NEW YORK INSTITUTE DUTCHESS COMMUNITY COLLEGE OF TECHNOLOGY Associate in Applied Science Bachelor of Science in Electrical Technology (ELT) Electrical and Computer Engineering Technology Credit Credit Course Course First Semester (15 credits) Math—Recommended MAT 184: Algebra/Trig for Precalc MATH 135 Fundamentals of Precalculus I 3 4 ENG 101 Composition I 3 FCWR 101 Writing I 3 ELT 105 DC Circuits 3 ETEC 110 Electrical Technology I 4 ELT 107 Intro to Prog for Automation 3 ETEC/CTEC Elective 3 ICBS Behavioral Science Seminar* BHS 103 Social Problems in Today's World 3 3 Second Semester (15 credits) Math Elective – Recommended MAT 185: Precalculus MATH 136 Fundamentals of Precalculus II 3 4 ENG 102 Composition II 3 FCWR 151 Writing II 3 ELT 106 AC Circuits ETEC 120 Electrical Technology II 3 4 ELT 108 Electronics I 3 ETEC 131 Electronics Technology I 4 ELT 115 Digital Fundamentals CTEC 216 Digital Electronics 4 Third Semester (16 credits)

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ELT 122 Manufacturing Tools and Practices

ELT 213 Electro-Mechanical Devices

ELT 218 Electronics II

PHY 121 General Physics I

American History Course

Fourth Semester (17 credits) ELT 216 Automation Systems

ELT 250 ELT Capstone Project

CHE 111, CHE 121, or PHY 122

Free Elective – *Recommended* MAT 221 Calculus I (4)

TOTAL

ENT 131 Technical Drawing

Technical Elective

*Transfer substitution awarded on the basis of this agreement.

Note – Recommended courses are identified to maximize transfer credit award to NYIT.

Fewer credits may transfer if "Recommended" courses are not completed.

TOTAL

Credit used to balance ETEC 110, 120, 131

PHYS 130 Introductory Physics + 1 credit used to

ETEC 240 Energy Technology

balance ETEC 231

ETEC 231 Electronics Technology II

FCIQ 101 Foundations of Inquiry*

Credit used to balance CTEC 216, 235

Course Equivalent: Chemistry Elective (4), or

PHYS 150 Intro Physics II + 1 Physics Elec credit MATH 161 Basic Applied Calculus + 1 credit used

Credit used to balance MATH 135

CTEC 235 Microcomputers I

ETEC/CTEC Elective

to balance MATH 136

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Program of Study at New York Institute of Technology Bachelor of Science in Electrical and Computer Engineering Technology

Courses to be completed at NYIT:

