

TRANSFER ARTICULATION AGREEMENT

Quinsigamond Community College

And

Worcester Polytechnic Institute

Computer Science-Transfer Associate in Science Degree

To

Admission to Bachelor of Science Degree in Computer Science

Worcester Polytechnic Institute (WPI) and Quinsigamond Community College (QCC) recognize that for some students the path to a technical education may begin at a community college. To assist students who wish to pursue such an option, WPI and Quinsigamond Community College formalized this pattern by signing a transfer articulation agreement in 1989.

The purpose of this document is to affirm an agreement based on a thorough review of the current courses taught in QCC's **Computer Science-Transfer Associate in Science Degree** program by the appropriate WPI department head/designee. Further reviews will be conducted tri-annually or when significant changes occur to the curriculum of either institution.

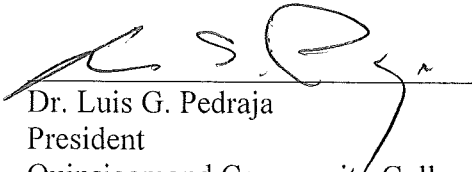
Under this agreement, the terms of which are described on the following pages, WPI agrees to accept students from QCC as sophomores or juniors depending on their programs of study.


Terms of Agreement


In this agreement between WPI and QCC, both institutions agree to the following items:

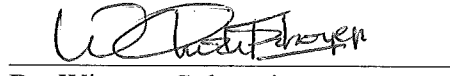
1. WPI agrees to refer potentially qualified students to QCC for pre-entrance course preparation as well as first year-level course work leading to eventual transfer to a four-year program.
2. WPI agrees to accept as advanced sophomores all graduates of the QCC Computer Science-Transfer Associate in Science Degree who have completed the attached program of study and, upon proper application and the positive recommendation of the two-year college, have met the admissions qualifications as set forth by WPI's Undergraduate Admissions Office for transfer applicants. In general, all transfer candidates with a 3.3 GPA or higher, and are in good academic and disciplinary standing, will be accepted from QCC. Students with grade-point averages below 3.3 will be considered on a case-by-case basis.
 - a. Information about entrance and application requirements for WPI transfer candidates can be found at admissions.wpi.edu under Transfer Students.
3. In addition, WPI agrees to accept all college-level courses within the QCC Computer Science-Transfer Associate in Science Degree program curriculum as laid out in this articulation agreement, provided courses are completed with grades of "B" or higher ("B-" is acceptable in some instances). See Appendix A. Please note: WPI does not limit the number of credits accepted. However, students have to meet a residency requirement of 72 credits (8 units, two full academic years).
4. With careful planning, students completing the above requirements may be able to graduate from WPI in two and one-half years.
5. Faculty and administrative staff from both institutions should be encouraged to visit each other's campuses and confer on matters of curriculum content and the program details.
6. The program will be promoted through each college's website, academic catalog, and appropriate marketing materials.
7. This agreement is effective on the date of signature, and will continue in effect for three years from that date. Substantive changes in the courses or program of either institution will necessitate a review of the agreement. This agreement may be terminated or re-negotiated at the request of either institution given due protection to those students enrolled at either institution who expect to pursue this plan of study.

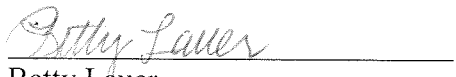
Institutional Approvals

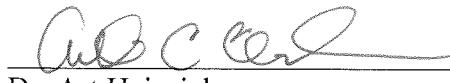

Dr. Luis G. Pedraja
President
Quinsigamond Community College



Dr. Laurie Leshin
President
Worcester Polytechnic Institute

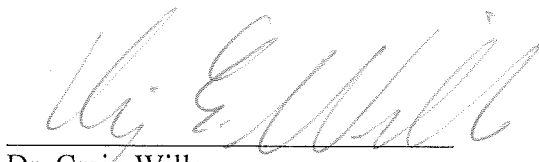

Dr. Nancy Schoenfeld
Interim Vice President of Academic Affairs
Quinsigamond Community College

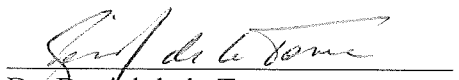

Dr. Winston Soboyejo
Provost
Worcester Polytechnic Institute



Betty Lauer
Dean, School of Business,
Engineering & Technology
Quinsigamond Community College


