCI 150 in major	--
(including one lab)	806-187 Calculus-Based Physics 1	3	PHYSICS 209/214	
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-199 Psychology of Human Relations	3		
Cultural Diversity			Met by course above w/ diversity content	--
Math Requirement				
Calculus	804-198 Calculus 1	4	MATH 231	
Major Requirements				
Survey of Computer Science			COMPSCI 150	3
Intro Computer Programming	AAS degree completion	3	COMPSCI 250	
Intermediate Computer Program			COMPSCI 251	3
Discrete Information Structures			COMPSCI 317	3
Data Structures & Algorithms			COMPSCI 351	3
Social, Prof, & Ethical Issues			COMPSCI 395	3
Computer Architecture			COMPSCI 458	3
Professional Seminar	AAS degree completion	1	EAS 200	
Technical Electives			COMPSCI 300-level or above	12
2nd Major Requirement				
Area 1	AAS degree completion	15		
Area 2			Minor, certificate, or courses in one dept	15
General Electives				
	801-136 English Composition 1	3	ENGLISH 101	
	804-156 Calculus 2	4	MATH 232	
	Block transfer of remaining AAS credits	24		
TOTAL CREDITS	*Recommended substitution.	66		54

Appendix B: University General Education Requirements (GER)

Waukesha County Technical College (WCTC)
<u>**School of Applied Technologies**</u>
Architectural Drafting/Construction Technology (10-614-5)
Automation Systems Technology (10-664-1)
Electrical Engineering Technology (10-662-1)
Electronic Systems Technology (10-663-4)
Manufacturing Engineering Technology (10-623-3)
Mechanical Design Technology (10-606-1)
Mechanical Engineering Technology (10-606-2)
<u>**School of Business**</u>
Front End Web Development (10-201-5)
IT-Computer Support Specialist (10-154-3)
IT-Cybersecurity Specialist (10-151-2)
IT-Data & Analytics Specialist (10-156-3)
IT-Network Specialist (10-150-2)
IT-Web & Software Developer (10-152-7)
to
The Board of Regents of the University of Wisconsin System on behalf of
University of Wisconsin-Milwaukee (UWM)
College of Engineering & Applied Science
BA Computer Science

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. <u>Note that College of Letters and Science majors must complete GER coursework beyond what is listed here.</u> 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   801-243 Business Writing

Competency—QL-A:

804-118 Intermediate Algebra w/ Apps   804-201 Intermediate Algebra
804-195 College Algebra w/ Apps   804-212 College Algebra

Competency—QL-B (Calculus Required):

804-198 Calculus 1

Competency—Foreign Language:

College coursework in a foreign language through the second semester.

Distribution—Arts:

N/A

Distribution—Humanities:

801-198 Speech
801-204 Intro to Literature
801-247 World Literature

809-166 Intro to Ethics
804-133 Math & Logic
809-223 Intro to World Religion

Distribution—Natural Sciences (+ indicates lab credit):

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:

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

Cultural Diversity:

809-172 Intro Diversity Studies

809-235 Multicultural America