Module	Module name	CP	SuSe L T	WiSe L T	SuSe L T
	Major area of study "Sustainable Energy Systems & Circular Process Engineering"				
	Specialised laboratory with presentation	**5**		o	
	Major Modules Specialised modules amounting to 35 credit points. The choice must be made from the specialisation-dependent electives. Extensions of the credit points limit are possible in the case of stays abroad.	**35**		o	
	STEM electives				
	STEM modules may be elected from the range of STEM related courses in the master's curriculum of the Faculty of Mechanical Engineering of the Ruhr-Universität Bochum (RUB), another STEM faculty of the RUB, the faculty of mechanical engineering of the Technical University (TU) Dortmund and the Faculty of Mechanical Engineering at the University Duisburg/Essen. The examination board decides on admissibility upon application.	**15**		o	
	Non STEM electives				
	Non-STEM modules may be elected from the range of non-STEM related master's courses of the Faculty of Mechanical Engineering or other faculties as long as the admission is allowed. The elective module should not contain STEM content and be useful for engineering education in general. The examination board decides on admissibility upon application.	**5**		o	
	Scientific papers				
	Master's thesis including (interim-)presentation (900 h))	30			o
	Credit points:	**90**	30	30	30

Elective specialisation	**Recommended elective profiles**
Sustainable Energy Systems & Circular Process Engineering (SECE)	1 Sustainable Energy Systems 2 Circular Process Engineering

Abbreviations

CP	= Credit points
L	= Lecture hours per week
T	= Tutorial hours per week

Specialised laboratory (5CP) and (compulsory) elective subjects from one specialisation amounting to 35 CP, including 2 (10 CP) compulsory modules marked with an x					
Major Module name	**CP**	**WiSe [hrs/week]**	**SuSe [hrs/week]**	**profiles**	
				1	**2**
Sustainable Energy Systems & Circular Process Engineering					
Specialised Laboratory Energy Technology or Process Technology	5			x	x
Thermodynamics of Mixtures	5		4	x	x
Numerical Methods for Internal Aerodynamics	5		4	x	x
Demand and Supply in Energy Markets	5		4	o	
Geothermal Energy Systems	5		4	o	
Circular Process Engineering	5		4		o
Chemical Processes for Closed Carbon Cycles	5		4		o
Computer Aided Process Design	5		4		o
Introduction to Fluid-Flow Measurement Techniques	5		4		o
Hydrogen Technologies	5	2	2		o
Process Simulation of Energy Plants	5	4		o	
Gasdynamics	5	4		o	
Chemical Energy Storage and Carbon-Based Feedstock	5	4			o
Energy Systems Analysis	5	4		o	
Turbulence Modelling	5	4			o
Geothermal Drilling Engineering and Subsurface Technologies	5	4		o	

For the choice of compulsory elective modules, we recommend using an elective profile. For the elective profiles mentioned, overlap-free courses and examination dates are aimed for. The choice of compulsory elective modules from different profiles is also permissible within a specialisation. In this case, however, no organisational optimisation (overlap-free events, examination dates) can be guaranteed.

x = compulsory subject
o = elective subject

Recommended elective profiles

1 Sustainable Energy Systems
2 Circular Process Engineering