Dr. Art Heinricher
Dean of Undergraduate Studies
Worcester Polytechnic Institute


Hao Loi
Coordinator of the Computer
Science—Transfer Program
Quinsigamond Community College


Dr. Craig Wills
Head, Department of Computer Science
Worcester Polytechnic Institute


Dr. Daniel de la Torre
Coordinator of Transfer & Articulation
Quinsigamond Community College


Julie Chapman
Director of Recruitment Partnerships
Worcester Polytechnic Institute

Confirmed date of agreement signed by all parties: 3/29/2019

Initials: JCB

APPENDIX A

QCC to WPI Computer Science Articulation Agreement

QCC COURSES

WPI EQUIVALENT

COMPUTER SCIENCE

CSC 108 Computer Science I
CSC 109 Computer Science II
CSC 208 Introduction to Architecture
& Assembly Language

CS 1101 Introduction to Program Design
CS 1102 Object-Oriented Design Concepts
CS 2011 Introduction to Machine Organization and
Assembly Language

CSC 211 Programming with Data
Structures

CS 2223 Algorithms

CSC 212 Software Engineering

CS 3733 Software Engineering

MATHEMATICS

MAT 125 Discrete Mathematics
MAT 233 Calculus I
MAT 234 Calculus II
MAT 235 Calculus III*
MAT 233, 234
MAT 233, 234, 235*
MAT 237 Probability & Statistics
For Engineers & Scientists
MAT 238 Differential Equations*
MAT 243 Linear Algebra*

MA 2201/CS 2022 Discrete Mathematics
MA 1021 Calculus I
MA 1022 Calculus II
MA 1024 Calculus IV
MA 1021-1023 Calculus I-III
MA 1021-1024 Calculus I-IV
MA 2611 Applied Statistics I

MA 2051 Differential Equations
MA 2071 Linear Algebra

HUMANITIES AND ARTS

ENG 101 Composition I
ENG 102 Composition II

WR 1010 Elements of Writing
EN 1251 Introduction to Literature

*QCC's mathematics courses MAT 235, MAT 238, and MAT 243 are not included in the Computer Science—Transfer curriculum, but are included here in case students wish to take these additional mathematics courses.

In addition to the above, courses taken in the subjects below** will transfer towards the Humanities and Arts requirement at WPI. Please note that only courses taken at the 100 level or higher are approved for transfer. In addition, students can only transfer elementary level language courses if they plan to fulfill the WPI Humanities and Arts requirement in that foreign language.

Please note: All non-Mathematics courses require a grade of "B" or better to transfer; Math courses require "B-" or higher grades, with the exception of MAT 243 which requires a C or better.

***Art, Arabic, Mandarin, English, German, History, Humanities, Music, Philosophy, Religion, Spanish, and Theatre*

SOCIAL SCIENCES

The social science courses are not included in the articulation agreement and will be evaluated on an individual basis.

PLEASE REFER TO QCC/WPI EQUIVALENCY DOCUMENT FOR ADDITIONAL INFORMATION.

QCC Computer Science-Transfer to WPI Computer Science Articulation Agreement

QCC Course #	QCC Course Title	WPI Course #	WPI Course Title
Semester 1			
CSC 108	Computer Science I	CS 1101	Introduction to Program Design
ENG 101	Composition I	WR 1010	Elements of Writing
MAT 233	Calculus I	MA 1021*	Calculus I *
---	Lab Science Elective	---	See equivalency QCC/WPI document for suggestions
Semester 2			
CSC 109	Computer Science II	CS 2101	Object-Oriented Design Concepts
ENG 102	Composition II	EN 1251	Introduction to Literature
MAT 234	Calculus II	MA 1022*	Calculus II *
---	Lab Science Elective	---	See equivalency QCC/WPI document for suggestions
Semester 3			
CSC 208	Introduction to Architecture and Assembly Design	CS 2011	Introduction to Machine Organization and Assembly
MAT 125	Discrete Mathematics	MA 2201/CS 2022	Discrete Mathematics
SPH 101	Speech Communication Skills	HU 1XXX	Humanities 1000 Level Elective
---	Humanities Elective	**	See equivalency QCC/WPI document for suggestions
---	Social Science Elective	***	See equivalency QCC/WPI document for suggestions
Semester 4			
CSC 211	Programming with Data Structures	CS 2223	Algorithms
CSC 212	Introduction to Software Engineering	CS 3733	Software Engineering
MAT 237	Probability & Statistics for Engineers and Scientists	MA 2611	Applied Statistics I
---	Social Science Elective	***	See equivalency QCC/WPI document for suggestions

