2019-20 GRADUATION GUIDE

Microcontroller Systems Technician

Certificate of Completion

Holland code family: Organizers

www.roguecc.edu/Counseling/HollandCodes/test

About the Program

The Microcontroller Systems Technician four-term certificate is designed for students seeking entry-level positions servicing, upgrading, and repairing personal computer and microcontroller-based equipment. The coursework emphasizes electronics studies aimed at the hardware portion of the field as well as computer science courses involving operating systems, networking, and related software applications.

Technical courses involve lecture, lab work, and real-world experience in the lab using industry standard test equipment and practices. This program will help students gain skills for entry into one of today's most dynamic occupations. Typical occupations include those of PC/microcontroller support technicians, network specialists, microcomputer technicians, and field service technicians. Training also provides excellent positioning for lateral movement into areas such as technical sales or technical writing. Certificate courses are aligned for continuation into the Electronics Technology AAS degree and Computer and Embedded Systems Engineering Technology AS degree for transfer to Oregon Institute of Technology.

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.

Students are also required to complete any prerequisites listed.

Advanced Standing

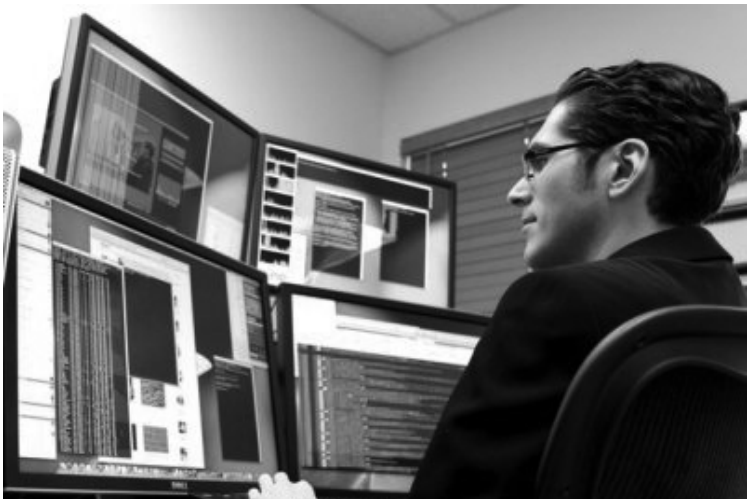
Coursework from accredited colleges and universities will be accepted in accordance with college policies and the Electronics Technology Department chair's recommendation. In order to ensure that coursework is current, program courses over three years old must be reviewed and approved by the appropriate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

Graduation Requirements

Students must complete all courses in this program with a grade of "C" or better to receive their certificates. 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 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**



Required Courses

Course No.	Course Title	Credits
First Term		
EET101	Introduction to Electronics	3
EET129	Introduction to Embedded Systems	3
MTH63	Applied Technical Math/Applied Algebra I or MTH60 Fundamentals of Algebra I or higher level math	4-5
WR115	Introduction to Expository Writing or higher level composition	3-4
		13-15
Second Term		
EET125	Electronics Fundamentals I	6
HE112	Emergency First Aid or approved health elective (see catalog for approved list of electives)	1-3
PSY101	Psychology of Human Relations or BT101 Human Relations in Organizations	3
___	Approved program elective(s) [2]	0-3
		10-15
Third Term		
CIS227	PC Hardware Fundamentals and Repair	5
EET127	Exploring the Raspberry Pi	3
EET130	Digital Fundamentals I	6
		14
Fourth Term		
CIS140	Introduction to Operating Systems	4
EET131	Digital Fundamentals II	6
EET180	Cooperative Work Experience/Electronics or	
____	Approved program elective(s) [2]	3-5
		13-15
TOTAL PROGRAM CREDITS		**50-59**

Approved Program Electives

(one or more courses totaling a maximum of 4-8 credits required)

Course No.	Course Title	Credits
BT121	Digital Marketing and e-Commerce	3
	Any computer applications course, CIS125 or above	1-4
EET104	Introduction to Manufacturing Electronics	4
EET106	Electronic Assembly	3
EET112	Introduction to Mechatronics	3

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EET113	Exploration of Alternative Energies	3
EET118	Introduction to Renewable Energy Systems	5
EET132	Digital Fundamentals III	5
EET199	Selected Topics in Technology	1-5
EET240	Microcontrollers I	5
GS104	Physical Science with lab	4
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
MFG210	AC/DC Electrical Systems for Manufacturing	3
MFG230	Statistics and Quality Control	3
MTH65	Fundamentals of Algebra II or higher level math (if not taken as a required course)	4
WR121	English Composition I	4
WR122	English Composition II	4
WR227	Technical Writing	4

[1] Required for graduation.

[2] A maximum of 4-8 elective credits are required for graduation.

For more information contact the Electronics Technology Department:

Grants Pass or Medford. 541-245-7809

Toll free in Oregon . . . . . .800-411-6508, Ext. 7809

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Web address . . . . . www.roguecc.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.roguecc.edu/nondiscrimination.

RCC
Rogue Community College