

Electronics Technology

Holland code family: Doers

About the Program

The Electronics Technology Associate of Applied Science degree provides students the necessary skills for entry into one of today's most dynamic and broad-based technical fields. The program emphasizes electronic theory fundamentals, troubleshooting and design, and involves both highly technical and general studies courses. Advanced courses include radio frequency and microwave communications, PC hardware, and microcontrollers and interfacing. Typical occupations include those of electronics test technicians at manufacturing sites or field engineers in the communications industry.

The technical courses involve extensive lab work using industry standard test equipment and practices. As a capstone, students design and build an electronics project to demonstrate their proficiencies of program outcomes. The AAS degree can be used for technical block transfers to four-year institutions' basic engineering programs, although continuing students will be advised to take additional transfer courses.

Program Learning Outcomes

The curriculum in RCC courses is derived from a set of identified learning outcomes that are relevant to the discipline. Program learning outcomes for electronics technology programs are:

Identify and solve real-world problems through the application of electronics theory and concepts.

Calibrate, test, and repair analog and digital circuitry using industry standard test equipment.

Organize, interpret, and use technical information and documentation.

Communicate effectively across a variety of audiences: technicians, engineers, management and customers.

Function collaboratively as a member of a team to achieve specified and measurable results.

Demonstrate flexibility, adaptability, and time management skills commensurate with industry productivity needs.

Demonstrate the ability to adhere to personal and industry safety standards.

Demonstrate life-long learning towards professional growth.

Negotiate and abide by the terms of agreement that define their employment.

Entry Requirements

Students are required to complete the Placement Process to determine skill level and readiness in math, reading, and writing. As part of their training program, students must begin with the courses within their skill level as determined through the Placement Process. In addition, students may also be required to enroll in classes that would increase their employability and success.

Advanced Standing

Coursework from accredited colleges and universities will be accepted in accordance with college policies and with the Electronics Technology Department chair's recommendation. In order to ensure that coursework is current, program courses over three years old must be reviewed and approved by the appropriate department chair before being accepted toward core requirements. Official transcripts must be filed with the RCC Enrollment Services Office.

Graduation Requirements

Students are required to complete all courses in this program with a grade of "C" or better to receive their degrees. Certain required courses are graded on a pass/no pass basis only. A grade of "P" for these courses indicates a student earned the equivalent of a "C" or better grade.

Prerequisites

Course No.	Course Title	Credits
CS/CIS	Approved 3-4 credit Computer Science or Computer Information Science class, CS120/CIS120 or above, or documented computer proficiency within the past ten years. ¹	0-4
MTH20	Pre-algebra I or designated placement test score	0-4
RD90/WR90	College Reading/Fundamentals of Composition or WR91 Fundamentals of Academic Literacy (WR91 substitutes for both RD90 and WR90) or designated placement test score	0-8
Total Prerequisite Credits		0-16



First Year Required Courses

Course No.	Course Title	Credits
First Term		
EET112	Introduction to Mechatronics or	
EET129	Embedded Systems – Arduino	3
EET125	Electronics Fundamentals I (DC)	6
MTH63	Applied Algebra I or	
	MTH60 Fundamentals of Algebra I or higher level math	4
		13
Second Term		
EET126	Electronics Fundamentals II (AC)	6
EET130	Digital Fundamentals I	6
WR115	Introduction to Expository Writing or	
	SP100 Basic Communication or	
	SP111 Fundamentals of Public Speaking or	
	SP218 Interpersonal Communication ²	3-4
		15-16
Third Term		
CIS140	Introduction to Operating Systems	4
EET131	Digital Fundamentals II	6
EET140	Solid State Fundamentals	6
		16
Fourth Term		
HE112	Emergency First Aid	1
LIB127	Introduction to Academic Research	1
PSY101	Psychology of Human Relations or	
	BT101 Human Relations in Organizations	3
WR121	English Composition	4
		9
Total First Year Credits		53-54
Second Year Required Courses		
Course No. Course Title Credits		
Fifth Term		
CIS227	PC Hardware Fundamentals and Repair	5
EET215	Operational Amplifiers and Linear Integrated Circuits	5
EET220	Solid State Devices	6
		16

Sixth Term

EET225	Electronics Troubleshooting	3
EET230	Radio Frequency Communications Fundamentals	6
EET240	Microcontrollers I	5
		14

Seventh Term

EET205	International Society of Certified Electronics Technicians (ISCET) Certification Preparation	1
EET235	Microwave Applications	5
EET241	Microcontrollers II	5
EET250	Prototype Development and Documentation or EET280 Cooperative Work Experience/Electronics	4
	Approved program elective(s)	0-5
		15-20

Total Second Year Credits

45-50

TOTAL PROGRAM CREDITS

98-104

Approved Program Electives

Course No.	Course Title	Credits
BA101	Introduction to Business	4
BT121	Digital Marketing and e-Commerce	4
CIS	Any computer applications course, CIS125 or above	3-4
EET101	Introduction to Electronics	3
EET104	Fundamentals of Manufacturing Electronics	4
EET106	Electronics Assembly	3
EET112	Introduction to Mechatronics (if not taken as part of core)	3
EET113	Exploration of Alternative Energies	3
EET118	Introduction to Renewable Energy Systems	5
EET127	Exploring Raspberry Pi	3
EET132	Digital Fundamentals III	5
EET180	Cooperative Work Experience / Electronics	Var
EET199	Selected Topics in Technology	1-5
GS104	Physical Science with lab	4
MEC150	PLC Motor Control	3
MET101	Mechanical Drafting	3
MET121	CAD I: Mechanical (SolidWorks)	3
MET122	CAD II: Mechanical (SolidWorks)	3
MET160	Materials and Metallurgy	3
MFG101	Introduction to Manufacturing	3
MFG121	Manufacturing Processes I	4
MFG220	Research and Development Prototyping	4
MFG230	Statistics and Quality Control	3
MFG241	CNC Programming – Mill	4
MFG242	CAM I: Mastercam	4
MFG243	CAM II: Mastercam	4
MFG244	CNC Programming – Lathe	3
MTH60R	Fundamentals of Algebra I Recitation	1
MTH65	Fundamentals of Algebra II or higher level math	4-5
MTH65R	Fundamentals of Algebra II Recitation	1
MTH111R	College Algebra Recitation	1
MTH112R	Elementary Functions Recitation	1
SP111	Fundamentals of Public Speaking (if not taken as part of core)	4
WLD101	Welding Fundamentals	3
WR122	English Composition II	4
WR227	Technical Writing	4

¹ Required for graduation.

² If students test out of WR115, they may take WR122 instead of speech upon completion of WR121.

For more information contact the Electronics Technology Department:

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Web address	www.rogucecc.edu/electronics
TTY	Oregon Telecom Relay Service, 711

This advising guide is for advising purposes only. Please see current college catalog for additional information on specific college policies and graduation requirements.

RCC is an open institution and does not discriminate. For RCC's non-discrimination policy and a full list of regulatory specific contact persons visit the following webpage: www.rogucecc.edu/nondiscrimination.

