

Instructions for students of the FA of the CTU in Prague

Introduction: Workshops are a space for the **production of architectural and design models**. **Consultations** on individual projects take place in the workshops, where students are introduced to the possibilities of model production. Furthermore, the workshop space is equipped with **machines on which students work only after training or mostly with the professional assistance of a workshop employee**. Safety regulations must be observed for every job. Upon arrival at the workshop, students must always register in **the book Health and Safety**, which is prepared at the entrance to the workshop. This book includes instructions for the safe use of individual machines and workshop equipment. Here, students must study these instructions carefully.

Machinery:

1. Large and small band saw: only with the assistance of a workshop employee. It is possible to cut wood, polystyrene, plastics. Only metal materials must not be cut on the saw.
2. Lathe: only with the assistance of a workshop employee. It is possible to work on wood, plastics, metals.
3. Miter saw: only with the assistance of a workshop employee. Only wood, plastics can be cut. Metals must not be cut on the saw.
4. Grinders: after connecting the suction (vacuum cleaner) it is possible to grind polystyrene, wood, plastics, not metals.
5. Lever shears: possibility to format cartons, plastic boards, not metals.
6. Stand drills: for drilling wood, plastic, metal
7. Planer with stretch: only with the assistance of a workshop employee. Only wooden materials can be planed.
8. Circular saw: It is possible to format wooden materials.
9. Bending machine: only with the assistance of a workshop employee. For metal bending only.
10. Electric shears: only for metal up to 1.25 mm thick
11. Resistance wires (heat cutter): only for cutting polystyrene
12. CNC milling machine: only with the assistance of a workshop employee. Possibility of cutting plastics and wood
13. Laser: only with the assistance of a workshop employee. Possibility to cut only paper materials.
14. Vacuum press: only with the assistance of a workshop employee. Possibility to vacuum plastic materials.
15. Powder printer: only with the assistance of a workshop employee. Possibility to print models from powder material, similar to plaster.

16. Plastic printer: Only with the assistance of a workshop employee. Possibility to print plastic model.

Material possibilities of model production:

Polystyrene models: For the production of models, it is possible to use fusible resistance wires, guide rails, copying rakes for transfer from paper to polystyrene, brushes, band saws. You can also use a model grinder to clean models. Painting of models using acrylic paints in the marked part of the workshop (information from employees).

The whole production process can be realized in the workshop space.

Cardboard (paper models): For the production of the model from paper and cardboard it is possible to use formatting shears, steel rulers, carriers, cutting compasses, el. grinders, el. reciprocating saws. After consultation, a laser can be used for cutting. In the marked part of the workshop, the models can be painted with alcohol and acrylic paints.

The whole production process can be realized in the workshop space.

Wooden models: For the production of wooden models it is possible to use band saws, stand and hand drills, cordless. drills, miter saws, planer, grinders, el. planer, straight hand saws, circular saws, micro milling machines. CNC milling machine after consultation with a workshop employee. In the marked part of the workshop, the models can be painted with alcohol and acrylic paints.

The whole production process can be realized in the workshop space.

Plastic models: For the production of plastic models it is possible to use a vacuum press, (after a properly prepared hoof of plaster or wood, metal) special scalpels and compasses, lever shears, grinders, band saws, straight saws, micro milling machines, el. plane. Painting of the model with the help of spray paint is possible in the marked part (waste room) of information from the workshop employees.

The whole production process can be realized in the workshop space, except for coloring the model.

Gypsum models: For the production of gypsum models, molds and hooves it is possible to use a gypsum ring with turning knives, marble tables. Coloring of the model is possible in the marked part of the gypsum or in the room intended for spray spraying (information from the workshop staff)

The whole production process can be realized in the workshop space, except for coloring the model.

Working with metal: For metal processing can be used lathe, small table band saw, table drill, table milling machine, hand press, el. falling scissors (up to 1.25mm thick) manual el. metal scissors. It is not possible to weld and grind in the workshop - only manual grinding (files). Cutting of metals only by chipping (using metal saws).

The whole production process can be realized in the workshop space, except for coloring the model.

Before starting the production of the model, it is necessary to consult with employees regarding the selected material. The employee provides all information about materials and their technological processing.

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After working in the workshop, students always clean up the leftover material into sorted waste, bins, brooms and shovels are available in the workshop. If necessary, they will ask employees for garbage bags.

IT IS FORBIDDEN IN THE WORKSHOP:

- work with open fire
- use of spray paints (designated room)
- use of synthetic paints and polyester sealants and adhesives (designated room)
- consumption of food and beverages
- smoking and alcohol consumption even in the outdoor area in front of the workshop

Workshop equipment list

Central workshop - machinery

1. Large band saw
2. Small band saw
3. Bench drills
4. Disc grinders
5. Heat cutters for polystyrene
6. Metal lathe
7. Table milling machine
8. Miter saw
9. Circular saw
10. Reciprocating table saw
11. Bending machine
12. Dropping scissors for cartons
13. CNC milling machine
14. Laser
15. Plastic printers
16. Powder printers
17. Compressor

Central workshop - hand tools

18. Terminal sets
19. Hammer set
20. Set of combination pliers
21. Sikovsky pliers
22. Set of splitters
23. Screwdriver sets
24. Side key sets
25. Hand saws for metal
26. Hand saws for wood
27. Hacksaws
28. Needle files
29. Cordless drills
30. Electric planer
31. Straight grinder
32. Reciprocating saw

Gypsum

1. Gypsum ring with turning knives
2. Clay grinder
3. 2x marble table

Model room

1. Sculptural stands
2. Clay

Design workshop - machinery

1. Bench drill
2. Lathe
3. CNC lathe
4. Table milling machine
5. Miter saw
6. Proxxon small grinder
7. Proxa large grinder
8. Band saw
9. Planer with stretch
10. Metal band saw
11. Circular saw
12. Reciprocating table saw
13. Bending machine, rolling machine, scissors
14. Electric shears
15. Resistance wire

Design workshop – hand tools

1. Terminal sets
2. Hammer set
3. Set of combination pliers
4. Sikovsky pliers
5. Set of splitters
6. Screwdriver sets
7. Side key sets
8. Hand saws for metal
9. Hand saws for wood
10. Hacksaws

11. Needle files
12. Cordless drills 2x
13. Electric sheet metal shears
14. Electric planer
15. Straight grinder
16. Reciprocating saw
17. Circular saw – mafi
18. Heat cutter