

## A.A.S. Degree in Instrumentation & Control Technologies

Emerging technologies drive career opportunities in advanced manufacturing, nanotechnology, transportation, communications, and other industries. Prepare for in-demand high-tech positions and gain hands-on skills in data acquisition, automation, mechatronics, and control systems. Math and physics are incorporated into electronics, design, process improvement, data acquisition, and automation technologies classes. This program prepares adaptable workers to fill job openings across a variety of high-tech industries.

Employers need workers who will focus their attention on product and service innovation, as well as quality improvements in production and business processes. The demand for qualified employees who possess the technical skills essential to advanced manufacturing and automation businesses, remains high. Employers in this field seek workers who are team-oriented, possess strong hardware and software skills, can read and translate diagrams and flow charts, and demonstrate strong communication skills.

With your FLCC education, you'll be ready to get right to work. Grads go on to land positions in these types of sample of industries:

- Automotive
- Aerospace
- Electrical Systems
- Industrial Pumps
- Photonics
- Precision Manufacturing
- Clean Energies
- Advanced Manufacturing

Curriculum Requirements: As a student in the IC Tech program, you are required to complete 63 college credit hours with an FLCC Transcript grade point average of no lower than C (2.0). For this degree program, you must successfully complete the following (under College Courses).

Year 1: 9 <sup>th</sup> Grade	High School Courses	College Courses
<b>Focus:</b> academic success in all courses, review requirements towards high school diploma, professional skill development, interest survey and exploration in P-TECH pathways and chose pathway by year's-end, introductory college courses, industry speakers.	ELA 9	Computing Science Portal: CSC 103 **
	Global Studies I	Core Excel: CSC 135 **
	Living Environment *	
	Algebra I *	
	Foreign Language ^	
	Physical Education 9	
	Study Skills (Professional and Thinking Skills)	

Year 2: 10 <sup>th</sup> Grade	High School Courses	College Courses
<b>Focus:</b> academic success in all courses, review and audit transcript towards high school diploma, professional skill development, further exploration of career options, industry partners participate in projects and offer tours, begin full year of college courses.	ELA 10	Computer Imaging: ART 115 **
	Global Studies II *	Health: HPE 212 **
	Earth Science *	Tech Core Level 1 ** @
	Algebra II *	
	Physical Education 10	

Year 3: 11 <sup>th</sup> Grade	High School Courses	College Courses
<b>Focus:</b> academic success in all courses, review and audit transcript towards high school diploma, professional skill development, further exploration of career options, visit industries, industry partners participate in projects and offer tours, begin cover letter & resume development, interview training, research and plan for work-based learning experiences.	ELA 11	College Algebra: MAT 145 **
	U.S. History and Government *	Tech Core Level 2 ** @
	Applied Science or Chemistry * #	Emerging Technologies: TECH 116 **
	Algebra III (if do not meet MAT 145 pre-req)	
	Physical Education 11	

Year 4: 12 <sup>th</sup> Grade	High School Courses	College Courses
<b>Focus:</b> complete academic requirements towards high school diploma, review and audit college transcript, refine cover letter & resume, continue interview training, engage in work-based experiences, register for full-time enrollment at Finger Lakes Community College	Physics *	Composition I: ENG 101 **
	ELA 12A (if do not meet ENG 101 pre-req)	Composition II: ENG 103 **
	ELA 12B (if do not meet ENG 101 pre-req)	American Government: POL 100 **
		Principles of Macroeconomics: ECO 210 **
		Pre-Calculus: MAT 152 **
		Physical Education- Walk and Jog: HPE 121 **
		Physical Education- Stress Red. Exercise: HPE 164 **
		Tech Core Level 3 ** @
		Human Communication: COM 100 **

Year 5: 13 <sup>th</sup> Grade (first full year at FLCC)	High School Courses	College Courses
<b>Focus:</b> full-time enrollment in Finger Lakes Community College, meet with P-TECH liaison, update cover letter & resume, continue interview training, internship and career searches, engage in work-based experiences and internships		College Physics I: PHY 118 ~
		College Physics II: PHY 119 ~
		Material Science: MET 101 ~
		Engineering Graphics: ESC 105 ~
		MS Access: CSC 139 ~
		Automation of Data Acquisition: TECH 231 ~

Year 6: 14 <sup>th</sup> Grade (second full year at FLCC)	High School Courses	College Courses
<b>Focus:</b> full-time enrollment in Finger Lakes Community College, meet with P-TECH liaison, finalize cover letter & resume, complete work-based experiences and internships, complete A.A.S. degree and graduate, apply for jobs and prepare for interviews, if choose: apply for enrollment in a four-year college program		Automation Control I: TECH 232 ~
		Introduction to Process Improvement: TECH 233 ~
		Automation Control II: TECH 234 ~
		Technology Co-op: TECH 250 ~

\* Course leading to NYS Regents Examination; Required for Regents Diploma/Graduation (4+1)

\*\* Dual-credit course: counts toward both high school and college credits

^ Required for high school diploma, usually completed for credit by end of 8<sup>th</sup> grade

# Depends on which course is available for that school year

~ FLCC college courses completed in years 5 & 6 and order of completion determined by student and FLCC advisor

@ Tech Core Sequence for IC Tech: Combined FLCC courses over a three-year sequence:

- Computing with LabVIEW: ESC 174
- Electronic Theory: TECH 122
- Digital Electronics: TECH 123
- Engineering Graphics: ESC 105 (proposed Nov 2018)

Additional information on the A.A.S. degree in Instrumentation & Control Technologies can be found at the Finger Lakes Community College website:

[Instrumentation & Control Technologies](#)

- [Program Overview](#)
- [Curriculum Requirements](#)
- [Course Descriptions](#)
- [Sample Schedule](#)

College Courses and A.A.S. degree requirements are established by FLCC and may be updated at their discretion

W-FL P-TECH--- As of: 1/31/2019 8:34 AM

This is an overview of this pathway and can differ from student to student depending on what high school credits and courses a student may complete in 8<sup>th</sup> grade and how each student completes planned P-TECH courses (both high school and college).