#### Note:

The following curriculum is a consolidated version. It is legally non-binding and for informational purposes only.

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# Curriculum for the Diploma Programme in Pharmacy at the University of Innsbruck

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## Curriculum for the Diploma Programme in Pharmacy at the University of Innsbruck

The following abbreviations are to be used:

ECTS = European Credit Transfer System

IP = examination using continuous assessment

LV P = course examinations

LV-P = course examinations SS = summer semester Semh = semester hour(s)

UniStG = University Study Act 1997

WS = winter semester

## § 1 Profile

## (1) Qualification profile and skills

In modern society, pharmacy plays a key role in the health care sector. It is a teaching and research subject in natural sciences, with a strong link to the field of medicine.

Pharmaceutical sciences focus on pharmaceutical products and all related aspects. The Diploma Programme in Pharmacy conveys necessary skills and abilities with which tasks can be conducted independently, competently and efficiently, including knowledge of development, production, quality assurance, composition, preparation and storage, biological effect and interaction of pharmaceuticals as well as their safe use.

In addition to traditional pharmaceutical-related activities, graduates may perform important roles in areas involving informing and advising patients and doctors. This requires additional interdisciplinary skills in patient-oriented pharmacy and health care.

## (2) Occupational profiles

The traditional occupational field of more than 80 per cent of pharmacy graduates is in **public pharmacies** and **hospital pharmacies**. Due to their wide-ranging interdisciplinary training, graduates are also qualified for other fields of activity, including the following areas:

- colleges and universities (research and teaching)
- schools (CPHT education)
- industry (research, production, approval, analytics)
- · health authorities
- inspection and testing institutes (forensic analysis, environmental protection, narcotics analysis, residue analysis laboratories)
- pharmaceutical wholesale
- · specialist publishers

#### (3) Contents and structure

The Diploma Programme in Pharmacy aims at introducing students to all fields of pharmacy with its most important theoretical and practical skills as well as relevant methods, in accordance with the objectives of university training.

The acquisition of fundamental principles in natural sciences and medicine during the Studies Induction and Orientation Stage is followed by the attainment of comprehensive skills in the pharmaceutical core subjects pharmacognosy, pharmacology and toxicology, medicinal chemistry as well as pharmaceutical technology.

Moreover, the diploma programme provides interdisciplinary courses in 'Patient-oriented Aspects in Pharmacy' and courses with attention to special aspects of pharmacy. Elective compulsory subjects from the core subjects as well as a diploma thesis complete the Diploma Programme in Pharmacy. In addition, the programme offers elective courses in pharmaceutically relevant science fields.

## § 2 Scope and duration

#### (1) General

The Diploma Programme in Pharmacy consists of three sections, with a total duration of nine semesters and a work-load of 223 semester hours, including 23 semester hours of elective courses.

## (2) First section ("Erster Studienabschnitt")

The first section provides basic training in all fields of pharmacy; it takes two semesters with a work-load of 42 semester hours.

The first section is concluded when all courses for that section of the programme have been completed successfully (first diploma examination).

## (3) Second section ("Zweiter Studienabschnitt")

The second section conveys the fundamentals of different pharmaceutical subjects; it takes five semesters with a work-load of 129 semester hours.

The second section is concluded when all courses for that section of the programme have been completed successfully (second diploma examination).

#### (4) Third section (,,Dritter Studienabschnitt")

The third section focuses on in-depth knowledge and specialization and prepares students for independent scientific work; it takes three semesters, including one semester for completing the diploma thesis, with a work-load of 29 semester hours.

The third section is concluded successfully with the third diploma examination.

#### (5) Studies Induction and Orientation Stage

- 1. The Studies Induction and Orientation Stage covers one semester (30 ECTS-Credits) and offers students an overview of the main contents of the diploma programme and its structure in order to provide a factual basis to assess the decision to pursue the chosen field.
- 2. The Studies Induction and Orientation Stage requires the following course examinations, which may be repeated twice, to be completed successfully:
  - a) Comprehensive Lecture Series in Pharmacy (VO 2, 3 ECTS-Credits)
  - b) Introduction to Stoichiometry and Biostatistics (VO 2, 2 ECTS-Credits)
  - c) General Chemistry and Inorganic Pharmaceuticals (VO 4, 6 ECTS-Credits)
  - d) General Biology for Pharmacy (VO 3, 4 ECTS-Credits)
- 3. Passing the examinations specified in paragraph 2 permits students to attend all further courses and take all examinations following the Studies Induction and Orientation Stage and to write a diploma thesis as described in the curriculum. Registration requirements specified by the curriculum are to be followed.

## § 3 Types of courses

Courses of the curriculum for the Diploma Programme in Pharmacy are as follows:

- 3.1 **Lectures (VO , Vorlesung ')** introduce students in a didactical way to a subject. General lectures introduce students to the main topics and methods of the subject, with particular reference to essential facts and key doctrines in the field. Special lectures cover the latest scientific developments and present recent research results.
- 3.2 **Practical courses (UE**, *Übung'*) focus on practical skills of different work methods through guided or independent work.
- 3.3 **Lectures with practical elements (VU**, *Vorlesung verbunden mit Übungen*) are courses closely linked with a lecture, which cover specific issues and their solutions, in accordance with the practical objectives of the diploma programme mentioned in section 3.1.
- 3.4 **Seminars** (**SE**, *Seminar*) are courses for scientific discussion where students are required to perform scientific work independently, in form of a presentation and a written piece of work.
- 3.5 **Excursions (EX**, *Exkursion*) serve to demonstrate and treat topics outside the premises of the university, with written documentation (e.g. report, poster, review).

## § 4 Subjects

According to § 4(23) UniStG, subjects are thematic units of a number of closely linked courses, generally conveying common contents and methods.

The Diploma Programme in Pharmacy conveys knowledge of different subjects with the four core subjects Pharmacognosy (I), Pharmacology and Toxicology (II), Medicinal Chemistry (III) and Pharmaceutical Technology (IV), which form the examination subjects of the second section of the diploma programme.

According to § 2(2), the courses of the first section convey the necessary fundamentals of the diploma programme. The allocation of relevant courses to propaedeutic examination subjects can be found in § 5. In this context, the following abbreviations are to be used:

PBM Propaedeutic Biologic-Medicinal Subjects
PC Propaedeutic Chemical Subjects
ID Interdisciplinary Subjects

Additional courses of the third section are allocated to the examination subjects 'Special Pharmacy 1' (marked with 'SP-1' in § 5) and 'Special Pharmacy 2' (marked with 'SP-2' in § 5).

## § 5 Courses

#### (1) General

The following section lists the courses of the Diploma Programme in Pharmacy which are to be completed as compulsory (§ 4(24) UniStG) and elective courses (§ 4(25) UniStG). The courses mentioned below are compulsory subjects unless otherwise stated. As courses are sequential sessions, the

structure of semesters should be followed by students as indicated. In terms of efficient study progress, it is recommended to take course examinations, if possible, by the beginning of the semester following the course at the latest.

According to the European system for the transfer of credits, ECTS-Credits are allocated to all courses (§ 13(5) UniStG) to make a course sequence more transparent and thus internationally comparable. In order to successfully complete the diploma programme within the scheduled time frame of nine semesters, students are recommended to perform a workload of 30 ECTS-Credits per semester. ECTS-Credits are mentioned in the following course charts.

For elective courses, one semester hour in general corresponds to one ECTS-Credit. The allocation of courses to the individual subjects is specified in § 4.

#### (2) Courses of the first section

## 1<sup>st</sup> semester (WS)

Course	Туре	Semh	Examinat ion	Subje ct <sup>a)</sup>	ECTS- Credits	Number of participant s <sup>b)</sup>
Comprehensive Lecture Series in Pharmacy	VO	2	LV-P	ID	3	
Introduction to Stoichiometry and Biostatistics	VO	2	LV-P	ID	2	
Physics for Students of Pharmacy	VO	2	LV-P	ID	3	
General Chemistry and Inorganic Pharmaceuticals	VO	4	LV-P	PC	6	
Qualitative Inorganic Analysis for Pharmacy	UE	5	IP	PC	2.5	56
General Biology for Pharmacy	VO	3	LV-P	PBM	4	
Hygiene and Microbiology I	VO	2	LV-P	PBM	2	
Hygiene and Microbiology Laboratory Course I	UE	1	IP	PBM	0.5	55
First Aid	VU	1	IP	PBM	0.5	
	_	22		-	23.5	

## 2<sup>nd</sup> semester (SS)

Course	Туре	Semh (hour s)	Examinat ion	Subje ct <sup>a</sup> )	ECTS- Credits	Number of participant s <sup>b)</sup>
Pharmaceutical Analysis - Introduction and Basics	VO	3	LV-P	PC	4	
Organic Chemistry for Pharmacists	VO	4	LV-P	PC	7	
Laboratory Methods (for Students of Pharmacy)	VO	1	LV-P	PC	2	
Quantitative Inorganic Analysis	UE	4	IP	PC	2	25
Hygiene and Microbiology II	VO	2	LV-P	PBM	2.5	
Hygiene and Microbiology Laboratory Course II	UE	1	IP	PBM	0.5	55
Anatomy, Physiology, Pathophysiology (incl. Medical Terminology) I	vo	5	LV-P	PBM	6	
		20			24	

For some courses, prerequisites [according to § 7(7) UniStG] do apply, which are to be assessed by presentation of relevant course examination certificates:

- a) for the course "Qualitative Inorganic Analysis for Pharmacy Students" (UE 5): successful completion of the courses:
  - 1. "First Aid" (VU 1)
  - 2. "General Chemistry and Inorganic Pharmaceuticals" (VO 4)
- b) for the course "Hygiene and Microbiology Laboratory Course I" (UE 1):

successful completion of the courses:

- 1. "Hygiene and Microbiology I" (VO 2)
- 2. "Comprehensive Lecture Series in Pharmacy" (VO 2)
- 3. "Introduction to Stoichiometry and Biostatistics" (VO 2)
- c) for the course "Quantitative Inorganic Analysis" (UE 4):

successful completion of the courses:

- 1. "General Chemistry and Inorganic Pharmaceuticals" (VO 4)
- 2. "Pharmaceutical Analysis Introduction and Basics" (VO 3)
- 3. "Comprehensive Lecture Series in Pharmacy" (VO 2)
- 4. "Qualitative Inorganic Analysis for Pharmacy Students" (UE 5)
- 5. "Introduction to Stoichiometry and Biostatistics" (VO 2)
- d) for the course "Hygiene and Microbiology Laboratory Course II" (UE 1):

successful completion of the courses:

- 1. "Hygiene and Microbiology Laboratory Course I" (UE 1)
- 2. "General Biology for Pharmacy" (VO 3)

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b) Number of participants according to § 5(6)

## (3) Courses of the second section

The prerequisites for the courses of the second section are successful completion of the courses of the first section. Lecture examinations from the subjects of the third and fourth semester can be brought forward.

## 3<sup>rd</sup> semester (WS)

Course	Туре	Semh	Examina tion	Subjec t <sup>a)</sup>	ECTS- Credits	Number of participant s <sup>b)</sup>
Biochemistry and Molecular Biology for Pharmacists	VO	3	LV-P	I	4	
Basics of Anatomy, Morphology and Systematics of Medicinal Plants	vo	2	LV-P	I	4	
Anatomy, Physiology, Pathophysiology (incl. Medical Terminology) II	vo	3	LV-P	II	4	
Nomenclature and Stereochemistry of Drugs	VO	1	LV-P	III	2	
Laboratory Course in Organic Chemistry	UE	12	IP	III	7	34
Instrumental Pharmaceutical Analytics	VO	2	LV-P	III	3	
		23			24	

## 4th semester (SS)

Course	Туре	Semh	Examina tion	Subjec t <sup>a)</sup>	ECTS- Credits	Number of participant s <sup>b)</sup>
Morphology and Anatomy from Medicinal Plants	UE	3	IP	I	6	32
General Pharmacology and Pharmacokenetics	VU	3	LV-P	II	4	15
Medicinal Chemistry I	VO	3	LV-P	III	6	
Separation and Analytical Methods of Organic Active Pharmaceutical Ingredients	vo	3	LV-P	III	5.5	
Analysis of Drugs and their Active (Pharmaceutical) Ingredients	UE	13	IP	III	6.5	40
Electrochemical and Biochemical Methods in Pharmaceutical Chemistry	vo	2	LV-P	III	2	
		27			30	

## 5<sup>th</sup> semester (WS)

Course	Туре	Semh	Examina tion	Subjec t <sup>a</sup> )	ECTS- Credits	Number of participant s b)
Pharmacognosy - Biogenous Drugs I	VO	5	LV-P	I	7.5	
Morphologic and Anatomic Analyses of Medicinal Herbs	vo	1	LV-P	I	1.5	
Morphologic and Anatomic Analyses of Medicinal Herbs	UE	5	IP	I	1.5	32
Pharmacology and Toxicology I	VO	3	LV-P	II	4.5	
Selected Topics in Pharmacology, Toxicology and	VU	2	LV-P	II	1.0	15

a) Explanatory notes on the subjects are specified in § 4
 b) Number of participants according to § 5(6)

Nutrition I						
Medicinal Chemistry II	VO	3	LV-P	III	4.5	
Chemical Methods in Clinical Diagnostics	VO	2	LV-P	III	2.0	
Exercises in Analytical and Clinical Chemistry	UE	7	IP	III	2.5	40
Pharmaceutical Technology I	VO	3	LV-P	IV	4	
		31			29	

## 6<sup>th</sup> semester (SS)

Course	Туре	Semh	Examin ation	Subjec t <sup>a)</sup>	ECTS- Credits	Number of participant s b)
Pharmacognosy - Biogenous Drugs II	VO	3	LV-P	I	6	
Chemical and Biological Analysis of Biogenous Pharmaceuticals <sup>c)</sup>	vo	2	LV-P	I	d)	
Chemical and Biological Analysis of Biogenous Pharmaceuticals <sup>c)</sup>	UE	6	IP	I	d)	20
Quality Inspection and Assessment of Medicinal Plants and Phototherapeutics c)	UE	2	IP	I	d)	20
Pharmacology and Toxicology II	VO	3	LV-P	II	6	
Selected Topics in Pharmacology, Toxicology and Nutrition II	VU	2	LV-P	II	1	15
Medicinal Chemistry III	VO	3	LV-P	III	6	
Pharmaceutical Technology II	VO	2	LV-P	IV	4	
Introduction to Exercises in Pharmaceutical Technology	vo	1.5	LV-P	IV	2.5	
Pharmaceutical-Technological Seminar I	SE	1	IP	IV	0.5	20
Exercises in Pharmaceutical Technology I	UE	6	IP	IV	3	40
		31.5 – 21.5			23	

## 7<sup>th</sup> semester (WS)

Course	Typ e	Semh (hours)	Examin ation	Subjec t <sup>a)</sup>	ECTS- Credits	Number of participan ts b)
Quality Inspection and Assessment of Medicinal Plants and Phytotherapeutics c)	UE	2	IP	I	1	20
Chemical and Biological Analysis of Biogenous Pharmaceuticals <sup>c)</sup>	VO	2	LV-P	I	3.5	
Chemical and Biological Analysis of Biogenous Pharmaceuticals <sup>c)</sup>	UE	6	IP	I	2.5	20
Pharmacology, Toxicology III and Nutrition	VO	1	LV-P	II	2	
Medicinal Chemistry IV	VO	3	LV-P	III	6	
Pharmaceutical Aspects of Clinical Chemistry	VO	1	LV-P	III	2	
Modern Methods of Active Ingredient Research	VO	1	LV-P	III	2	

a) Explanatory notes on the subjects are specified in § 4
 b) Number of participants according to § 5(6)

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Number of participants according to § 5(6)

