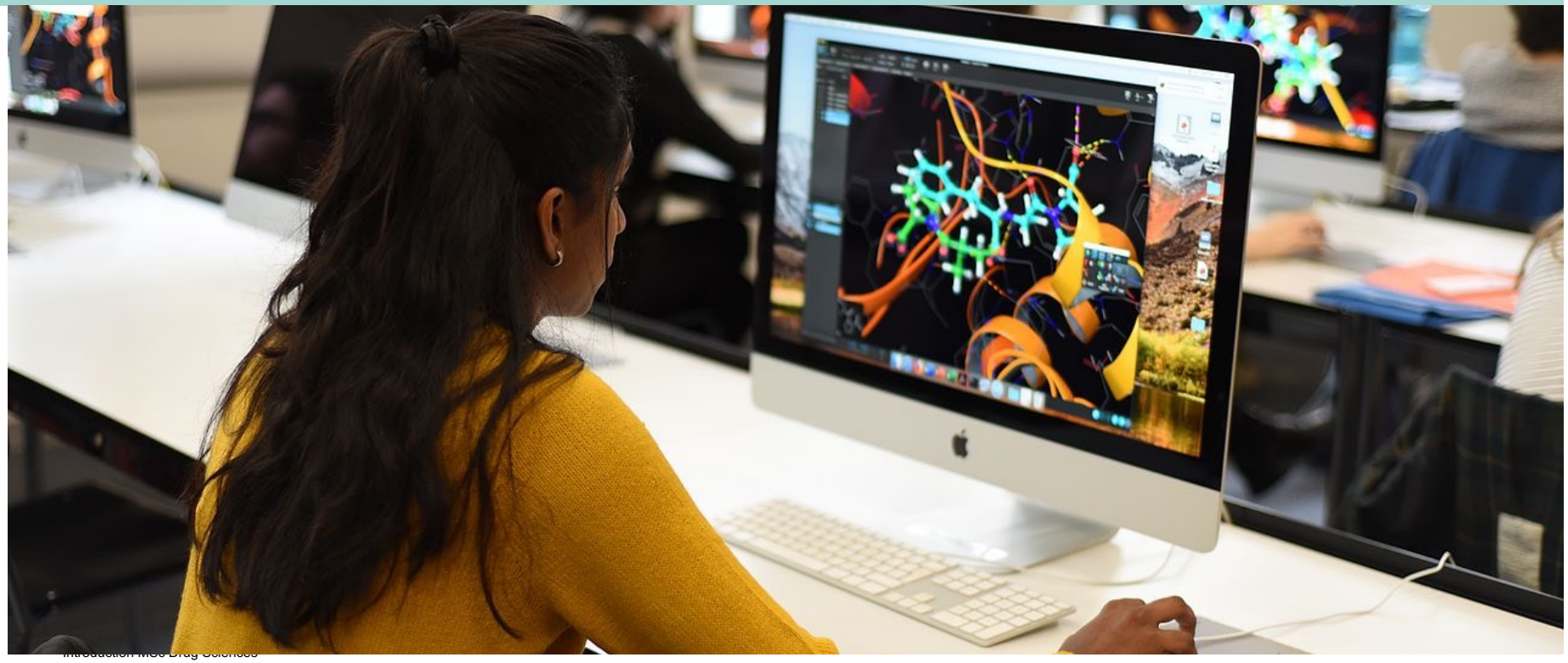
University of Basel

DEPARTMENT OF PHARMACEUTICAL SCIENCES

Welcome to the
Master program in Drug Sciences

19.09.2023



University of Basel

DEPARTMENT OF PHARMACEUTICAL SCIENCES

Introduction
for 1st year students MSc Drug Sciences

Dr. Leonie Reutner
Study Coordinator Department of Pharmaceutical Sciences

Prof. Dr. Alex Odermatt
Prof. Dr. Daniel Ricklin
Prof. Dr. Markus Lill

Program Committee MSc Drug Sciences

Welcome to the University of Basel

Oldest University in Switzerland

Founded 1460

Humanist tradition

Current focus in life sciences

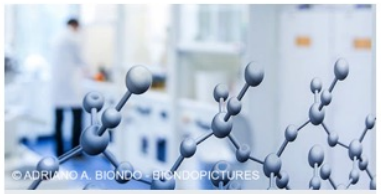
12.000 students

unibas.ch

Welcome to the Faculty of Science

Departemente

DEPARTEMENT
Biozentrum



DEPARTEMENT
Chemie

DEPARTEMENT
Mathematik und Informatik

DEPARTEMENT
Pharmazeutische Wissenschaften

DEPARTEMENT
Physik

DEPARTEMENT
Umweltwissenschaften

Faculty of Science
3000 students

6 Depts / 2 Institutes

philnat.unibas.ch

Welcome to the the Dept of Pharmaceutical Sciences!

