BINGHAMTON
UNIVERSITY

State University of New York

TRANSFER ARTICULATION AGREEMENT BETWEEN THOMAS J WATSON SCHOOL OF ENGINEERING AND APPLIED SCIENCE BINGHAMTON UNIVERSITY AND HERKIMER COUNTY COMMUNITY COLLEGE

INTRODUCTION

In an effort to better serve students intending to pursue programs of study within the Watson School of Engineering and Applied Science at Binghamton University, Herkimer County Community College and Binghamton University hereby enter into this transfer articulation agreement.

Binghamton University recognizes students from Herkimer County Community College who complete an associate degree and then wish to pursue and earn a baccalaureate degree in the Watson School at Binghamton University.

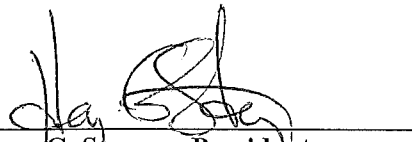
OBJECTIVES

- **To facilitate the transition of graduates from the associate of science in engineering science at Herkimer County Community College to baccalaureate degree programs in electrical, mechanical, industrial & systems, and computer engineering in the Watson School at Binghamton University.**
- **To attract qualified students to both Herkimer County Community College and Binghamton University.**
- **To provide information that ensures appropriate advisement for students from faculty and staff at both Herkimer County Community College and Watson School at Binghamton University.**
- **To encourage academic coordination between the faculty and advisors at the two institutions, including curricular reviews.**
- **To assess and exchange information on the specific outcomes of this articulation program with the goal of continual improvement.**

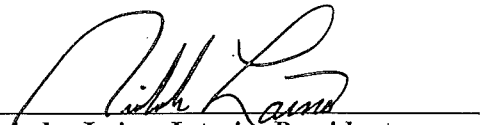
TRANSFER ARTICULATION AGREEMENT
BETWEEN
WATSON SCHOOL
BINGHAMTON UNIVERSITY
AND
HERKIMER COUNTY COMMUNITY COLLEGE

In May, 2014 Watson School of Binghamton University and Herkimer County Community College agree to enter into an articulation agreement as described by articles one through six of the attached document and the Transfer Information/Curriculum Planning Guide. This articulation agreement will remain in effect until it is recertified or until it is terminated.

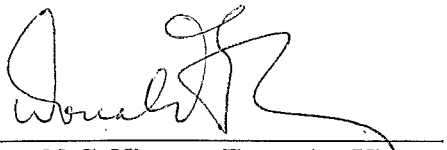
The undersigned agree to all the stipulations outlined in the attached documents.



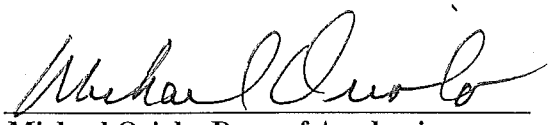
Harvey G. Stenger, President
Binghamton University



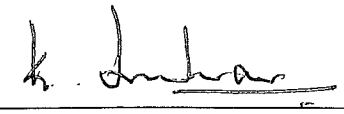
Nicholas Laino, Interim President
Herkimer County Community College



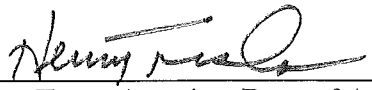
Donald G. Nieman, Executive Vice President for Academic Affairs and Provost
Binghamton University



Michael Oriolo, Dean of Academic Affairs
Herkimer County Community College



Krishnaswami Srihari, Dean
Watson School
Binghamton University



Henry Testa, Associate Dean of Academic Affairs
Herkimer County Community College

ARTICLES OF ARTICULATION

1. **Under the provisions of this document, all Herkimer County Community College students who have graduated or who will graduate prior to enrollment at Binghamton with an associate of science in engineering science degree with a cumulative grade point average of at least a 3.0 will be welcomed as matriculated students in the Watson School, provided that all engineering transfer admissions criteria are met, including prerequisite courses outlined in the transfer brochure and the attached transfer equivalency information. A completed application is due by February 15 for fall admission. However, those who intend to complete the bachelor of science degree in four standard, full-time semesters must enter in a fall semester having completed all prerequisites required for their desired program.**

