

# High Technology Studies

Holland code family: Thinkers

## About the Program

The High Technology Studies four-term certificate program is designed to expand technical knowledge across a range of technical career areas. Students may specialize in a number of technology areas such as welding, manufacturing, machining, computer aided drafting, electronics, and/or computer science by selecting the appropriate technical electives.

The U.S. Department of Education requires disclosure of specific information about career and technical certificate programs to prospective students. Data includes Standard Occupational Classification (SOC) codes, graduation rates, tuition and fees, typical costs for books and supplies, job placement rates for students completing the programs, and median loan debt incurred by students completing the programs. For more information visit [www.roguecc.edu/GainfulEmployment](http://www.roguecc.edu/GainfulEmployment).

## 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 by the results of their placement assessment. 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 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 Enrollment Services Office 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.

## What skills will you learn?

Visit <http://go.roguecc.edu/department/program-learning-outcomes>.

## What are the employment opportunities?

Visit <http://www.roguecc.edu/GainfulEmployment>.

## Prerequisites

Course No.	Course Title	Credits
CS__	Approved 3-4 credit computer science class, CS120 or above or documented computer proficiency <sup>1</sup>	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**

## General Education Courses

Course No.	Course Title	Credits
<b>Mathematics</b>		
(Additional math classes may be required as prerequisites to some technical electives.)		
MTH63	Applied Algebra I or MTH60 Fundamentals of Algebra I or higher level math	4-5

## Communication

(one course required)

BT113	Business English I	
BT114	Business English II	
WR115	Introduction to Expository Writing	
WR121	English Composition I	3-4

## Health/First Aid

HE112	Emergency First Aid	1
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## Human Relations

BT101	Human Relations in Organizations or PSY101 Psychology of Human Relations	3
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**Total General Education Credits 11-13**

## Technology Area Credits

(a minimum of 39 credits required)

Course No.	Course Title	Credits
CS__	Any computer science course, CS125 or above (CS125ss strongly recommended)	variable
AM120	Auto Maintenance and Trades Practices with lab	6
DS111	Basic Electricity for Diesel Technicians I with lab	7
DS120	Diesel Trades Practices with lab	6
DS260	Hydraulic Systems for Heavy Equipment	4
EET101	Introduction to Electronics	3
EET104	Fundamentals of Manufacturing Electronics	4
EET106	Electronic Assembly	3
EET112	Introduction to Mechatronics	3
EET113	Exploration of Alternative Energies	3
EET118	Introduction to Renewable Energy Systems	5
EET120	Renewable Energy Systems (RES) Site Analysis and Design	4
EET121	North American Board of Certified Energy Practitioners (NABCEP) Entry-level Preparation	2
EET125	Electronics Fundamentals I (DC)	6
EET126	Electronics Fundamentals II (AC)	6
EET127	Exploring the Raspberry Pi	3
EET129	Introduction to Embedded Systems	5
EET130	Digital Fundamentals I	6
EET131	Digital Fundamentals II	6
EET132	Digital Fundamentals III	5
EET140	Solid State Fundamentals	6
EET240	Microcontrollers I	5
MEC130	Hydraulics I	3
MET101	Mechanical Drafting	3
MET104	Applied Shop Practices	3
MET105/WLD104	Blueprint Reading - Mechanical	3
MET121	CAD I: Mechanical (SolidWorks)	3
MET122	CAD II: Mechanical (SolidWorks)	3
MET123	CAD III: Mechanical (SolidWorks)	3
MET160	Materials and Metallurgy	3
MFG101	Introduction to Manufacturing	3
MFG121	Manufacturing Processes I	4

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MFG122	Manufacturing Processes II	4
MFG123	Manufacturing Processes III	4
MFG140	CNC Controls	2
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
MFG255	Computer Integrated Manufacturing	4
MTH65	Fundamentals of Algebra II	4
WLD101	Welding Fundamentals I	3
WLD102	Welding Fundamentals II	3
WLD111	Technology of Industrial Welding I	6
WLD112	Technology of Industrial Welding II	6
WLD113	Technology of Industrial Welding III	6
WLD211	Technology of Industrial Welding IV	6
WLD212	Technology of Industrial Welding V	6
WLD213	Technology of Industrial Welding VI	6
WLD250	Selected Topics in Welding	variable

**Total Technology Area Credits** **39**  
**TOTAL PROGRAM CREDITS** **50-52**

<sup>1</sup> Required for graduation. Successful completion of CS120 or otherwise meeting the proficiency requirement within the last 10 years fulfills this requirement. Contact a computer science advisor to help determine placement.

For more information contact the Electronics Technology Department:

Grants Pass or Medford ..... 541-245-7809  
Toll free in Oregon ..... 800-411-6508, Ext. 7809  
email ..... [electronics@rogucecc.edu](mailto:electronics@rogucecc.edu)  
Web address ..... [www.rogucecc.edu/electronics](http://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.

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