13 Research Groups

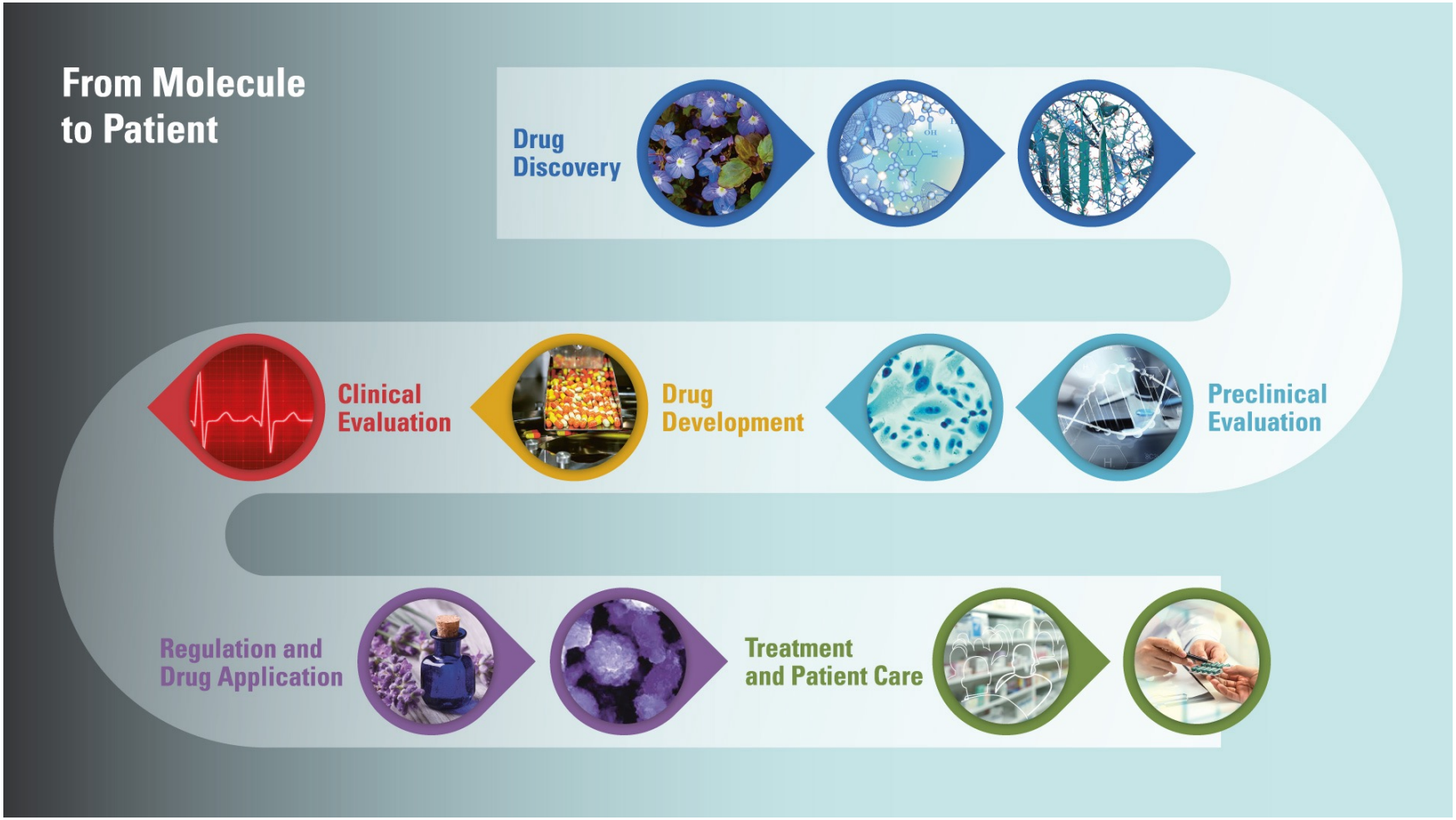
600 students

Drug Sciences
80 students

Established 2016

https://pharma.unibas.ch/en/home/
https://pharma.unibas.ch/en/education/

Research and Education at the DPhS



Meet the Heads of the Drug Sciences program

Prof. Dr. Alex Odermatt
Molecular & Systems Toxicology

Prof. Dr. Markus Lill
Computational Pharmacy

Prof. Dr. Daniel Ricklin
Molecular Pharmacy

Meet (some) of the (internal) lecturers

Prof. Dr. Henriette Meyer zu Schwabedissen
Biopharmacy

Prof. Dr. Jörg Huwyler
Pharmaceutical Technology
Head of Teaching Commission

PD Dr. Martin Smiesko
Molecular Modelling

Meet (some) of the (internal) lecturers

Prof. Dr. Robin Teufel
Pharmaceutical Biology

Prof. Dr. Olivier Potterat
Pharmaceutical Biology

Prof. Dr. Scott McNeil
Nanopharmaceutical &
Regulatory Sciences

Meet (some) of the (internal) lecturers

Prof. Dr. Matthias Liechti
Clinical Pharmacology & Toxicology

Prof. Dr. Martin Wilks
Regulatory Toxicology

PD. Dr. Jamal Bouitbir
Molecluar and Systems Toxicology

University of Basel

DEPARTMENT OF PHARMACEUTICAL SCIENCES

What makes this Master programme special?

What makes MSc Drug Sciences special?

idorsia

NOVARTIS

Tobias Junt
Mark Deurinck
Gisbert Weckbecker

ACTELION
A JANSSEN PHARMACEUTICAL COMPANY
OF Johnson&Johnson

Lonza

Roche

Adrian Roth

Industry collaborations

What makes MSc Drug Sciences special?

Diversity in students

What makes MSc Drug Sciences special

scaht

Swiss Centre for Applied Human Toxicology

"Specilasation in Toxicolgy"

1.) MSc Drug Sciences
2.) Set of predifined electives
3.) 5 years of professional exp.

- Registration as Toxicologist

SCAHT collaboration

What makes MSc Drug Sciences special?

Mentoring

As part of the Master's program in Drug sciences students will be offered a mentoring program. They are given the opportunity to get access to the experience and network of established scientists and professionals to get answers to relevant questions about studying, career planning and start in a classic one-to-one mentoring. The participating mentors come from the pharmaceutical industry and support their mentees in their decisions. The mentoring is based on the voluntary participation and commitment of the participants. The study coordination of the Departement of Pharmaceutical Sciences offer a minimal framework program and is available for consultation.

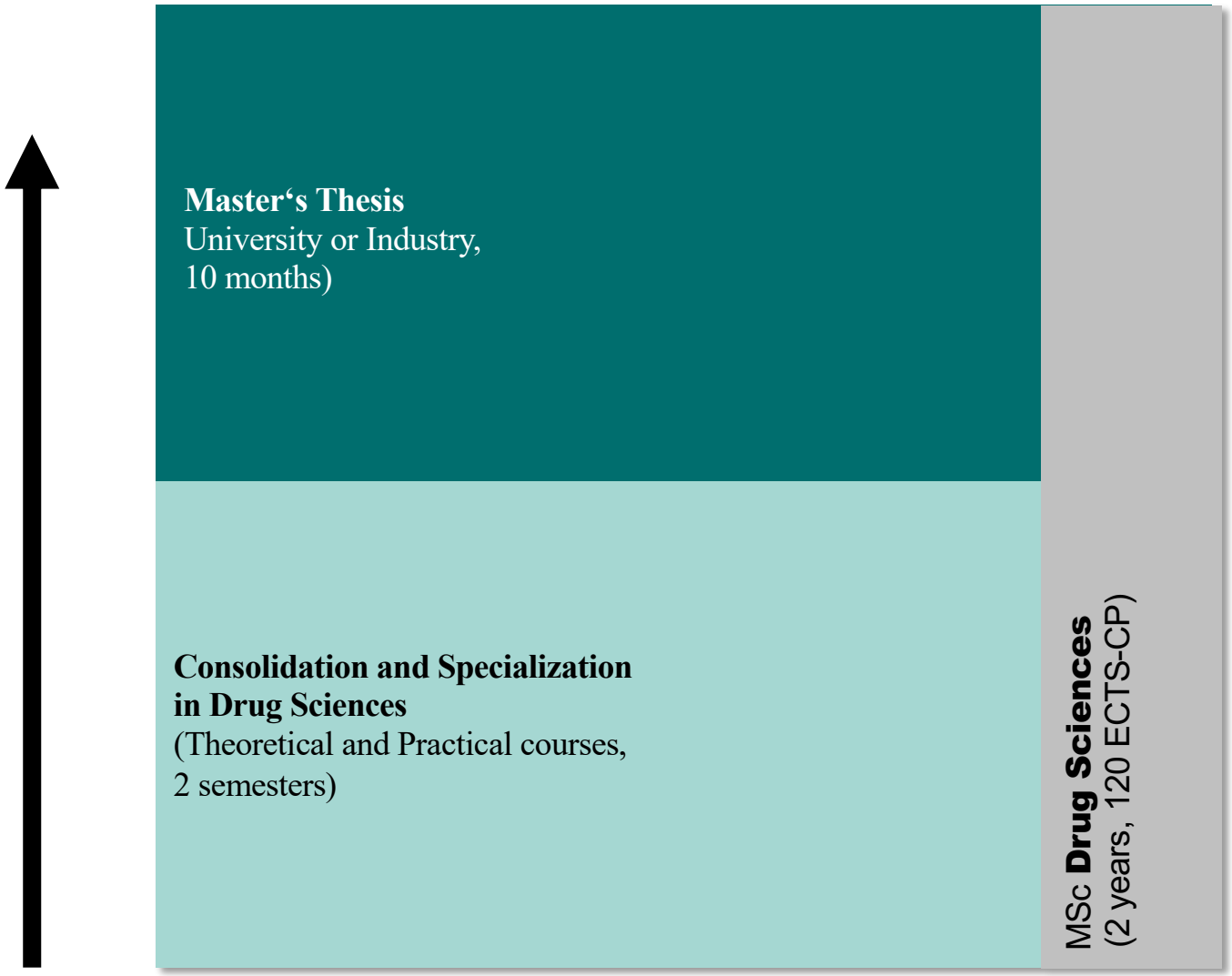
Concept Mentoring program for students in the MSc in Drug Sciences

- Concept (English version)
- Konzept (German version - Deutsch)

Mentoring

What makes MSc Drug Sciences special?

