

Module Handbook (<https://modhb.uni-kl.de/>)

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Course of Study "Energy and Process Engineering" (B.Sc.)

[MV-82.B10-SG]

Department	[MV] Maschinenbau und Verfahrenstechnik
Degree	[B.Sc.] Bachelor (B.Sc.)
Course of Study	Energy and Process Engineering
State	[NORM] Active
Short Name	B.Sc. Energy and Process Engineering
Additional informations	Examination regulations (https://www.uni-kl.de/fileadmin/ha-4/42-Pruefung/Pruefungsordnungen/Bachelor/Bachelor-PO_Mbau.pdf) Homepage of the Course of Study (https://www.mv.uni-kl.de/studium-lehre/studium/bachelor/bsc-energie-und-verfahrenstechnik/)

Section *Mathematisch-naturwissenschaftliche Grundlagen*

Fundamentals

P	MAT-00-01-M-1 (/mhb/modules/MAT-00-01-M-1/)	Higher Mathematics I	8.0 CP
P	MAT-00-02-M-1 (/mhb/modules/MAT-00-02-M-1/)	Higher Mathematics II	8.0 CP
P	MAT-00-03A-M-1 (/mhb/modules/MAT-00-03A-M-1/)	Higher Mathematics: Vector Analysis and Differential Equations (for Engineering Students)	8.0 CP
P	MAT-00-033-M-1 (/mhb/modules/MAT-00-033-M-1/)	Higher Mathematics: Numerics (for Engineering Students)	4.0 CP
P	PHY-EXP-018-M-1 (/mhb/modules/PHY-EXP-018-M-1/)	Experimentalphysik I für Ingenieure/innen	5.0 CP
P	PHY-PRAKT-507-M-1 (/mhb/modules/PHY-PRAKT-507-M-1/)	Physikalisches Praktikum für Maschinenbauer	4.0 CP
P	MV-CHE-01-M-1 (/mhb/modules/MV-CHE-01-M-1/)	Chemistry for engineers	5.0 CP
P	MV-CHE-02-M-2 (/mhb/modules/MV-CHE-02-M-2/)	Chemical Reaction Engineering	4.0 CP
		Das Modul wird im Bachelorstudiengang EVT mit 3 LP eingebracht.	

Section *Ingenieurwissenschaftliche Grundlagen I*

Section Ingenieurwissenschaftliche Grundlagen I

Fundamentals

P	MV-TM-54-M-4 (/mhb/modules/MV-TM-54-M-4/)	Elements of Applied Mechanics I	6.0 CP
P	MV-TM-55-M-4 (/mhb/modules/MV-TM-55-M-4/)	Elements of Applied Mechanics II	5.0 CP
P	MV-WKK-B100-M-4 (/mhb/modules/MV-WKK-B100-M-4/)	Materials Science	11.0 CP
P	MV-TD-57-M-4 (/mhb/modules/MV-TD-57-M-4/)	Heat Transfer	5.0 CP
P	MV-SAM-24-M-4 (/mhb/modules/MV-SAM-24-M-4/)	Fluid Mechanics I	5.0 CP
P	MV-VPE-B101-M-4 (/mhb/modules/MV-VPE-B101-M-4/)	Integrated Design Engineering Education	7.0 CP
P	MV-TD-18-M-4 (/mhb/modules/MV-TD-18-M-4/)	Thermodynamics I	5.0 CP
P	MV-TD-19-M-4 (/mhb/modules/MV-TD-19-M-4/)	Thermodynamics II	4.0 CP
P	MV-TD-56-M-4 (/mhb/modules/MV-TD-56-M-4/)	Thermodynamics of Mixtures	5.0 CP
P	MV-PAK-B102-M-4 (/mhb/modules/MV-MTS-B102-M-4/)	Electrical Engineering for Mechanical Engineering	7.0 CP
P	MV-KIMA-B110-M-4 (/mhb/modules/MV-MVT-B110-M-4/)	Design of Pressure Vessels and Operation of Chemical Apparatus	6.0 CP

Section Ingenieurwissenschaftliche Grundlagen II

Core Modules (non specialised)

