(*faculty stamp*)

COURSE DESCRIPTION

1. Course title: TECHNICAL DRAWING	**2. Course code**
3. Validity of course description: 2012/2013	
4. Level of studies: 1st cycle of higher education	
5. Mode of studies: intramural studies	
6. Field of study: POWER ENGINEERING	(FACULTY SYMBOL) RIE
7. Profile of studies: academic	
8. Programme: all	
9. Semester: 2	
10. Faculty teaching the course: Institute of Power Engineering and Turbomachinery	
11. Course instructor: dr inż. Marian Lipka	
12. Course classification: common courses	
13. Course status: compulsory	
14. Language of instruction: english	
15. Pre-requisite qualifications: shortage	
16. Course objectives: acquaint a students with graphical design record	

17. Description of learning outcomes:

Nr	Learning outcomes description	Method of assessment	Teaching methods	Learning outcomes reference code
1.	Know the concepts of technical drawing as a structure record and nature of these standards	Test	Lecture	K_W07
2.	Has a knowledge covering the basic elements of dimensioning	Test	Lecture	K_W07
3.	Characterize the principle of objects projecting	Test	Lecture	K_W07
4.	Be able use the selected design features on a graphical notation	Project completion	Project	K_W07 K_U02
5.	Can understand the record of non complex design spatial element	Project completion	Project	K_W07 K_U02

18. Teaching modes and hours

Lecture: 15 Project: 30

19. Syllabus description:

Lectures:
Normalized components of the technical drawing. Dimensioning elements. The principles of reconstruction of 2D and 3D objects (Monge'a projections, axsonometry projections) with their geometrical writing. General principles of dimensioning.. Structure of views, sections and revolved and removed sections. Geometrical shaping of engineering forms with use of polyhedrons, blocks and surfaces. Construction writing and marking of a machine components. Roughness and undulation of surfaces. Marking of surfaces. Drawing management.

Projects:
Record of 2D constructions. Structure record of thread – pipe joints. Design reconstruction of 3D object.

20. Examination: No

21. Primary sources:

1. **Goetsch, Chalk, Nelson: Technical Drawing. Delmar Publishers, 2000.**
2. T. Dobrzański: Rysunek techniczny maszynowy. WN-T. Warszawa, 2007.
3. K. Filipowicz, A. Kowal, M. Kuczaj: Rysunek techniczny. Wyd. Pol. Śląskiej. Gliwice, 2008.

22. Secondary sources:

1. Z. Lewandowski: Geometria wykreślna. PWN. Warszawa, 1980.
2. Related standards.

23. Total workload required to achieve learning outcomes

Lp.	Teaching mode :	Contact hours / Student workload hours
1	Lecture	15 / 8
2	Classes	/
3	Laboratory	/
4	Project	30 / 31
5	BA/ MA Seminar	/
6	Other	6 /
	Total number of hours	51 / 39

24. Total hours: 90

25. Number of ECTS credits: 3

26. Number of ECTS credits allocated for contact hours: 2

27. Number of ECTS credits allocated for in-practice hours (laboratory, classes, projects): 2

26. Comments:

Approved:

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(date, Instructor's signature)

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(*date , the Director of the Faculty Unit signature)*