

Modulbezeichnung	Thermal Power Plants	
Semester	6	
ECTS-Punkte (Dauer)	5 (1 Semester)	
Art	Pflichtfach	
Studentische Arbeitsbelastung	60 h Kontaktzeit + 90 h Selbststudium	
Voraussetzungen (laut BPO)		
Empf. Voraussetzungen		
Verwendbarkeit	BaSES	
Prüfungsform und -dauer	Klausur 2h oder mündliche Prüfung, mündliche Präsentation und schriftliche Dokumentation	
Lehr- und Lernmethoden	Vorlesung	
Modulverantwortlicher	C. Jakiel	
Qualifikationsziele		
<p>During this lecture students learn about different types of thermal power plants and their functions. This includes knowledge of different primary heat sources and heat engines. And they should be able to choose the heat engine suitable to the available heat source. Students should be able to classify and evaluate the power plants regarding efficiency, emissions and power density. They can describe, analyze and compare the different steps of energy conversion from primary to electric energy in thermal power plants.</p>		
Lehrinhalte		
<p>Structure, function and operating behavior of thermal power plants for conventional (coal, oil, natural gas, nuclear) and renewable (solar, geothermal, biomass, (process) waste heat) heat energy sources, including sector coupling. Global energy resources. Energy conversion processes, including losses and efficiency definitions.</p>		
Literatur		
<p>Zahoransky, R. (Hrsg.): Energietechnik - Systeme zur Energieumwandlung, 7. Auflage, Springer Vieweg Verlag, Wiesbaden, 2015.</p>		
Lehrveranstaltungen		
Dozent	Titel der Lehrveranstaltung	SWS
C. Jakiel	Thermal Power Plants	4