

First year curriculum MSc. Biotechnology Freiburg

Master Biotechnologie - 1st year - winter semester								
EP	Code EdT	TEACHERS	CM (h)	TD (h)	TD parta. (h)	TP/TAE (h)	Total hrs student	Coeff.

Modul Advanced Biotechnology I 12 ECTS								
Immunology & ImmunoTechnology	it	E.Weiss, C. Gavériaux	30				30	3.2
Virology	vi	D. Gilmer	22	4		2	28	2.8
Synthetic Microbiology	sm	A. Becksei	15				15	1.6
Genetic Engineering	ge	B. Chatton	26	14		8	48	4.4

Modul Engineering Sciences I 12 ECTS								
Statistics & Experimental planning	se/pe	N. Paul, Y. Nominé	20	10			30	4.7
Mathematics	ma	Y. Nominé	10				10	1.7
Structural methods for Biology	sb	A. Dejaegere	14	20		8	42	5.6

Modul Humanities, Economy & Social Sciences III 3 ECTS								
English	en	R. Plotto, D. Adamson		39			39	1
Deutsch / Français	d/f	S. Marten, A. Hacker, G. Gyss		39			39	1
Industrial Finances	fc	C. Gruber	4	8			12	0.5
BioEthics	be	A. Stephan et al.	6				6	0
Quality	qu	J. Martin	12				12	0.5

Modul Practicals III 3 ECTS								
TP Protein Purification	ppP	A. Stephan et al.		8		62	70	1
TP Cellular Culture	ccP	D. Dujardin, F. Deryckere	8			70	78	1.2
TP Synthetic Microbiology	smP	A. Becksei				55	55	0.8

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UE BT2 : Biotechnology II 6 ECTS								
Metabolism & Biotechnology	mb	G. Orfanoudakis	12	12			24	1.4
Process engineering	pe	C. Mailhe	12	12			24	1.4
Cellular Biology2 & microscopy	cm	J de Mey & D. Dujardin	4	22		4	30	1.4
Biotechnology & Health : neurobiology	neu	C. Gavériaux	22				22	1.8

UE ES4 : Humanities, Economy & Social Sciences IV 3 ECTS								
English	en	R. Plotto, D. Adamson		21			21	1.1
Deutsch / Français	d/f	S. Marten, A. Hacker, G. Gyss		21			21	1.1
BioEthics	be	A. Stephan et al.	8			9	17	0
Labor law	ll	R. Weiss	10			1	11	0.8

Modul Plant biology 12 ECTS								
Plant Biology practicals	pbP	T. Laux				140	140	8.4
Plant Molecular Biology	pm	T. Laux et al.	24				24	3.6

Modul Specialized project I 9 ECTS								
Choose One Item								
Synthetic Biology	sbP	W. Weber				80	80	9
Plant biotechnology engineering	isP	T. Laux				80	80	9
Project in Bioprocess engineering	bpP	C. Zell, Offenburg				80	80	9

CM (cours magistrale) = Vorlesung / lecture

TD (travaux dirigés) = Übung oder Seminar / exercise or seminar

TP (travaux pratiques) = Praktika / practical

Second year curriculum MSc. Biotechnology Freiburg

Master Biotechnologie - 2nd year - winter semester								
EP	Code EdT	TEACHERS	CM (h)	TD (h)	TD parta. (h)	TP/TAE (h)	Total hrs student	Coef.

Master Biotechnologie - 2nd year - summer semester								
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Modul specialized Biotechnology I 9 ECTS								
Introduction to system biology		A. Dejaegere	6	21			27	4.8
Current topics in synthetic biology		M. Madek, J.Haiech	7	9		8	24	4.2

Master modul 30 ECTS								
Internship							6 months	30

Modul specialized biotechnology II 6 ECTS								
Choose Two Items								
Human Genetics		B. Chatton	24	0			24	3
Comparative and medical genomics		O. Lecompte	14	12			26	3
Drug design		E. Kellenberger	14	17			31	3
Environmental Biotechnology		JM Jeltsch	10	10			20	3

Modul Humanities, Economy & Social Sciences V 3 ECTS								
Intellectual Property	ip	C.Ritzenthaler	16				16	0
Professional Integration	pi	E. Weiss		20			20	0
BioEthics	be	A. Stephan				9	9	3

Modul Specialized projects II 12 ECTS								
Choose One Item								
Synthetic biology	pr	W. Weber, Freiburg				75	75	12
Plant biotechnology engineering	isP	T. Laux, Freiburg				75	75	12
Project in advanced bioproduction	pr	C. Zell, Offenburg				75	75	12

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