

Introduction to MSc Programme

Biochemistry and Molecular Biology

Summer 2022

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Prof. Salvatore Chiantia	Physical Biochemistry (Deputy Head)
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Examination Board

uni-potsdam.de

Uni-Startseite Uni A-Z Sitemap English

Universität Potsdam Faculty of Science

STUDYING RESEARCH UNIVERSITY ONLINE SERVICES

The Faculty Study and Teaching Research Internationalization News

Faculty of Science / Study and Teaching / Master / Biochemistry and Molecular Biology

Master Biochemistry and Molecular Biology

Overview

- Bachelor
- Master**
- Astrophysics
- Biochemistry and Molecular Biology**
- Module guide and study regulations
- Bioinformatics
- Chemistry
- Computational Science
- Data Science
- Ecology, Evolution and Conservation
- Nutritional Science



Master Biochemistry and Molecular Biology - Portrait

Information for prospective students is provided by the portrait of the study program at the website of the central student advisory service



Institute of Biochemistry and Biology

Informations about the Master program Biochemistry and Molecular Biology of the Institute of Biochemistry and Biology



Admission, application and enrollment

Current informations related to admission and application

Examination board Master Biochemistry and Molecular Biology

Current examination board Master Biochemistry and Molecular Biology

Commission for study and teaching Biochemistry/Biology

Information about the commission for study and teaching Biochemistry/Biology

Subject-specific admission regulations

General admission regulations and admission regulations for the master's program Biochemistry and Molecular Biology (english version will following

MSc Biochemistry and Molecular Biology:
<https://www.uni-potsdam.de/en/mnfakul/study-and-teaching/master/biochemistry-and-molecular-biology>

- ✓ Check requirements to obtain MSc (120 LP) -> structure of programme
- ✓ Choose course of study
- ✓ Find interesting courses in course overview/ module guide
- ✓ Take particular care of when and under which umbrella elective modules are offered
- ✓ You can also accredit courses outside of the BAM programme, but be aware of procedure!
- ✓ Sign up with courses and enjoy learning!

Where to start?

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Where to start?

Laid out for 4 semesters; total of 120 CP/ECTS

The Master's program is subdivided as follows:

2 Mandatory core modules (<i>Kernmodule</i>)	12 CP
3 Orientation modules (<i>Richtungsmodule</i>)	33 CP
Elective modules (<i>Wahlpflichtmodule</i>)	40 CP
Advanced module (<i>Vertiefungsmodul</i>)	5 CP
Master thesis (<i>Masterarbeit</i>)	30 CP

Structure of the programme

In 3 semesters you should have a total of 90 CP/ECTS

2 Mandatory core modules (<i>Kernmodule</i>)	12 CP
3 Orientation modules (<i>Richtungsmodule</i>)	33 CP
Elective modules (<i>Wahlpflichtmodule</i>)	40 CP
Advanced module (<i>Vertiefungsmodul</i>)	5 CP

You should only register 90 CP with PULS (not 92 or 96!)

It is possible to select more elective modules but only 90 CPs will be counted. You can actively select the ones to be counted into your final degree by „grade picking“ when handing in your thesis (see P. 37, Abs.3 comments of

BAMA-O) https://www.uni-potsdam.de/fileadmin/projects/studium/docs/03_studium_konkret/07_rechtsgr_undlagen/kommentierung_bama-o_studierende_2013.pdf

Structure of the programme

2 Core modules (*Kernmodule*; compulsory; 6 CP each; “State of the art” lecture series and “Practical bioinformatics”)

3 orientation modules (*Richtungsmodule*; three to be chosen from more than 20 options; 11 CP each; consist of one lecture [2 h/week], literature seminar [2 h/week], 6-week lab-based research project)

Elective modules (*Wahlpflichtmodule*; to be chosen from many different options; 6 or 8 CP each; typically consist of one lecture [2 h/week], literature seminar [2 h/week], with or without 2-week practical course; orientation modules with 11 CP can be chosen as well → **need to end up with exactly 40 CP!!**)

4-week preparation for Master thesis (*advanced research practical* or *Vertiefungsmodul*; 5 CP)

Master thesis (30 CP)

Structure of the programme

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Where to start?

Starting in the **winter semester**

Semester;	Modules	sum of CP
1.	1 Orientation module Core module 1	(11 CP) (6 CP)
a.	33 CP Elective modules	(16 CP)
b.	28 CP	(11 CP)
c.	33 CP	(16 CP)
2.	Core module 2 1 Orientation module	(6 CP) (11 CP)
a.	25 CP Elective module(s)	(8 CP)
b.	29 CP	(12 CP)
c.	23 CP	(6 CP)
3.	1 Orientation modulee	(11 CP)
a.	32 CP Elective modules	(16 CP)
b.	33 CP	(17 CP)
c.	34 CP	(18 CP)
	Advanced research practical (5 CP)	
4.	30 CP Master thesis	(30 CP)

Starting in the **summer semester**

Semester;	Modules	sum of CP
1.	Core module 2 1 Orientation module	(6 CP) (11 CP)
a.	25 CP Elective module	(8 CP)
b.	29 CP	(12 CP)
c.	23 CP	(6 CP)
2.	Core module 1 1 Orientation module	(6 CP) (11 CP)
a.	33 CP Elective modules	(16 CP)
b.	28 CP	(11 CP)
c.	33 CP	(16 CP)
3.	1 Orientation module	(11 CP)
a.	32 CP Elective modules	(16 CP)
b.	33 CP	(17 CP)
c.	34 CP	(18 CP)
	Advanced research practical (5 CP)	
4.	30 CP Master thesis	(30 CP)

Proposed course of study

Note: Core module 1 (State-of-the-art) is offered in the winter semester, Core module 2 (Practical Bioinformatics) is offered in the summer semester

