

**ADVANCED TECHNOLOGY 120**  
COURSE OUTLINE - WINTER 2018



**TEACHER:** A. Hallihan

**COURSE DESCRIPTION:**

The objective of this course is for students to construct technological solutions to real-world problems. Students will identify a problem, develop a plan, research/collect data, analyze a design, implement a plan, and test their solution. The course follows Coop (MAKE) 120 where students continue to apply the 4 C's...Creativity, Critical Thinking & Problem Solving, Collaboration, and Communication in the MVHS MakerSpace. Students will develop a detailed project proposal, develop an instructable to journal their progress and present their results to not only their peers but also invited guests.

**SCOPE AND SEQUENCE:**

- Creating an Instructable
  - Researching a topic of interest & developing a project proposal
  - Components of an effective instructable
  - Documenting your work...text, pictures & video essentials
- Project #1 Presentation
- Developing a Business Model
  - Unique value propositions
  - Cost structure and revenue streams
- Project #2 Presentation

<b>EVALUATION:</b>	Project Proposals/Instructables/Tech Activities	50 %
	Project #1 Presentation/Videos	25 %
	Project #2 Presentation/Videos	25 %

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**EVALUATION COMPONENTS:**

*Documentation...*

- Submit an engineering proposal and/or business model that outlines your project objectives.
- Detailed instructable of project with text, pictures and videos (2 instructional & 1 product showcase).

*Tech Activities...*

Complete **two** of the following with shared documentation to showcase your involvement...

- 8 hours of MakerSpace Leadership during lunch and/or after school (log to be maintained and signed).
- Lesson delivered at either Elementary or Middle School level.
- SuperPower/Youth Entrepreneurship Challenge [**February 23<sup>rd</sup> Application Deadline**].
- Sumobot Competitor/Team Member [**March 21<sup>st</sup> at Simonds High School**].
- STEMFair project with STEMFest participation [**March 24<sup>th</sup> at James M. Hill**].
- NB Drone League Racing (regular indoor time trials followed by outdoor race in June).
- Use Beam to mentor projects with another school (log to be maintained and signed).
- Other tech activity that may come up in the semester or idea submitted by the student.

*Presentations:*

- Develop an engaging presentation for the class that reflects all aspects of your project.
  - Visuals must be included (graphs, charts, pictures, videos).
  - Duration will be 10 minutes and must have an interactive activity for audience.