



# Course Outline



## Course Information

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Course Title: Advanced Engineering

Course Code: DEB40S

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: Advanced engineering design drafting is intended for students in the transition phase of engineering design drafting. Curriculum content focuses on engineering product design and manufacturing. Students will present their design solutions to others.

Prerequisites: DEC30S – Engineering Design.

## Course Objectives

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- Principles of design
- Drafting, engineering, and manufacturing standards
- Manufacturing materials, fasteners, standard components, and processes
- Computer model parts, assemblies, and sub-assemblies for visualization, simulations, and finite element analysis
- Part, assembly, and development drawings

## Assessment

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### Formative Assessments:

Self-assessments, survey questions, weekly assignment feedback.

### Summative Assessments:

This course is assessed based on a variety of small and large projects, tests, presentations, portfolios and research.

There is NO final exam for this course.

## Course Schedule

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Unit	Number of Weeks
Warm up activity	1
Metal Design + Finite Element Analysis	6
Presentations	1
Portfolio	1
Research – Manufacturing Methods	1-2
Advanced Parametric Modelling	3
Surface Modelling	2

## 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.

**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 ONCE to put the device away. If the problem continues then the students parents and/or the office administration will be contacted.

**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%).