P	MV-MTS-23-M-4 (/mhb/modules/MV-MTS-23-M-4/)	Measurement and control Theory	8.0 CP
P	MV-MVT-58-M-4 (/mhb/modules/MV-MVT-58-M-4/)	Mechanical Process Engineering I	6.0 CP
P	MV-TVT-59-M-4 (/mhb/modules/MV-TVT-59-M-4/)	Thermal Separation Processes I	6.0 CP
P	MV-BioVT-60-M-4 (/mhb/modules/MV-BioVT-60-M-4/)	Fundamentals in bioprocess engineering	3.0 CP
P	MV-TVT-43-M-4 (/mhb/modules/MV-TVT-43-M-4/)	Process Engineering	6.0 CP
P	MV-SAM-31-M-4 (/mhb/modules/MV-SAM-31-M-4/)	Turbomachinery I	4.0 CP
P	MV-SAM-B129-M-4 (/mhb/modules/MV-SAM-B129-M-4/)	Introduction to Energy Technology	5.0 CP
P	MV-LTD-B130-M-4 (/mhb/modules/MV-LTD-B130-M-4/)	Energy process and systems engineering	3.0 CP
P	MV-TVT-79-M-4 (/mhb/modules/MV-TVT-79-M-4/)	Laboratory Thermal Process Engineering I	3.0 CP
P	MV-MVT-78-M-4 (/mhb/modules/MV-MVT-78-M-4/)	Laboratory Mechanical Process Engineering I	3.0 CP

Section SoftSkills

SoftSkills

P	MV-FBK-B104-M-4 (/mhb/modules/MV-FBK-B104-M-4/)	General Softskills	4.0 CP
P	MV-MV-B125-M-4 (/mhb/modules/MV-MV-B125-M-4/)	Guidelines for independent tasks	6.0 CP

Section KF1: Verfahrenstechnik

Specialisation

Aus einem der Kompetenzfelder (KF) sind mindestens 8 Leistungspunkte zu erbringen.

WP	MV-TD-68-M-4 (/mhb/modules/MV-TD-68-M-4/)	Development and Design of Chemical Processes	2.0 CP
WP	MV-TVT-126-M-4 (/mhb/modules/MV-TVT-126-M-4/)	Environmental Engineering I	3.0 CP
WP	MV-MVT-69-M-7 (/mhb/modules/MV-MVT-69-M-7/)	Dust Removal I	3.0 CP
WP	MV-MVT-63-M-7 (/mhb/modules/MV-MVT-63-M-7/)	Particle Technology I	3.0 CP
WP	MV-MVT-67-M-7 (/mhb/modules/MV-MVT-67-M-7/)	Particle Technology and Waste Treatment I	3.0 CP
WP	MV-TVT-292-M-4 (/mhb/modules/MV-TVT-292-M-4/)	Process development in chemical industry	2.0 CP
WP	MV-TVT-80-M-4 (/mhb/modules/MV-TVT-80-M-4/)	Reaction Engineering Laboratory	3.0 CP
WP	MV-TVT-213-M-4 (/mhb/modules/MV-TVT-213-M-4/)	Environmental Engineering Laboratory I	3.0 CP

Section *KF2: Energietechnik*

Specialisation

WP	MV-SAM-111-M-7 (/mhb/modules/MV-SAM-111-M-7/)	Turbomachinery II	3.0 CP
WP	MV-LAF-B111-M-4 (/mhb/modules/MV-LAF-B111-M-4/)	Energy Economy and Power Plant Technology	4.0 CP
WP	MV-VKM-105-M-4 (/mhb/modules/MV-LAF-105-M-4/)	Energy Technology I	3.0 CP
WP	MV-SAM-B132-M-4 (/mhb/modules/EIT-MEA-181-M-2/)	Fundamentals of Electrical Power Engineering	5.0 CP
WP	MV-VKM-249-M-4 (/mhb/modules/MV-LAF-249-M-4/)	Resource- and Environment-friendly Energy Conversion I	3.0 CP
WP	MV-SAM-B131-M-4 (/mhb/modules/MV-SAM-B131-M-4/)	Laboratory Energy and Environmental Technology I	3.0 CP

Section *Spezielle SoftSkills*

SoftSkills

P	MV-MV-B105-M-4 (/mhb/modules/MV-MV-B105-M-4/)	Nichttechnisches Wahlmodul	2.0 CP
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Section *Praktikum*

Internship / Occupational Modules

P	MV-MV-48-M-4 (/mhb/modules/MV-MV-48-M-4/)	Advanced Internship	20.0 CP
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Section *Bachelorarbeit*

Thesis

P	MV-MV-49-M-4 (/mhb/modules/MV-MV-49-M-4/)	Bachelor's thesis	12.0 CP
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