

# Associate in Applied Science

Toward a Degree in

## Mechatronics Engineering Technology

Career Curriculum 00ELT 3012  
Minimum Hours: 65  
Major Code: 1.2 150612  
Effective Date: Fall 2025

### FIRST YEAR – FALL SEMESTER

Dept.	No.		Hrs.	Grade
ORI	100	College 101	1	_____
ELT	102	Basic Electricity and Wiring	4	_____
ELT	111	Digital Electronics I	3	_____
MAT	111	Precalculus	5	_____
ELT	105	Introduction to Programmable Logic Controllers	3	_____
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### NOTES AND INFORMATION

<sup>2</sup> Requires a grade of "C" or higher.

<u>Fall only courses:</u>	<u>Spring only courses:</u>	
ELT 111	ELT 103	ELT 218
ELT 151	ELT 104	ELT 224
ELT 214	ELT 112	ELT 201
ELT 205	ELT 150	
ELT 105	ELT 210	

### FIRST YEAR – SPRING SEMESTER

Dept.	No.		Hrs.	Grade
ELT	103	Applied DC/AC Circuits	4	_____
ELT	112	Digital Electronics II	3	_____
ELT	150	Applied Solid State Electronics	3	_____
ELT	201	PLC Manufacturing Systems & Industrial Robotics	3	_____
MAT	131	Calculus I	5	_____
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The Mechatronics Engineering Technology AAS Degree (00ELT3012) is an ICCB approved extension of the Electronics Technology AAS Degree (00ELT3010) and is the parent program to:

- Industrial PLC Systems Certificate (00ELT3013)

**Career Opportunities:** Industrial Maintenance Engineering technicians solve technical problems in research and development, manufacturing, sales, construction, inspection, and maintenance. In manufacturing, the Industrial Maintenance Engineering technician may assist engineers and scientists, especially in research and development. Duties may include quality control, inspecting products and processes, conducting tests, repairing, and maintaining industrial equipment or collecting data.

### SECOND YEAR – FALL SEMESTER

Dept.	No.		Hrs.	Grade
ELT	151	Applied Solid State Circuits	3	_____
ELT	214	Fundamentals of Computing Hardware	3	_____
ELT	205	Hydraulics & Pneumatics	3	_____
PHY	155	College Physics I	5	_____
ENG	101	English Composition 1 <sup>2</sup> OR ENG 113 Professional Technical Writing <sup>2</sup>	3	_____
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### JALC ELT Programs are education members of:



Institute of Electrical and Electronics Engineers  
445 Hoes Lane  
Piscataway, NJ 08854



Association for Computing Machinery  
1601 Broadway, 10th Floor  
New York, NY 10019-7434

### SECOND YEAR – SPRING SEMESTER

Dept.	No.		Hrs.	Grade
COM	115	Speech OR COM 116 Interpersonal Communication	3	_____
ELT	104	Introduction to VFDs	2	_____
ELT	210	Supporting Computer Operating Systems	3	_____
ELT	218	Introduction to Network Technologies	3	_____
ELT	224	Power Distribution and Motors	3	_____
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