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Universität Potsdam Studium

STUDIUM FORSCHUNG UNIVERSITÄT ONLINE-DIENSTE

Studienangebot Bewerbung & Immatrikulation **Studium konkret** Beratungs- & Serviceeinrichtungen Termine & Fristen

Studium / Studium konkret / Rechtsgrundlagen & Studienordnungen / Studien- und Prüfungsordnungen / Biochemistry and Molecular Biology

Biochemistry and Molecular Biology

Master

- [Studien- und Prüfungsordnung für das Masterstudium im Fach Biochemistry and Molecular Biology](#) an der Universität Potsdam vom 20. Januar 2016 (AmBek 6/16, S. 545) (PDF)
 - [Erste Satzung zur Änderung der fachspezifischen Studien- und Prüfungsordnung für den Masterstudiengang Biochemistry and Molecular Biology](#) an der Universität Potsdam vom 16. Januar 2019 (AmBek 10/19, S. 640) (PDF)
 - [Discipline-Specific Regulations for Study and Examinations for the Master's Program in Biochemistry and Molecular Biology](#) at the University of Potsdam (**English translation**) (PDF)

Übersicht

Infos zum Studienstart

Studienorganisation

Prüfungsorganisation

Studien- und Prüfungsorganisation mit PULS

Schlüsselkompetenzen

Vorlesungsverzeichnisse & Englischsprachige Kurse

Study regulations

https://www.uni-potsdam.de/fileadmin/projects/studium/docs/03_studium_konkret/07_rechtsgrundlagen/studienordnungen/BAMA-O-BCMB_MSc_EN.pdf

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Where to start?

Universität Potsdam
 PULS

Universität Potsdam Courses **Modulbeschreibung** Winter 2019/20 DE **Login**

You are here: [Home](#)

Auflistung der Module

Hilfetext
 ▶ Hier klicken um den Hilfetext anzuzeigen

Funktionen: PDF-Sortierung

Master of Science - Biochemistry and Molecular Biology - WiSe 2016/17

▶ BIO-B-KM1 - State of the Art in Biochemistry and Molecular Biology (6 LP, Pflichtmodul) -> Zum Modul <i>State of the Art in Biochemistry and Molecular Biology</i>
▶ BIO-B-KM2 - Practical Bioinformatics (6 LP, Pflichtmodul) -> Zum Modul <i>Practical Bioinformatics</i>
▶ BIO-B-RM1 - Nanobiotechnology (11 LP, Wahlpflichtmodul) -> Zum Modul <i>Nanobiotechnology</i>
▶ BIO-B-RM10 - Modern Methods in Light Microscopy (11 LP, Wahlpflichtmodul) -> Zum Modul <i>Modern Methods in Light Microscopy</i>
▶ BIO-B-RM11 - Physiology of Microorganisms (11 LP, Wahlpflichtmodul) -> Zum Modul <i>Physiology of Microorganisms</i>
▶ BIO-B-RM12 - Current Aspects and Methods of Plant Cell Biology (11 LP, Wahlpflichtmodul) -> Zum Modul <i>Current Aspects and Methods of Plant Cell Biology</i>
▶ BIO-B-RM13 - Evolutionary and Population Genetics (11 LP, Wahlpflichtmodul) -> Zum Modul <i>Evolutionary and Population Genetics</i>

Module guide

https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&publishContainer=ModulbaumAnzeigen&modulkatalog.mk_id=83&menuid=&topitem=modulbeschreibung&subitem=&noDBAction=y&init=y

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Universität Potsdam Courses Modulbeschreibung Winter 2019/20 ? DE

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Login

username without @uni-potsdam.de
musterma von musterma@uni-potsdam.de

password

Anmelden

Course Overview („Vorlesungsverzeichnis“)

<https://puls.uni-potsdam.de/>

Universität Potsdam PULS

My Functions **Courses** Modulbeschreibung

Winter 2019/20 DE 29:25

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You are here: Home

Course Overview (WiSe 2019/20)

View: short medium long

- ① Vorlesungsverzeichnis
 - ① Mathematisch-Naturwissenschaftliche Fakultät
 - ① Institut für Biochemie und Biologie
 - ① Master of Science
 - ① Biochemistry and Molecular Biology (Prüfungsversion ab WiSe 2016/17)
 - ① Pflichtmodule
 - ① Vertiefungsmodul
 - ① Richtungsmodul
 - ① Wahlpflichtmodule
 - ① Fakultative Lehrveranstaltungen

Course Overview („Vorlesungsverzeichnis“)

<https://puls.uni-potsdam.de/qisserver/rds?state=wtree&search=1&trex=step&root120192=167710%7C163183%7C164407%7C164686%7C167680&P.vx=kurz>

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[My Functions](#) | **Courses** | [Modulbeschreibung](#)

You are here: [Home](#) → [Courses](#) → [Course Overview](#)

Course Overview (WiSe 2019/20)

View: [short](#) [medium](#) [long](#)

- ① Vorlesungsverzeichnis
 - ① Mathematisch-Naturwissenschaftliche Fakultät
 - ① Institut für Biochemie und Biologie
 - ① Master of Science
 - ① Biochemistry and Molecular Biology (Prüfungsversion ab WiSe 2016/17)
 - ① Richtungsmodule
 - ① BIO-B-RM1 - Nanobiotechnology
 - ① BIO-B-RM2 - Cellular Signal Transduction
 - ① BIO-B-RM3 - Evolutionary Genomics (Evolution across Scales module D)
 - ① BIO-B-RM4 - Antibody-Technologies
 - ① BIO-B-RM5 - Novel Cloning Technologies for Future Biotechnology
 - ① BIO-B-RM6 - Animal Models in Developmental Biology and Cell Physiology
 - ① BIO-B-RM7 - Bioelectronics
 - ① BIO-B-RM8 - Immunotechnology
 - ① BIO-B-RM9 - Synthetic Biology
 - ① BIO-B-RM10 - Modern Methods in Light Microscopy
 - ① BIO-B-RM11 - Physiology of Microorganisms
 - ① BIO-B-RM12 - Current Aspects and Methods of Plant Cell Biology
 - ① BIO-B-RM13 - Evolutionary and Population Genetics
 - ① BIO-B-RM14 - Physical Methods in Live Cell Imaging
 - ① BIO-B-RM15 - Metalloproteins
 - ① BIO-B-RM16 - Current Aspects of Plant Physiology
 - ① BIO-B-RM17 - Current Aspects and Methods of Plant Cell Biology and Evolutionary Genomics

