

Assessment and subject description

Óbuda University		Kandó Kálmán Faculty of Electrical Engineering			Institute of Power Systems	
Subject name and code: Energetics		KVKEN1ABNE KVEVE11ANC			Credits: 2	
Full-time, Spring/Fall Semester						
Course: Energetics						
Responsible:	Peter Kadar senior lecturer		Teaching staff:	Peter Kadar, Mark Karacsi		
Prerequisites:						
Contact hours per week: 2	Lecture: 2	Class discussion:	Lab hours:	Tutorial:		
Assessment and evaluation:	Semester mark					
Subject description						
<p><i>Aims:</i> In the frame of course “energetics” the students may get impression about the power engineering activity, specialized on the power system operation. Through the selected chapters of the power system control they get acquainted with the special expressions and verbs used in this sector.</p>						
<p><i>Topics to be covered:</i> After the presentation of the Hungarian power system, some basic highlights are shown as the power plant operations and the controls strategies. The micro- and smart grids are mentioned as well. The construction and operation of the wind turbines, although the integration of the renewable energy sources into the power system operation is discussed in detail. We introduce also the operation of the Phasor Measurement Unit and other GPS based application. The chapter of the deregulation shows the financial – legal – economical ambience of all the actions related power. The audio records of the English spoken inter TSO dispatcher talks, the visualisation demonstration program and the load forecast application makes more viable the course.</p>						
Topics				Week	Lessons	
ENTSOE, Hungarian Power system				1.	2	
Wind I.				2.	2	
Wind II				3.	2	
Former student presentations / News and magazines / IEEE				4.	2	
Vocabulary assessment I. / Starwars				5.	2	
Student papers – Small renewables				6.	2	
Student papers – Dispatcher talks – ODSZ listen / Former student presentation				7.	2	
Small renewables – Vocabulary assessment II.				8.	2	
Solar Belt				9.	2	
Intelligent networks				10.	2	
CO2 emission				11.	2	
Microgrids				12.	2	
Exam presentation				13.	2	
Exam presentation				14.	2	

Assessment and evaluation

Requirements of the signature:

- ~~Attendance at the classes (A)~~
- Written assessments (W)
- Oral presentation (O)

Type of exam:

Semester mark

Evaluation of the exam:

$$\begin{aligned} & \cancel{33\% A} + \cancel{33\% W} + \cancel{33\% O} \\ & 60\% W + 40\% O \end{aligned}$$

Materials

- Materials in the Moodle
- Vocabulary specialized for the Power Engineering in electronic form
- Electronic newsletters

1st of September 2020

Peter Kadar PhD