

English translation from the German. The translation is for information only. Effective from October 2018.

Module overview/Curriculum

Module code	Module title	ECTS
1. Semester (30 ECTS; Selection of 24 ECTS from Modules 01-05)		
MMB001	Introduction into Microbiology	6
MMB002	Microbial Physiology	8
MMB003	Microbial C ommunication	8
MMB004	Microbial Interactions	8
MMB005	Microbiology and Molecular Biology	8
2. Semester (30 ECTS; Selection of 30 ECTS from Modules 06-19)		
MMB006	Adaptation in Microorganisms	10
MMB007	Molecular Communication in Basidiomycetes	10
MMB008	Microbial Consortia	10
MMB009	Molecular Infection Biology of lower Eukaryotes	10
MMB010	Biotechnology - Bioelectrochemistry	10
MMB011	Molecular and Microbial Infection Biology	5
MMB012	Immune reactions of humans to Microorganisms and Pathogens	5
MMB013	Biomolecular Chemistry	5
MMB014	Geomicrobiology	5
MMB015	Chemical Ecology	5
MMB016	Translational Medical Microbiology	5
MMB017	Microbe-Plant Interactions	5
MMB018	Microbial Metabolism	5
MMB019	Wildcard	5/10
3. Semester (30 ECTS)		
MMB700	Project Module	15
MMB800	Specialization Module	15
4. Semester (30 ECTS)		
MMB900	Master thesis	30

1st Year of study		2nd Year of study	
WS	SoSe	WS	SoSe
MMB 001 (G) Introduction into Microbiology	MMB 006 (A) Adaptation in Microorganisms	MMB 700 (T) Project Module	MMB 900 (T) Master thesis
MMB 002 (G) Physiology of Microorganisms	MMB 007 (A) Molecular Communication in Basidiomycetes	MMB 800 (T) Specialization Module	
MMB 003 (G) Microbial C ommunication	MMB 008 (A) Microbial Consortia		
MMB 004 (G) Microbial Interactions	MMB 009 (A) Molecular Infection Biology of lower Eukaryotes		
MMB 005 (G) Microbiology and Molecular Biology	MMB 010 (A) Biotechnology - Bioelectrochemistry		
	MMB 011 (A) Molecular and Microbial Infection Biology		
	MMB 012 (A) Immune reactions of humans to Microorganisms and Pathogens		
	MMB013 (A) Biomolecular Chemistry		
	MMB 014 (A) Geomicrobiology		
	MMB 015 (A) Chemical Ecology		
	MMB 016 (A) Translational Medical Microbiology		
	MMB 017 (A) Microbe-Plant Interactions		

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	MMB 018 (A) Microbial Metabolism		
	MMB 019 (A) Wildcard		

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Study Focus:

A focus for the study programme can be reached by combining modules. This allows a specific focus on Physiology (Modules MMB006, MMB008, MMB014), Mycology (MMB007, MMB009, MMB011, MB0016, MMB017), Human Pathogens (MMB009, MMB011, MMB012, MMB016), Interactions with Eukarya (MMB007, MMB009, MMB011, MMB013, MMB015, MMB017) or Biotechnology (MMB010, MMB013, MMB018).

Interdisziplinäre Modules:

Generally, all microbiology centered modules, e.g. Microbial Ecology from the Study programme MSc Evolution, Ecology and Systematics (Mv: Küsel), Organelles: Development and Function (Mv: Oelmüller) from MSc Molecular Life Science, or the Biogeosciences Field Seminar from MSc Biogeosciences are accepted.

In addition, modules from other Master Programmes can be accepted if they strengthen the interdisciplinary character of education. In these cases, a mandatory meeting for student advice is necessary. Examples include Plant Interactions, Biogeosciences, Medicine or other disciplines in Life Sciences, Ethics, Scientific English, Nanotechnologies or Biophotonics. Non-university practical internships can be taken as Elective Module after an advisory meeting.

International Mobility:

International exchange is possible and supported. The University's International Office, Erasmus-Programme, networking with other Coimbra-Universities, and other Programmes (like RISE) are giving support. And individual student advice is mandatory.

To allow for easy credit transfer, a Learning Agreement should be signed with the head of the MSc Programme that is deposited with the Deans' Study Office. The teachers in the Programme, the Head of Programme and the Deans' Study Office give advice on international exchange and mobility.

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Module overview

1. Semester: (Basic module MMB001 compulsory; Selection of 3 from 4 offered Basic modules MMB002-MMB005)

MMB001: Introduction into Microbiology (Mc: Krause)			G	WS/SS	SWS	ECTS
E	Basic methods in microbiology	Krause, students of 3rd semester	WS	2 (Block 1. Wo.)		
S	Introduction of the subjects of BSc theses	Krause	WS	1		
OS	Microbial Communication Colloquium	Professors of Microbiology	WS, SS	1; 1		
					5	6

MMB002: Microbial Physiology (Mc: N.N.)			G	WS/SS	SWS	ECTS
L	Microbial Physiology	N.N.	WS	2		
P	Microbial Physiology	N.N. + co-worker	WS	5 (block 4 weeks half-day)		
					7	8

MMB003: Microbial Communication (Mc: Kothe)			G	WS/SS	SWS	ECTS
L	Microbial Communication	Kothe	WS	2		
P	Microbial Communication	Kothe + co-worker	WS	5 (block 4 weeks half-day)		
					7	8

MMB004: Microbial Interactions (Mc: N.N.)			G	WS/SS	SWS	ECTS
L	Microbial Interactions	N.N.	WS	2		
P	Microbial Interactions	N.N. + co-worker	WS	5 (block 4 weeks half-day)		
					7	8

