Ancaster High School
Course Outline 2013/2014
Manufacturing Technologies
Grade 11 TMJ3E
Technological Education

TEACHER: Mr. J. Radix **PREREQUISITE:** None **HOURS:** 110 **CREDIT VALUE:** 1

DEPARTMENT HEAD: Mr. K. Lemieux **TEXTBOOK:** None

GUIDELINE: *The Ontario Curriculum Grades 11 and 12, Technological Education, 2009 Revised*

The text will be provided free of charge. However, the student is responsible for returning the book in reasonable condition. The student will be charged for loss or damage.

OVERALL EXPECTATIONS:

A. MANUFACTURING TECHNOLOGY FUNDAMENTALS

OVERALL EXPECTATIONS

By the end of this course, students will:

A1. demonstrate an understanding of the primary manufacturing industries and the processes and technologies related to them;

A2. demonstrate an understanding of how a design process is used in the planning and development of a manufacturing project;

A3. describe and demonstrate the correct use of processes required for making material conversions;

A4. demonstrate an understanding of relevant mathematical and scientific concepts and apply technological literacy and communication skills in the study of manufacturing technology.

B. MANUFACTURING TECHNOLOGY SKILLS

OVERALL EXPECTATIONS

By the end of this course, students will:

B1. use technical design and production skills to interpret and prepare drawings and to develop process plans for a manufacturing project;

B2. demonstrate the ability to select appropriate materials for the manufacture of a product and prepare them properly for production;

B3. demonstrate a working knowledge of various metrology tools used to measure, lay out, and inspect a product;

B4. demonstrate a working knowledge of the purpose, characteristics, and safe use of various hand tools, machine tools, power tools, and equipment used in the manufacture of products.

C. TECHNOLOGY, THE ENVIRONMENT, AND SOCIETY

OVERALL EXPECTATIONS

By the end of this course, students will:

C1. demonstrate an understanding of ways in which the manufacturing industry affects the environment;

C2. explain how the manufacturing industry affects various aspects of society.

D. PROFESSIONAL PRACTICE AND CAREER OPPORTUNITIES

OVERALL EXPECTATIONS

By the end of this course, students will:

D1. demonstrate an understanding of and compliance with health and safety legislation, standards, and practices as they relate to processes, materials, tools, and equipment used in manufacturing;

D2. demonstrate an understanding of career opportunities in the manufacturing industry and the education, training, and certification required for these careers.

TEACHING STRATEGIES (include, but not limited to):

- Providing appropriate accommodation for students on IEP's and for English Language Learners and for those who are First Nations, Metis or Inui;
- Utilizing Student Support and Student Alternative Support Programs;
- Contacting parents for support and assistance;
- Using diagnostic assessment and check-in points to monitor student progress;
- Providing differentiation of instruction and assessment to meet the needs of diverse learners;
- Providing ongoing descriptive feedback that is clear, specific, meaningful, and timely to support improved student learning;
- Creating lessons, and assessment and evaluations, that are carefully planned to relate to the curriculum expectations and learning goals, and as much as possible to the interests, learning styles and preferences of all students;
- Developing students' self-assessment skills to enable them to assess their own learning, set specific goals, and plan next steps for their learning.

ASSESSMENT AND EVALUATION OF WORK:

Assessment and evaluation will be based on the provincial curriculum expectations and the achievement levels outlined in the curriculum policy document. Students will be given numerous and varied opportunities to demonstrate their achievement of the expectations across the four categories of knowledge and skills.

Midterm and final marks will be calculated using the prescribed learning strands with the following weighting:

Strand	Weighting
A. MANUFACTURING TECHNOLOGY FUNDAMENTALS	**20%**
B. MANUFACTURING TECHNOLOGY SKILLS	**40%**
C. TECHNOLOGY, THE ENVIRONMENT, AND SOCIETY	**5%**
D. PROFESSIONAL PRACTICE AND CAREER OPPORTUNITIES	**5%**

Evidence of achievement can be determined from a variety of sources, including but not limited to: in-class assignments, class presentation, open-ended questions, observations, quizzes, unit tests, investigations, projects, conversations, portfolios, anecdotal records, self-assessments, etc. Not every assessment will count towards a student's final grade. The primary purpose of assessment and evaluation is to improve student learning.

CULMINATING ACTIVITY

Culminating activities occur at or near the end of a course. They form part of the final 30% of a student's mark. If a student is absent from a culminating activity, they must provide a doctor's note. The culminating activity will not normally be re-scheduled.

For this course, the culminating activity will occur: In the last month of the course and during the exam schedule.
And will consist of the following: A practical demonstration of skills learned throughout the semester and a written assignment (reflective writing).

LEARNING SKILLS:

The report card provides a record of the learning skills demonstrated by the student in every course, in the following six categories. However, learning skills are not directly considered in the determination of percentage grades.

Independent Work	These skills will be assessed using the following key:
Collaboration	E = Excellent
Organization	G = Good
Initiative	S= Satisfactory
Responsibility	N = Needs Improvement
Self-Regulation	

MARK CALCULATION:

Interim: A report will be given to reflect how well the student is progressing with suggestions for improvement.

Term Work:	70% of the overall grade (from all term evaluations)
Final Evaluation(s):	30% of the overall grade (20% practical culminating activity, 10% written assignment)

Teachers will take various considerations into account before making a decision about the grade to enter on the report card. Determining a report card grade will involve teacher's professional judgement and interpretation of the evidence and should reflect the student's most consistent level of achievement with special considerations given to the more recent evidence. Marks are not merely a calculation of averages, but an evaluation of the consistent achievement of the student.

CONTACT INFORMATION:

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Extra Help Sessions: As required