

DEPARTMENT OF MATERIALS SCIENCE AND TECHNOLOGY
COURSE SYLLABUS

Course Details				
Code	Academic Year			Semester
NWI407	4			7
Title	T	A	L	ECTS
Renewable Energy Technologies	2	1	1	6
Language	German			
Level	Undergraduate	X	Graduate	Postgraduate
Department / Program	Materials Science and Technology			
Forms of Teaching and Learning	Face to face			
Course Type	Compulsory		Elective	X
Objectives	The students are familiar with the structure and structure of energy systems for the distribution of electrical energy, have an understanding of the planning and methodology of electricity procurement, know and understand the necessary processes and processes for the operation of electrical energy systems, understand the requirements for information and communication systems for network management, can process energy logistics relationships, specify and interpret systems			
Content	Structure and construction of electrical energy systems, electricity procurement management, forecasts, deployment planning and risk management in electrical energy systems, theoretical requirements, processes and tasks of energy logistics, information technology for network management and integration of decentralized producers and consumers, information technology for energy logistics processes, database systems, standards, data security, design and performing experimental tasks on energy data management			
Prerequisites				
Coordinator				
Lecturer(s)	Asist Prof.Dr. Sibel Özenler			
Assistant(s)				
Work Placement	No			
Recommended or Required Reading				
Books / Lecture Notes	Crastan, V. (2012): Elektrische Energieversorgung 1, Springer Verlag. 2. Crastan, V.(2011): Elektrische Energieversorgung 2, Springer Verlag			
Other Sources	1. Crastan, V. (2012): Elektrische Energieversorgung 1, Springer Verlag. 2. Crastan, V.(2011): Elektrische Energieversorgung 2, Springer Verlag			
Additional Course Material				
Documents				
Assignments				
Exams				

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Course Composition			
Mathematics und Basic Sciences			%
Engineering			100%
Engineering Design			%
Social Sciences			%
Educational Sciences			%
Natural Sciences			%
Health Sciences			%
Expert Knowledge			%
Assessment			
Activity	Count	Percentage (%)	
Midterm Exam	1	40	
Quiz			
Assignments			
Attendance			
Recitations			
Projects			
Final Exam	1	60	
		Total	100
ECTS Points and Work Load			
Activity	Count	Duration	Work Load (Hours)
Lectures	14	3	42
Self-Study	14	3	42
Assignments	2	20	40
Presentation / Seminar Preparation			
Midterm Exam	1	3	3
Recitations	14	3	42
Laboratory			
Projects			
Final Exam	1	3	3
		Total Work Load	172
		ECTS Points (Total Work Load / Hours)	6
Learning Outcomes			
1	The students are familiar with the structure and structure of energy systems for the distribution of electrical energy, have an understanding of the planning and methodology of electricity procurement, know and understand the necessary processes and processes for the operation of electrical energy systems, understand		

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	the requirements for information and communication systems for network management, can process energy logistics relationships, specify and interpret systems
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Weekly Content

1	Introduction to energy systems and resources
2	Energy, sustainability & the environment
3	Quantifying energy & energy arithmetic
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Contribution of Learning Outcomes to Program Objectives (1-5)

	P1	P2	P3	P4	P5	P6	P7
All							
1		3	3				
2							



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Contribution Level 1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High

Compiled by:

Date of Compilation: