

**Thomas J. Watson School of Engineering and Applied Science at Binghamton University**  
**BS in Mechanical Engineering-Four-Year Program**

Application curriculum code: 0268

**BROOME COMMUNITY COLLEGE - AS in Engineering Science major-2009**

<u>Fall</u>			<u>Spring</u>		
Course No.	Course Name	Transfer Course	Course No.	Course Name	Transfer Course
Math 221	Calculus I (M)	MATH 181	Math 222	Calculus II	MATH 182
Chem 111	Chemical Principles (L)	CHM 145& 146*	Phys 131	General Physics I	PHY 181
WTSN 111	Exploring Engineering I	SUBSTITUTE EGR 150	WTSN 112	Exploring Engineering II (J)	SUBSTITUTE EGR 151
WTSN 103	Engineering Communications I	ENG 110	WTSN 104	Engineering Communications II	ENG 111/220
	General Ed Elective (P)	SUGGEST HIST 130 OR 131		General Ed Elective (G)	SUGGEST ANY HIST 155-159
	Body /Wellness	PED ACTIVITY		Body/Wellness	PED WELLNESS
<b>Year 2</b>					
<u>Fall</u>			<u>Spring</u>		
Course No.	Course Name	Transfer Course	Course No.	Course Name	Transfer Course
Math 371	Ordinary Differential Equations	MATH 282	Math 323	Calculus III	MATH 281
Phys 132	General Physics II	PHY 182	ME 211	Intro to Solid Mechanics	EGR 283 STR. MATERIALS *
ME 273	Statics	EGR 281	EECE 260	Circuits (with lab)	EGR 285
	General Ed Elective (A)	ANY ART ,MUS, THEA	ME 274	Dynamics	EGR 282
				General Ed Elective (N)	ANY SOCIAL SCIENCE <sup>1</sup>
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<b>Transfer for Year 3</b>					
<u>Fall</u>			<u>Spring</u>		
Course No.	Course Name	Transfer Course	Course No.	Course Name	Transfer Course
ME 381	Computer-Aided Engineering		ME 392	Mechanical Engineering Design	
ME 331	Thermodynamics		ME 351	Fluid Mechanics	
ME 362	Material Science	EGR 284	ME 372	Engineering Proj. Mgmt	
ME 302	Engineering Analysis		ME 391	Meas. & Instrum. Lab	
	Elective*			General Ed Elective (H)	Any Humanities Course
<b>Year 4</b>					
<u>Fall</u>			<u>Spring</u>		
Course No.	Course Name	Transfer Course	Course No.	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	Engineering Computational Methods			Technical Elective	
	Technical Elective			Elective*	

<sup>1</sup> Any Gen Ed (Pluralism in US, Global Interdependencies, Aesthetics, or Social Science can be taken either before or after transfer either at BU or (with pre-approval) elsewhere.

\*Department-approved electives allow students to tailor their program to pursue individual interests.

\*For junior transfers (began 2008) both Chem 145/146 are required to use as Chem 111 for the BSME major.

\*Beginning with the Fall 2008 sophomore year (fall 07 freshmen) statics and dynamics at BU were split into two courses which match BCC's 281/282. \*Strength of Materials is now prerequisite for junior year 381 and 392.

**Thomas J. Watson School of Engineering and Applied Science at Binghamton University**  
**BS in Electrical Engineering-Four-Year Program**

Application curriculum code: 0266

**BROOME COMMUNITY COLLEGE-AS in engineering science 2009**

<u>Fall</u>			<u>Spring</u>		
Course No.	Course Name	Transfer Course	Course No.	Course Name	Transfer Course
Math 221	Calculus I (M)	<b>MATH 181</b>	Math 222	Calculus II	<b>MATH 182</b>
Chem 111	Chemical Principles (L)	<b>CHM 145*</b>	Phys 131	General Physics I (calculus-based)	<b>PHY 181</b>
WTSN 111	Exploring Engineering I	SUBSTITUTE EGR 150	WTSN 112	Exploring Engineering II (J)	SUBSTITUTE EGR 151
WTSN 103	Engineering Communications I	<b>ENG 110</b>	WTSN 104	Engineering Communications II	<b>ENG 111 OR 220</b>
	General Ed Elective (P)	SUGGEST HIST 130 OR 131		General Ed Elective (G)	SUGGEST ANY HIST 155-159
	Body /Wellness	<b>PED ACTIVITY</b>		Body/Wellness	<b>PED WELLNESS</b>