Orientation Modules/ Intensive modules

21 different modules; 11 CP each;
 consist of one lecture [2 h/week], literature seminar [2 h/week],
 6-week lab-based research project

Universität Potsdam | **Courses** | Module Description | Winter 2021/22 | DE

You are here: [Home](#) → [Courses](#) → [Course catalog](#)

Current Aspects and Methods of Plant Cell Biology RM - Single View

Functions: [apply / withdraw application](#)

Type of Course	Blockveranstaltung	Number	
Hours per week in term	11	Term	WiSe 2021/22
Department	Institut für Biochemie und Biologie	Language	englisch
application period	01.10.2021 - 10.11.2021 active		

Gruppe 1: preselect apply now / cancel application

	Day	Time	Frequency	Duration	Room	Lecturer	Cancelled on	Max. participants
→ _	Vorlesung	Mo	12:15 to 13:45	wöchentlich	25.10.2021 to 14.02.2022	2.25.B2.01 Prof. Dr. Grebe	20.12.2021: Akademische Weihnachtsferien 27.12.2021: Akademische Weihnachtsferien	
→ _	Seminar	Mo	14:15 to 15:45	wöchentlich	25.10.2021 to 14.02.2022	2.25.B2.01 Prof. Dr. Grebe	20.12.2021: Akademische Weihnachtsferien 27.12.2021: Akademische Weihnachtsferien	

Structure Tree
 This lecture was found in WiSe 2021/22 1 times:
 Vorlesungsverzeichnis
 Faculty of Sciences
 Institut für Biochemie und Biologie
 Master of Science
 Biochemistry and Molecular Biology (Examination regulation of the winter semester 2016/17)
 Intensive Modules
 BIO-B-RM12 - Current Aspects and Methods of Plant Cell Biology --- 1

Orientation Modules: Lecturers, Dates, timings...

<https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&publishid=75947&moduleCall=webInfo&publishConfFile=webInfo&publishSubDir=veranstaltung>

Universität Potsdam Courses **Module Description** Winter 2021/22 DE

Findung a module
Findung a module catalog
Hide menu

You are here: Home → Module Description → Finding a module

Modul: Current Aspects and Methods of Plant Cell Biology

Das hier aufgeführte Modul basiert auf in den Amtlichen Bekanntmachungen der Universität Potsdam veröffentlichten Studien- und Prüfungsordnungen. Verbindliche Regelungswirkung haben nur die veröffentlichten Ordnungen.

BIO-B-RM12: Current Aspects and Methods of Plant Cell Biology		Anzahl der Leistungspunkte (LP):	
		11 LP	
Modulart (Pflicht- oder Wahlpflichtmodul):	Abhängig vom Studiengang (siehe unten)		
Inhalte und Qualifikationsziele des Moduls:	<p>Die Vorlesung konzentriert sich auf die aktuelle Forschung und Methoden der zellbiologischen Untersuchung von Pflanzenwachstum und Entwicklung. Die behandelten Themen werden die subzellulären Funktionen der Pflanzenhormon-Biosynthese, Transport- und Reaktionswege, der Membrantransport- und Recyclingwege, der Proteinabbauwege sowie die Kontrolle des Zytoskelett- und des Zellwand-Aufbaus während der Zellteilung, der Zellstreckung, der Zell- und der Gewebepolarität beinhalten. Darüber hinaus werden Beziehungen zwischen epidermale Zellschicksal und epidermale Differenzierung, die Zellteilung und die Ausbildung von Zell- und Gewebepolarität sowie die inter- und intrazelluläre Kommunikation während der Ausbildung von Gewebepolarität behandelt.</p> <p>Das Praktikum beinhaltet die zellbiologische und die physiologische Untersuchung der Zellteilung bei Pflanzen, der Zellstreckung, der Zell- und der Gewebepolarität. Im Zusammenhang damit werden aktuelle Forschungsfragen der Arbeitsgruppe Grebe besprochen. Es finden Methoden Anwendung, wie die mikroskopische Lebendbeobachtung und Abbildung von Zytoskelettelementen, das Sichtbarmachen der Zellteilung und Zellpolarität mit Hilfe von fluoreszierenden Proteinen durch konfokale Laser Scanning Mikroskopie, Fluoreszenzwiederkehr nach Photobleichung („fluorescence recovery after photobleaching“) sowie Immunfluoreszenzlokalisierungsverfahren. Die Wechselwirkung der sichtbarmachten Proteine wird durch Protein-Protein-Interaktionsmethoden analysiert sowie <i>in vivo</i> genetisch und durch phänotypisch-zellbiologische Untersuchung von Einzel- und Doppelmutanten überprüft.</p> <p>Im Seminar werden wissenschaftliche Originalartikel in englischer Sprache zu aktuellen Themen der Biochemie diskutiert.</p> <p>Das Modul wird den Studierenden ein grundlegendes Verständnis von aktuellen Forschungsfragen und Methoden der pflanzlichen Zellbiologie vermitteln. Die Studierenden werden dabei mit den theoretischen Grundlagen, den wissenschaftlichen Ansätzen und den experimentellen Methoden der Pflanzenzell- und Entwicklungszellbiologie vertraut gemacht. Das Modul wird Studierenden spezielle Kenntnisse und Fähigkeiten der zellbiologischen Untersuchung von biologischen Prozessen vermitteln. Diese bilden einen zentralen Teil des Masterstudiengangs, falls beabsichtigt wird, sich auf Genetik, Molekular- oder Zellbiologie zu spezialisieren.</p> <p>Lernziele:</p> <ul style="list-style-type: none"> - Studierende lernen, wie man wissenschaftliche Originalliteratur in englischer Sprache liest und kritisch bewertet. - Studierende lernen, die wesentlichen Punkte aus der wissenschaftlichen Originalliteratur zu extrahieren. - Studierende lernen wissenschaftliche Fragen schriftlich in knapper Form zu diskutieren. - Studierende können ihre Arbeit einem wissenschaftlichen Publikum mit geeigneten Medien präsentieren und sich mit Fragen und/oder Kommentaren in einer wissenschaftlichen Diskussion über ihr Thema austauschen. - Studierende lernen zielgerichtete Fragen über mögliche zukünftige Forschungsrichtungen zu stellen, um ein bestimmtes Problem verfolgen zu können 		
Modul(teil)prüfungen (Anzahl, Form, Umfang, Arbeitsaufwand in LP):	Mündliche Prüfung, 30 Minuten; 70% Praktikumsprotokoll, ca. 20 Seiten; 30%		
Selbstlernzeit (in Zeitstunden (h)):	95		
Veranstaltungen (Lehrformen)	Kontaktzeit (in SWS)	Prüfungsnebenleistungen (Anzahl, Form, Umfang)	Lehrveranstaltungs begleitende Modul(teil)prüfung (Anzahl, Form, Umfang)
		Für den Abschluss des Moduls	Für die Zulassung zur Modulprüfung
Current aspects and methods of plant cell biology (6 Wochen) (Praktikum)	Betreuung: 5 SWS	-	-
Current aspects and methods of plant cell biology (Vorlesung und Seminar)	2 V + 2 S	-	Vortrag (30 Min.)
Häufigkeit des Angebots:	WiSe und SoSe		
Voraussetzung für die Teilnahme am Modul:	keine		
Anbietende Lehreinheit:	Biologie/Biochemie		