The details:
Study structure



The details:
Curriculum (1st study year)

Module / Lehrveranstaltungen	KP	Semester
1. Introduction and Basis of Human Diseases (8 KP)		
a. Molecular and Pathologic Basis of Disease (V)	3	HS
b. Cancer: Basics, Cause and Therapy (V)	2	HS
c. Genetic Approaches in Biomedical Research (V)	1	HS
d. Nanomedicine (V)	1	HS
e. Drug Sciences (S)	1	HS/FS*
2. General Skills and Experimental Tools (6 KP)		
a. Molecular Modeling in Drug Design (V)	2	HS
b. Computer Modeling of Adverse Effects (V)	1	FS
c. Biostatistics and Experimental Planning (V)	2	HS
d. Information Retrieval**	1	HS
3. Target Identification/Validation to Discovery of Modulators (8 KP)		
a. Mechanisms of Drug Action (V)	2	HS
b. Targets and Therapeutics in Immune Pharmacology (V)	1	HS
c. Concepts of Medicinal Chemistry (V)	2	HS
d. Development of Therapeutic Antibodies (V)	1	HS
e. From Novel Targets to Novel Therapeutic Modalities (V)	2	FS
4. Translating Pharmacology and Drug Safety to Humans (12 KP)		
a. Mechanisms of Toxicity (V)	1	HS
b. Early Safety Assessment and Alternatives to Animal Testing, 3Rs (V)	1	HS
c. Pharmacogenomics (V)	1	FS
d. Organ directed Toxicity (V)	1	FS
e. Reproductive Toxicology (V)	1	HS
f. Psychopharmacology and Neurotoxicology (V)	1	FS
g. Immunosafety (V)	1	FS
h. Regulatory Aspects for Approval of Therapeutics (V)	1	FS
i. Animal Experimentation for Regulatory Purposes (V)	2	HS
j. Safety Assessment for “First-in-Human Clinical Trials” (V)	2	FS
5. Clinical Drug Development: the Basis for Market Approval (8 KP)		
a. Clinical Toxicology (V)	1	HS
b. Good Clinical Practice (V)***	1	HS
c. Special Topics of Clinical Pharmacology (V) bis HS 19 / Special Topics in Drug Discovery and Development (V) ab HS 20	2	HS
d. Industrial Pharmacy (V)	2	HS
e. Drug Delivery and Targeting (V)	2	HS
6. Practical Training (8 KP)		FS
Laboratory Methods in Drug Sciences	8	FS

7. Wahlbereich (insgesamt 15 KP[1])		HS/FS
Folgende Vorlesungen sind Bestandteil für die Spezialisierung in Toxikologie (erforderlich für spätere Registrierung als Fachtoxikologin/Fachtoxikologe gemäss Bestimmungen des Berufsregisters: http://www.swisstox.ch/swisstox-de/register/reglement.php)		
a. Chemical Risk Assessment (V)	1	HS
b. Environmental Toxicology: Compounds, mechanisms, bioaccumulation, effects (V)	1	FS
c. Environmental Toxicology: Effects on organisms and populations (V)	1	FS
d. Food Toxicology and Risk Assessment (V)	1	FS
Erweiterter Wahlbereich (empfohlenes Lehrangebot des Departements Pharmazeutische Wissenschaften):		
e. Bioactive Compounds in Nutritional Plants (V)	1	HS
f. Clinical Chemistry (V)	1	HS
g. International Workshop or Conference (Learning contract)	1	(HS/FS)
h. Modern Cancer Therapy (V)	1	FS
i. Natural Toxins, and Toxin Producing Organisms (V)	1	HS
j. Scientific Writing (S)	3	FS
k. Analytical Applications in Drug Discovery (V)	1	FS
l. Artificial Intelligence in Drug Discovery (V)	1	FS
m. Understanding Sunscreens (V)	1	FS
Total	***65***	

Legende:

HS	Herbstsemester
FS	Frühjahrsemester
KP	ECTS-Kreditpunkte
P	Praktikum
S	Seminar
V	Vorlesung

* muss über die gesamte Studiendauer zweimal besucht werden
** ersetzt ab HS23 „Research Projects in Drug Sciences“. Research Projects in Drug Sciences wird letztmalig im FS24 für Studierende angeboten, die ihr Studium vor HS23 begonnen haben und sich im FS24 in der Masterarbeit befinden.
***Findet im akademischen Jahr 2023/2024 einmalig im FS statt im HS statt.

The details:
Curriculum (2nd study year)

Module / Lehrveranstaltungen	KP	Semester
Masterarbeit (50 KP)		
Masterarbeit (inkl. Verfassen des schriftlichen Berichts)*	50	HS+FS
Masterprüfung (4 KP)		
Masterprüfung (inkl. Vorbereitung)**	4	HS/FS
1. Introduction and Basis of Human Diseases (1 KP)		
e. Drug Sciences (S)	1	HS/FS
Total	***55***	

* Vor Beginn der Masterarbeit muss ein Masterarbeitsvertrag ausgefüllt und von allen Beteiligten unterzeichnet werden (vgl. https://philnat.unibas.ch/de/studium/master)

** Anmeldung zur mündlichen Masterprüfung erfolgt über Absprache mit Beurteiler und Betreuer.

Legende:

HS	Herbstsemester
FS	Frühjahrsemester
KP	ECTS-Kreditpunkte
S	Seminar

(cp. Program Guidelines)

The details:
Schedule autumn semester 23

Compulsory courses	Elective courses˚	*Elective courses˚ required for specialization in Toxicology*

1st – 6th semester week (18/09 – 27/10/2023)

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8.15 – 9.00	60033 Special Topics in Drug Discovery and Development (G. Weckbecker/A. Odermatt)	* 28937 Early Safety Assessment and Alternatives to Animal Testing, 3Rs (A. Roth/A. Odermatt)		44816 Industrial Pharmacy (M. Puchkov)	18580 Information Retrieval (O. Potterat)
9.15 –10.00					
10.15 – 11.00	28939 Molecular and Pathologic Basis of Disease (P. Moulin)	15386 Mechanisms of Drug Action (D. Ricklin)	* 44814 Targets and Therapeutics in Immune Pharmacology (T. Junt)	28938 Drug Delivery and Targeting (J. Huwyler)	
11.15 – 12.00					
12.00 – 13.15					68840 Genetic Appr. in Biomedical Research (R. Lindberg)
13.15 – 14.00	28934 Cancer: Basics, Cause and Therapy (A. Odermatt)	* 44812 Mechanisms of Toxicity (J. Bouitbirl)	65721 Nanomedicine (S. McNeil)		
14.15 – 15.00					44817 Concepts of Medicinal Chemistry (A. Mayweg/A. Odermatt)
15.15 – 16.00	28941 Biostatistics and Experimental Planning (G. Duran-Pacheco)	46377 Molecular Modeling in Drug Design (M. Lill)	* 28942 Animal Experimentation for Regulatory Purposes (M. Deurinck)	* 14438 Clinical Chemistry (K. Rentsch)	
16.15 – 17.00					
17.15 – 18.00			68839 Drug Sciences (SDS) (D. Ricklin)	14446 Geschichte der Pharmazie (Ph. Wanner)	

***7th semester week** (30/10 – 3/11/2023): Examination week (no lectures)

8th - 13th semester week (6/11 – 15/12/2023) *(no lectures: 24/11/2023: Dies Academicus)*

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8.15 – 9.00	60033 Special Topics in Drug Discovery and Development (G. Weckbecker/A. Odermatt)	* *46374 Chemical Risk Assessment (M. Wilks)*		* 44816 Industrial Pharmacy (M. Puchkov)	
9.15 – 10.00					
10.15 – 11.00	* 28939 Molecular and Pathologic Basis of Disease (P. Moulin)	* 15386 Mechanisms of Drug Action (D. Ricklin)	* 14429 Development of Therapeutic Antibodies (D. Ricklin)	* 28938 Drug Delivery and Targeting (J. Huwyler)	
11.15 – 12.00					
12.00 – 13.15					68840 Genetic Appr. in Biomedical Research (R. Lindberg)
13.15 – 14.00	* 28934 Cancer: Basics, Cause and Therapy (A. Odermatt)	* 29950 Clinical Toxicology (Y. Schmid)	* 15384 Bioactive Compounds in Food Plants and Nutraceuticals (O. Potterat)	* 14431 Natural Toxins, and Toxin Producing Organisms (R. Teufel)	
14.15 – 15.00					* 44817 Concepts of Medicinal Chemistry (A. Mayweg/A. Odermatt)
15.15 – 16.00	* 28941 Biostatistics and Experimental Planning (G. Duran-Pacheco)	46377 Molecular Modeling in Drug Design (M. Lill)	* 28942 Animal Experimentation for Regulatory Purposes (M. Deurinck)		
16.15 – 17.00					
17.15 – 18.00			68839 Drug Sciences (SDS) (D. Ricklin)	14446 Geschichte der Pharmazie (Ph. Wanner)	

***14th semester week** (18/12 – 22/12/2023): Examination week (no lectures)

(Additional examination dates January 2024, cp. overview:
https://pharma.unibas.ch/en/education/assessments-and-credit-points/continuous-assessments/

*

University of Basel

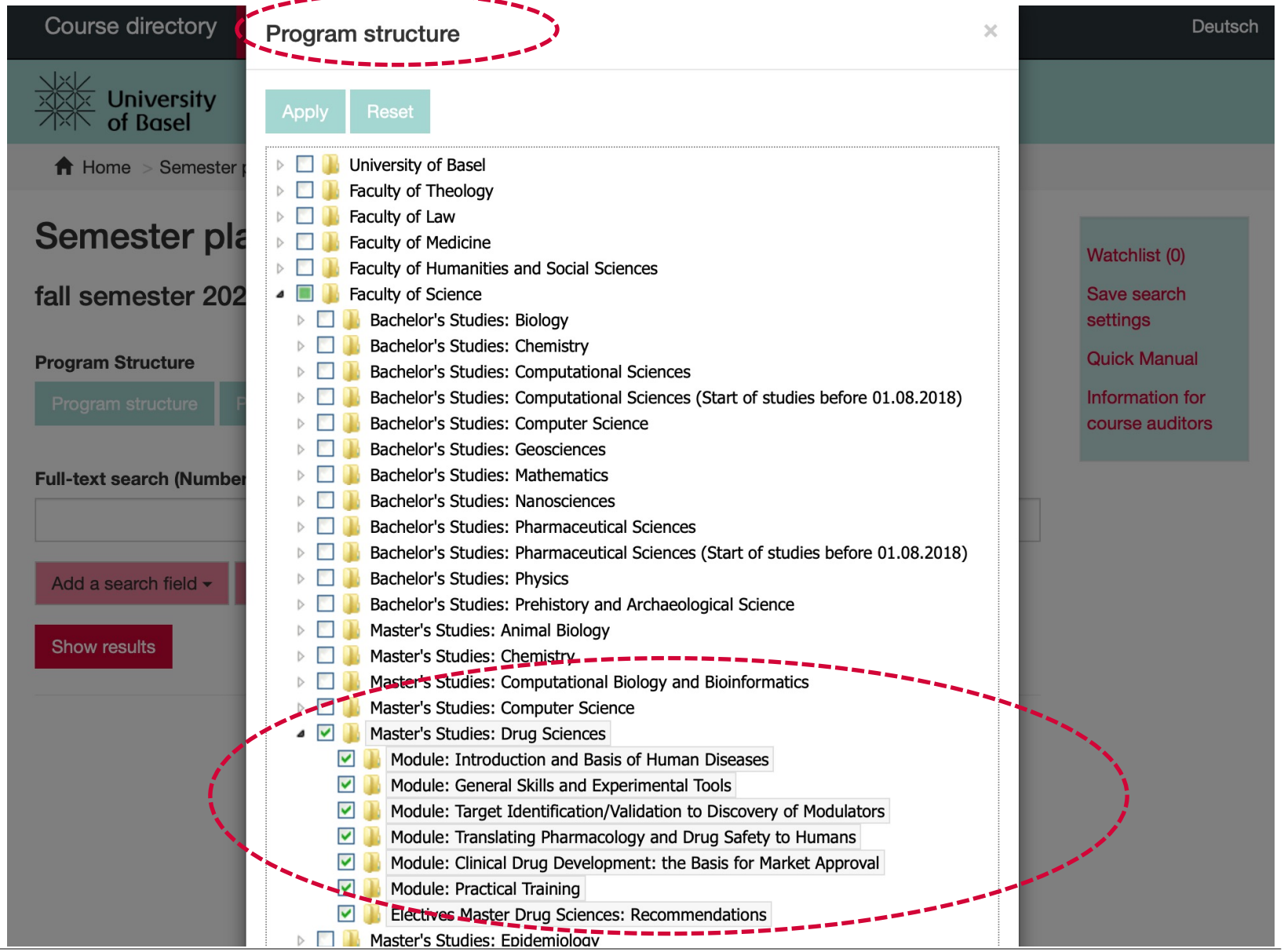
DEPARTMENT OF PHARMACEUTICAL SCIENCES

Course registration and information on lectures

Course Registration in Services (services.unibas.ch)

- Lectures **are in person (on site)**, but some sessions may be held online (see course guide)
- **Registration («Belegung») is mandatory** (prerequisite for gaining access to course material, sitting examinations and, for obtaining credit points)
- Please registration now via official web application services.unibas.ch
- Further information cp. university website: https://www.unibas.ch/en/Studies/My-Studies/Course-Registration.html

http://vorlesungsverzeichnis.unibas.ch/en



Online course directory

Semester planning

fall semester 2023 (course registration period: 01.08.2023 to 16.10.2023)

Watchlist (0)

Save search settings

Quick Manu

Information course audit

Program Structure

Program structure 8 | Program and module details | Reset selection

Full-text search (Number, lecturers, content, entry requirement, learning objectives, literature, comments)

Add a search field | Reset search fields

Show results

Show 10 entries

Showing 1 to 10 of 24 entries

Previous 1 2 3 Next

Semester	No.	Format	Title	Lecturers	CP	Time and place	Aud.	
fs 2023	28942-01	Lecture	Animal Experimentation for Regulatory Purposes	Mark Deurinck	2	Wednesday, 15.15-17.00 Biozentrum, Seminarraum U1.191 weekly		+
fs 2023	15384-01	Lecture	Bioactive Compounds in Food Plants and Nutraceuticals	Olivier Potterat	1	Wednesday, 13.15-15.00 Pharmazentrum, Hörsaal 2 weekly		+
fs 2023	28941-01	Lecture	Biostatistics and	Gonzalo Duran-	2	Monday, 15.15-17.00		+

