Study program / course: **Mechanical engineering**

The type and level of study: **Bachelor academic studies**

Name of subject: **Hydraulic and pneumatic machines**

Teacher: **Babic J. Milun, Dobrica M Milovanovic, Despotovic Z. Milan**

Status: **Obligatory for module M_4, V semester**

Number ECTS: **6**

Preconditions: **None**

Aim

Preparation of future engineers who will work in the energy sector for design, construction, operation and maintenance of industrial, agricultural and process and other facilities and energy equipment.

The outcome of the case

After completing the course, students will be able to be involved in the economic sector as:

- planners,
- consultants,
- sustainers hydro and thermal power machinery and equipment,
- experts for monitoring and measuring transceiver,
- managers in the power and thermo plants.

Content items

Theoretical and practical teaching:

- Principles of action and classification of hydraulic and pneumatic machinery,
- Structural performance of hydraulic and pneumatic machinery,
- Critical phenomena in hydraulic and pneumatic machinery
- The parameters of power hydraulic and pneumatic machinery and methods of their experimental determination,
- Working curves of hydraulic and pneumatic machine,
- Coupling of hydraulic and pneumatic machine with pipe line,
- Methods of calculation and design of hydraulic and pneumatic machine.

Training: Exercises, other forms of teaching, Study Research

References

1.M. Babic, S. Stojkovic: Theory and principles of mathematical modeling turbo machines, Prosveta, Belgrade, 1997.

2.M. Babic: Collection of solved problems in turbo machines, Naucna knjiga, Belgrade, 1997.

Number of active teaching classes				Other classes
Lectures: **3**	Exercises: **1.6**	Other forms of teaching: **0.4**	Study Research: **0**	**1**

Methods of teaching: Interactive classroom lectures and exercises, creating the so-called two editorial seminars and one final work.

Score of knowledge (the maximum number of points 100)

Examination obligations	**Points**	**Final exam**	**Points**
Activity during lectures	10	Written exam	
Practical teaching		Oral exam (presentation of final seminar work)	40
Tests:		....	
Seminars (two seminar’s work)	50		