Orientation Modules: Course descriptions

https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&moduleCall=modulansicht&publishConfFile=modulverwaltung&publishSubDir=up/modulbearbeiter&modul.modul_id=865

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Some orientation modules deviate from scheme below

RM8 Immunotechnology

(2x 2h/week lecture, 1h/seminar, 6 week lab)

RM18 Microevolution/Conserving the Evolutionary process

(2x 2h/week lecture, 1h/seminar, 5h/week exercise)

RM19 The Central Role of Evolutionary Biology

(2h/week lecture, 1h/week lecture, 3 x 1h/week seminar)

Orientation Modules

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6-week lab-based research project

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Where to start?

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 Datenschutz Kontakt Impressum
 My Functions **Courses** Modulbeschreibung Winter 2019/20 ? DE 29:20
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 Course Overview (WiSe 2019/20)
 View: short medium long

- ① Vorlesungsverzeichnis
 - ① Mathematisch-Naturwissenschaftliche Fakultät
 - ① Institut für Biochemie und Biologie
 - ① Master of Science
 - ① Biochemistry and Molecular Biology (Prüfungsversion ab WiSe 2016/17)
 - ① Wahlpflichtmodule
 - ① BIO-B-WM1 - Biochemistry A
 - ① BIO-B-WM2 - Biotechnology A
 - ① BIO-B-WM3 - Protein Science A
 - ① BIO-B-WM4 - Genome Research and Systems Biology A
 - ① BIO-B-WM5 - Molecular Biology A
 - ① BIO-B-WM6 - Cellular and Development Biology A
 - ① BIO-B-WM7 - Biochemistry B
 - ① BIO-B-WM8 - Biotechnology B
 - ① BIO-B-WM9 - Protein Science B
 - ① BIO-B-WM10 - Genome Research and Systems Biology B
 - ① BIO-B-WM11 - Molecular Biology B
 - ① BIO-B-WM12 - Cellular and Development Biology B
 - ① BIO-B-WM13 - Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies B
 - ① BIO-B-WM14 - Biochemistry and Molecular Biology as Reflected in other Sciences A
 - ① BIO-B-WM15 - Biochemistry and Molecular Biology as Reflected in other Sciences B
 - ① BIO-B-WM16 - Biochemistry and Molecular Biology in Practice A
 - ① BIO-B-WM17 - Biochemistry and Molecular Biology in Practice B

Elective Modules

many different modules; 6 (B) or 8 (A) CP each; typically consist of one lecture [2 h/week], literature seminar [2 h/week], with (A) or without (B) 2-week practical course

University of Potsdam PULS

Winter 2019/20

DE

29:49

My Functions Courses Modulbeschreibung

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Course Overview (WiSe 2019/20)

View: short medium long

- ① Vorlesungsverzeichnis
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 - ① Master of Science
 - ① Biochemistry and Molecular Biology (Prüfungsversion ab WiSe 2016/17)
 - ① Wahlpflichtmodule
 - ① BIO-B-WM1 - Biochemistry A

Veranstaltungsart	Titel der Veranstaltung
diverse Formen	Antibody Technologies
diverse Formen	Cell-free Protein Synthesis
Praktikum	Cellular and Molecular Immunology Practical
diverse Formen	Cryo Electron Microscopy in Structural Biology
Seminar	Immuntechnologie
diverse Formen	Modern aspects of biochemistry and analytics of carbohydrates
Vorlesung	Molecular Biotechnology and Advanced Immunology
diverse Formen	Seminar Bioelektronik, Nanobiotechnologie, Bioanalytik
Blockveranstaltung	Structure, Function and Evolution of Chloroplast Genomes (Wahlpflichtmodul)

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Elective Modules

many different modules; 6 (B) or 8 (A) CP each; typically consist of one lecture [2 h/week], literature seminar [2 h/week], with (A) or without (B) 2-week practical course

[My Functions](#) | **Courses** | [Modulbeschreibung](#) | Winter 2019/20 | DE | 29:27
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You are here: [Home](#) → [Courses](#) → [Course Overview](#)

Cryo Electron Microscopy in Structural Biology - Single View

Functions: [Schedule preselected](#)

Type of Course	diverse Formen	Number	
Hours per week in term	4	Term	WiSe 2019/20
Department	Institut für Biochemie und Biologie	Language	englisch
application period	01.10.2019 - 20.11.2019		

Gruppe 1: [application info](#) preselect

	Day	Time	Frequency	Duration	Room	Lecturer	Cancelled on	Max. participants
	Vorlesung	Mi	12:15 to 13:45	wöchentlich	16.10.2019 to 05.02.2020	2.25.B2.01 Prof. Dr. Wendler	25.12.2019: 1. Weihnachtstag 01.01.2020: Neujahr	
	Seminar	Mi	14:15 to 15:45	wöchentlich	16.10.2019 to 05.02.2020	2.25.B2.01 Prof. Dr. Wendler	25.12.2019: 1. Weihnachtstag 01.01.2020: Neujahr	
	Praktikum	- to	Block	at		Dr. rer. nat. Radon , Prof. Dr. Wendler		

Comment: 2 Wochen nach Absprache

Content:
 The course covers theory and advanced image analysis techniques in transmission electron microscopy (TEM). In the lecture the following topics are explained:
 - buildup of a TEM, electron guns, holders and detectors
 - theory of diffraction, image formation, how electrons interact with material; contrast transfer function
 - theory behind high resolution cryo TEM
 - sample preparation and image acquisition in (single particle) TEM
 - 2D and 3D image analysis
 - point group symmetries
 - refinement and validation of 3D reconstructions
 - visualisation and interpretation of TEM results
 During the seminar the students will analyse current TEM results from subject-specific English literature, summarize the key aspects of the work and discuss the research outcome critically.

Description

Learning outcomes:

- 1. Subject-specific competences:**
 At the end of the course the students will have learned and understood the underlying theory in transmission electron microscopy and single particle image analysis. They will be able to identify suitable TEM applications to a biological question and will have gained insight into the current state of the art in cryo electron microscopy. They will also have analysed the structure and function of diverse biological complexes.
- 2. Methods-specific competences:**
 The students learn to interpret, analyse and present results derived from subject-specific, English literature. They will also learn how to prepare a TEM sample, how to operate a TEM, how to analyse TEM images and how to interpret TEM data.
- 3. Action competence:**
 The students present and defend scientific work in a public seminar using suitable presentation media. The students learn to work in a team, give constructive feedback and assess each other in a public seminar.

Elective Modules

many different modules; 6 (B) or 8 (A) CP each; typically consist of one lecture [2 h/week], literature seminar [2 h/week], with (A) or without (B) 2-week practical course

Sometimes, courses are not offered due to insufficient number of participants

- **cancellation during semester**
- **plan alternatives when choosing your course of study!**

Elective Modules

many different modules; 6 (B) or 8 (A) CP each; typically consist of one lecture [2 h/week], literature seminar [2 h/week], with (A) or without (B) 2-week practical course

If you have done your Bachelor at UP you can't take courses if you have taken them in Bachelor studies:

Biochemistry A Biotechnology A Protein Science A Genome Research and Systems Biology A Molecular Biology A Cellular and Developmental Biology A												Biochemistry B Biotechnology B Protein Science B Genome Research and Systems Biology B Molecular Biology B Cellular and Developmental Biology B											
WP 8LP						WP 6LP																	
1	2	3	4	5	6	7	8	9	10	11	12												
												Titel	CP	Klausur	münd. Prüf.	SWS	VL	Übung	Seminar	Praktikum	WiSe	SoSe	Dozent
x	x	x	x	x	x	x	x	x	x	x	x	RM6	Animal Models in Developmental Biology and Cell Physiology	6/11		x	2V+2S	2 (wöchentlich)	2 (wöchentlich)	6 Wochen Block	x		Seyfried
												RM8	Immunotechnology	6/8/11		x	4V+1S	4 (wöchentlich)	1 (14 tägig 2h)	1/6 Wochen	x		Behrsing/Arndt
												RM11	Physiology of Microorganisms	6/8/11	x		2V+2S	2 (wöchentlich)	2 (wöchentlich)	2/6 Wochen Block	x		Dittmann
												RM17	Epigenetics and Epigenomics in Plants, Animals and Fungi	6/8/11	x		2V+2S	2 (wöchentlich)	2 (wöchentlich)	2/6 Wochen Block		x	Bäurle
												RM22	Cell Biology Of Centrosomes And The Nuclear Envelope	6/8/11			2V+2S	2 (wöchentlich)	2 (wöchentlich)	2/6 Wochen Block			Gräf
x	x					x	x					RM22	Modern Aspects of Biochemistry and Analytics of Carbohydrates	6/8/11		x	2V+2S	2 (Block)	2 (Block)	2/6 Wochen Block	x	x	Barbirz, Fetke
													Molecular Microbial Ecology	6/8		x	2V+2S	2 (wöchentlich)	2 (wöchentlich)	wöchentlich	x	x	Dittmann
													Presentation skills for life scientists	6		x	2V+2S	2 (wöchentlich)	2 (wöchentlich)	x	x	Lenhard/Bäurle	
													Theoretische und Praktische Einführung in die Massenspektroskopie	6		x	2V+2S	2 (Block)	2 (Block)	x	x	Fetke	
													Programming with R	6	x		1V+2Ü+1P	1 (Block)	2 (Block)	1 (Hausaufgabe)		x	Groth
													Experimental design for molecular biologists	6		x	2V+2S	2 (wöchentlich)	2 (wöchentlich)		x	Lenhard/ Kappel	
													Developmental Biology in Animals and Plants	6/8		x	2V+2S	2 (wöchentlich)	2 (wöchentlich)	2 Wochen Block	x		Lenhard/Bäurle

Elective Modules already offered in Bachelor

- ✓ Check requirements to obtain MSc (120 LP) -> structure of programme
- ✓ Choose course of study
- ✓ Find interesting courses in course overview/ module guide
- ✓ Take particular care of when and under which umbrella elective modules are offered
- ✓ You can also accredit courses outside of the BAM programme, but be aware of procedure!
- ✓ Sign up with courses and enjoy learning!

