



## Sec. 5 Industrial Arts Option

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This course provides an introduction to the use of shop equipment and building techniques. Topics will include basic drafting (drawing of diagrams), shop safety (including WHMIS and fire safety), and the opportunity to construct a variety of projects in different materials (from wood to metal and plastic). We will also introduce some basic electrical concepts, projects as well as basic automotive maintenance. Extra help or work time is offered as required.

### Materials Required & Supplied (Reno Depot, Dollar Store, Home Depot, etc.):

#### ● Supplied:

- Wood: Technology & Processes by Glencoe (hardcover textbook)
- Woodworking: Techniques & Projects (softcover book)
- Shop apron, safety goggles/glasses & safety gloves
- Dust mask & ear protection (plugs, ear muffs, etc.)
- Fractional tape measure
- A quality mechanical woodworking pencil
- Basic kit of tools and equipment (clamps, saws, hammer, etc.)

#### ● iPad/Chromebook & Google Drive, Docs, Sheets and Slides apps

- Students will be expected to upload their work on Moodle and/or Google drive and will need to respect proper file and/or folder naming (each student will get a number in the group (alphabetically)
  - “Number last name\_course\_assignment name”
    - “21\_Smith\_Ind Arts\_Chair drawings.pdf”

### Cost

- There is a cost of 150\$ that contributes to the purchase of personal safety materials, and consumables such as wood, metal, screws, glue, etc. (payment is split into two parts)
- Most of the materials students get to keep or contribute to the school if they so choose.
- Payment is made [online](#) through the finance department, but should there be any issues with payment, refunds, etc., please contact [financialaid@loyola.ca](mailto:financialaid@loyola.ca)

### Location

- Homerooms or workshop (room 226) & robotics workshop/garage & outdoors



**Throughout this course students will:**

- Identify and describe the safe use of basic hand tools.
- Identify some basic wood joinery and wood types.
- Identify and describe the safe use of various power tools.
- Apply basic drafting skills to produce both shop and 3D drawings (time permitting)
- Demonstrate basic measurement and layout techniques.
- Demonstrate basic competencies of individual effort and interpersonal interaction.
- Shop behaviour (Basic Competencies)
- Appropriate behaviour is a vital component of safety in the shop. The manner in which you behave is important not only for your safety, but the safety of others as well.

**Inappropriate behaviours include:**

- Poor cleanup
- Lack of PPE (Personal Protective Equipment) and/or improper use of machines/tools
- Horseplay (running, pushing, throwing, irresponsible, etc)
- Disruptive to the class and/or disrespect of equipment or people

**Cleanup**

- Putting your project and tools away in their proper spots
- Cleaning off any machines you have used as well as your workspace

**Grading**

1. Safety and basic tools unit (must pass in order to complete further sections)
  - This includes textbook readings, notes and quizzes
2. Small group or individual projects (approximately three per year or one per term)
  - Some project ideas given by instructor
  - Some student designed projects
    - Each project must have a “project-planning sheet” which is submitted before the project can begin and must be turned in with the final project
    - Work ethic and productivity will be judged by the teacher each cycle
3. Assignments and quizzes: some examples...
  - Safety
  - Technical diagrams
  - Design
  - Possibility of using CAD, possibly Inventor (technical drawings)
4. Basic Competencies
  - Joining
  - Assembly
  - Wiring
  - Basic car maintenance (changing car tires & possibly oil changes)

**Term breakdown**

Term 1	40% (including an end of term presentation)
Term 2	60% (including an end of year summative presentation)

**Projects might include (products could be sold to raise funds for charity):**

- Locker organizer/shelves, bookshelves and tables
- Loyola recycling and compost receptacles
- Sports or exercise equipment
- Adirondack chairs