Discipline	**Applied Geometry and Engineering Graphics** code: 4 1 semester /winter/
Specialty	**Thermal Engineering and Renewable Energy Sources**
ECTS credits: **6**	Form of assessment: **Inter-semester evaluation**
Lecturer	**Assist. Prof. Eng.** **Sonya Vachinska, PhD** **Room 508M** **Phone:+359 52 383 531** **E-mail: s_vachinska@abv.bg** **s_vachinska@tu-varna.bg**
Department	Technology of Machine Tools and Manufacturing
Faculty	Faculty of Manufacturing Engineering and Technologies

Learning objectives:

"APPLIED GEOMETRY AND ENGINEERING GRAPHICS" course teach students on the fundamentals of geometry and their projection - point, line, plane and geometric elements, their dependence, intersection, parallelism, distance and angles between geometric elements, and surfaces and solving their real sizes, isometrics intersection of surfaces of the engineering drawing. The subject conduct deep aesthetic criteria about engineering thinking and document preparation. Knowledge of preparing drawings and projections will be obtained.

Applied geometry and Engineering graphics is a part of technical documentation and this is a universal language of all engineers used in theirs design process. It is a formal and precise way of presenting specific information about the shape, the size, features, machining and precision of the elements. The purpose of course is to teach young student how to prepare an engineering drawing which convey all the required information to produce that component. All drawings are necessary to create in accordance with standardized conventions for layout, nomenclature, interpretation, appearance, size etc.

CONTENTS:

Training Area	Hours lectures	Hours laboratory exercises
Graphics in design and communication. Projection systems – first angle orthographic projection and third angle orthographic projection. View types – main, additional, part and local views.	5	10
Cutting plane and sectioning – successive section, revolved, broken-out, offset, aligned section and half section. Dimensioning –symbols and specific features.	5	10
Treads joins. Type of threads. External and internal threads. Standard threaded elements. Conventional representation of common feature.	3	6
Surface finishing. Roughness and tolerance. Rules for reading assembly drawing and disconnect elements	2	4
TOTAL: 30 h	**15**	**30**