Where to start?

- In principle, lab courses/internships can also be done outside the BAM course list at the UP, at other universities, at extra-university institutes or at companies.
- This has to be clarified with the course organiser of the module into which this lab course/internship could reasonably fit.
- **THIS MUST NOT RESULT IN MODULES WITH A DIFFERENT NUMBER OF CREDIT POINTS THAN WHAT IT SAYS IN PULS/THE MODULE GUIDE.**
- Please discuss all details with the respective course organizer.

▶ BIO-B-RM22

- **Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies** (11 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies

▶ BIO-B-WM13

- **Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies B** (6 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies B

Courses outside UP: Research Institutes, Industry

BIO-B-RM22

BIO-B-WM13

Courses at other Universities can be accredited even when CPs deviate from the required 6, 8, or 11 CPs. Methods and subject content of these courses have to match the UP module used for the accreditation.

It is possible to recognize courses from other Universities via an application for recognition „Anerkennungsantrag“, when the student had a enrolled as a guest student „Nebenhörerschaft“. This however is not possible for other courses at UP, when they are not listed in PULS under BAM.

Foreign study visits can be accredited via a Learning Agreement (see <https://www.uni-potsdam.de/de/international/outgoing/anererkennung> and P. 6, Section „Prozessschritte für das Anerkennungsverfahren vor dem Aufenthalt an der Gasthochschule <https://www.uni-potsdam.de/fileadmin/projects/zfq/Qualit%c3%a4tsmanagement/Leitfaden-Anerkennung-15092016.pdf>

Courses outside UP: Research Institutes, Industry

- In principle, lab courses/internships can also be done outside the BAM course list at the UP, at other universities, at extra-university institutes or at companies.
- This has to be clarified with the course organiser of the module into which this lab course/internship could reasonably fit.
- **THIS MUST NOT RESULT IN MODULES WITH A DIFFERENT NUMBER OF CREDIT POINTS THAN WHAT IT SAYS IN PULS/THE MODULE GUIDE.**
- Please discuss all details with the respective course organizer.

▶ BIO-B-RM22

- **Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies** (11 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies

▶ BIO-B-WM13

- **Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies B** (6 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Current Research in Biochemistry and Molecular Biology in Local Research Institutes and Biotechnology Companies B

Courses outside UP: Research Institutes, Industry

BIO-B-RM22

BIO-B-WM13

- If you want to take courses at other institutes at the UP (related to the subjects taught, e.g. toxicology, bioinformatics, ethics in science) they need to be registered with PULS.
- Please contact the examination board if you want to book UP courses, currently unavailable to you on PULS.
- The courses to be recognised should correspond to one of the modules in your module catalogue with regard to hours, ECTS, examination requirements (6, 8, 11 CP!!!)
- Modules BIO-B-WM 14, 15, 16, 17 are designed to recognise achievements outside of the BAM programme. 14CP can be taken outside your subject area using these modules.
- Language courses cannot be recognised.

Courses inside UP

BIO-B-WM14, 15, 16, 17

- If you want to take courses at other Universities, you need to accredit them with the University of Potsdam (**Geschäftsstelle Studium und Lehre**).
- 14CP can be taken outside your subject area using the modules below
- This has to be clarified and discussed with head of examination board.
- **THIS MUST NOT RESULT IN MODULES WITH A DIFFERENT NUMBER OF CREDIT POINTS THAN WHAT IT SAYS IN PULS/THE MODULE GUIDE.**

▶ BIO-B-WM14 - **Biochemistry and Molecular Biology as Reflected in other Sciences A** (8 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Biochemistry and Molecular Biology as Reflected in other Sciences A

▶ BIO-B-WM15 - **Biochemistry and Molecular Biology as Reflected in other Sciences B** (6 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Biochemistry and Molecular Biology as Reflected in other Sciences B

▶ BIO-B-WM16 - **Biochemistry and Molecular Biology in Practice A** (8 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Biochemistry and Molecular Biology in Practice A

▶ BIO-B-WM17 - **Biochemistry and Molecular Biology in Practice B** (6 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Biochemistry and Molecular Biology in Practice B

Courses inside/outside UP: Universities

BIO-B-WM14, 15, 16, 17

- If you want to take courses at other Universities, you need to accredit them with the University of Potsdam (**Geschäftsstelle Studium und Lehre**).
- 14CP can be taken outside your subject area using the modules below
- This has to be clarified and discussed with head of examination board.
- **THIS MUST NOT RESULT IN MODULES WITH A DIFFERENT NUMBER OF CREDIT POINTS THAN WHAT IT SAYS IN PULS/THE MODULE GUIDE.**

▶ BIO-B-WM14 - **Biochemistry and Molecular Biology as Reflected in other Sciences A** (8 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Biochemistry and Molecular Biology as Reflected in other Sciences A

▶ BIO-B-WM15 - **Biochemistry and Molecular Biology as Reflected in other Sciences B** (6 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Biochemistry and Molecular Biology as Reflected in other Sciences B

▶ BIO-B-WM16 - **Biochemistry and Molecular Biology in Practice A** (8 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Biochemistry and Molecular Biology in Practice A

▶ BIO-B-WM17 - **Biochemistry and Molecular Biology in Practice B** (6 LP, Wahlpflichtmodul) -> [Zum Modul](#)
Biochemistry and Molecular Biology in Practice B

Courses inside/outside UP: Universities

BIO-B-WM14, 15, 16, 17

- ✓ Check requirements to obtain MSc (120 LP) -> structure of programme
- ✓ Choose course of study
- ✓ Find interesting courses in course overview/ module guide
- ✓ Take particular care of when and under which umbrella elective modules are offered
- ✓ You can also accredit courses outside of the BAM programme, but be aware of procedure!
- ✓ Sign up with courses and enjoy learning!

