D – Study course characteristics

Study course name	Power Systems Operation				
Course type	optional			**recommended year / semester**	3/W
Study course range	2p+2s	**hours per week**	4	**credits**	4
Other range description					
Way of finishing	assessment + exam			**Education form**	lecture + seminar
Other requirements for students					

Course tutor

Jan Švec, Zbyněk Brettschneider

Brief course summary

The course introduces specific topics concerning transmission and distribution electrical systems operation, mainly transformer neutral point grounding types and their results in failure states. The course is also focused on technical legislation and its requirements on power systems equipment, development and specific operational and failures states.

1. Legislation in power sector.
2. HV, MV and LV power systems operational modes.
3. Voltage and loading control in distribution systems.
4. Compensated MV systems.
5. Resistor grounded MV systems.
6. Transmission system code, power plant blocks operation.
7. Auxiliary services (principles, reserves, certification)
8. Transmission system development, safety and operational quality
9. Transmission system equipment and standards.
10. Distribution system code, safety and quality of supply
11. Operation of generation connected to distribution system
12. Dispersed generation of electricity
13. New trends in power systems operation.
14. Reserve

Study literature

Transmission system code
Distribution system code
Continental Europe Operation Handbook. ENTSO-E