Online course directory
e.g. 15386 – Mechanisms of Drug Action – Dates and Rooms

Back to selection

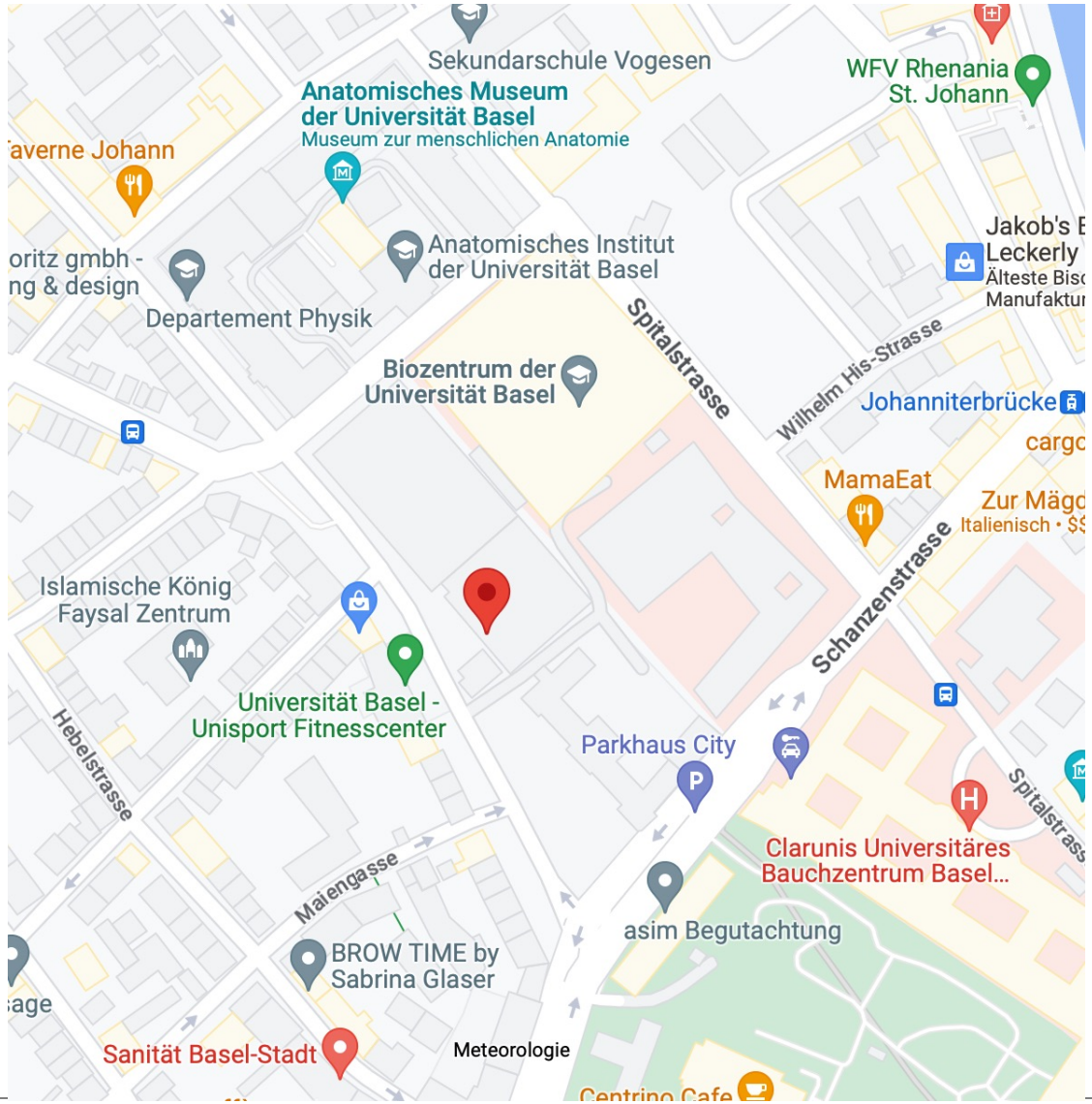
Description | Admission Requirements | Dates and Rooms | Modules | Assessment

Interval	weekly
Date	19.09.2023 – 12.12.2023
Time	Tuesday, 10.15-12.00 Pharmazentrum, Hörsaal 2

Date	Time	Room
Tuesday 19.09.2023	10.15-12.00	Pharmazentrum, Hörsaal 2
Tuesday 26.09.2023	10.15-12.00	Pharmazentrum, Hörsaal 2
Tuesday 03.10.2023	10.15-12.00	Pharmazentrum, Hörsaal 2
Tuesday 10.10.2023	10.15-12.00	Pharmazentrum, Hörsaal 2
Tuesday 17.10.2023	10.15-12.00	Pharmazentrum, Hörsaal 2
Tuesday 24.10.2023	10.15-12.00	Pharmazentrum, Hörsaal 2
Tuesday 31.10.2023	10.15-12.00	- Siehe Bemerkung, Examination weeks

Online course directory

e.g. 15386 – Mechanisms of Drug Action – Location

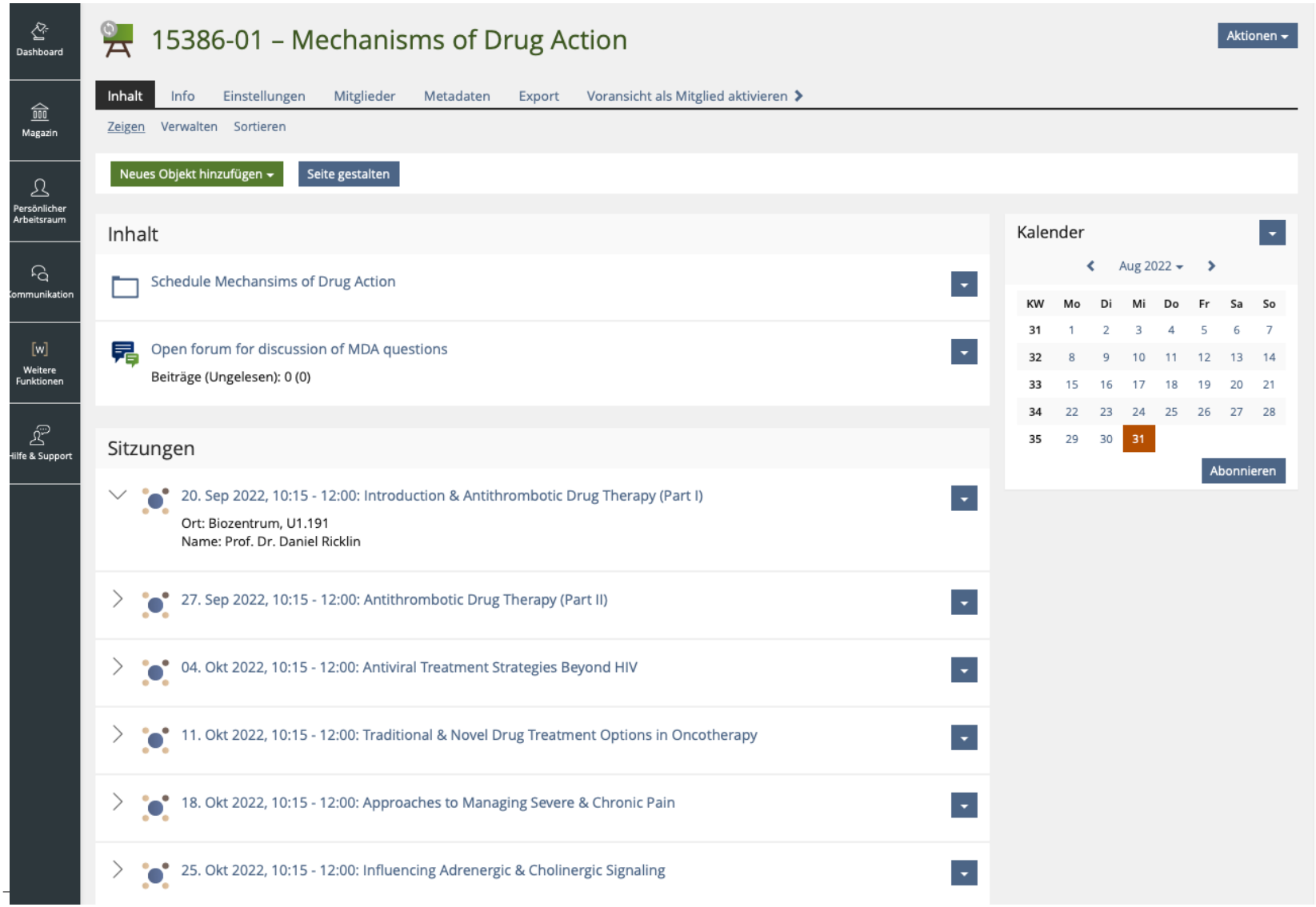


ADAM: Advanced Distribution And More
http://adam.unibas.ch

- Electronic file distribution system
- Access to course materials and information
  (synchronization one night after successful registration for courses on services.unibas.ch

