



COURSE OUTLINE

Course Name: Welding, Heating and Cutting Steel 2

Course Number: ACRT 1230

Number of Credits: 2.0

Effective Date: January 2019

Course Description:

This course builds on the GMAW processes of ACRT 1120 adding vehicle structural welding. Then, students learn various ways to heat and cut steel using oxyacetylene and induction heating equipment. Finally, students will be introduced to the Squeeze Type Resistance Spot Welding (STRSW) process and equipment.

This course is part of the full-time Auto Collision Repair Technician Certificate program.

School or Centre:

School of Trades, Technology & Design

Year of Study:

1st Year Post-secondary

Course History:

Replacement Course

Name of Replacing Course (if applicable):

ACRT 1212, ACRT 1213

Course Pre-requisites (if applicable):

Successful completion of ACRT 1120 Welding, Heating and Cutting Steel 1

Course Co-requisites (if applicable):

PLAR (Prior Learning Assessment & Recognition)

No Yes (details below):

Instructional Strategies:

Instructional strategies include: Lectures, demonstrations, group work, individual work, field trips, and project work in an authentic shop environment.

Course Learning Outcomes:

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

1. Perform various GMA welds on sheet steel
2. Describe and use various methods to heat metals
3. Describe and use resistance spot welders

Program Learning Outcomes:

Upon completion of this program, graduates will be able to:

1. Apply the skills and knowledge necessary to perform as a Level 1 Automotive Collision Repair Technician as per the Industry Training Authority of British Columbia, provincial program standards;
2. Evaluate completed repairs for consistency, accuracy and quality according to industry specifications and standards;
3. Adhere to industry health and safety standards in the repair and reconditioning of automotive vehicles;
4. Practice professional etiquette in a team environment;
5. Apply occupational essential skills outlined by Essential Skills Development Canada in the Essential Skills profile for Motor Vehicle Body Repairers.

Evaluation/Grading System

Grading System	Specify if 'Other':	Specify Passing Grade:
Percentages		70%

Components and Weighting of the Assessment/Evaluation Plan:

Type	Percentage	Evaluation Plan (provide a brief explanation for each component especially if value exceeds 35%):
Quizzes/Tests	30	Formative theory (quizzes and assignments)
Exam	20	Summative theory
Assignments	30	Performance evaluations
Participation	20	Active participation, teamwork, attendance and safety demerits
Total		100

Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
J - Classroom/Online (Mixed Mode)	20	
B - Lab (Computer, Chemistry...)	30	
Total		50

Resource Material(s):

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

Course Topics:

Squeeze-Type Resistance Spot Welding
Review Straightening Steel
Review Oxyacetylene Welding & Cutting
Review Steel Unitized Structures, Technologies and Repairs
Review Steel GMA Welding Theory

VCC Education and Education Support Policies

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at:

<http://www.vcc.ca/about/governance--policies/policies/>

To find out how this course transfers, visit the BC Transfer Guide at www.bctransferguide.ca.

FOR COMMITTEE USE ONLY

Approved by Curriculum Committee:	September 18, 2018	Approved by Education Council:	October 9, 2018
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