



# Course Outline



## Course Information

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Course Title: Introduction to Mechanical Engineering (Essentials 1)

Course Code: DEA20S

Year: 2025/2026

Location: Crocus Plains Regional Secondary School, Room 211

## Instructor Information

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Instructor Name: Mr. Jason Klimack

Email: [Klimack.Jason@bsd.ca](mailto:Klimack.Jason@bsd.ca)

Office Phone: 1.204.729.0309

Communication: Best methods of communication is through email.

## Course Description

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Overview: Essentials 1 is intended for students wishing to explore mechanical design drafting. This course covers basic mechanical design tools and gets students to begin looking at the design of objects to understand how they are intended to function.

Prerequisites: None.

## Course Objectives

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- Prepare computer models of design solutions.
- Prepare working and presentation drawings and documents.
- Plan and organize presentations of design solutions.
- Describe and apply common tools and equipment used in design drafting.
- Demonstrate employability skills required in design drafting including personal management, organization, teamwork, and independence.

## Assessment

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Formative Assessments: Self-assessments, survey questions, weekly assignment feedback.

Summative Assessments:

- Practical and Theory tests – 55%
- Assignments – 10%
- Projects – 30%
- Employability – 5%

There is NO final exam for this course.

## Course Schedule

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Unit	Number of Weeks	% Final Grade
Introduction to Inventor	2	5
Parametric Modelling	2	10
Multiview Drawings	2	10
Patterns	1	5
Advanced 3D Modelling Tools: Revolve and Loft	2	10
Advanced 3D Modelling Tools: Sweep, Shell, Coil	1	5
Reverse Engineering	1	10
Group Presentation	1	5
Assemblies	2	10
Image Rendering	1	10
Final Project	3	15

## Course Policies

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**Attendance:** Students that are absent for one or more days are responsible for ensuring that they catch up with any content that was covered during their absence prior to the end of the unit, or with the teacher's permission of an extension PRIOR to the absence.

**Late work:** Students are to save all their course work in their shared engineering folder on OneDrive. Students will not need to submit their work as the instructor will always have access. However, any work that is incomplete at the time of grading will be assigned a grade based on the level of completeness (e.g. if the project is only 75% complete, the student will receive a maximum score of 75%).

**Academic integrity:** There is a zero-tolerance policy for academic dishonesty (cheating), including but not limited to: replicating projects from the internet, completing or submitting other students work, plagiarism, or using AI to write content for any written assessments. Failure to comply with this policy will result in a grade of zero for that assessment and may result in the reporting of the incident to the student's parents or the school administration.

**Class participation:** All students are expected to participate in class activities and discussions.

**Personal electronic devices:** All personal electronic devices are prohibited during class time including cellphones, smart watches, ear buds and headphones. If a student is caught using their device they will be asked to place the item in their locker. If the issue continues then either the student's parents or school administration will be contacted.