ADAM: Advanced Distribution And More

http://adam.unibas.ch



Workspaces and study areas the University of Basel

- Gallery at the Pharmazentrum
- Workplaces at Biozentrum, 1. floor
- Restaurant “BaCell”, Biozentrum

- Overview of work spaces and study areas on the webite of the UB (library): https://ub.unibas.ch/en/services/work-spaces-study-areas/

University of Basel

DEPARTMENT OF PHARMACEUTICAL SCIENCES

Master Thesis

Master Thesis in Drug Sciences

Required forms for acquiring credit points (no further registration in MOnA required) as well as information shee
be found under "› **Documents**":

Refer to the overview of each Research Group for the current Master's Theses-Projects

› Biopharmacy	› Clinical Pharmacology & Toxicology	› Clinical Pharmacy & Epidemiology
› Computational Pharmacy	› Molecular & Systems Toxicology	› Molecular Pharmacy
› Pharmaceutical Biology	› Pharmaceutical Care	› Pharmaceutical Technology
› Regulatory Toxicology	› Translational Complementary Medicine	

- 10 month scientific project, including written thesis
- Industry or University
- Primary supervisor with at least Master degree
- Assessor / responsible supervisor: Prof. or PD from the Master Drug Sciences
- Master thesis contract for 50 ECTS

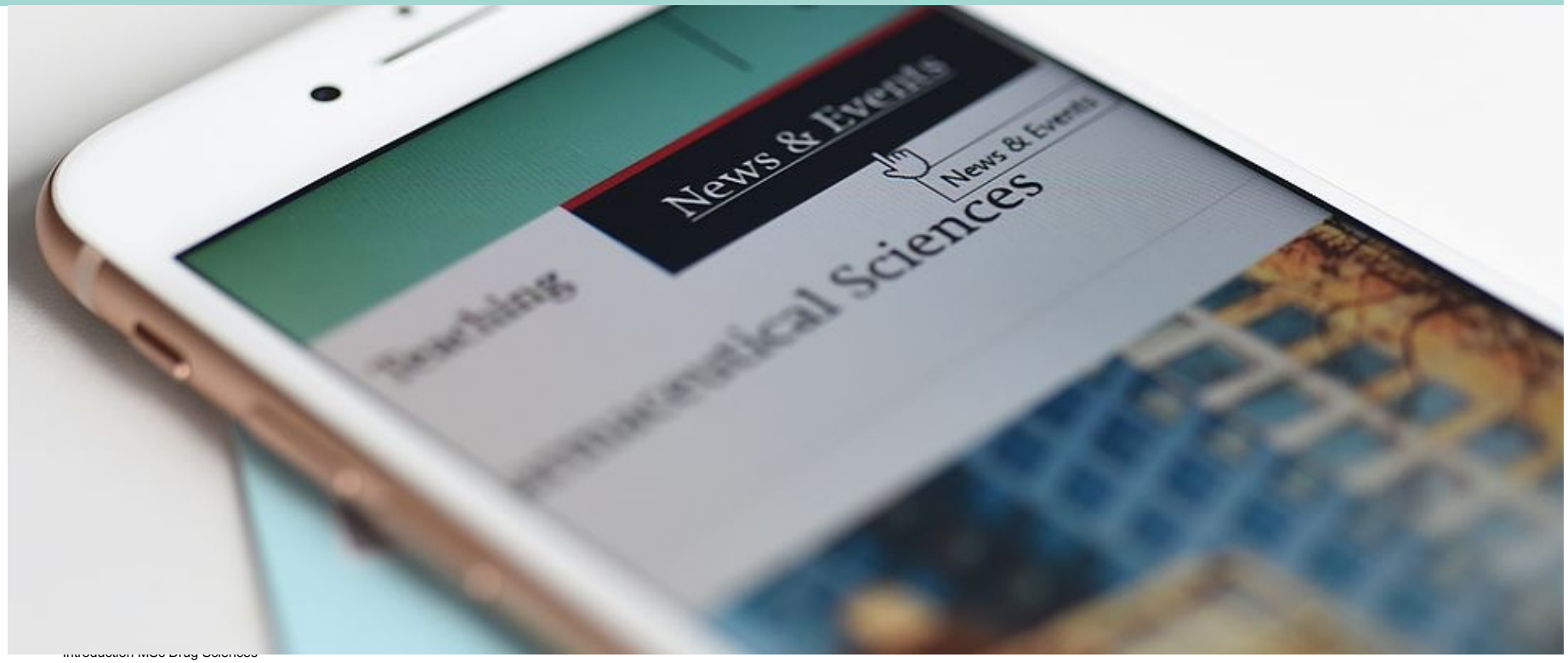
- Defense within 4 Weeks
- 45 minute colloquium including talk and discussion
- Assessor and primary supervisor
- 4 ECTS