Where to start?

Universität Potsdam

PULS

Universität Potsdam Courses Modulbeschreibung Winter 2019/20 ? DE

Uni Homepage You are here: [Home](#)

Studium

Zugang zu Moodle

Anmeldungs- und Belegungsfristen

Verification of study reports

Welcome on HIS Online-Portal - the university portal for students, guests, teachers and employees

Login

username without @uni-potsdam.de
musterma von musterma@uni-potsdam.de

password

Anmelden

Course Overview („Vorlesungsverzeichnis“)

<https://puls.uni-potsdam.de/>

University of Potsdam | Courses | Modulbeschreibung | Winter 2019/20 | DE | Login

You are here: [Home](#) → [Home](#) → [Hilfeseiten](#)

PULS Help

- [The PULS Homepage](#)
- [The PULS Pages](#)
- [Meine Funktionen](#)
 - [My Course Schedule](#)
 - [My Courses](#)
 - [My Modules](#)
 - [My Achievements](#)
 - [My Stays Abroad](#)
 - [My Placement Tests](#)
 - [iTAN Management](#)
 - [My Documents](#)
 - [Address Management](#)
 - [Registration Deadlines](#)
 - [Verification of a certificate of enrollment](#)
- [Veranstaltungen](#)
 - [Course Catalog](#)
 - [Find a Course](#)
 - [Registering for a Course](#)
- [Registering for a Repeat Examination](#)
- [Modulbeschreibung](#)
 - [Finding a Module](#)
 - [Finding a Module Catalog](#)
- [Logging Out of PULS](#)
- [Test Account \(demo access\)](#)

Registering for a Course

You can register for courses through the [Course Catalog](#), [My Course Plan](#), [My Modules](#) and the [course view](#). To do so click on **jetzt belegen/abmelden** (register/withdraw now).
On the following page you can choose a priority (if there is more than one group) and if available choose the examination associated with the course.

Lehrveranstaltungsbelegung

Belastungen und Ressourcen von Lehrern im Schulalltag

belegen

Gruppe 1	
Fr 16:00 - 20:00 (13.12.2019)	Bachelor of Education Bildungswissenschaften BM.Ed. 54 Schultheorie und Bildungsforschung (9 LP) © 641621 Seminar → Prüfungsleistung (belegen)
Sa 09:00 - 18:00 (18.01.2020)	
Fr 16:00 - 20:00 (24.01.2020)	
Sa 09:00 - 18:00 (01.02.2020)	

Gruppenpriorität:

PULS help function

<https://puls.uni-potsdam.de/qisserver/rds?state=verpublish&status=init&vmfile=no&moduleCall=hilfeseiten&publishConfFile=textvorlagen&publishSubDir=up&vid=53#inhalt>

Remember to sign out of modules that you don't want to take!!!

Order of registration for each module:

- Registration for module
 - until end of enrolment period: May 10th
- Registration for practical courses
 - check on PULS; often during semester
- Registration for Exam
 - end of semester,
 - but at least 8 days before exam!

Registration

Code of conduct (source: Institut für Anglistik und Amerikanistik):

<https://www.uni-potsdam.de/en/iaa/our-department/conduct.html>

Plagiarism is considered serious academic misconduct.

Plagiarism guidelines (only german):

<https://www.uni-potsdam.de/am-up/2011/ambek-2011-01-037-039.pdf>

All written work

- composed yourself and done independently
- sources have to be correctly cited

Citation rules

Registration, enrollment, and withdrawal period for courses*	April 01 – May 10, 2022
Start of the admission (no enrollment possible)	April 13, 2022
Instructional Period	April 19 – July 29, 2022
Re-registration Period for the Winter Semester 2022/23** Deadline for: Applying for the Notification of Continuation of Studies in a Master's Program Applying for Changing Your Degree Program Applying for Leave of Absence Applying for Part-time Study etc.	June 15 – July 15, 2022
Summer Break	August 01 – August 31, 2022
Days without Instruction during the Instructional Period	
Mai Day	May 01, 2022
Christi Himmelfahrt	May 26, 2022
Pentecost Monday	June 06, 2022

Important dates

<https://www.uni-potsdam.de/en/studium/dates-and-deadlines/important-dates-and-deadlines-during-your-studies>

Absolutely, hold deadlines for course, exam and thesis registration.

Keep your TAN safe and available

Talk to module coordinators if you have questions/ feedback!

Important

Studienbereich - Forms & Doc... X +

https://www.uni-potsdam.de/en/studium/konkret/formulare/studienbereich

120% Suchen

What to Study Application & Enrollment **Studying** Advising & Services Dates & Deadlines

Studies / Studying / Forms & Documents / Studienbereich

Overview

- Information on the consequences of the corona crisis
- Information on Starting Your Studies
- Organizing Your Studies
- Organizing Your Exams
- Organizing your Studies and Exams with PULS
- Key Competences
- Course Catalogs & English-language Courses
- Cancellation of Degree Programs
- Legal Foundations
- Forms & Documents**
 - Studienbereich**
 - Anerkennung von Leistungen
 - Prüfungsbereich
- Study & internship abroad

Formulare & Dokumente im Studienbereich

Übergang Bachelor - Master

- Antrag auf Aufnahme des Studiums im Masterstudiengang - nicht lehramtsbezogen (PDF 3,93MB)
- Antrag auf Aufnahme des Studiums im Masterstudiengang - lehramtsbezogen (Lehramt ab Wise 16/17) (PDF 278KB)
- Antrag auf Aufnahme des Studiums im Masterstudiengang- lehramtsbezogen ("auslaufendes" Lehramt) (PDF 211KB)
- Nachweis des Beratungsgesprächs beim Übergang in einen lehramtsbezogenen Masterstudiengang (PDF 74KB)
(Nur für "auslaufendes" Lehramt erforderlich!)