*Earning a B- or better in Calculus I and II at QCC (MAT 233, MAT 234) will result in receiving transfer credit for MA 1021, MA 1022, and MA 1023 (Calculus I-III) at WPI. Earning a B- or Better in Calculus I, II, and III at QCC (MAT 233, 234, 235) will result in receiving transfer credit for MA 1021-1024 (Calculus I-IV) at WPI.

**Only courses taken at the 100 level or higher are approved for transfer in Humanities and Arts (Art, Arabic, Mandarin, English, German, History, Humanities, Music, Philosophy, Religion, Spanish, and Theatre). In addition, students can only transfer elementary level language courses if they plan to fulfill the WPI Humanities and Arts requirement in that foreign language.

***The Social Science electives are not included in the articulation agreement and will be evaluated on an individual basis.

For additional information on transfer credit acceptance, see the QCC/WPI Equivalency document provided with this agreement.

QCC/WPI COURSE EQUIVALENCIES QCC/WPI COURSE EQUIVALENCIES

This list only includes QCC courses with established WPI equivalents.
Equivalencies are accurate as of the date of the articulation agreement, and are subject to re-evaluation as needed.

QCC Equivalent Course	WPI Equivalent Course	Grade Required
ACC 101 FINANCIAL ACCOUNTING I	ACC 1XXX 1000 LEVEL ELECTIVE	B or better
ACC 222 MANAGERIAL ACCOUNTING	ACC 1XXX 1000 LEVEL ELECTIVE	B or better
ART 101 ART APPRECIATION	AR 1100 ESSENTIALS OF ART	B or better
ART 131 INTRODUCTION TO DRAWING I	AR 2202 FIGURE DRAWING	B or better
BIO 100 PRINCIPLES OF HUMAN BIOLOGY	BB 1025 HUMAN BIOLOGY	B or better
BIO 101 GENERAL BIOLOGY: CORE CONCEPTS	BB 1XXX BIOLOGY 1000 LEVEL ELECTIVE	B or better
BIO 104 INTRODUCTION TO PLANT BIOLOGY	BB 2030 PLANT DIVERSITY	B or better
BIO 105 PRINCIPLES OF ECOLOGY	BB 2040 PRINCIPLES OF ECOLOGY	B or better
BIO 107 PRINCIPLES OF BIOLOGY I	BB 1001 INTRODUCTION TO BIOLOGY	B or better
BIO 108 PRINCIPLES OF BIOLOGY II	BB 1045 BIODIVERSITY	B or better
BIO 231 GENERAL MICROBIOLOGY	BB 2003 FUNDAMENTALS OF MICROBIOLOGY	B or better
BIO 259 CELL BIOLOGY BIO 260 MOLECULAR BIOLOGY	BB 2550 CELL BIOLOGY	B or better
BIO 262 PRINCIPLES OF GENETICS	BB 2920 GENETICS	B or better
BSL 101 BUSINESS LAW I	BUS 2020 THE LEGAL ENVIRONMENT OF BUSINESS DECISIONS	B or better
CHM 105 GENERAL CHEMISTRY I CHM 106 GENERAL CHEMISTRY II	CH 1010 CHEMICAL PROPERTIES, BONDING, AND FORCES CH 1020 CHEMICAL REACTIONS CH 1030 KINETICS, EQUILIBRIUM AND THERMODYNAMICS	B or better
CHM 123 PRINCIPLES OF CHEMISTRY FOR ENGINEERS I	CH 1010 CHEMICAL PROPERTIES, BONDING, AND FORCES	B or better
CHM 123 PRINCIPLES OF CHEMISTRY FOR ENGINEERS I CHM 124 PRINCIPLES OF CHEMISTRY FOR ENGINEERS II	CH 1010 CHEMICAL PROPERTIES, BONDING, AND FORCES CH 1020 CHEMICAL REACTIONS CH 1030 KINETICS, EQUILIBRIUM AND THERMODYNAMICS	B or better
CHM 124 PRINCIPLES OF CHEMISTRY FOR ENGINEERS II	CH 1030 KINETICS, EQUILIBRIUM AND THERMODYNAMICS	B or better
CHM 201 ORGANIC CHEMISTRY I	CH 2310 ORGANIC CHEMISTRY I	B or better
CIS 121 INTRODUCTION TO PROGRAMMING WITH C++	CS 1XXX COMPUTER SCIENCE 1000 LEVEL ELECTIVE	B- or better
CSC 108 COMPUTER SCIENCE I	CS 1101 INTRODUCTION TO PROGRAM DESIGN	B or better
CSC 109 COMPUTER SCIENCE II	CS 2102 OBJECT-ORIENTED DESIGN CONCEPTS	B or better
CSC 208 INTRODUCTION TO ARCHITECTURE AND ASSEMBLY LANGUAGE	CS 2011 INTRODUCTION TO MACHINE ORGANIZATION AND ASSEMBLY LANGUAGE	B or better
CSC 211 PROGRAMMING WITH DATA STRUCTURES	CS 2223 ALGORITHMS	B or better
CSC 212 INTRODUCTION TO SOFTWARE ENGINEERING	CS 3733 SOFTWARE ENGINEERING	B or better
CSC 221 C++ FOR SCIENTISTS & ENGINEERS	CS 1XXX COMPUTER SCIENCE 1000 LEVEL ELECTIVE	B or better

