COLLEGE OF THE ROCKIES

Structured Cabling Systems – WIST 205
Wireless Systems Technician Program

Course Outline

COURSE IMPLEMENTATION DATE: **September 2020**
OUTLINE EFFECTIVE DATE: **September 2022**
COURSE OUTLINE REVIEW DATE: **March 2027**

GENERAL COURSE DESCRIPTION:

This course will introduce students to copper and fiber optic structured cable systems. The course aims to offer a balanced mix of theory and practice relating to cabling system. Students will learn installation and testing procedures for specific copper category cabling. The fibre portion of the course will cover the basic concepts of light transmission theory in fiber, the different types of single-mode and multi-mode fibers, installation of various fiber optic connectors and fusion splicing of fibres. A high degree of importance will be placed on development of good hand skills and safely handling copper and fiber optic cabling.

Program Information: This course is required for successful completion of the Wireless Systems Technician Diploma program.

Delivery: This program is delivered hybrid (includes both face-to-face and online components).

COTR Credits: 4

Hours for this course: 120 hours

Typical Structure of Instructional Hours:

Instructional Activity	Duration
Lecture Hours	60
Seminars / Tutorials	
Laboratory / Studio Hours	60
Practicum / Field Experience	
Other Contact Hours	
Total	120

Practicum Hours (if applicable):

Type of Practicum	Duration
On-the-Job Experience	
Formal Work Experience	
Other	
Total	N/A

Course Outline Author or Contact:
Oludare Sokoya, PhD, PMP

Signature

APPROVAL SIGNATURES:

Department Head
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Department Head Signature

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EDCO

Valid from: September 2022 – March 2027

Education Council Approval Date

COURSE PREREQUISITES AND TRANSFER CREDIT:

Prerequisites: WIST 204 with a minimum grade of C- (55%) or higher.

Corequisites: N/A

Flexible Assessment (FA):

Credit can be awarded for this course through FA ☑ Yes ☐ No

Learners may request formal recognition for flexible assessment at the College of the Rockies through one or more of the following processes: External Evaluation, Worksite Assessment, Demonstration, Standardized Test, Self-assessment, Interview, Products/Portfolio, Challenge Exam. Contact an Education Advisor for more information.

Transfer Credit: For transfer information within British Columbia, Alberta and other institutions, please visit http://www.cotr.bc.ca/Transfer.

Student should also contact an academic advisor at the institution where they want transfer credit.

Prior Course Number: AUST 207, WIST207

Textbooks and Required 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:

Oliviero & Woodward. *Cabling: The complete Guide to Copper and Fiber-Optic Cabling*, 5th Ed.

Please see the instructor's syllabus or check COTR's online text calculator http://go.cotr.bc.ca/tuition/tCalc.asp for a complete list of the currently required textbooks.

LEARNING OUTCOMES:

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

- troubleshoot and correct faults in a copper cabling run;
- employ safety & handling practices associated with copper cable;
- describe the basic functions of optical transceivers;
- describe optical fiber: components, tensile strength, manufacturing and mode and reflective index profiles;
- describe optical fiber: dispersion, attention and bending loss;
- discuss fiber optic cable installation using industry standards;
- build and test a fibre optic cable;
- demonstrate the use of an OTDR & Measure fiber loss with a power meter;
- describe optical fiber splicing: safety, procedures, equipment, procedures and requirements;
- perform SM fusion splicing on a fibre optic cable; and
- test and evaluate a fibre optic link.

COURSE TOPICS:

- Structured Cabling Systems
- Copper Cable
- Fibre Optic Cable
- Optical Transceivers
- Splicing

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

EVALUATION AND ASSESSMENT (Face-to-Face Delivery):

Assignments	% of Total Grade
Written Copper Exam	40%
Written Fiber Exam	40%
Lab Test #1	10%
Lab Test #2	10%
Total	100%

Please see the instructor's syllabus for specific classroom policies related to this course, such as details of evaluation, penalties for late assignments and use of electronic aids.

EXAM POLICY:

Students must attend all required scheduled exams that make up a final grade at the appointed time and place.

Individual instructors may accommodate for illness or personal crisis. Additional accommodation will not be made unless a written request is sent to and approved by the appropriate Department Head prior to the scheduled exam.

Any student who misses a scheduled exam without approval will be given a grade of "0" for the exam.

COURSE GRADE:

Course grades are assigned as follows:

Grade	A+	A	A-	B+	B	B-	C+	C	C-	D	F
Mark (Percent)	≥ 90	89-85	84-80	79-76	75-72	71-68	67-64	63-60	59-55	54-50	< 50

A grade of "D" grants credit but may not be sufficient as a prerequisite for sequential courses.

ACADEMIC POLICIES:

See www.cotr.bc.ca/policies for general college policies related to course activities, including grade appeals, cheating and plagiarism.

COURSE CHANGES:

Information contained in course outlines is correct at the time of publication. Content of the courses is revised on an ongoing basis to ensure relevance to changing educational, employment and marketing needs. The instructor endeavours to provide notice of changes to students as soon as possible. The instructor reserves the right to add or delete material from courses.