Architecture Model Making Workshop

Prepared by Dr. Djamel Ouahrani
Date 25 February 2024

Introduction

Design process is the outcome a process of learning starting from theory then experiment and finally design. The experiment includes both testing and measuring physical parameters and model making model at different scale and level of details.

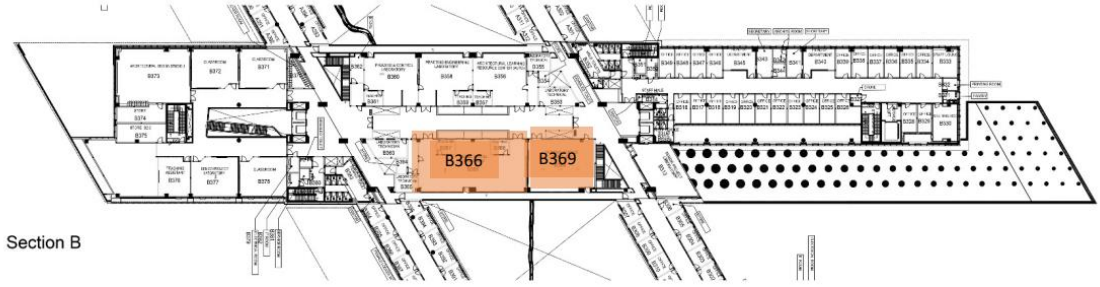
The Department of Architecture and Urban Planning is fully facilitated with all required space and equipment to support the students during their five years of study with knowledge and skill to meet professional standards. DAUP has five design studios, building sciences Lab, Model making workshop and one library. All these facilities are located in section B of Engineering College, H07 except the CADD lab which is in section C

MODEL MAKING AND 3D PRINTING

Students use the workshop to produce architectural prototypes and models as a part of their Research and educational program. The workshop is well-equipped with a wide range of hand tools and machines such as a band saw, scroll saw, meter saw, disc sander, 3D printer, and laser cutter. Due to safety concerns, students must go through a lesson about safety requirements and lab regulations, which are posted in the workshop. The location of the workshop is B366. The following is the layout of the model-making workshop.

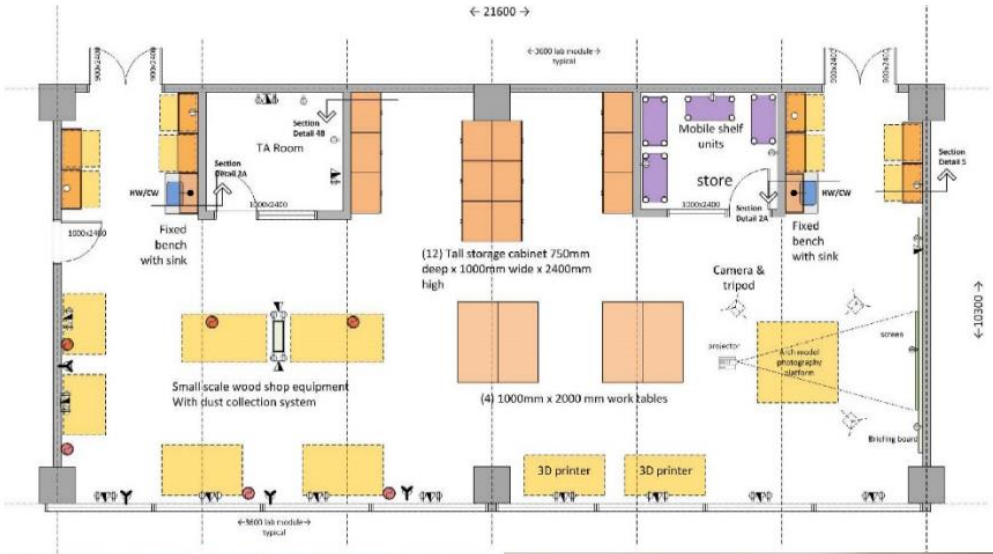
1.2 MODEL-MAKING WORKSHOP LOCATION AND EQUIPMENTS

The location of the model making workshop is as shown in the floor plan, H07-B366



Second Floor, H07-Section B

1. Model-making Workshop (B366)



Model Making workshop (H07-B366)

Machines available in the Model Making Lab:

1. **3D printer** -Ultimaker 3D printer is to creates a physical object from a digital design. The process works by laying down thin layers of material in the form plastic (PLA). Their actively heated build chambers, direct drive, and rigid metal frame make it easy to 3D print a specific range of engineering-grade materials with high repeatability and dimensional accuracy using 1.75 mm filament	
2. **3D printer** -Creality Creality Print is a selfdeveloped FDM slicing software .It's a practical and easy-to-use tool that can help you remote control and monitor your 3D printer and help print directly from your computer	
3. **Laser cutter** A laser cutter is a prototyping and manufacturing tool used primarily by engineers, designers, and artists to cut and etch into flat material. Laser cutters use a thin, focused laser beam to pierce and cut through materials to cut out patterns and geometries specified by designers	
4. **Band Saw** A band saw uses a long sharp blade consisting of a continuous band of toothed metal rotating on opposing wheels to cut materials such as wood. It could cut a wider variety of materials	

5. **Mitre Saw** They are primarily used for cutting wood trim and molding, but also can be used to cut metal, masonry, and plastics	
6. **Scroll Saw** A scroll saw is a small electric or pedal -operated saw used to cut intricate curves in wood, metal, or other material	
7. **Dill Press** The drill press is used for drilling accurate and consistent holes where the depth of the hole can be preset and repeated.	
8. **Disc Sander** Made up of a circular abrasive paper, mounted on a circular plate; the disc sander is ideal for end grain work, shaping subtle round corners and removing large amounts of material quickly	

9. **Oscillating Spindle sander** Spindle sanders are highly efficient woodworking power tools that use spinning sanding drums to oscillate up and down on a piece of wood, creating smooth, clean finishes	
10. **Woodturning Lathe** Wood-turning lathes are typically used to shape wood into cylindrical profiles.	
11. **Construction saw** They are primarily used for cutting wood of greater depth.