



# Co-OP (MAKE) 120

'BHS MAKERSPACE'  
WINTER 2019



TEACHER: A. Hallihan

WORKSTATIONS/TECHNOLOGIES:

## WORKSTATIONS...

3D PRINTING  
MICROCONTROLLERS  
ROBOTICS

SILK SCREENING  
RETRO ARCADE  
RASPBERRY PI

UNDERWATER ROBOTICS  
VINYL CUTTING  
VIRTUAL REALITY

MAKE ELECTRONICS  
HEAT PRESS  
BUTTON MAKING

## TECHNOLOGIES...

HAB  
RETROPIE ARCADE  
MINTI PI  
RASPBERRY PI  
PI SENSEHAT  
ARDUINO  
IPADS

OPENROV  
MATE ROV  
PHANTOM 3 DRONE  
HUBSAN DRONE  
PARROT DRONE  
OCULUS RIFT TOUCH  
MAKE KITS

GO PRO HERO 3  
GO PRO SESSION  
360FLY  
SPHERO  
MBOTS  
LEGO ROBOTICS  
REDBOTS

MAKEKEY MAKEKEY  
MICRO:BIT  
ADAFRUIT WEARABLES  
ARTCUT  
SILOUETTE CAMEO  
HEAT PRESS  
SILK SCREENING

### COURSE DESCRIPTION:

BHS MakerSpace explores STEAM projects that involve Science, Technology, Engineering, Arts and Mathematics. This course will enable students to undertake creative, innovative and entrepreneurial projects in the classroom. Students will explore a variety of technologies while designing and engineering their own project. Mentors will be established to help develop these projects as well as instruction on the basics.

The course is designed to apply the 4 C's... Creativity, Critical Thinking & Problem Solving, Collaboration, and Communication. These skills are beneficial in any workplace and are essential for life-long learning. The goal of the course is to improve these skills so they can be used in any of your future endeavours.

### SCOPE AND SEQUENCE:

- Engineering Design Process
  - Intro. to design and engineering (PBS Design Squad Challenges)
  - History of engineering
  - Documenting your work...keeping Google Doc, photo documentation & video editing
- Safety Modules [<http://nbcsa.ca/english/elearning.htm>]
  - Orientation
  - WHMIS
- Workstation Basics
- Final Projects

<b>EVALUATION:</b>	Weekly Google Doc/Online Summary/TechPoints/Activities	50 %
	Project #1 [due March 27 <sup>th</sup> ]	25 %
	Project #2 [due June 12 <sup>th</sup> ]	25 %

## EVALUATION COMPONENTS:

### *Documentation (including a webpage devoted to your project)*

- Submit an engineering proposal that outlines your project ideas.
- Written Google Doc entries with pictures, notes and troubleshooting.
- Bi-weekly online journal entries that document your progress with any notes, pictures or video clips.

### *Techpoints:*

Complete a choice of optional activities that demonstrate the following three components:

- Promotion of technology
- Exploration of technology
- Application of technology
- A maximum of 100 TechPoints may be accumulated.
- Accumulation of these points will be done on an inventory sheet.

*Completion of a student project is a requirement for this course. The components of the project are...*

### *Part I: Presentation*

- Develop an engaging presentation for the class that reflects and summarizes your project.
  - Visuals should be included (graphs, pictures, videos, etc.).
  - Duration will be 5 minutes.

### *Part II: Summary Video*

- Explanation of setup and equipment needed.
- Demonstration of the project.

## WEBSITES:

- **COURSE HOMEPAGE:** <http://blackville.nbed.nb.ca/other/bhsmakerspace>
- **ICE CENTER:** <https://www.bhsice.com/>
- **YOUTUBE CHANNEL:** [https://www.youtube.com/channel/UCadmQIZlcXTmxg9JWjE-lxw?view\\_as=subscriber](https://www.youtube.com/channel/UCadmQIZlcXTmxg9JWjE-lxw?view_as=subscriber)
- **TWITTER ACCOUNT:** @BHSMaker #BHSMake