

# Technical drawing laboratory

**The laboratory provides practical activities for the courses of Descriptive Geometry and Mechanical Drawing..**



## **General objective:**

Acquiring general knowledge of geometry and mechanical drawing in order to ensure scientific approaches in the field of navigation, transport and shipping management, ensuring the understanding, the innovation and the creation of new knowledge in the disciplines which are to be studied by students.

## **Specific objectives:**

- Spatial and plan representation in projection systems for points, lines, planes and bodies;
- Descriptive Geometry synthesis problems;
- Solving metric problems with the aid of Descriptive Geometry;
- Correct use of geometry tools;
- Knowing the general rules of mechanical drawing;
- Views, sections and breaks representation;
- Dimensioning of mechanical drawings;
- Representing, dimensioning and marking the fillet. Filleted assemblies;
- Representation and dimensioning keyways and axles;
- Representing gears and coil springs ;
- Drawing overall design.

## **Equipment:**

- Drawing boards:
  - 15 boards (2 seats);
- Racks for pieces: 1;
- Black board;

- Geometry tools :
  - for the black board: rulers, T shape rulers, triangles ( 30-60-90 ), triangles with handle ( 45-45-90 );
  - for students: ruler, triangular ruler, triangles, French curves.
- Measuring instruments used in mechanical drawing laboratories: calipers;
- Metal pieces.



### List of available tasks:

1. Descriptive Geometry;
2. Draft scale drawing of a piece;
3. Mechanical drawing representation of the parts with internal or external fillets;
4. Mechanical drawing representation of the coil springs;
5. Mechanical drawing representation of the gears/transmission shafts;
6. Mechanical drawing representation of the assembly drawings.

