

Name: _____ 5__



Loyola

HIGH SCHOOL

Sec. 5 Industrial Arts Option

Teacher: Mr. M. Elie (eliem@loyola.ca) Voicemail : 514-486-1101 ext 619

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.

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

- **Supplied:**
 - Wood: Technology & Processes by Glencoe (textbook)
 - Shop apron, safety goggles/glasses & safety gloves
 - Dust mask & ear protection (plugs, ear muffs, etc.)
 - Fractional tape measure
 - A quality mechanical woodworking pencil
 - Steel toe covers, but certified shoes/boots can be brought in when required
- **Required:**
 - Graph paper, small folder (or duo-tang) and clipboard (nothing expensive)
 - Rulers for drawing/drafting

Cost

- There is a cost of 150\$ that contributes to the purchase of safety materials, consumables such as wood, metal, etc.
- 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

Location

- Laboratory/workshop (room 226) & robotics workshop (basement) & garage

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.
- Demonstrate basic measurement and layout techniques.
- Apply construction techniques to produce several projects.

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Continued from previous section:

- 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 Unit (must pass in order to complete further sections)
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
 - Inventor (technical drawings) and 3D printing
4. Basic Competencies
 - Joining
 - Assembly
 - Wiring
 - Car maintenance (changing car tires & possibly oil changes)

Possible guest speakers/instructors:

- Electricians
- Cabinet makers
- Mechanics (possibly to supervise car maintenance, tire and oil change activities)

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

- Tool boxes
- Locker organizer/shelves, bookshelves and tables
- Loyola recycling and compost receptacles
- Props for the school play & sports equipment
- Adirondack chairs or picnic tables
- SSX (student stock exchange) booths