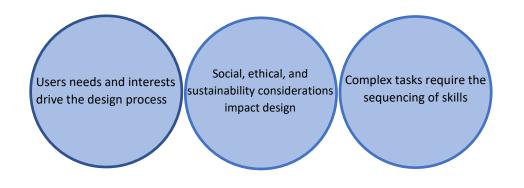# Woodwork 10 – Course Outline

Woodwork 10 is a 2 credit largely project based course incorporating some theory. Through the designing and building of projects, students will gain an appreciation for fine woodworking processes, utilizing appropriate tools and techniques.

Applied Design, Skills, and Technology Courses (ADST)

The ability to design, make, acquire, and apply skills and technologies is important in the world today and key in the education of citizens for the future.

ADST curriculum is an experiential, hands-on program of learning through design and creation.

The 'Big Ideas' – overarching organizers for the development and delivery of the course

Users needs and interests drive the design process

Social, ethical, and sustainability considerations impact design

Complex tasks require the sequencing of skills

Content

Upon completion of the course, students are expected to know the following:

- ✓ project design opportunities
- ✓ uses and creation of plans and drawings
- ✓ identification, characteristics, properties, and uses of wood from various species
- ✓ choices related to the sustainable use of wood
- ✓ techniques for stock breakout and woodworking using a variety of tools and equipment, including stationary power equipment
- ✓ function, uses, and role of portable and stationary power equipment in the creation of a project
- ✓ function and use of hand tools

As this is a hands-on course in that projects drive the learning. Students will be expected to complete one main project and one or more smaller projects as time permits.

Mitred Box

The main project for this course will the designing and building of a mitred 'keepsake' box. Students will model their box using professional level 3D modelling software (Autodesk Fusion 360), generate a set of working plans to build it from, and finally, use common woodworking power tools to manufacture and finish it.

Secondary Projects

Students will undertake one or more secondary projects as time permits. Options will be presented, or students can design and make personally driven skill level appropriate projects if teacher approved.

Modern Woodworking

In recent years, technology seems to have crept into every aspect of our lives, with woodworking being no exception. Students will be encouraged to make use of technology in their project designs. Through the use of computers for design generation, and the incorporation of CNC Routers and Laser Cutter/Engravers. Learning how to use these technological tools can help novice woodworkers to achieve professional outcomes only once achievable through years of skill development.

Theory

Theory study is the building of the knowledge that allows us to do cool things. This course will not contain a lot of formal theory, but some is not only necessary, but it's good for us 😊

Theory Topics

- ☐ Measurement Systems and Applications
- ☐ Wood Species Identification
- ☐ Sustainability
- ☐ Project Cost Calculation

Curricular Competencies

Students are expected to be able to do the following:

Understand Context – how things fit into the larger picture

Define – identify project constraints; associated criteria; potential users

Ideate – generate ideas within a project's constraints, critically analyze these, determine (ongoing) viability; identify sources of inspiration

Prototype – develop a plan; evaluate potential materials; make changes as needed; keep records of process/iterations

Test – identify sources of feedback; develop appropriate test methods; conduct testing; evaluate results and iterate as needed

Make – use tools, technologies, materials and processes; follow a step by step plan; be sensitive to waste

Share – identify methods and targets for sharing of products and processes; demonstrate; identify new goals

Grades

Grades will be calculated cumulatively and posted to My Ed BC regularly. This course runs every other day for the next 10 weeks (Term 1), approx. 60 hrs. The grade breakdown is as follows:

Term 1 (40% of overall grade)
Safety – 10%
Design – 30%

Term 1 (60% of overall grade)
Main Project – 50%
Secondary Project(s) – 10%

Safety

Your safety is the highest priority in the shop. Safe work practices, handling of materials, techniques and expected behaviour will be clearly conveyed and it is expected that you will demonstrate your understanding by demonstrating safe work habits at all times.

The following safety protocol applies to the use of all stationary power tools:

1. Students receive a demonstration on proper tool use and safety considerations
2. Students must pass a safety test achieving a minimum standard. Corrections, if needed, must be made and the teacher satisfied that understanding has been achieved. Testing that results in a grade below the minimum standard may result in the student needing a second demonstration before they can use the equipment.
3. The teacher will observe the student the first time they use a given tool
4. Students will ask for the teacher for permission immediately prior to using any power tool

Class Website (Google: 'Isfeld Makerspace')

A website is maintained to support all courses offered in this room. The direct address is http://makerspace.isfeldschool.com/, however it is often easier to simply Google 'Isfeld Makerspace' to get there. You will be using this site nearly, if not, every day and it cannot be over emphasized how important it is to remember how to get there!

Recommended

We will be utilizing online video tutorials during the design portion of the course. Having everyone use the computer's built in speakers does not work well for obvious reasons. Please bring ear buds or headphones with you to use for this purpose.

Flex Block

Flex Block, the last hour of each day, is an opportunity for you to catch up on missed work/assignments and/or get a little bit of extra time if you find that you are falling behind. Please do make use of this time if you feel that you need to. Also, expect that if you have missing work/assignment, or are falling behind and you are not attending Flex Block I will request that you do so and you will be expected to attend until such time as you are caught up.

https://curriculum.gov.bc.ca/curriculum/adst/10/woodwork