Articulation Agreement

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
AAS Advanced Manufacturing Technology (10-664-2)
AAS Architectural – Structural Engineering Technician (10-614-6)
AAS Civil Engineering Technology – Highway Technology (10-607-4)
AAS Electrical Engineering Technology (10-662-1)
AAS IT – Cybersecurity Specialist (10-151-2)
AAS IT – Data Analytics Specialist (10-156-3)
AAS IT – Network Specialist (10-150-2)
AAS IT – Software Developer (10-152-1)
AAS IT – Web Software Developer (10-152-4)
AAS 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

Effective Date: 12/01/2021   Next Review Date: 12/01/2026

☒New Agreement   ☐Revised Agreement

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

Gateway 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 for those earning an AAS to 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 (Math Placement Level 30 or higher) 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 the equivalent of UWM MATH 105 Introductory College Algebra, MATH 108 Algebraic Literacy II, or MATH 116 College Algebra. In order to better prepare for successful math placement, 804-115 College Technical Math 1 is recommended over 804-135 Quantitative Reasoning. 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 Gateway 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 Gateway 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 Gateway 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 Gateway 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 2020-2021 academic years (see Appendix C). The terms of this agreement may be applied to degrees completed prior to 2020-2021 upon individual review to ensure consistency in the curriculum. This agreement is valid for a period of five years. Both Gateway 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 matriculated while the agreement was active will be allowed to continue under its original terms.

Gateway and UWM will make the terms of this agreement public and may develop marketing materials for its promotion. 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.

UWM and Gateway will provide academic advising to Gateway learners inquiring about UWM programs. Learners will be connected with a UWM advisor prior to transfer. UWM and Gateway will share materials, catalogs, and other information to facilitate their understanding of requirements and programs. Gateway will assist UWM in arranging recruitment events on its campuses.

Both parties agree that failure to maintain regional accreditation will be grounds for termination of the agreement. Failure to maintain accreditation required by the specific academic program(s) referenced in this agreement will be grounds for exclusion of that program from the agreement.

Gateway desires to track the use of articulation agreements by our students. If possible, UWM will send Gateway the total number of credits transferred from Gateway annually or other data that can be conveniently produced.

Approved by:

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

Signatures on file.

_____   _____
Johannes Britz, Ph.D.,   Date   Bryan Albrecht, Ed.D.,   Date
Provost/Vice Chancellor of Academic Affairs   President

_____   _____
Brett Peters, Ph.D.,   Date   Zina Haywood,   Date
Dean, College of Engineering & Applied Science   Executive VP/Provost

Official notices regarding this agreement should be sent to:

University of Wisconsin-Milwaukee   Gateway Technical College

Chris Head   Jaime Spaciel
Assistant Director of Transfer Services   Director, Career Pathways & Program Effectiveness
P.O. Box 729   3520 30th Avenue
Milwaukee, WI 53201-0729   Kenosha, WI 53144
head@uwm.edu   spacielj@gtc.edu
414-229-2754   262-564-3080

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

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

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
AAS Advanced Manufacturing Technology (10-664-2)
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 possible 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 of instruction may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway courses that can fulfill GERs			
Oral and Written Comm-Part A		--	ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 310 (counts as Humanities)	--
Quantitative Literacy-Part A			Met by Math Placement Level 30	--
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)	801-198 Speech	3	COMMUN 103	
			ENGLISH 310	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	
	809-198 Intro to Psychology	3	PSYCH 101	
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
Minor Areas of Concentration				
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	33		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	65		65

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
<u>**AAS Architectural – Structural Engineering Technician (10-614-6)**</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 possible 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 of instruction 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	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway 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			Met by Math Placement Level 30	--
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	
	809-198 Intro to Psychology	3	PSYCH 101	
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
Minor Areas of Concentration				
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	33		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	65		65

Appendix A.3: Pro6ram-to-Program Transfer Table

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
<u>AAS Civil Engineering Technology – Highway Technology (10-607-4)</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 possible 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 of instruction 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	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway 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			Met by Math Placement Level 30	--
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	
	809-198 Intro to Psychology	3	PSYCH 101	
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
Minor Areas of Concentration				
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	33		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	65		65

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

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
AAS 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 possible 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 of instruction may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway 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	804-197 College Algebra & Trig w/ Apps	5	MATH 115	
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)	806-154 General Physics 1	4	PHYSICS 120 & 121	
Social Science (6 credits)	809-196 Intro to Sociology	3	SOCIOL 101	
	809-198 Intro to Psychology	3	PSYCH 101	
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			EAS 200	1
Technical Electives			COMPSCI 300-level or above	12
Minor Areas of Concentration				
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	
	804-181 Calculus 2	4	MATH 232	
	Block transfer of remaining AAS credits	25		
TOTAL CREDITS	*Recommended substitution.	69		58

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

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
<u>**AAS IT – Cybersecurity Specialist (10-151-2)**</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 possible 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 of instruction 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	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway 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			Met by Math Placement Level 30	--
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)	809-196 Intro to Sociology	3	SOCIOL 101	
	809-198 Intro to Psychology	3	PSYCH 101	
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
Minor Areas of Concentration				
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	32		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	64		65

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

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
AAS 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 possible 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 of instruction may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway 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			Met by Math Placement Level 30	--
Quantitative Literacy-Part B	804-189 Statistics	3	MTHSTAT 215	
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	
	809-198 Intro to Psychology	3	PSYCH 101	
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
Minor Areas of Concentration				
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	
	801-196 Oral/Interpersonal Comm	3	COMMUN 105	
	Block transfer of remaining AAS credits	23		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	61		65

