

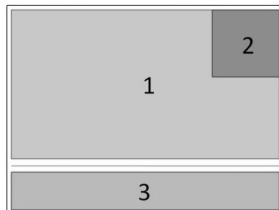
**Piotr DUDZIK**

Silesian University of Technology  
 Geometry and Engineering Graphics Centre  
 Ul. Krzywoustego 7 44-100 Gliwice  
 e – mail: [piotr.dudzik@polsl.pl](mailto:piotr.dudzik@polsl.pl)

**E – LEARNING – DIDACTIC AID FOR DRAWING GEOMETRY**

A large number of ongoing studies of the material and the need for greater knowledge of the subjects discussed during lectures makes the students have great difficulties with a plumb and appropriate preparation for classes as well as the design of exercise. This situation causes difficulties in implementing the tasks of the classroom, as well as impossible to understand the subsequent batch of material.

To help students master the material the author has developed teaching aids in the form of films. These materials correspond to the themes pursued in lectures and in a later time in the classroom. Films include the tasks solved by the "step by step, presenting the practical use of the structure discussed during the lecture. For easy of receiving all the films are composed of four parts (title identifying the issues concerned, the task together with the assumptions, the course of solving the tasks, the outcome of prepared questions.). In addition to the immutable parts of all materials have been developed based on a graphic diagram (Fig. 1).










- 4. Field design drawing
- 5. Auxiliary Field drawing (sketch)
- 6. The description field of their operations

Fig. 1 Layout of contents presented in the film.

In addition to the consistent frames of film by continuing to apply to all signs of supporting materials and colors (Table 1).

Table 1 Indications aids used in

description	figurative
data points	
search points - resulting	
Support points	
visible edges	
invisible edges	
Guides and construction	
axis	

The observation of aid in recent years can be seen that students are reluctant to benefit from it which may suggest some problems:

1. lack of theoretical knowledge - failure to understand the lecture,
2. too difficult examples,
3. too complicated a description of the operation performer

Designed to help enhance the attractiveness of the author decided to develop another part of the film. Presented in these issues will concern the way the mapping points, lines and planes, with an emphasis on the correct naming of elements, as well as their location in space.

**BIBLIOGRAPHY:**

[8.] BARTEL K.: „Perspektywa malarska”, PWN, Warszawa 1958

[9.] BŁACH A.: ”Inżynierska geometria wykreślna. Podstawy i zastosowania”, Wydawnictwo Politechniki Śląskiej, Gliwice 2009

[10.] BŁACH A., DUDZIK P.: „” w druku

[11.] GROCHOWSKI B.: „Geometria wykreślna z perspektywą stosowaną”, PWN, Warszawa 2010

[12.] OTTO F. i E.: „Podręcznik geometrii wykreślnej”, PWN, Warszawa 1998

[13.] ZIMEK R.: ”PowerPoint 2007 PL”, Helion, Gliwice 2008

[14.] <http://www.techsmith.com/learn/default.asp>