



# SEAQUAM

## ENGINEERING TECHNOLOGY 10/11/12 COURSE OUTLINE

The following is an outline of the general course content, evaluation, and attendance. Please read carefully.

### **COURSE OBJECTIVES:**

The course objective is to help young people prepare to live and work in a technological world by developing life long learning and technological literacy with respect to tools, materials, systems, processes and using them in an informed, ethical and responsible way.

### **GLOBAL LEARNING OUTCOMES:**

Students will be introduced to and evaluated on both the practical and theoretical aspects of power technology within the framework of Technology IRP and its following curriculum organisers:

1. Self and Society: Solving design problems  
Working independently and co-operatively  
Understanding technology and society  
Develop positions and attitudes
2. Communication: Using manual and computer drawing processes  
Using language and visual communication  
Designing and revising presentations
3. Production: Safety  
Evaluating materials  
Applying, combining, forming, separating and finishing  
Constructing prototypes and products  
Recycling and minimising waste
4. Control: Sensing, switching and regulating
5. Energy and Power: Conversion, transmission and conservation

\*For further specifics on content visit the Curriculum Branch's home page:

<http://www.bced.gov.bc.ca/curriculum>

### **COURSE CONTENT:**

Safety, Materials and their qualities, Measurement: imperial and metric, Drawing and Interpretation, physics, power, bridges, robotics, programming, tba.

## EVALUATION:

Evaluation will be based on a variety of the following:

- Teacher observations
- Student self assessment
- Practical assignments (samples of student work)
- Projects (quality & workmanship)
- Quizzes and tests
- Oral and written reports/assignments

Terms will be weighted will be as follows: Term 1 - 30%  
Term 2 - 30%  
Term 3 - 40%

## ATTENDANCE REQUIREMENTS:

This is a participation programme that requires substantial hands-on work as well as theoretical instruction. Student missing class(es) cannot easily make up these experiences. This course emphasises the expectation of the employer in the world of work - your employer expects you to be at work on time everyday. The practical mark component of the course will be acquired from project work and related activities. If you are not in attendance, no mark can be given for these activities. Excessive absences will be discussed with administration, your counselor and your parents which could lead to the possible removal from class. Prolonged illness will be reason for appeal. A note from a doctor will be required. The student is responsible to make up missed work and assignments.

## LATE POLICY:

Students reporting to class late must provide a note from other school staff to be excused for their tardiness. Late arrivals may be given written work, clean-up, or other duties as seen appropriate by the teacher. In addition, marks could be lost due to not being in attendance to write quizzes (if given) at the beginning of class. Attending and being on time will greatly affect student's standing; therefore, anyone with excessive absences and lates cannot expect to reap the full benefits of the course.

## EQUIPMENT, SUPPLIES, COURSE FEES:

- Coveralls/proper clothing, footwear enclosing the foot (sandals are prohibited), personal safety glasses.
- Loose-leaf binder, ruled and blank paper, pen & pencil, 10' – 3 m measuring tape.
- \*\* Students that show up for class without the above will be considered NOT PREPARED FOR CLASS and will NOT be allowed to fully participate in the class until they are obtained. The above requirements are mandatory for reason of safety and learning.
- There will be a charge for materials made available, for supplemental projects and materials taken home, to the student over and above the basic required project(s).

## PROPOSED PROJECT LIST:

### based on allotted time

1. Civil Engineering
  - a. Foundations
  - b. Material Science
  - c. Structures
2. Mechanical Engineering
  - a. Gears
  - b. Simple machines
  - c. Trebuchets
3. Electrical Engineering
  - a. Vex Robotics
  - b. simple robots
  - c. Alternative/human Power

## SHOP OPERATIONS:

## **SHOP CLASSES DO NOT BEGIN UNTIL ALL STUDENTS HAVE COVERALLS/safe clothing**

1. Each student will be expected to clean and put away the tools and materials they have used at their work stations as well as clean up their bench and floor area around it. **TOOLS NOT RETURNED TO THEIR PROPER LOCATION DEPRIVES YOU AND OTHERS OF THEIR USE IN FUTURE.**
2. The last 5 to 10 minutes of the shop period will be devoted to general clean up of the facilities. All students will participate collectively in the clean up regardless of whether they used the tools or made the mess. *Clean-up means properly putting away all tools and equipment and cleaning up all work areas before removing coveralls and washing up.*
3. During the course year, there will be scheduled major shop clean-ups done. When major shop clean-ups occur will be determined by the instructor.
4. Property of others must be left alone unless one has permission. Property going missing in the shop is everyone's responsibility and therefore, anything going missing will result in practical work ceasing until its return or for a time period deemed appropriate by the instructor, or some other mutual arrangement has been made for compensation. To protect your valuables it is best to leave them at home.
5. In case of an emergency (fire drill, earthquake, etc.) all students are to meet together as a group at the lower track field following emergency evacuation procedures in an orderly fashion.
6. Long hair must be confined by a hat or other acceptable means.
7. All students must score a minimum of 85% on the safety test before shop privileges begin.
8. Students participating in horse play, or endangering others in any way will have their shop privileges restricted or terminated as decided by the instructor and school administration.
9. All students must remain in the shop or classroom. No one is to leave without the express consent of the instructor. *If you are out of the classroom or shop without the permission of the teacher, this is an indication to your teacher that you have no interest in being here and therefore, should drop the class.*

## **WRITTEN ASSIGNMENT FORMAT:**

To earn full marks for written assignments, follow these directions carefully.

- Written neatly - work not easily read will not be marked or word processed.
- Write the date, block and your name on each page at the upper right hand corner.
- Staple each assignment at the top left corner.
- Answer each question correctly.
- Leave one line between each answer.
- Use only complete sentence answers. Restate the question in the answer.
- Late assignments will not be accepted if class time has been given to complete.