**Year 2**

<u>Fall</u>			<u>Spring</u>		
Course No.	Course Name	Transfer Course	Course No.	Course Name	Transfer Course
Math 371	Ordinary Differential Equations	<b>MATH 282</b>	ISE 261	Probabilistic Systems I	MATH 260 OR AFTER TRANSFER
Phys 132	General Physics II	<b>PHY 182</b>	EECE 260	Electrical Circuits	<b>EGR 285</b>
CS 211	Program'g I for Engrs	<b>CST 127</b>	CS 212	Program'g II for Engrs	<b>CST 202/138</b>
EECE 251	Digital Logic Design	<b>CST 170</b>	EECE 252	Computer Organization & Microprocessors	<b>EGR 289</b>
EECE 281	EECE Seminar I	SUBSTITUTE EGR 101/200			

\*\*\*\*\*Transfer for Year 3\*\*\*\*\*

<u>Fall</u>			<u>Spring</u>		
Course No.	Course Name	Transfer Course	Course No.	Course Name	Transfer Course
Math 323	Multivariable Calculus	<b>MATH 281</b>	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			Professional Elective 1	

**Year 4**

<u>Fall</u>			<u>Spring</u>		
Course No.	Course Name	Transfer Course	Course No.	Course Name	Transfer Course
EECE 487	Senior Project I (J)		EECE 488	Senior Project II	
	Technical Elective I			Technical Elective II	
	General Education Elective (H)			Professional Elective II	
	General Education Elective (A)	Any Thea, Mus, Art, Cinema, Photography		General Education Elective (N)	Any Social Science Course

<sup>1</sup>MATH 260 at BCC is equal to this class. \*Electrical and Computer Engineering (ECE) allows substitution of Chem 145/lab for Chem 111, so this is the only department where Chem 146/lab will not be required. If taken, Statics & Dynamics would be used in the two Professional Elective areas.

**Thomas J. Watson School of Engineering and Applied Science at Binghamton University**  
**BS in Computer Engineering-Four-Year Program**

Application curriculum code: 0843

**BROOME COMMUNITY COLLEGE-AS in engineering science 2009**

<u>Fall</u>			<u>Spring</u>		
BU Course No.	Course Name	Transfer Course	BU Course No.	Course Name	Transfer Course
Math 221	Calculus I (M)	<b>MATH 181</b>	Math 222	Calculus II	<b>MATH 182</b>
Chem 111	Chemical Principles (L)	<b>CHM 145*</b> see note	Phys 131	General Physics I	<b>PHY 181</b>
WTSN 111	Exploring Engineering I	Substitute EGR 150	WTSN 112	Exploring Engineering II (J)	Substitute EGR 151
WTSN 103	Engineering Communications I	<b>ENG 110</b>	WTSN 104	Engineering Communications II	<b>ENG 111 OR 220</b>
	General Ed Elective (P)	<b>SUGGEST HIST 130 OR 131</b>		General Ed Elective (G)	<b>SUGGEST ANY HIST 155-159</b>
	Body /Wellness	<b>PED ACTIVITY</b>		Body/Wellness	<b>PED WELLNESS</b>
<b>Year 2</b>					
<u>Fall</u>			<u>Spring</u>		
BU Course No.	Course Name	Transfer Course	BU Course No.	Course Name	Transfer Course
Math 371	Ordinary Differential Equations	<b>MATH 282</b>	ISE 261	Probabilistic Systems I	<b>MATH 260 APPV'D 2006**</b>
Phys 132	General Physics II	<b>PHY 182</b>	EECE 260	Electrical Circuits	<b>EGR 285</b>
CS 211	Program'g I for Engr	<b>CST127</b>	CS 212	Program'g II for Engr	<b>CST202/CST 138</b>
EECE 251	Digital Logic Design	<b>CST 170</b>	EECE 252	Computer Organization & Microprocessors	<b>EGR 289</b>
EECE 281	EECE Seminar I	<b>SUBSTITUTE ENR 101/200</b>			
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<b>Year 3</b>					
<u>Fall</u>			<u>Spring</u>		
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	<b>MATH 250</b>		General Ed Elective (H)	<b>Any Humanities Course</b>
EECE 382	EECE Seminar II				
<b>Year 4</b>					
<u>Fall</u>			<u>Spring</u>		
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	
	General Ed Elective (A)	Thea, Art, Mus, Cinema, Photography		General Ed Elective (N)	<b>Any Social Science Course</b>
CS 350	Operating Systems			Professional Elective I	<b>MATH 281</b>

\*Electrical and Computer Engineering (ECE) allows substitution of Chem 145/lab for Chem 111, so this is the only department where Chem 146/lab will not be required.