Dr. Babak Dastgheib-Beheshti, Dean

College of Engineering & Computing Sciences, NYIT

ETEC 310 Communication Circuits 4 ETEC 325 Applied Statistics 3 ETEC 410 Control Systems Technology 4 ETEC 495 Electrical Engineering Technology Senior Design or - CTEC 495 Computer Technology Seminar Project 3 CTEC 204 Programming Techniques I 3 CTEC 208 Programming Techniques II 3 CTEC 241 Circuit Design and Fabrication 4 CTEC 243 Applied Computational Analysis I 3 CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT 4 CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 COre and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication FCWR 304 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^A 5 Total credits at New York Institute of Technology: 66 **Requirement determined by science course completed at Dutchess CC	Major courses:			<u>Credits</u>	
ETEC 410 Control Systems Technology 4 ETEC 495 Electrical Engineering Technology Senior Design or - CTEC 495 Computer Technology Seminar Project 3 CTEC 204 Programming Techniques I 3 CTEC 208 Programming Techniques II 3 CTEC 241 Circuit Design and Fabrication 4 CTEC 243 Applied Computational Analysis I 3 CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT 4 CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^^ 5 Total credits at New York Institute of Technology: 66 **Requirement determined by science course completed at Dutchess CC	=	Communication Circuits		·	
ETEC 495 Electrical Engineering Technology Senior Design or CTEC 495 Computer Technology Seminar Project 3 CTEC 204 Programming Techniques I 3 CTEC 208 Programming Techniques II 3 CTEC 241 Circuit Design and Fabrication 4 CTEC 243 Applied Computational Analysis I 3 CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT 4 CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 9 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC	ETEC 325	Applied Statistics		3	
CTEC 495 Computer Technology Seminar Project 3 CTEC 204 Programming Techniques I 3 CTEC 208 Programming Techniques II 3 CTEC 241 Circuit Design and Fabrication 4 CTEC 243 Applied Computational Analysis I 3 CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT 4 CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: 666 **Requirement determined by science course completed at Dutchess CC	ETEC 410	Control Systems Technology		4	
CTEC 204 Programming Techniques I CTEC 208 Programming Techniques II 3 CTEC 241 Circuit Design and Fabrication 4 CTEC 243 Applied Computational Analysis I 3 CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication FCSC 101 Foundations of Scientific Process 5 FCWR 304 Communication for Technical Professions 1 ICLT 3XX ICLT Literature Seminar 1 ICPH 3XX ICPH Philosophy Seminar 1 ICSS 309 Technology and Global Issues PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^^ 5 Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC* **Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC* **Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC* **Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC* **Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC* **Total credits at New York Institute of Technology: **Total credits at New York Institute of	ETEC 495	Electrical Engineering Technology Senior Design	n <u>or</u>	-	
CTEC 208 Programming Techniques II 3 CTEC 241 Circuit Design and Fabrication 4 CTEC 243 Applied Computational Analysis I 3 CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT 4 CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or 15 Total credits at New York Institute of Technology: 66 **Requirement determined by science course completed at Dutchess CC	CTEC 495	Computer Technology Seminar Project		3	
CTEC 241 Circuit Design and Fabrication 4 CTEC 243 Applied Computational Analysis I 3 CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT 4 CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 1 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or 1 Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: 666 **Requirement determined by science course completed at Dutchess CC	CTEC 204	Programming Techniques I		3	
CTEC 243 Applied Computational Analysis I CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT 4 CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions ICLT 3XX ICLT Literature Seminar ICPH 3XX ICPH Philosophy Seminar ICSS 309 Technology and Global Issues PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: ARequirement determined by science course completed at Dutchess CC	CTEC 208	Programming Techniques II		3	
CTEC 247 Applied Computational Analysis II 3 CTEC 336 Embedded Systems and IoT 4 CTEC 350 Microcontroller Based Systems 3 IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: 66 **Requirement determined by science course completed at Dutchess CC	CTEC 241	Circuit Design and Fabrication		4	
CTEC 336 Embedded Systems and IoT CTEC 350 Microcontroller Based Systems IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: 66 **Requirement determined by science course completed at Dutchess CC	CTEC 243	Applied Computational Analysis I		3	
CTEC 350 Microcontroller Based Systems IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or 1 Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: 66 **Requirement determined by science course completed at Dutchess CC	CTEC 247	Applied Computational Analysis II		3	
IENG 240 Engineering Economics 3 IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC	CTEC 336	Embedded Systems and IoT		4	
IENG 251 Project Engineering 3 Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC**	CTEC 350	Microcontroller Based Systems		3	
Core and additional requirements: FCSP 105 Foundations of Speech Communication 3 FCSC 101 Foundations of Scientific Process 3 FCWR 304 Communication for Technical Professions 3 ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: 66 **Requirement determined by science course completed at Dutchess CC	IENG 240	Engineering Economics		3	
FCSP 105 Foundations of Speech Communication FCSC 101 Foundations of Scientific Process FCWR 304 Communication for Technical Professions ICLT 3XX ICLT Literature Seminar ICPH 3XX ICPH Philosophy Seminar ICSS 309 Technology and Global Issues PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC** **Total Credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC** **Total Credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC** **Total Credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC** **Total Credits at New York Institute of Technology: *	IENG 251	Project Engineering		3	
FCSC 101 Foundations of Scientific Process FCWR 304 Communication for Technical Professions ICLT 3XX ICLT Literature Seminar ICPH 3XX ICPH Philosophy Seminar ICSS 309 Technology and Global Issues PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC** **Geometric Process** 3 3 FCWR 304 Communication for Technology Seminar 3 ICLT Literature Seminar 3 ICPH Philosophy Seminar 3 ICPH Philosophy Seminar 5 Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC** **Geometric Process** **Geometric P	Core and additional requirements:				
FCWR 304 Communication for Technical Professions ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: 66 **Requirement determined by science course completed at Dutchess CC	FCSP 105	Foundations of Speech Communication		3	
ICLT 3XX ICLT Literature Seminar 3 ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: ^Requirement determined by science course completed at Dutchess CC	FCSC 101	Foundations of Scientific Process		3	
ICPH 3XX ICPH Philosophy Seminar 3 ICSS 309 Technology and Global Issues 3 PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: ^Requirement determined by science course completed at Dutchess CC	FCWR 304	Communication for Technical Professions		3	
ICSS 309 Technology and Global Issues PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ Total credits at New York Institute of Technology: **Requirement determined by science course completed at Dutchess CC* **Geometric Course Course Completed at Dutchess CC* **Geometric Course	ICLT 3XX	ICLT Literature Seminar		3	
PHYS 150/Elective Intro Physics II (3) + Liberal Arts/Science Elec (2) or Liberal Arts/Science Electives (5)^ Total credits at New York Institute of Technology: ^Requirement determined by science course completed at Dutchess CC	ICPH 3XX	ICPH Philosophy Seminar		3	
Liberal Arts/Science Electives (5)^ 5 Total credits at New York Institute of Technology: 66 ^Requirement determined by science course completed at Dutchess CC	ICSS 309	Technology and Global Issues		3	
Total credits at New York Institute of Technology: ^Requirement determined by science course completed at Dutchess CC	PHYS 150/Elective	Intro Physics II (3) + Liberal Arts/Science Elec (2) <u>or</u>		
^Requirement determined by science course completed at Dutchess CC	Liberal Arts/Science Electives (5)^			<u>5</u>	
^Requirement determined by science course completed at Dutchess CC	Total credits at New York Institute of Technology:			66	
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Effective Fall 2019