

Electrical Controls Engineering Technology, A.A.A.S.

(Code 903)

GRCC Program:

The degree in Electrical Controls Engineering Technology prepares students to design, install, troubleshoot, and repair machine electrical systems with an emphasis in manufacturing equipment. Students study the basic operations and control systems which are used in industry today. Courses in this program also cover topics in pneumatics, hydraulics, and mechanical power.

This area of emphasis offers many employment opportunities in the West Michigan. This program prepares students to become automation technicians, industrial electricians, electrical panel builders, electrical controls systems installers, and electrical field servicing technicians.

Students entering this program should meet the college's minimum entrance requirements in Reading, Mathematics and English.

First Year

First Semester (Suggested Sequence)		Credits
EL 150	Electric. Schematics, Elect. Stand. & Codes	(4/4)
MN 199	Theory of Machine Operations	(3/4)
EL 144	Basic Electricity and Electronics	OR (4/6)
EL 106	Technical Electricity	AND (4/6)
EL 107	Technical Electronics	(4/6)
EL 132	Electronics Mathematics	OR (4/4)
MA 107	Inter. Algebra or Higher Math	OR (4/4)
TE 103	Inter. Technical Mathematics	AND (4/4)
TE 104	Advanced Technical Mathematics	(3/3)

Total Credits 15 Minimum

Second Year

Third Semester		Credits
EL 161	Introduction to Digital Logic	(3/4)
EL 166	Advanced PLC Systems	(2/3)
MN 113	Mechanical Power Transmission	(2/2.25)
EN 100	College Writing	OR (3/3)
EN 101	English Composition 1	(3/3)
Natural Science and Math Elective (min 4)		(4/6)

Total Credits 14 Minimum

Second Semester (Suggested Sequence)

HUM_	Humanities Elective (min. of 3 credits)	(3/3)
EL 162	Control Systems	(2/3)
EL 163	Electrical Troubleshooting	(2/2)
EL 164	Programmable Logic Controllers	(2/3)
MN 217	Hydraulics	(4/6)
MN 218	Pneumatics	(3/4)

Total Credits 16 Minimum

Fourth Semester

EL 201	Industrial Electricity	(4/6)
EL 275	Mechatronics-Automated Systems	(4/6)
EN 102	English Composition 2	(3/3)
PS 110	Survey of American Government	(3/3)
WE_	Wellness Elective	(1/2)

Total Credits 15 Minimum

Total Credits: 60 Minimum