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

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
AAS 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 possible 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 of instruction may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway 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			Met by Math Placement Level 30	--
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)	809-196 Intro to Sociology	3	SOCIOL 101	
	809-198 Intro to Psychology	3	PSYCH 101	
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
Minor Areas of Concentration				
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	28		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	60		65

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

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
AAS IT – Software Developer (10-152-1)
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 possible 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 of instruction may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway 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			Met by Math Placement Level 30	--
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	
	809-198 Intro to Psychology	3	PSYCH 101	
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	152-122 Computer Programming	3	COMPSCI 250	
Intermediate Computer Program	152-125 Computer Programming, Adv.	3	COMPSCI 251	
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
Minor Areas of Concentration				
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	25		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	63		59

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

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
<u>**AAS IT – Web Software Developer (10-152-4)**</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 possible 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 of instruction 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	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway 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			Met by Math Placement Level 30	--
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	
	809-198 Intro to Psychology	3	PSYCH 101	
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	152-184 Java Programming 1	3	COMPSCI 250	
Intermediate Computer Program	152-174 Java Programming 2	3	COMPSCI 251	
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
Minor Areas of Concentration				
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	24		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	62		59

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

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
AAS 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 possible 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 of instruction may require students to exceed 120 credits to meet all graduation requirements. Transfer results will differ based on individual students' transcripts.

Degree Requirement	Gateway Coursework	Cr	UWM Coursework	Cr
GER Requirements	See Appendix B for additional Gateway courses that can fulfill GERs			
Oral and Written Comm-Part A			ENGLISH 102	3
Oral and Written Comm-Part B			ENGLISH 206 or other	3
Quantitative Literacy-Part A			Met by Math Placement Level 30	--
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)	801-198 Speech	3	COMMUN 103	
			Various courses (see Appendix B)	3
Natural Science (6 credits)			Met by COMPSCI 150 in major	--
(including one lab)	806-154 General Physics 1	4	PHYSICS 120 & 121	
Social Science (6 credits)	809-195 Economics	3	ECON 100	
	809-198 Intro to Psychology	3	PSYCH 101	
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
Minor Areas of Concentration				
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	28		
	804-115 Technical Math 1*	5		
TOTAL CREDITS	*Recommended math course.	64		65

Appendix B: University General Education Requirements (GER)

Gateway Technical College (Gateway)
School of Manufacturing, Engineering, and Information Technology
AAS Architectural – Structural Engineering Technician (10-614-6)
AAS Civil Engineering Technology (10-607-4)
AAS Electrical Engineering Technology (10-662-1)
AAS IT – Cybersecurity Specialist (10-151-2)
AAS IT – Data Analytics Specialist (10-156-3)
AAS IT – Network Specialist (10-150-2)
AAS IT – Software Developer (10-152-1)
AAS IT – Web Software Developer (10-152-4)
AAS 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

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 above and 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 placement score or recognized test credit
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. An appropriate placement score or recognized test credit
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

Distribution Requirements		
		a single foreign language by earning a satisfactory score on an approved placement, proficiency, departmental, or other examination.
Arts	3	A course in the history, philosophy, theory, or practice of the creative and interpretive arts.
Humanities	6	Two courses that address questions, issues, and concepts basic to the formation of character and the establishment of values in a human context. Common subject areas include art history, history, language and literature, philosophy, religious studies, and film and media studies.
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 dealing with the study of human behavior, human cultural and physical variation and evolution, and the organization, development, and consequences of human activity, both past and present.
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.

Gateway GER Transfer Courses
The following list can be consulted to find Gateway courses that meet UWM GER requirements. This list is not meant to be exhaustive. There may be additional Gateway 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:

801-150 English Composition II

Competency—OWC-B:

105-106 Business Communications   801-197 Technical Reporting

Competency—QL-A:

804-133 Math & Logic   804-197 College Algebra & Trigonometry w/ Apps
804-135 Quantitative Reasoning

Competency—QL-B:

804-189 Introductory Statistics   804-198 Calculus 1

Competency—Foreign Language:

College coursework in a foreign language through the second semester.
802-125 Spanish II

Distribution—Arts:

801-177 Creative Writing

Distribution—Humanities:

304-118 Art History   804-133 Math & Logic
801-198 Speech   809-166 Intro to Ethics

Distribution—Natural Sciences (+ indicates lab credit):

806-102 Environmental Chemistry   806-177 General Anatomy & Physiology+
806-105 Principles of Animal Biology+   806-179 Advanced Anatomy & Physiology+
806-114 General Biology+   806-184 Plant Biology
806-127 Chemistry 1   806-186 Intro to Biochemistry+
806-129 Chemistry 2+   806-195 Anatomy & Physiology 1
806-134 General Chemistry+   806-196 Anatomy & Physiology 2
806-154 General Physics 1+   806-197 Microbiology+
806-172 Basic Nutritional Science

Distribution—Social Sciences:

102-137 Intro to Business   809-159 Abnormal Psychology
504-900 Intro to Criminal Justice   809-172 Intro to Diversity Studies
801-196 Oral/Interpersonal Communication   809-188 Developmental Psychology
809-128 Marriage & Family   809-195 Economics
809-143 Microeconomics   809-196 Intro to Sociology
809-144 Macroeconomics   809-198 Intro to Psychology

Cultural Diversity:

809-172 Intro to Diversity Studies