MMB005: Microbiology and Molecular Biology (Mc: Brakhage)			G	WS/SS	SWS	ECTS
L	Microbiology and Molecular Biology	Brakhage	WS	2		
P	Microbiology and Molecular Biology	Brakhage + co-worker	WS	5 (Block)		
					7	8

2. Fachsemester: (Selection of 30 ECTS from Modules 06-19)

MMB006: Adaptation in Microorganisms (Mc: N.N.)			A	WS/SS	SWS	ECTS
L	Adaptation in Microorganisms	N.N.	SoS	2		
P	Adaptation in Microorganisms	N.N. + co-worker	SoS	5 (block 4 weeks half-day)		
S	Actual original research papers on microbiology subjects			1		
					8	10

MMB007: Molecular Communication in Basidiomycetes (Mc: Kothe)			A	WS/SS	SWS	ECTS
L	Basidiomycetes	Kothe, Krause	SoS	2		
E*	Basidiomycetes	Kothe, Krause	SoS	2		
P	Molecular Communication	Kothe + co-worker	SoS	5 (block 4 weeks half-day)		

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Ex	Basidiomycetes		SoS	1	
				8	10

*Exercise can be performed in alternative to the lecture.

MMB008: Microbial Consortia (Mv: N.N.)		A	WS/SS	SWS	ECTS
S	Microbial Consortia	N.N.	SoS	2	
P	Microbial Consortia	N.N. + co-worker	SoS	5 (block 4 weeks half-day)	
E	Exercises with Mikrobiome analyses	N.N. + co-worker	SoS	1	
				8	10

MMB009: Molecular Infection Biology of lower Eukaryotes (Mc: Brakhage) A			WS/SS	SWS	ECTS
L	Molecular Infection Biology	Brakhage	SoS	2	
P	Molecular Infection Biology	Brakhage + co-worker	SoS	5 (block 4 weeks half-day)	
S	How to write a report	Brakhage + co-worker	SoS	1	
				8	10

MMB010: Biotechnology - Bioelectrochemistry (Mc: Agler-Rosenbaum) A			WS/SS	SWS	ECTS
L	Biotechnology	Rosenbaum	SoS	2	
P	Bioelectrochemistry	Rosenbaum + co-worker	SoS	2 (block 2 weeks half-day)	
				4	5

MMB011: Molecular und Microbial Infection Biology (Mc: Hube) A			WS/SS	SWS	ECTS
L	Molecular und Microbial Infection Biology	Hube + co-worker	SoS	2	
P	Molecular und Microbial Infection Biology	Hube + co-worker	SoS	1 week block	
				4	5

MMB012: Immune reactions of humans to Microorganisms and Pathogens (Mc: Zipfel) A			WS/SS	SWS	ECTS
L	Immune reactions to Microorganisms	Zipfel + co-worker	SoS	2	
P	Immune reactions to Microorganisms	Zipfel + co-worker	SoS	1 week block	
				4	5

MMB013: Biomolecular Chemistry (Mc: Hertweck) A			WS/SS	SWS	ECTS
L	Biomolecular Chemistry	Hertweck	SoS	2	
P	Biomolecular Chemistry	Hertweck + co-worker	SoS	1 week block	
				4	5

MMB014: Geomicrobiology (Mc: Küsel) A			WS/SS	SWS	ECTS
L	Aquatic Geomicrobiology	Küsel	SoS	2	
P	Aquatic Geomicrobiology	Küsel + co-worker	SoS	1 week block	
				4	5

MMB015: Biomolecular Chemistry (Mc: Boland) A			WS/SS	SWS	ECTS
S	Biomolecular Chemistry	Boland	SoS	2	
P	Biomolecular Chemistry	Boland + co-worker	SoS	1 week block	
				4	5

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MMB016: Translational Medical Microbiology (Mc: Jacobsen)		A	WS/SS	SWS	ECTS
L	Translational Medical Microbiology	Jacobsen	SoS	2	
P	Translational Medical Microbiology	Jacobsen + co-worker	SoS	1 week block	
				4	5

MMB017: Microbe-Plant Interactions (Mc: Kothe)		A	WS/SS	SWS	ECTS
S	Microbe-Plant Interactions	Agler	SoS	2	
P	Microbe-Plant Interactions		SoS	2 (block 2 weeks half-day)	
				4	5

MMB018: Microbial Metabolism (Mc: N.N.)		A	WS/SS	SWS	ECTS
S	Microbial Metabolism	N.N.	SoS	2	
P	Microbial Metabolism	N.N.	SoS	2 (block 2 weeks half-day)	
				4	5

MMB019: Wild card (Mc: Professors of Microbiology)		A	WS/SS	SWS	ECTS
S	To be agreed		SoS	4	
P	To be agreed		SoS	5	
				5/8	5/10

3. Semester:

MMB700: Specialization module MMB (Mc: Supervisor)		T	WS/SS	SWS	LP
P	Specialization module	Professors of Microbiology	WS/SS	6 weeks to be agreed	
					15

MMB800: Projektmodul MMB (Mc: Supervisor)		T	WS/SS	SWS	LP
P	Projektpraktikum	Professors of Microbiology	WS/SS	6 weeks to be agreed	
	Vermittlung mikrobieller Grundlagen			1 weeks block	
					15

4. Semester:

MMB900: Master thesis MMB (Mc: Supervisor)		T	WS/SS	SWS	LP
P	Master thesis	Professors of Microbiology	WS/SS	6 months	
					30

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