



WIST-101 – Technical Skills

Technology

Effective Term & Year: Fall 2022

Course Outline Review Date: 2027-03-01

Program Area: Information Technology

Description:

This course provides the required skills for the student to perform the tasks that will be encountered in the practical phases of the Wireless Systems Technician program. Theoretical concepts as well as practical applications are included. Safety concerns for the electronics industry including Workplace Hazardous Material Information System (WHMIS) requirements are addressed. Training will be provided in the use of small hand tools used in the telecommunications industry concluding with the construction of a small electronics project. Math skills used by a technician will be studied in this course focusing on the trigonometric functions and logarithmic functions which apply in communications systems. Training will be given in basic report writing including graphing as related to electronics.

Program Information:

This course is required for the first year of the Wireless Systems Technician program.

Delivery Methods: Hybrid – On-campus (Face-to-Face) and Online

Credit Type: College of the Rockies Credits

Credits: 4

Instructional Activity and Hours:

Activity	Hours
Classroom, Directed Studies or Online Instruction	60

Seminar/Tutorials	
Laboratory/Studio	60
Practicum/Field Experience	
Co-op/Work Experience	
Other	
Total	120

Course Requisites:

- Admissions to the Wireless Systems Technician program

Flexible Assessment: Yes

In some cases students may be able to apply for recognition of prior learning outside the classroom. This flexible assessment process provides equivalent course credit. It is a rigorous process that may include external evaluation, worksite assessment, demonstration, standardized test, self-assessment, interview, products/portfolio, and challenge exam, or other measures as appropriate. Tuition fees apply. Contact an education advisor for more information.

Course Transfer Credit:

For information about receiving transfer credit for courses taken at other BC institutions, please see <http://www.bctransferguide.ca>. All requests for course transfer credit from institutions in BC or elsewhere should go to the College of the Rockies Enrollment Services office.

Textbook Resources:

Textbook selection varies by instructor and may change from year to year. At the Course Outline Effective Date the following textbooks were in use:

Floyd, Thomas and Buchla, David, *Electronic Fundamentals: A System Approach*.

Buchla, David, *Experiments in DC/AC Fundamentals*.

Wireless Systems Technician program Level 1 Package

Please see the instructor's syllabus or check COTR's online text calculator <https://textbook.cotr.bc.ca/> for a complete list of the currently required textbooks.

Learning Outcomes:

Upon the successful completion of this course, students will be able to

- identify hardware and cabling used in the electronics industry;
- identify chemicals and lubricants used in the electronics industry;
- describe the safe storage, handling and disposal of chemicals and hazardous materials;
- demonstrate soldering and de-soldering techniques;
- perform simple wiring tasks;
- demonstrate the safe usage of hand and small power tools;
- use scientific notation and engineering notation as related to electronics;
- perform fundamental mathematical and logarithmic calculations;
- use sine, cosine and tangential functions to solve trigonometric equations;
- use complex number systems to represent vectors;
- interpret and draw graphs, as required for a technical report; and
- write a simple report on a topic related to electronics.

Course Topics:

- Workplace Safety
- Hand Tool Usage
- Electronics
- Trigonomic Functions
- Logarithmic Functions
- Graphing
- Basic Report Writing

See instructor's syllabus for the detailed outline of weekly readings, activities and assignments.

Evaluation and Assessments

Assessment Type: On-Campus (face-to-face) and Online, or Hybrid

Assessment Type	% of Total Grade
Lab Tests (x2)	20%
Project	10%
Math Test (x2 @ 15% each)	30%
Graphing Assignment	10%
Technical Writing Test	10%
Final Exam	20%

Total	100%
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Assessment Type: Co-op/Work Placement

Assessment Type	% of Total Grade
Workplace Hazardous Material Information System (WHMIS: PVHE-700) (4 hours)	COM/NCG

Grade Scheme

A+	A	A-	B+	B	B-	C+	C	C-	D	F
>=90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	<50

Pass requirements: None

Evaluation Notes: A grade of “D” grants credit, but may not be sufficient as a prerequisite for sequential courses.

Exam Attendance:

Students must attend all scheduled exams at the appointed time and place. Instructors may approve an alternate exam to accommodate an illness or personal crisis. Department heads will consider other written requests. Any student who misses a scheduled exam without prior approval will receive a “0” on the exam.

Academic Policies:

College of the Rockies policies related to courses can be found at <https://cotr.bc.ca/about-us/college-policies/> and include the following:

- Policy 2.4.3 Students with Documented Disabilities
- Policy 2.4.4 Student Conduct (plagiarism, other cheating, behavioral misconduct)
- Policy 2.5.8 Academic Performance
- Policy 2.5.3 Grade Appeal
- Policy 2.4.9 Student Concerns Re Faculty

Equivalent Course(s) and Course Code Changes

Prior Course Code: AUST 101

Course Changes:

The College of the Rockies updates course outlines regularly to meet changing educational, employment and marketing needs. The instructor will notify students in writing of any updates to this outline during the semester. The instructor reserves the right to revise, add or delete material while meeting the learning outcomes of this course outline.