STUDY MODULE DESCRIPTION FORM

Name of the module/subject	Code
Nuclear power plant in electric power system	**1010311371010315679**

Field of study	Profile of study (general academic, practical)	Year /Semester
Energetyka - studia stacjonarne I stopnia	**(brak)**	**4 / 7**
Elective path/specialty	**Subject offered in:**	**Course (compulsory, elective)**
Nuclear Power Engineering	**polish**	**obligatory**

Cycle of study:	Form of study (full-time,part-time)
First-cycle studies	**full-time**

No. of hours	No. of credits
Lecture: **2** Classes: **1** Laboratory: **-** Project/seminars: **-**	**4**

Status of the course in the study program (Basic, major, other)	(university-wide, from another field)
(brak)	**(brak)**

Education areas and fields of science and art	ECTS distribution (number and %)
technical sciences	**4 100%**

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Student has the basic knowledge in the scope of electric power fundamentals
2	**Skills**	Student has the ability to use his knowledge on electrical power system operation
3	**Social competencies**	Student is aware of expanding his knowledge, competences and can cooperate in group

Assumptions and objectives of the course:

The aim of subject is to learn students with optimal methods of high power from power plants to power system and specific of flexible cooperation of nuclear power plant with electric power system

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Student has the basic knowledge of problems of electric power security, especially possible threats, increase of power system security - [K_W07++]
2. Student has basic knowledge in the scope of electrical engineering fundamentals and nuclear power engineering - [K_W11+=]
3. Student ma basic knowledge in the scope power system operation and taking out power form nuclear plant - [K_W18+++]

Skills:

1. Student is able to formulate and solve problems connected with nuclear power plant operation in power system. - [K_U16++]
2. Student uses principles of safety at work, is able to assess influence of power systems on environment - [K_U17++]
3. Student is able to assess state of power system and knows the principles of rational management - [K_U20++]

Social competencies:

1. Student is knows the needs of further education (second and third level of studies), increase of technical competences, self-development and actiion in community - [K_K01++]

Assessment methods of study outcomes

Lecture - evaluation of knowledge and skills proved with exam

Classes - evaluation of knowledge obtained during classes

Course description

Localization of nuclear power plant according to local power system ability. Space planning procedures ? specifics for nuclear power plant. Water supply systems. Flexible cooperation of nuclear power plant with power system. The way of taking out high electric power, advantage and disadvantage of particular technology. Environment protection.

Basic bibliography:

1. Gładyś H., Matla R., Praca elektrowni w systemie elektroenergetycznym, WNT, Warszawa
2. Kubowski J., Nowoczesne elektrownie jądrowe, WNT, Warszawa, 2010

Additional bibliography:

1. http://www.atom.edu.pl
2. http://www.iaea.org/pris/ IAEA Power Reactor Information System

Result of average student's workload

Activity	Time (working hours)
1. Participation in lectures	30
2. Preparation for exam	15
3. Participation in exam	2
4. Participation in classes	15
5. Preparation for classes	15
6. Preparation for colloquium	15
7. Consultation	10

Student's workload

Source of workload	hours	ECTS
Total workload	102	4
Contact hours	57	2
Practical activities	0	0