2. **Application Forms and requirements for application and admission are available at http://www2.binghamton.edu/admissions/students/transfer-students.html including additional requirements for International Applicants and Educational Opportunity Program (EOP) applicants.**

3. **This document and the attached curriculum planning guides describe the requirements for the bachelor of science degrees in the Watson School. The planning guides also provide information about approved Binghamton University transfer course equivalencies that should be taken within the first two years of study at Herkimer County Community College to fulfill University General Education and/or Watson School requirements.**

4. **Credits awarded through programs including Advance Placement (AP), International Baccalaureate (IB) and College Level Examination Program (CLEP) will also be considered for transfer based upon official proof of minimum required scores.**

5. **Each institution hereby agrees to notify the other in the event of substantive changes in a course, programs or policies at its institution that would have an impact on this agreement, including the courses and provisions herein. Herkimer County Community College shall notify the Watson School anytime that course syllabi and/or contents are significantly altered, or if new courses should be reviewed for equivalency. Substantive changes to the degree program at Binghamton University will be reflected in the Bulletin and in the guide materials on the website, and due notification shall be made to Herkimer County Community College. All such notification shall be made as early as reasonable.**

6. **Evaluation and renegotiation of this agreement will occur every 5 years. At the request of either party, a review of the contents and/or implementation of the agreement will be conducted by the institutions. Binghamton University and/or Herkimer County Community College will give not less than one calendar year's written notice for a termination of the articulation agreement.**

For additional information contact
Watson School Dean's Office 607-777-6204

The Curriculum Planning Guides are part of this agreement and are attached as pages 3-6.

Thomas J. Watson School of Engineering and Applied Science at Binghamton University
BS in Computer Engineering-Four-Year Program
Application curriculum code: 0843
Herkimer County Community College-Spring 2014

Fall			Spring		
BU Course No.	**Course Name**	**Transfer Course**	**BU Course No.**	**Course Name**	**Transfer Course**
Math 221	Calculus I (M)	**MA 245**	Math 222	Calculus II	**MA 246**
Chem 111	Chemical Principles (L)	**SC 153***	Phys 131	General Physics I	**SC 233**
WTSN 111	Discovering Engineering I	**SC 191**	WTSN 112	Discovering Engineering II (J)	**SC 192**
WTSN 103	Tech Communication I	**EN 111**	WTSN 104	Tech Communication II	**EN 112**
	General Ed Elective (P)	**Select from: SS 121,122,141**		General Ed Elective (G)	**SS 172**
	Body /Wellness	**1 credit wellness**		Body/Wellness	**1 credit activity**

Year 2

Fall			Spring		
BU Course No.	**Course Name**	**Transfer Course**	**BU Course No.**	**Course Name**	**Transfer Course**
Math 371	Differential Equations	**MA 251**	ISE 261	Probabilistic Systems I	**MA 127**
Phys 132	General Physics II	**MA 234**	EECE 260	Electrical Circuits	**ECE260 SUNYIT ******
CS 211	Program'g for Engrs I	**IS 124&125**	CS 212	Program'g for Engrs II	**Can take after transfer**
EECE 251	Digital Logic Design	**	EECE 252	Comp Org/Microprocessors	**Can take after transfer**
EECE 281	EECE Seminar I	**Using 1 sub credit**			

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Year 3-POINT OF TRANSFER

Fall			Spring		
BU Course No.	**Course Name**	**Transfer Course**	**BU Course No.**	**Course Name**	**Transfer Course**
EECE 301	Signals & Systems		EECE 352	Computer Architecture	
EECE 315	Electronics I		EECE 387	Design Lab	
EECE 351	Digital System Design		EECE 359	Computer Networks	
Math 314	Discrete Math			Gen Ed Elective (H)	**Any Humanities**
EECE 382	EECE Seminar II				

Year 4

Fall			Spring		
BU Course No.	**Course Name**	**Transfer Course**	**BU Course No.**	**Course Name**	**Transfer Course**
EECE 487	Senior Project I (J)		EECE 488	Senior Project II	
	Technical Elective I			Technical Elective II	
CS 350	Operating Systems			Professional Elective I	
	General Ed Elective (A)	**Any Art, Music, Theater, Photography or Cinema**		General Ed Elective (N)	**Any Social Science**