ECO 215 PRINCIPLES OF MACROECONOMICS	ECON 1120 INTRODUCTORY MACROECONOMICS	B or better
ECO 216 PRINCIPLES OF MICROECONOMICS	ECON 1110 INTRODUCTORY MICROECONOMICS	B or better
ELM 251 INSTRUMENTATION AND CONTROL TECHNOLOGY	RBE 2002 UNIFIED ROBOTICS II: SENSING	B or better
ENG 100 INTRODUCTION TO ENGLISH COMPOSITION	HU 1XXX HUMANITIES 1000 LEVEL ELECTIVE	B or better
ENG 101 COMPOSITION I	WR 1010 ELEMENTS OF WRITING	B or better
ENG 102 COMPOSITION II	EN 1251 INTRODUCTION TO LITERATURE	B or better
ENG 105 TECHNICAL WRITING	WR 3210 TECHNICAL WRITING	B or better
ENG 200 CHILDREN'S LITERATURE	HU 1XXX 1000 LEVEL ELECTIVE	B or better
ENG 260 SPECIAL TOPICS IN ENGLISH	HU 1XXX HUMANITIES 1000 LEVEL ELECTIVE NO WPI EQUIVALENCY	B or better
ERG 101 ENGINEERING GRAPHICS	ES 1310 INTRODUCTION TO COMPUTER AIDED DESIGN	B or better
ERG 211 INTRODUCTION TO MATERIALS SCIENCE	ES 2001 INTRODUCTION TO MATERIALS SCIENCE	B or better
ERG 221 STATICS	ES 2501 INTRODUCTION TO STATIC SYSTEMS	B or better
ERG 223 THERMODYNAMICS	ES 3001 INTRODUCTION TO THERMODYNAMICS	B or better
ERG 225 STRENGTH OF MATERIALS	ES 2502 STRESS ANALYSIS	B or better
FIN 111 PERSONAL FINANCIAL PLANNING	BUS 1XXX 1000 LEVEL ELECTIVE	B or better
HST 104 WORLD HISTORY I: BEGINNING TO 1500	HI 1341 INTRODUCTION TO GLOBAL HISTORY	B or better
HST 115 U.S. HISTORY: BEGINNINGS TO 1865	HI 1314 INTRODUCTION TO EARLY AMERICAN HISTORY	B or better
HST 116 U.S. HISTORY: 1865 TO PRESENT	HI 2314 AMERICAN HISTORY, 1877-1920	B or better
HUM 101 CRITICAL THINKING AND PROBLEM SOLVING	WR 1010 ELEMENTS OF WRITING	B or better
HUM 210 JOURNALING IN CONTEXT: NEW ENGLAND'S GREAT THINKERS	EN 3232 THE CONCORD WRITERS	B or better
HUM 232 SURVEY OF HOLLYWOOD FILM: 1920 TO PRESENT	HU 2251 INTRODUCTION TO FILM STUDIES	B or better
IMD 161 DIGITAL PHOTOGRAPHY	HU 1XXX HUMANITIES 1000 LEVEL ELECTIVE	B or better
LOG 105 INTRODUCTION TO BUSINESS LOGISTICS	BUS 1XXX 1000 LEVEL ELECTIVE	B or better
MAT 125 DISCRETE MATHEMATICS	MA 2201/CS 2022 DISCRETE MATHEMATICS	B- or better
MAT 233 CALCULUS I	MA 1021 CALCULUS I	B- or better
MAT 233 CALCULUS I MAT 234 CALCULUS II MAT 235 CALCULUS III	MA 1021 CALCULUS I MA 1022 CALCULUS II MA 1023 CALCULUS III MA 1024 CALCULUS IV	B- or better
MAT 233 CALCULUS I MAT 234 CALCULUS II	MA 1021 CALCULUS I MA 1022 CALCULUS II MA 1023 CALCULUS III	B- or better
MAT 234 CALCULUS II	MA 1022 CALCULUS II	B- or better
MAT 235 CALCULUS III	MA 1024 CALCULUS IV	B- or better

