



**TDJ3M – Technological Design
University/College Preparation, Grade 11
Student Course Outline/Evaluation Profile**

Course Description:

This course examines how technological design is influenced by human, environmental, financial, and material requirements and resources. Students will research, design, build, and assess solutions that meet specific human needs, using working drawings and other communication methods to present their design ideas. They will develop an awareness of environmental, societal, and cultural issues related to technological design, and will explore career opportunities in the field, as well as the college and/or university program requirements for them.

Prerequisite: none

Course Fee: \$10.00 to cover material costs

| Curriculum Strands | Overall Expectations |
|--|---|
| Fundamentals | <ul style="list-style-type: none"> A1. demonstrate an understanding of factors and relationships that affect technological design and the design process; A2. describe appropriate strategies, techniques, and tools for researching, organizing, planning, and managing design projects and related activities, with an emphasis on financial, human, and material resources; A3. demonstrate an understanding of drafting standards, conventions, and guidelines for various types of drawings used to represent designs; A4. demonstrate an understanding of a variety of tools, materials, equipment, and processes used to build, test, and evaluate models and prototypes; A5. use appropriate terminology and communication methods to document, report, and present progress and results. |
| Skills | <ul style="list-style-type: none"> B1. use appropriate strategies and tools to research and manage design projects and related activities; B2. apply appropriate methods for generating and graphically representing design ideas and solutions; B3. create and test models and/or prototypes, using a variety of techniques, tools, and materials; B4. use a variety of formats and tools to create and present reports summarizing the design process and to reflect on decisions made during the process. |
| Technology, the Environment and Society | <ul style="list-style-type: none"> C1. demonstrate an understanding of environmentally responsible design practices, and apply them in the technological design process and related activities; C2. describe the relationship between society and technological development. |
| Professional Practice and Career Opportunities | <ul style="list-style-type: none"> D1. describe and apply health, safety, and environmental practices related to technological design; D2. identify career opportunities in fields related to technological design, and describe the training and education required for these careers. |

Learning Categories

| Knowledge/Understanding (15%) | Thinking (20%) | Application (20%) | Communication (15%) |
|--|---|---|--|
| <ul style="list-style-type: none"> Quizzes Unit Tests Review Sheets | <ul style="list-style-type: none"> Project Reflections Written Assignments Debriefing Reports Critical Analysis | <ul style="list-style-type: none"> 'Hands-on' Projects Assignments Group and Individual Projects | <ul style="list-style-type: none"> Project Proposals/Briefs Project Presentations Student/Teacher conferences |

Assessment and Evaluation Breakdown: Final Communication Mark

| Formative (70%) – Term Work | | Summative (30%) – Final Culminating Project Evaluation | |
|-----------------------------|-------|--|-------|
| Knowledge/Understanding | (15%) | Course Culminating Task | (20%) |
| Thinking | (20%) | Final Written Exam | (10%) |
| Application | (20%) | | |
| Communication | (15%) | | |

Learning Strategies Employed in the Course:

As part of the learning process, students will receive ongoing descriptive feedback which may not be assigned a mark. Learning strategies include group work, teacher directed lessons, hands-on activities, interpretation and analysis of various media (videos, TV, posters, newspapers, floor plans, orthographic and isometric drawings), and writing assignments.

Learning Skills:

The following Learning Skills will be taught and assessed throughout the course. Student's performance in these skill areas will be assessed by the following categories: Excellent, Good, Satisfactory, Needs Improvement. There will be no numeric mark for Learning Skills on the report card. The development and the consistent practice of these skills influence academic achievement. These skills include:

| Responsibility | Organization | Independent Work | Collaboration | Initiative | Self-Regulation |
|--|---|---|---|---|--|
| <ul style="list-style-type: none"> fulfills responsibilities and commitments within the learning environment; completes and submits class work, homework, and assignments according to agreed-upon timelines; takes responsibility for and manages own behaviour. | <ul style="list-style-type: none"> devises and follows a plan and process for completing work and tasks; establishes priorities and manages time to complete tasks and achieve goals; identifies, gathers, evaluates, and uses information, technology, and resources to complete tasks. | <ul style="list-style-type: none"> independently monitors, assesses, and revises plans to complete tasks and meet goals; uses class time appropriately to complete tasks; follows instructions with minimal supervision. | <ul style="list-style-type: none"> accepts various roles and an equitable share of work in a group; responds positively to the ideas, opinions, values, and traditions of others; builds healthy peer-to-peer relationships through personal and media-assisted interactions; works with others to resolve conflicts and build consensus to achieve group goals; shares information, resources, and expertise and promotes critical thinking to solve problems and make decisions. | <ul style="list-style-type: none"> looks for and acts on new ideas and opportunities for learning; demonstrates the capacity for innovation and a willingness to take risks; demonstrates curiosity and interest in learning; approaches new tasks with a positive attitude; recognizes and advocates appropriately for the rights of self and others. | <ul style="list-style-type: none"> sets own individual goals and monitors progress towards achieving them; seeks clarification or assistance when needed; assesses and reflects critically on own strengths, needs, and interests; identifies learning opportunities, choices, and strategies to meet personal needs and achieve goals; perseveres and makes an effort when responding to challenges. |