\*\*MATH 260 at BCC is equal to this class but it is also possible to take this after transfer.

**State University of New York at Binghamton**  
**Thomas J. Watson School of Engineering and Applied Science**  
**BS in Industrial and Systems Engineering-Four-Year Program**  
 -Application curriculum code: 1367

**BROOME COMMUNITY COLLEGE--AS in engineering science 2009**

<u>Fall</u>			<u>Spring</u>		
BU Course No.	Course Name	Transfer Course	BU Course No.	Course Name	Transfer Course
Math 221	Calculus I (M)	<b>MATH 181</b>	Math 222	Calculus II	<b>MATH 182</b>
Chem 111	Chemical Principles (L)	<b>CHM 145&amp;146*</b>	Phys 131	General Physics I	<b>PHYS 181</b>
WTSN 111	Exploring Engineering I	SUBSTITUTE EGR 150	WTSN 112	Exploring Engineering II (J)	SUBSTITUTE EGR 151
WTSN 103	Engineering Communications I	<b>ENG 110</b>	WTSN 104	Engineering Communications II	<b>ENG 111/220</b>
	General Ed Elective (P)	SUGGEST HIST 130 OR 131		General Ed Elective (G)	ANY HIST 155-159
	Body /Wellness	<b>PED ACTIVITY</b>		Body/Wellness	ANY WELLNESS
<b>Year 2</b>					
<u>Fall</u>			<u>Spring</u>		
BU Course No.	Course Name	Transfer Course	BU Course No.	Course Name	Transfer Course
Math Elective*	*Math Elective – student must take either Math 371 - Ordinary Differential Equations or Math 323 - Calculus III	<b>MATH 281 or MATH 282</b>	Math 304***	Linear Algebra	<b>MATH 264***</b>
Phys 132	General Physics II	<b>PHYS 182</b>	ISE 261	Probabilistic Systems I	<b>MATH 260</b>
ME 273	Statics	<b>EGR 281 **</b>	ISE 212	Engr'g Computing	<b>CST 127/138</b>
ISE 231	Human Factors	Take after transfer		Gen Ed Elective (A)	Mus/Art/Thea/Cinema
<b>*****Year 3*****</b>					
<u>Fall</u>			<u>Spring</u>		
BU Course No.	Course Name	Transfer Course	BU Course No.	Course Name	Transfer Course
ISE 311	Enterprise Systems		ISE 320	Optimization & Operatns Res I	
ISE 362	Probabilistic Syst II		ISE 363	Designing with Experiments	
ISE 370	Industrial Automation		ISE 364	Engineering Economics & Project Management.	
	Technical Elective (ISE,ME,EECE,CS,BE)	<b>EGR 282**</b>		Gen Ed Elective (H)	Any Humanities Course
<b>Year 4</b>					
<u>Fall</u>			<u>Spring</u>		
BU Course No.	Course Name	Transfer Course	BU Course No.	Course Name	Transfer Course
ISE 420	Optimizatn&Operatns Res II		ISE 492	Systems Design Project	
ISE 421	Modeling and Simulation			Technical Elective (ISE, ME, EECE, CS, BE)	
ISE 491	Systems Design			Technical Elective (ISE, ME, EECE, CS, BE)	
	Free Elective	<b>MATH 281*** OR MATH 282</b>		Gen Ed Elective (N)	<b>Any Social Science</b>

\*For junior transfers in 2008 (Fall 07 freshmen) both Chem 145/146 are required to use as Chem 111 for the ISE major

\*\*Beginning with the Fall 2008 sophomore year at BU statics and dynamics at BU was split into two courses. ISE majors are now only required to complete statics. However, dynamics can be used as a technical elective if desired.

\*\*\*Linear Algebra is now required for this major, Calculus 3 or differential equations can be used as free elective if both are taken..