MAT 237 PROBABILITY & STATISTICS FOR ENGINEERS AND SCIENTISTS	MA 2611 APPLIED STATISTICS I	B- or better
MAT 238 DIFFERENTIAL EQUATIONS	MA 2051 ORDINARY DIFFERENTIAL EQUATIONS	B- or better
MAT 243 LINEAR ALGEBRA	MA 2071 MATRICES AND LINEAR ALGEBRA I	C or better
MGT 101 INTRODUCTION TO BUSINESS	BUS 1XXX 1000 LEVEL ELECTIVE	B or better
MGT 216 ENTREPRENEURSHIP AND SMALL BUSINESS MANAGEMENT	ETR 1XXX 1000 LEVEL ELECTIVE	B or better
MGT 222 INTERNATIONAL BUSINESS & MANAGEMENT	BUS 1020 GLOBAL ENVIRONMENT OF BUSINESS DECISIONS	B or better
MRK 201 PRINCIPLES OF MARKETING	MKT 1XXX 1000 LEVEL ELECTIVE	B or better
MUS 121 JAZZ IN AMERICA	MU 2719 JAZZ HISTORY	B or better
MUS 261 MUSIC HISTORY I	MU 2720 MUSIC HISTORY I: MEDIEVAL THROUGH THE BAROQUE	B or better
PHI 102 INTRODUCTION TO PHILOSOPHY	RE 1731 INTRODUCTION TO PHILOSOPHY AND RELIGION	B or better
PHY 105 GENERAL PHYSICS I	PH 1110 GENERAL PHYSICS—MECHANICS	B or better
PHY 106 GENERAL PHYSICS II	PH 1XXX PHYSICS 1000 LEVEL ELECTIVE	B or better
PHY 205 GENERAL PHYSICS III	PH 1120 GENERAL PHYSICS—ELECTRICITY AND MAGNETISM	B or better
PSC 201 UNITED STATES GOVERNMENT	GOV 1301 U.S. GOVERNMENT	B or better
PSC 221 STATE & LOCAL GOVERNMENT	GOV 1XXX GOVERNMENT 1000 ELECTIVE	B or better
PSY 101 INTRODUCTION TO PSYCHOLOGY	PSY 1400 INTRODUCTION TO PSYCHOLOGICAL SCIENCE	B or better
PSY 261 THEORIES OF PERSONALITY	PSY 1XXX PSYCHOLOGY 1000 LEVEL ELECTIVE	B or better
SOC 101 INTRODUCTORY SOCIOLOGY (PRINCIPLES)	SOC 1202 INTRODUCTION TO SOCIOLOGY AND CULTURAL DIVERSITY	B or better
SOC 111 SOCIAL PROBLEMS & SOCIAL CHANGE	SOC 1202 INTRODUCTION TO SOCIOLOGY AND CULTURAL DIVERSITY	B or better
SPH 101 SPEECH COMMUNICATION SKILLS	HU 1XXX HUMANITIES 1000 LEVEL ELECTIVE	B or better