Prerequisite: Mandatory first year curriculum completed; max. 3 ECTS open

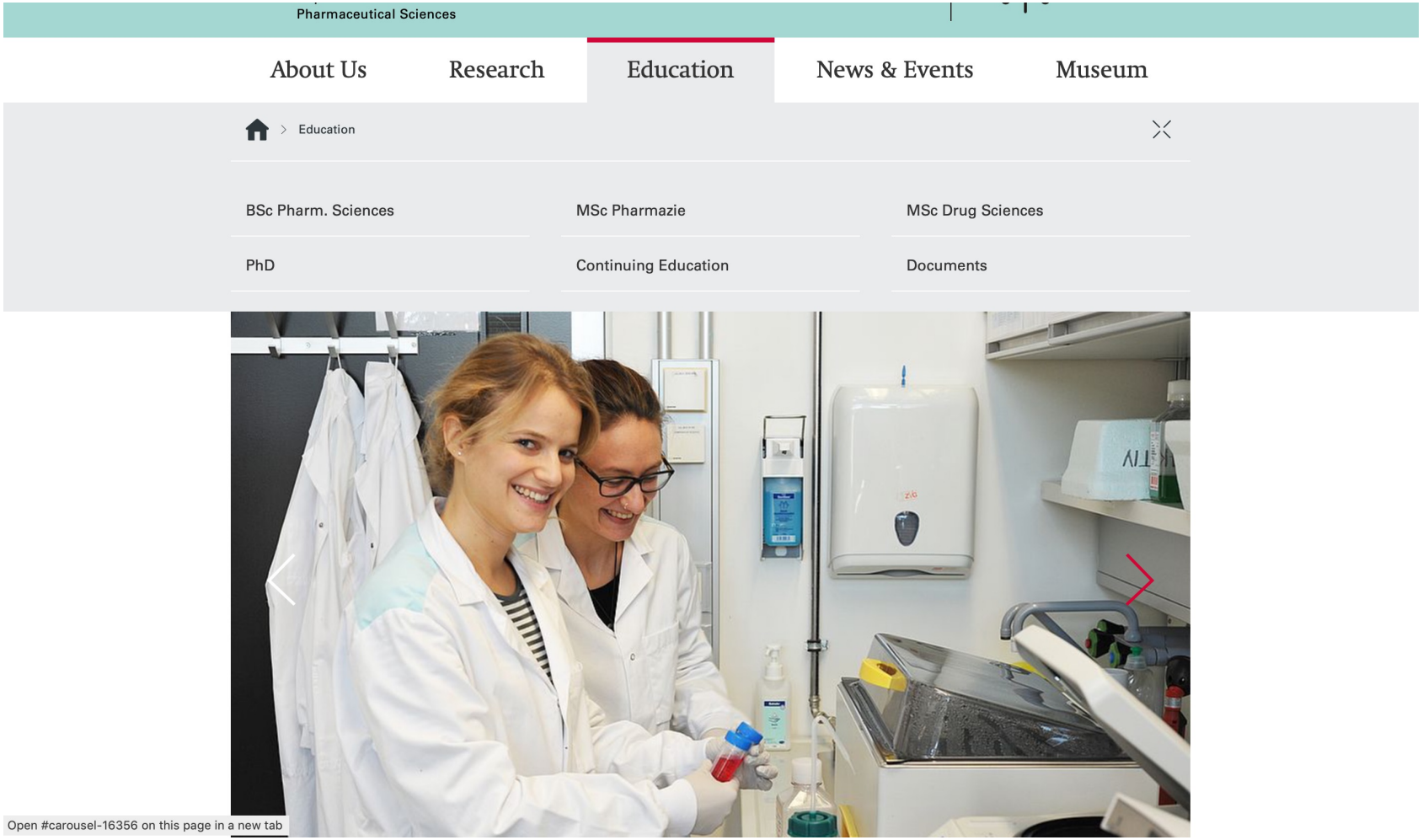
University of Basel

DEPARTMENT OF PHARMACEUTICAL SCIENCES

Communication and information

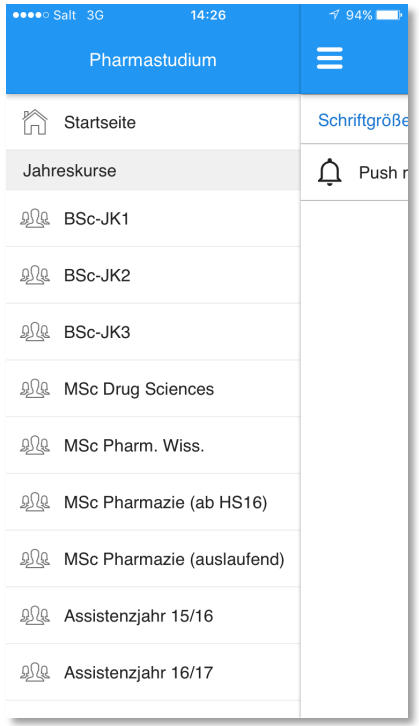


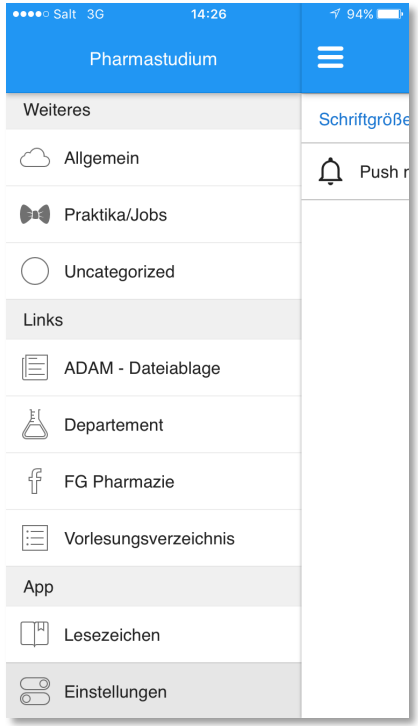
The details:
http://pharma.unibas.ch/en/education

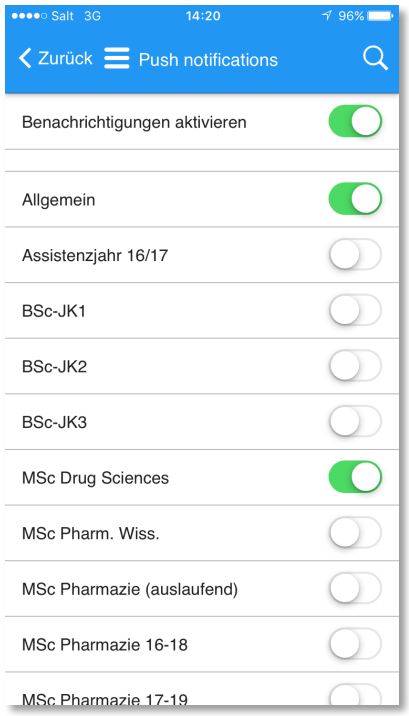


Communication while studying:
Pharmablog-App: http://pharmablog.unibas.ch

- Free of charge
- Push notifications (customizable) on your mobile device(s)
- Available for Android / iOS

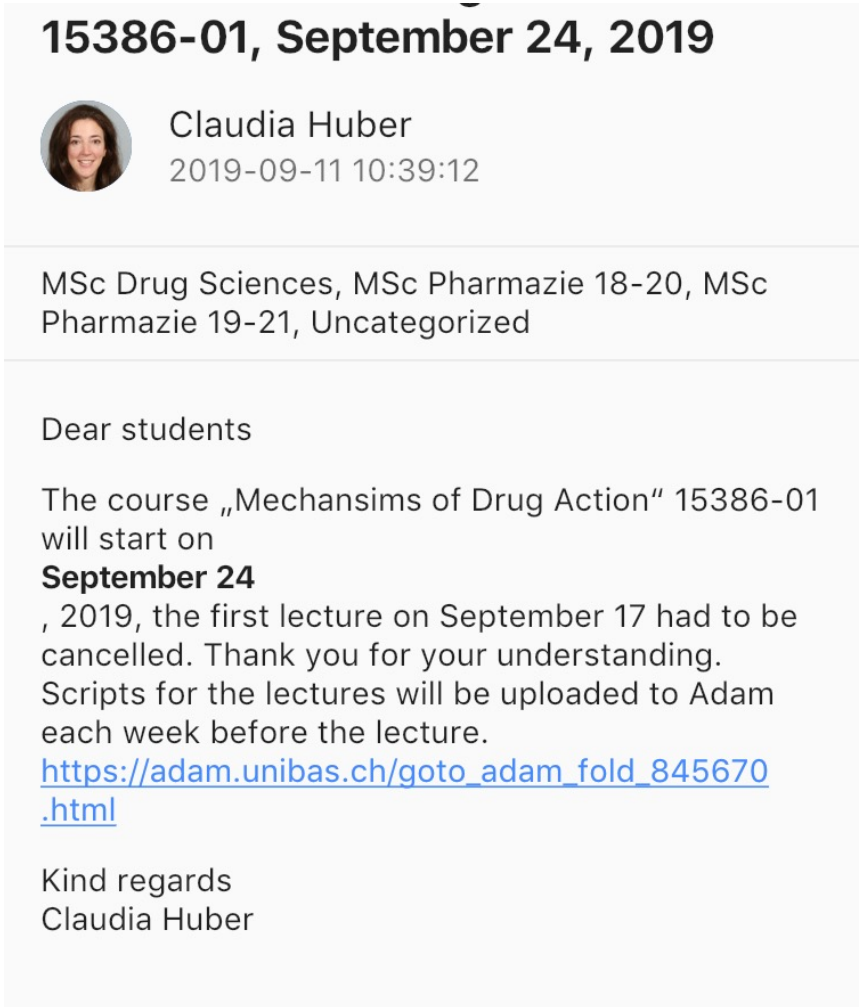






Communication while studying:
Pharmablog-App: http://pharmablog.unibas.ch

- Free of charge
- Push notifications (customizable) on your mobile device(s)
- Available for Android / iOS
- Important information!



