

Modulbezeichnung		Master Green Engineering Modul 9 Wahlpflicht - District Heating Systems
Verwendbarkeit		Master Green Engineering - Nachhaltige ET+VT für die Bioökonomie
Lernziele / Kompetenzen		<p>Students ...</p> <ul style="list-style-type: none"> - know the concept of district heating systems. - learn about the potential for urban waste heat recovery in EU27. - identify why awareness is important (of the possibility to recover urban waste heat) and how it can be done. - analyse technical solutions for waste heat reuse in European cities. - analyse transformation strategies for district heating systems.
Lehrinhalte		<ul style="list-style-type: none"> - Introduction of district heating - The role of urban waste heat recovery in district heating and the mapping of waste heat potential - The stakeholder and value chain of the urban waste heat recovery, its bankability and the business models - The ReUseHeat demonstrator in Madrid involving heat recovery from service sector (hospital), the technical characteristics of the recovery system and the lessons learnt - The experiences, challenges and lessons learnt from the ReUseHeat project case on heat recovery from underground transport infrastructure - The ReUseHeat demonstrator involving waste heat recovery from a datacenter in Braunschweig, the technical characteristics of the recovery system and the lessons learnt - REWARDHeat Serious game: Smart networks integrating renewable and waste energy source
Lehr- und Lernformen		Seminaristischer Unterricht, Unternehmensplanspiel
Modulsprache		Englisch
Voraussetzungen		<p>Formal: keine</p> <p>Inhaltlich: Grundlagen der Energieversorgung</p>
Prüfungsleistung		Hausarbeit (18 - 20 Seiten)
Kreditpunkte		5
Arbeits- aufwand	Präsenzzeiten	30
	Selbststudium	120
Schwerpunkte im Selbststudium		<ul style="list-style-type: none"> - Vor- und Nachbereitung der Vorlesungsinhalte - Literaturstudium - Schreiben einer Hausarbeit
Angebot des Moduls		Sommersemester
Modulverantwortliche/r		Prof. Dr. Holler
Lehrende/r		Prof. Dr. Holler, Dr. Romanov, Dr. Lygnerud (Halmstad University, Sweden)