

Curriculum for the Master's Degree in Chemical and Bioengineering (FAU Busan Campus)

Modules with credit points, distribution over semesters and examination

No	moudle	Hours per week			ECTS points	1	2	3	4	Exam time (min)	
		lecture	tutorial	Lab course		sem. ECTS	sem. ECTS	sem. ECTS	sem. ECTS	written	oral
M1	1.CS	3	1	3	7.5	7.5				120	
M2	2.CS	3	1	3	7.5	7.5				120	
M3	3.CS	3	1	3	7.5		7.5			120	
M4	4.CS	3	1	3	7.5		7.5			120	
M5	1.E	2	1		5	5					30
M6	2.E	2	1			5					30
M7	3.E	2	1		5		5				30
M8	4.E	2	1	3	7.5			7.5			30
M9	5.E	2	1	3	7.5			7.5			30
M10	1.S	2	1		5	5				*)	
M11	2.S	2	1		5		5			*)	
M12	3.S	2	1		5			5		*)	
M13	4.S	2	1		5			5		*)	
M14	Project course	approx. 150 hrs			5		5			*)	
M15	internship	7 weeks			5			5		*)	
M16	thesis	Approx. 900 hrs over 6 months			30				30		
Total hours		26	22	12		30	30	30	30	total ECTS	120
		60									

\*) ungraded certificate of achievement

- ECTS(European Credit Transfer and Accumulation System)

- CS: Core/Specialization Module/E: Elective Module/S: Supplementary Module

A. Core/Specialization Modules ( selecting 4 out of 6 modules) 7.5 ECTS X 4 = 30 ECTS

No	lecture	professor
1	Bioprocess and bioreaction technology	Rainer Buchholz
2	Mechanical process engineering	Mangi Cho
3	Chemical reaction engineering	Marco Haumann
4	Fluid mechanics	Antonio Delgado
5	Engineering thermodynamics	Andreas Fröba
6	Environmental biotechnology	Roman Breiter

B. Elective Modules (selecting 5 out of 10 modules)

7.5 ECT X 2 = 15 ECTS / 5 ECTS X 3 = 15 ECTS (Total 30 ECTS)

No	lecture	professor
1	Marine biotechnology	Rainer Buchholz
2	Cell technology	Christoph Lindenberger
3	Modelling of processes of solid/liquid separation	Johann Dück
4	Solvent concepts for catalytic processes	Marco Haumann
5	Technical catalysts and adsorbents	Marco Haumann
6	Micro-fluid dynamics	Özgür Ertunc
7	Physics of turbulence and turbulence modelling	Antonio Delgado
8	Combustion Technology	Lars Zigan
9	Applied microbiology	Roman Breiter
10	Enzyme technology	Christian Wandrey

C. Supplementary Module (selecting 3 out of 7 modules; Module 7 is compulsory)

5 ECTS X 4 = 20 ECTS

No	lecture	professor
1	Food technology	Rainer Buchholz
2	Planning and evaluation of experiments	Johann Dück
3	Chemical production processes	Marco Haumann
4	Numerical fluid mechanics	Antonio Delgado
5	Insight into process technology using optical metrology	Andreas Bräuer
6	Environment al process engineering	Roman Breiter
7	German language and culture	Dietmar Benndorf