***Electrical and Computer Engineering do not require a second chemistry course; SC 153 meets their requirement.**

******Since Herkimer does not offer a circuits course and their students typically complete their circuits at SUNYIT it will be allowed. However the Watson School's summer on line circuits course (EECE 260) is the preferred choice. This important course is prerequisite to junior level work. ECE also suggests that students take the summer on line EECE 251 digital logic course the summer prior to transfer.**

5/13/2014

Thomas J. Watson School of Engineering and Applied Science at Binghamton University
BS in Electrical Engineering-Four-Year Program
Application curriculum code: 0266
Herkimer County Community College-Spring 2014

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
Math 221	Calculus I (M)	**MA 245**	Math 222	Calculus II	**MA 246**
Chem 111	Chemical Principles (L)	**SC 153***	Phys 131	General Physics I	**SC 233**
WTSN 111	Exploring Engineering I	**SC 191**	WTSN 112	Exploring Engineering II (J)	**SC 192**
WTSN 103	Engineering Comm I	**EN 111**	WTSN 104	Engineering Comm II	**EN 112**
	General Ed Elective (P)	**Select from: SS 121,122,141**		General Ed Elective (G)	**SS 172**
	Body /Wellness	**1 credit wellness**		Body/Wellness	**1 credit activity**
Year 2					
Fall			**Spring**		
Course #	**Course Name**	**Transfer Course**	**Course #.**	**Course Name**	**Transfer Course**
Math 371	Ordinary Diff Equation	**MA 251**	ISE 261	Probabilistic Systems I	**MA 127**
Phys 132	General Physics II	**MA 234**	EECE 260	Electrical Circuits	**ECE260 SUNYIT ******
CS 211	Program I for Engineers	**IS 124&125**	CS 212	Program II for Engineers	**Can take after transfer**
EECE 251	Digital Logic Design	**	EECE 252	Microprocessors	**Can take after transfer**
EECE 281	EECE Seminar I-1 crdt	**Using 1 sub credit**			
Year 3-POINT OF TRANSFER					
Fall			**Spring**		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
Math 323	Calculus III	**MA 247**	EECE 387	EECE Design Lab	
EECE 315	Electronics I		EECE 323	Electromagnetics	
EECE 301	Signals and Systems		EECE 361	Control Systems	
EECE 332	Semiconductor Devices		EECE 377	Communication Systems	
EECE 382	EECE Seminar II-1 crdt			Professional Elective I	
Year 4					
Fall			**Spring**		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
EECE 487	Senior Project I (J)		EECE 488	Senior Project II	
	Technical Elective I			Technical Elective II	
	General Ed Elec (H)	**Any Humanities**		Professional Elective II	
	General Ed Elec (A) Aesthetics	**Any Art, Music, Theater, Photography or Cinema**		General Ed Elec (N)	**Any Social Science**

***Electrical and Computer Engineering do not require a second chemistry course; SC 153 meets their requirement.**
****Since Herkimer does not offer a circuits course and their students typically complete their circuits at SUNYIT that will be allowed. However the Watson School's summer on line circuits course (EECE 260) is the preferred choice. This important course is prerequisite to junior level work. ECE also suggests that students take the summer on line EECE 251 digital logic course the summer prior to transfer.**

Thomas J. Watson School of Engineering and Applied Science at Binghamton University
BS in Industrial and Systems Engineering-Four-Year Program
Application curriculum code: 1367- Herkimer County Community College - Spring 2014

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
Math 221	Calculus I (M)	**MA245**	Math 222	Calculus II	**MA246**
Chem 111	Chemical Principles (L)	**SI 153 & 154***	Phys 131	General Physics I	**SC233**
WTSN 111	Exploring Engineering I	**SC191**	WTSN 112	Exploring Engineering II	**SC192**
WTSN 103	Engineering Comm. I	**EN111**	WTSN 104	Engr'g Communication II	**EN112**
	General Ed Elec (G)	**SS 172**		General Ed Elec (P)	**Select from: SS 121,122,141**
	Body /Wellness	**1 credit wellness**		Body/Wellness	**1 credit activity**

