

## DESCRIPTION OF THE COURSES

- Course code: ELR2511
- Course title: Electrical power systems management
- Language of the lecturer: Polish

<i>Course form</i>	<i>Lecture</i>	<i>Classes</i>	<i>Laboratory</i>	<i>Project</i>	<i>Seminar</i>
<i>Number of hours/week*</i>	1				1
<i>Number of hours/semester*</i>	15				15
<i>Form of the course completion</i>	test				Prepare of the paper
<i>ECTS credits</i>	2 (1,1)				
<i>Total Student's Workload</i>	60				

- Level of the course (basic/advanced): advanced
- Prerequisites: Power systems
- Name, first name and degree of the lecturer/supervisor: dr hab. inż. Artur Wilczyński, prof. PWR
- Names, first names and degrees of the team's members: dr inż. Grażyna Dąbrowska-Kauf, dr inż. Robert Lis
- Year: 1..... Semester: 2.....
- Type of the course (obligatory/optional): obligatory
- Aims of the course (effects of the course): the effects of the course is to learn by students the management problems at the energy firms after power system restructuring
- Form of the teaching (traditional/e-learning): traditional
- Course description: Organisation of power sector. Introduction to the deregulation and restructuring of power sector. Development of electricity market. Examples of electricity markets. Tasks of transmission and distribution system operators. Regulation of the electricity industry. Organisation of access to the system. Electricity price mechanism, transmission pricing principles. System planning under competition.
- Lecture:

<i>Particular lectures contents</i>	<i>Number of hours</i>
1. Introduction, contents of the lecture. Electricity sector structure and changing this structure under competition, components of this structure.	2
2. Forms of ownership and management.	2
3. Directives of the European connected with the electricity market	2
4. Liberalization influence on the energetic firm activity	2
5. Electricity market models, examples from different countries.	2
6. Regulation of the electricity industry.	2
7. Power systems operation, the role of the independent system operators. System planning under competition, integrated resources planning, demand side management.	2
8. Test	1

- Classes – the contents:

- Seminars – the contents: Prepare of the paper connected with described problem.
- Laboratory – the contents:
- Project – the contents:
- Basic literature:
  1. Malko J., Wilczyński A., Rynki energii – działania marketingowe. Oficyna Wydawnicza Politechniki Wrocławskiej, Wrocław 2006.
  2. S. Hunt, G. Shuttleworth: Competition and choice in electricity, John Wiley & Sons, Chichester - New York - Weinheim - Brisbane - Singapore - Toronto, 1997.
  3. M. Ilic, F. Galiana, L. Fink: Power systems restructuring, engineering and economics, KLUWER Academic Publishers, Boston - Dordrecht - London, 1998.
  4. Directive 2003/54/EC of the European Parliament and of the Council, of 26 June 2003, concerning common rules for the internal market in electricity and repealing Directive 96/92/EC.
  5. Philipson L., Willis H. L.: Understanding Electric Utilities and De-Regulation. Marcel Dekker, Inc., New York 1999.
- Additional literature:  
Magazines: Fakty, Dokumenty PSE S.A. Biuletyn Miesięczny PSE S.A., Biuletyn Polskiego Towarzystwa Operatora Systemu Przesyłowego Energii Elektrycznej.
- Conditions of the course acceptance/creditation: Positive note of the test and seminary.

\* - depending on a system of studies