Units of Study and Approximate Timelines:

| Units | Timeline |
|---|--------------------|
| Unit #1 – Safety and Introduction to Design | 20 hours (18 days) |
| Unit #2 – Computer Aided Design | 20 hours (18 days) |
| Unit #3 – Architectural Design | 20 hours (18 days) |
| Unit #4 – Product Development | 20 hours (18 days) |
| Unit #5 – Robotics | 20 hours (18 days) |

Homework:

Homework may include practice, preparation or extension of in-class work. Consistent homework completion is essential for student success.

Deadlines:

Deadlines are realistic in the normal working life outside of the school setting. Deadlines are set as a reasonable management strategy for teachers and students so that workloads can be varied and balanced. Deadlines are also a way of bringing closure to one unit of work and moving ahead to another.

Students are expected to:

- Complete all assessment opportunity tasks (projects, assignments, presentations, etc.) by the due date assigned by the teacher.
- Seek assistance from the teacher when they feel unable to complete a task/assignment due to insufficient knowledge or skills. Advise the teacher of any difficulty well before an assignment/task is due.
- Understand that some deadlines are negotiated; some are absolute. Negotiate alternate deadlines well before an established due date. Work that is not submitted/completed on either a negotiated or absolute deadline will not be assessed/evaluated.
- Understand that chronic lateness in submitting tasks/assignments will prevent teachers from evaluating work and may require students to demonstrate their skills and knowledge within an alternate setting such as summer school.
- If the student does not submit or complete assigned tasks by the due date, that work may not be assessed/evaluated, a mark penalty may be imposed, and/or the student may receive a mark of zero.

Missed Evaluations:

- Students that know ahead of time that they will miss an evaluation are expected to discuss the situation beforehand with the subject teacher.
- Students who miss a summative evaluation for an unauthorized reason may lose the opportunity to complete the task.
- Students who are absent on the day of an evaluation for reasons such as illness, field trip or suspension are responsible for meeting the teacher to make alternate arrangements to submit/complete the assignment.

FAILURE TO COMPLETE COMPULSORY MAJOR EVALUATIONS INCLUDING THE FINAL EVALUATION MAY RESULT IN LOSS OF CREDIT. THERE ARE NO EXCEPTIONS FROM COMPLETING THE FINAL EVALUATION OF A COURSE.

Classroom Requirements:

- 3 ring binder with lined paper
- pen, pencil, ruler, eraser, calculator
- respect for yourself, others, and the equipment around you

Attendance: (Student Handbook)

You are expected to attend all classes. If a student is absent, it is the student's responsibility to make up missed work. Poor attendance is the chief cause of failure in school. Make an effort to schedule appointments outside of school hours. If you are absent, have a parent or guardian contact the school. If no parental confirmation is received, the absence is recorded as an unauthorized absence. Students should bring a dated signed note to the office upon their return.

Examinations and Final Course Evaluations:

Final course evaluations are compulsory. Students absent from a final evaluation (e.g. an examination) will receive a mark of zero unless prior permission of the principal is obtained, or a medical certificate is submitted to the office within 24 hours. The medical certificate must state specifically that the student was not able to attend at the time of the evaluation.

Patrick Fogarty Code of Conduct: (See Student Handbook)

The Simcoe Muskoka Catholic District School Board is committed to providing safe learning and teaching environments that promote responsibility, respect, civility and academic excellence. The Patrick Fogarty Code of Conduct clarifies what orderly and respectful behaviour is and outlines the consequences of non-compliance.

Academic Honesty and Consequences of Cheating:

The grades that students receive are intended to reflect their own academic achievement, effort and creativity. Copying or cheating is unacceptable behaviour. The following activities are considered to be cheating:

- a) copying any material from another student for evaluation purposes, with or without his/her knowledge.
- b) plagiarizing material i.e. handing in another person's work as one's own.
- c) copying material directly from a source without acknowledging the source.
- d) exchanging information or material during an evaluation.
- e) having unauthorized materials such as notes, texts and calculators at one's desk during evaluations.

Students are expected to:

Cheating will not be tolerated. If you cheat you will receive, as a minimum penalty, a mark of zero on the test assignment or exam and you may be suspended from school. Further consequences such as loss of the credit may result if the zero leads to a mark less than 50%.

Every student receives a Student Handbook to assist in keeping track of homework and assignments. Students are encouraged to use it on a regular basis. Additional information can be found in the Student Handbook/Board Policy.