

(faculty stamp)

**COURSE DESCRIPTION**

Z1-PU7

WYDANIE N1

Strona 1 z 1

<b>1. Course title:</b> MECHANICS II		<b>2. Course code</b>		
<b>3. Validity of course description:</b> 2012/2013				
<b>4. Level of studies:</b> MSc programme				
<b>5. Mode of studies:</b> intramural studies				
<b>6. Field of study:</b> MECHANICS AND MACHINE DESIGN		(FACULTY SYMBOL) RIE		
<b>7. Profile of studies:</b> general				
<b>8. Programme:</b> all				
<b>9. Semester:</b> first				
<b>10. Faculty teaching the course:</b> Institute of Power Engineering and Turbomachinery				
<b>11. Course instructor:</b> Dr inż. Grzegorz Nowak				
<b>12. Course classification:</b> fundamental				
<b>13. Course status:</b> compulsory				
<b>14. Language of instruction:</b> English				
<b>15. Pre-requisite qualifications:</b> basics of mechanics, basics of mechanics of materials				
<b>16. Course objectives:</b> knowledge extension in the field of engineering mechanics				
<b>17. Description of learning outcomes:</b>				
Nr	Learning outcomes description	Method of assessment	Teaching methods	Learning outcomes reference code
1.	Student has in-depth knowledge of the fundamental principles of body statics	Test	Lecture	K_W01 K_W05 K_W09 K_W15
2.	Student has knowledge on frictional problems	Test	Lecture	K_W01 K_W05 K_W09 K_W15
3.	Student has knowledge on section properties of selected structural shapes	Test	Lecture	K_W01 K_W05 K_W09 K_W15
4.	Student can determine external and internal loading for the basic structural elements	Test	Class	K_U21 K_U28
5.	Student can determine section properties for selected structural properties	Test	Class	K_U21 K_U28
6.				
7.				
8.				
<b>18. Teaching modes and hours</b>				
Lecture 15 Class 15				
<b>19. Syllabus description:</b>				
<b>lecture:</b> principles and laws of statics, free body diagram, equations of equilibrium, internal loading in trusses, centroid of a body, center of mass, moments of inertia, parallel-axis theorem, frictional phenomena				
<b>classes:</b> construction of free body diagrams, equilibrium of a body, internal force in a truss, centroid of an area, center of mass, moments of inertia,				

problems with friction

**20. Examination:** no

**21. Primary sources:**

J.L. Meriam, L.G. Kraige, Engineering Mechanics: Statics, Wiley, 2011  
Hibbeler, Engineering Mechanics: Statics + Dynamics”, Prentice Hall, 2013

**22. Secondary sources:**

Orłoś Z. (red.), Naprężenia cieplne, Wydawnictwo Naukowe PWN, Warszawa 1991,  
Niezgodziński T., Mechanika ogólna, PWN, 2008,  
Głowacki H., Statyka i kinematyka, OWPW, 2003

**23. Total workload required to achieve learning outcomes**

Lp.	Teaching mode :	Contact hours / Student workload hours
1	Lecture	15 / 15
2	Classes	15 / 15
3	Laboratory	/
4	Project	/
5	BA/ MA Seminar	/
6	Other	15 / 15
	Total number of hours	45 / 45

**24. Total hours:** 90

**25. Number of ECTS credits:** 3

**26. Number of ECTS credits allocated for contact hours:** 1.5

**27. Number of ECTS credits allocated for in-practice hours (laboratory classes, projects):** 0

**26. Comments:**

Approved:

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(date, Instructor's signature)

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(date, the Director of the Faculty Unit signature)