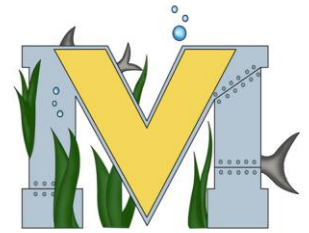




Co-OP 120

'MVHS MAKERSPACE'
FALL 2016



TEACHER: A. Hallihan

WORKSTATIONS/TECHNOLOGIES:

WORKSTATIONS...

3D PRINTING	3D SCANNING	UNDERWATER ROBOTICS	MAKE ELECTRONICS
MICROCONTROLLERS	EMBROIDERY	VINYL CUTTING	VIDEOGRAPHY
ROBOTICS	TREBUCHET MECHANICS	VIRTUAL REALITY	iBEACON APP

TECHNOLOGIES...

ORION 3D PRINTER	M3D	SILOUETTE CAMEO	ROLAND VINYL CUTTER
STRUCTURE SENSOR	OPENROV	MATE	MAKE KITS
SOLDERING	SPARKFUN	MAKEY MAKEY	ARDUINO
RASPBERRY PI	ADAFRUIT WEARABLES	REDBOTS	MBOTS
SINGER FUTURA	OCULUS RIFT DEV. 2	POCKET OPERATORS	HUMMINGBIRD
GoPro HERO 3	360FLY	iPAD AIR	iPAD MINI
PARROT DRONE	DJI PHANTOM DRONE	HUBSAN DRONE	ARCADE CONSOLE

COURSE DESCRIPTION:

MVHS 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 projects that can be turned into entrepreneurial ventures.

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 online journal & video editing
- Safety Modules [<http://nbcsa.ca/english/elearning.htm>]
 - Orientation
 - WHMIS
- Workstation Basics
- Final Projects

EVALUATION:	Journal/TechPoints/Activities/Assignments	50 %
	Project #1 [due November 4 th]	25 %
	Project #2 [due January 13 th]	25 %

EVALUATION COMPONENTS:

Online Journal: Documentation (webpage devoted to your project)

- Submit an engineering proposal that outlines your project ideas.
- Weekly journal entries that document updates your project 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://mvhs.nbed.nb.ca/other/mvhs-make>
- **STEM NORTH:** <http://stemnorth.nbed.nb.ca/>
- **YOUTUBE CHANNEL:** <https://www.youtube.com/channel/UC-hZtA0UUEzndBMm1wlme4Q>
- **TWITTER ACCOUNT:** @MVHS_ROV #MVHSMMAKE