15386-01, September 24, 2019

Claudia Huber
2019-09-11 10:39:12

MSc Drug Sciences, MSc Pharmazie 18-20, MSc Pharmazie 19-21, Uncategorized

Dear students

The course „Mechansims of Drug Action“ 15386-01 will start on
September 24
, 2019, the first lecture on September 17 had to be cancelled. Thank you for your understanding. Scripts for the lectures will be uploaded to Adam each week before the lecture.
https://adam.unibas.ch/goto_adam_fold_845670.html

Kind regards
Claudia Huber

Communication while studying:
Study Coordination

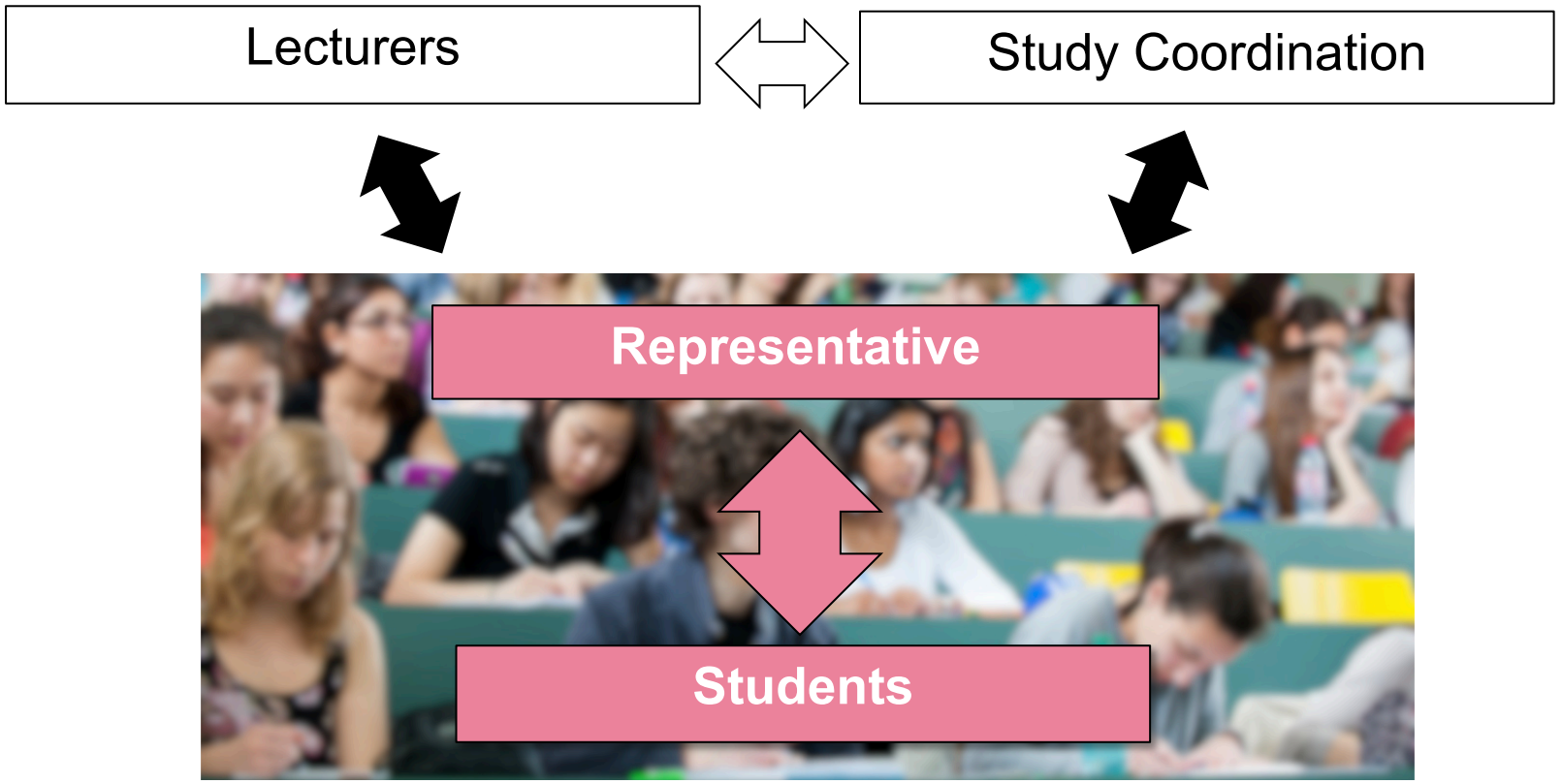
Dr. Leonie Reutner
Study Coordinator

Leonie.Reutner@unibas.ch

Claudia Immeli
Assistant

Claudia.Immeli@unibas.ch

Communication while studying:
Spokesperson of the current Master program
(„Jahreskurssprecher“)

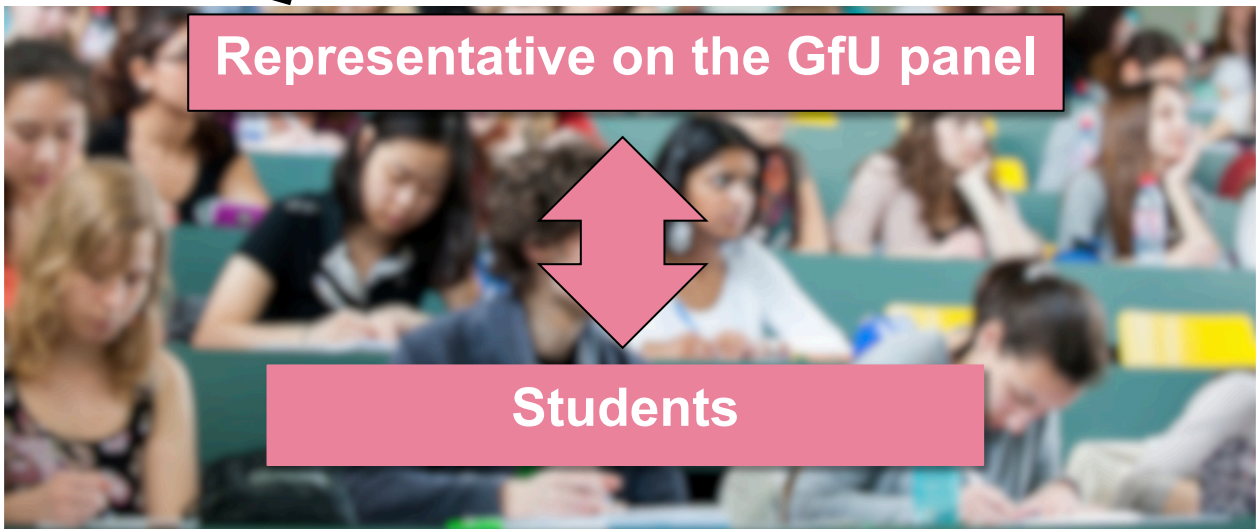


Communication while studying:
Gremium für Unterrichtsfragen (GfU)
(„Panel for Educational Issues“)

Members of GfU
(incl. Study Coordination)

⇔

Teaching commission
(Unterrichtskommission,
UK) Pharm. Sciences



Next meeting: October 5th, 17.15

Interested students get in touch with: leonie.reutner @unibas.ch

Any further questions…?

University of Basel

DEPARTMENT OF PHARMACEUTICAL SCIENCES

Thank you
for your attention…

…have a successful start
to your Master's studies!