Year 2

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
Math 323 or 371Elective	Differential Equa OR Calculus 3	**MA247 or MA251**	Math 304	Linear Algebra	**MA262**
Phys 132	General Physics II	**SC234**	ISE 212	Engineering Comput'g **(LabView used)**	**IS 124&125*** **
ME 273	Engineering Statics	**SC238**	ISE 261	Probabilistic Systems I	**MA 127****
ISE 231	Human Factors	**Can take after transfer**		General Ed Elec (A)	**Art,Thea,Music, Cinema,Photography**
ISE 295	Seminar Course- 1 credit	**Can take after transfer**			

Year 3-Point of Transfer

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
ISE 311	Enterprise Systems		ISE 320	Optimization & Operations Research I	
ISE 362	Probabilistic Systems II		ISE 363	Designing /Experiments	
ISE 370	Industrial Automation		ISE 364	Engr'g Econ & Project Management	
Technical Elective (ISE, ME, EECE, CS, BE)		**SC 239**		General Ed Elective (H)	**Any Humanities**

Year 4

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
ISE 420	Optimization & Operations Research II		ISE 492	Systems Design Project	
ISE 421	Modeling & Simulation			Technical Elective (ISE, ME, EECE, CS, BE)	
ISE 491	Systems Design			Technical Elective (ISE, ME, EECE, CS, BE)	
	Free Elective	**MA247 or MA251**		General Ed Elective (N)	**Any Social Science**

*** ISE requires a two course sequence in Chemistry to equal Chem 111. **MA 127 is minimally acceptable and review of all probability coverage over summer prior to transfer is strongly suggested. ***While IS 124&125 may be used as ISE 212 familiarity with LabView is encouraged.**

5/13/2014

Thomas J. Watson School of Engineering and Applied Science at Binghamton University
BS in Mechanical Engineering-Four-Year Program
SUNY Application curriculum code: 0268
Herkimer County Community College-Spring 2014

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
Math 221	Calculus I (M)	**MA245**	Math 222	Calculus II	**MA246**
Chem 111	Chemical Principles (L)*	**SC153 & 154**	Phys 131	General Physics I	**SC233**
WTSN 111	Exploring Engineering I	**SC191**	WTSN 112	Exploring Engineering II (J)	**SC192**
WTSN 103	Engr Communication I	**EN111**	WTSN 104	Engr Communication II	**EN112**
	General Ed Elective (G)	**SS 172**		General Ed Elective (P)	**Select from: SS 121,122,141**
	Body /Wellness	**1 credit wellness**		Body/Activity	**1 credit activity**

Year 2

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
Math 371	Ordinary Diff. Eqns	**MA 251**	Math 323	Calculus III	**MA247**
Phys 132	General Physics II	**SC234**	ME 211	Intro to Solid Mechanics	**SC 230**
ME 273	Engineering Statics	**SC238**	ME 274	Engineering Dynamics	**SC239**
ME 212	ME Programming (**MatLab**)	**IS 124: SEE NOTE**	EECE 260	Circuits (with lab)	**ECE 260 SUNYIT****
	General Ed Elective (A)	**Art,Thea,Music, Cinema,Photography**		General Ed Elective (N)	**Any Social Sci**

Year 3-POINT OF TRANSFER

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
ME 381	Computer-Aided Engineering		ME 392	Mech. Engr. Design	
ME 331	Thermodynamics		ME 351	Fluid Mechanics	
ME 362	Material Science		ME 372	Engr'g Project Management	
ME 302	Engineering Analysis		ME 391	Meas. & Instrumentation Lab	
	Open Elective**			General Ed Elective (H)	**Any Humanities**

Year 4

Fall			Spring		
Course #	**Course Name**	**Transfer Course**	**Course #**	**Course Name**	**Transfer Course**
ME 493	Senior Project I (J)		ME 494	Senior Project II	
ME 421	Mechanical Vibrations		ME 424	Control Systems in ME	
ME 441	Heat Transfer			Technical Elective	
ME 403	Engr'g Computational Methods			Technical Elective	
	Technical Elective			Open Elective	

***Mechanical Engineering requires a two course sequence in Chemistry to equal Chem 111.**
****Since Herkimer does not offer a circuits course and their students typically complete their circuits at SUNYIT it will be allowed. However the Watson School's summer on line circuits course (EECE 260) is the preferred choice. This important course is prerequisite to junior level work.**
Note: MatLab coverage is an important part of the ME 212 programming class and is required prior to transfer.

5/13/2014