



UNIVERSITÄT
BAYREUTH



FAKULTÄT FÜR
INGENIEURWISSENSCHAFTEN

Study plan of the Master of Science study programme

Biofabrication

Engineering Science Faculty
at the Universität Bayreuth

Version 05.07.2016

General Part

Abbr.	Course	1. Semester				2. Semester				3. Semester				4. Semester				Σ	
		CH		CP		CH		CP		CH		CP		CH		CP	CH	CP	
L	T	P	L			T	P			L	T			P	L				T
Material and Natural Science																			
BF	Module Biofabrication															4	5		
BF	Biofabrication	2	2		5											4	5		
FTE	Module Fundamentals of Tissue Engineering and Quality Management															4	5		
FTE1	Fundamentals of Tissue Engineering	2		1	3											3	3		
FTE2	Quality Management	1			2											1	2		
SAB	Module Self-Assembling Biopolymers															4	5		
SAB	Self-Assembling Biopolymers	2	2		5											4	5		
KMNS	Material and Natural Science – Competence Enhancement Core Elective Module Area															x	10		
KMNS1	Elective course, see selection catalogue ¹⁾		x		5											x	5		
KMNS2	Elective course, see selection catalogue ¹⁾		x		5											x	5		
Engineering Science																			
BMA	Module Biomaterials															4	5		
BMA	Biomaterials					2	2		5							4	5		
CAE	Module Computer Aided Engineering															4	5		
CAE1	Optimization					2			3							2	3		
CAE2	FE Seminar						2		2							2	2		
PPM	Module Processing of Polymeric Materials															1	5		
PPM1	Aspects in Processing of Polymeric Materials					2	1		4							0	4		
PPM2	Processing of Polymeric Materials Practical Course							1	1							1	1		
KES	Engineering Science – Competence Enhancement Core Elective Module Area															x	10		
KES1	Elective course, see selection catalogue ²⁾						x		5							x	5		
KES2	Elective course, see selection catalogue ²⁾						x		5							x	5		
Transferable Skills																			
SF	Module Scientific Working															5	5		
SF1	Ethics in Science					1			1							1	1		
SF2	Reception of Scientific Literature		1		1											1	1		
SF3	How to Write a Paper					3			3							3	3		
MMT	Module Management Training and Entrepreneurship															x	6		
MMT1	Elective course, see selection catalogue ³⁾		x		3											x	3		
MMT2	Elective course, see selection catalogue ³⁾						x		2							x	2		
MMT3	Entrepreneurship		x		1											x	1		
Master's Thesis																			
MT	Module Master's Thesis															x	30		
MT	Master's Thesis													x	30	x	30		
Subtotal			x		30		x		31				x	30	x	91			

Advanced Studies

Abbr.	Course	1. Semester				2. Semester				3. Semester				4. Semester				Σ		
		CH			CP	CH			CP	CH			CP	CH			CP	CH	CP	
		L	T	P		L	T	P		L	T	P		L	T	P				
SA	Module Summer Academy																	x	5	
SA	Summer Academy									x	5								x	5
AM ⁴⁾	Advanced Module																	x	24	
AM1	Elective course, see selection catalogue ⁵⁾									x	8								x	8
AM2	Elective course, see selection catalogue ⁵⁾									x	8								x	8
AM3	Elective course, see selection catalogue ⁵⁾									x	8								x	8
IAM ⁴⁾	International Advanced Module																	x	24	
IAM	Elective course, see selection catalogue ⁶⁾									x	24								x	24
Subtotal Advanced Studies										x	29								x	29
Sum (General Part + Advanced Studies)		x			29	x			31	x		29	x		30	x		x	120	

„Engineering Science – Competence Enhancement“ catalogue of core elective modules

Abbr.	Course	1. Semester				2. Semester				3. Semester				4. Semester				Σ	
		CH			CP	CH			CP	CH			CP	CH			CP	CH	CP
		L	T	P		L	T	P		L	T	P		L	T	P			
WBI	Biotechnology core elective module																	4	5
WBI1	Biotechnology					2			3									2	3
WBI2	Biotechnology Practical Course							2	2									2	2
WBT	Bioengineering for Tissue Regeneration core elective module																	4	5
WBT	Bioengineering for Tissue Regeneration					2	2		5									4	5
WCT	Coating Technology and Interface Engineering core elective module																	3	5
WCT1	Surface and coating technologies					2			3									2	3
WCT2	Surface and coating technologies practical course							1	2									1	2
WLA	Labcourse Automation core elective module																	x	5
WLA1	Automation Practical Course							1	1									1	1
WLA2	Study Project Automation					x			4									x	4

„Material and Natural Science – Competence Enhancement“ catalogue of core elective modules

Abbr.	Course	1. Semester				2. Semester				3. Semester				4. Semester				Σ	
		CH		CP	CH		CP	CH		CP	CH		CP	CH	CP	CH	CP	CH	CP
		L	T		P	L		T	P		L	T							
WAP	Advanced Polymers core elective module																	4	5
WAP	Advanced Polymers	2		2	5													4	5
WCM	Drug Chemistry core elective module																	4	5
WCM	Drug Chemistry	2		2	5													4	5
WPM	Polymer Materials core elective module																	4	5
WPM	Polymer Materials: Technology of Polymer Modification	2		2	5													4	5
WSA	Supramolecular Assemblies core elective module																	4	5
WSA	Physical Chemistry of Supramolecular Assemblies	2		2	5													4	5
WSC	Supramolecular Chemistry core elective module																	4	5
WSC	Basics of Supramolecular Chemistry	2		2	5													4	5

¹⁾ One module of the respective catalogue "Material and Natural Science – Competence Enhancement core elective modules" has to be selected.

²⁾ One module of the respective catalogue "Engineering Science – Competence Enhancement core elective modules" has to be selected.

³⁾ Courses from a regularly updated catalogue have to be selected. These courses originate not from engineering science/materials science area, and are provided proof by marked major course assessment, or by „passed“. The denoted distribution of credit points is exemplary and may be subject to change due to individually selected courses.

⁴⁾ Either the elective module AM or IAM has to be selected.

⁵⁾ AMx courses can be taken at participating chairs/prof. in the study programme (University of Bayreuth, and national partner universities / institutions according to a regularly updated list.

⁶⁾ The IAM module can be taken at participating profs./groups of international partner universities / institutions according to a regularly updated list.