Beurlaubung / Teilzeitstudium

- Antrag auf Beurlaubung (PDF 3,19MB)
- Antrag auf Befreiung von der Beitragspflicht an das Studentenwerk
- Formulare für ein Studium und Praktikum im Ausland
- Antrag auf Teilzeitstudium (PDF 210KB)

Exmatrikulation/Widerruf der Immatrikulation

- Antrag auf Exmatrikulation (PDF 1,01MB)
- Antrag auf Widerruf der Immatrikulation (PDF 134KB)
(Nur bei Neuimmatrikulation!)

Forms and Documents @ UP

<https://www.uni-potsdam.de/de/studium/konkret/formulare/studienbereich>

Übersicht

Infos für Studieninteressierte

Bachelor Biowissenschaften

Master Biowissenschaften

Biochemie & Molekularbiologie

Bioinformatik

Ökologie, Evolution & Naturschutz

Lehramt

Promotion

Prüfungsausschüsse

Computerpool

eLearning und Moodle

Vorlesungsverzeichnis

Fachschaft

Master Biochemie & Molekularbiologie

Universität Potsdam - Institut für Biochemie und Biologie - Studium und Lehre - Masterprogramme - Biochemie und Molekularbiologie

Informationen der Fakultät
Link zum Studiengang auf den zentralen Seiten der Math.-Nat. Fakultät

Informationen der zuständigen Arbeitsgruppen
Link zur Webseite des Masterstudiengangs



BAM webpage with news, FAQ, etc

BAM webpage:

<https://www.uni-potsdam.de/de/bam/index.html>

Übersicht - Master Biochemie

https://www.uni-potsdam.de/en/bam/uebersicht

Home Uni A-Z Sitemap English

STUDYING RESEARCH UNIVERSITY ONLINE SERVICES

The Faculty Study and Teaching Research Internationalization News

Master Biochemie und Molekularbiologie / Übersicht

Übersicht

- Application, Admission, Regulations
- Study plan
- Module manual
- First-semester students summer semester 2021
- Working groups
- Frequently asked questions (FAQ)
- Contact
- Examination board

Master Biochemistry and Molecular Biology

Modern life sciences require training of the next generation of scientists with strong background knowledge of key research areas. This has to be complemented with a solid understanding of state-of-the-art methods and technologies. Our international Master's program in Biochemistry and Molecular Biology focusses on a broad spectrum of research topics ranging from molecules to cells and animal or plant life. The different research teams in our program have core expertise in the fields of biomedicine, molecular plant sciences, evolutionary systems biology, and macromolecular systems. Master's students will be involved in research using the latest technologies in genomics, genetics, systematic bio- and protein analysis, and high-end microscopy. Currently, an international and diverse group of approximately 150 students is enrolled in the program while living in the Potsdam/Berlin area, one of Germany's culturally and scientifically most vibrant regions.

Program Content

This Master's program combines exciting basic research in the following core areas:

- Biomedicine
- Molecular plant sciences
- Evolutionary systems biology
- Macromolecular systems

Within the program, you can select from a broad choice of both practical and theoretical modules for each of the core areas. This allows you to follow your interests and to pursue research projects in the course of a personalized curriculum.

In the field of biochemistry, you will focus on the dynamics and processes of protein synthesis and function, as well as their interactions at intra- and extracellular levels. These processes are relevant for practical applications such as diagnosis and therapy of cardiovascular and neurodegenerative

<https://www.uni-potsdam.de/de/bam/index.html>

Prof. Salim Seyfried

Zoophysiology (Head)

Building 26 Room 1.63

Prof. Salvatore Chiantia Physical Biochemistry (Deputy Head)

Building 25 B0.07

Student representative: Sofia Stiegert

pabam2020@uni-potsdam.de

Examination Board

Register master thesis, recognition of external or previous academic credentials, Disability compensation, extension of master thesis, ...

Dr. Marianne Grafe

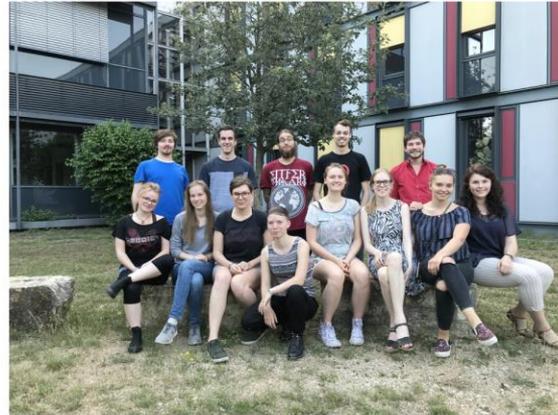
tutoribb@uni-potsdam.de

- Departmental advisor for BAM students
- Study prognosis forms
- Questions related to study organisation,
- Information about admission and study regulations to existing students
- Help with understanding study regulations, course planning, and creation of timetable
- Help with PULS...

Departmental student advisor



Willkommen beim FSR BCE!



Sitzungen in der nächsten Zeit:

Montag 02.03.2020 um 18:00 Uhr im FSR-Raum

Montag 30.03.2020 um 18:00 Uhr im FSR-Raum

Letzte Beiträge

[Protokoll vom 09.03.2020](#)

[Protokoll vom 27.01.2020](#)

[Protokoll vom 13.01.2020](#)

[Protokoll vom 16.12.2019](#)

[Protokoll vom 02.12.2019](#)

[Protokoll vom 18.11.2019](#)

[Protokoll vom 04.11.2019](#)

[Protokoll vom 28.10.2019](#)

Archive

Monat auswählen

Student Council/ Student representatives

<https://www.fsr-bce.de/>