These courses are parallel courses according to § 7(8) UniStG, and, due to limited number of participants, are held in WS (6<sup>th</sup> semester) and in SS (7<sup>th</sup> semester)

Allocation of ECTS-Credits is made in the 7<sup>th</sup> semester

a) Explanatory notes on the subjects are specified in § 4

Introduction to Exercises in Pharmaceutical Technology II	VO	1.5	LV-P	IV	2	
Pharmaceutical-Technological Seminar II	SE	1	IP	IV	0.5	20
Exercises in Pharmaceutical Technology II	UE	6	IP	IV	3	40
Biopharmaceutics	VO	2	LV-P	IV	3.5	
		16.5 – 26.5			28	

For some courses, prerequisites [according to § 7(7) UniStG] do apply, which are to be assessed by presentation of relevant course examination certificates:

- a) for the course "Laboratory Course in Organic Chemistry" (UE 12)
  - successful completion of the courses:
    - 1. "Organic Chemistry for Pharmacists" (VO 4)
    - 2. "Laboratory Methods (for Students of Pharmacy)" (VO 1)
- b) for the course "Morphology and Anatomy from Medicinal Plants" (UE 3)

successful completion of the course:

- " Morphology and Anatomy from Medicinal Plants" (VO 2)
- c) for the course "Analysis of Drugs and their Active (Pharmaceutical) Ingredients" (UE 13) successful completion of the courses:
  - 1. "Nomenclature and Stereochemistry of Drugs" (VO 1)
  - 2. "Laboratory Course in Organic Chemistry" (UE 12)
  - 3. "Instrumental Pharmaceutical Analytics " (VO 2)
  - 4. "Separation and Analytical Methods of Organic Active Pharmaceutical Ingredients" (VO 3)
- d) for the course "Exercises in Analytical and Clinical Chemistry" (UE 7)  $\,$

successful completion of the courses:

- 1. "Analysis of Drugs and their Active (Pharmaceutical) Ingredients" (UE 13)
- 2. "Electrochemical and Biochemical Methods in Pharmaceutical Chemistry " (VO 2)
- 3. "Biochemistry and Molecular Biology for Pharmacists" (VO 3)
- e) for the course "General Pharmacology and Pharmacokenetics" (VU 3)

successful completion of the courses:

"Anatomy, Physiology, Pathophysiology (incl. Medical Terminology) I" (VO 5)

"Anatomy, Physiology, Pathophysiology (incl. Medical Terminology) II" (VO 3)

f) for the course "Morphologic and Anatomic Analyses of Medicinal Herbs" (UE 5) successful completion of the course:

"Morphology and Anatomy from Medicinal Plants" (UE 3)

g) for the course "Chemical and Biological Analysis of Biogenous Pharmaceuticals" (UE 6) successful completion of the courses:

"Morphologic and Anatomic Analyses of Medicinal Herbs" (VO 1)

" Morphologic and Anatomic Analyses of Medicinal Herbs" (UE 5)

h) for the course "Quality Inspection and Assessment of Medicinal Plants and Phytoterapeutics" (UE 2)

successful completion of the course:

"Chemical and Biological Analysis of Biogenous Pharmaceuticals" (UE 6)

i) for the course "Selected Topics in Pharmacology, Toxicology and Nutrition I" (VU 2) successful completion of the course:

"General Pharmacology and Pharmacokenetics" (VU 3)

j) for the course " **Selected Topics in Pharmacology, Toxicology and Nutrition II**" (VU 2) successful completion of the course:

"Selected Topics in Pharmacology, Toxicology and Nutrition I" (VU 2)

k) for the course "Exercises in Pharmaceutical Technology I" (UE 6) successful completion of the course:

"Introduction to Exercises in Pharmaceutical Technology I" (VO 1.5)

- l) for the course "Exercises in Pharmaceutical Technology II" (UE 6) successful completion of the courses:
  - 1. "Exercises in Pharmaceutical Technology I" (UE 6)
  - 2. "Pharmaceutical-Technological Seminar" (SE 1)
  - 3. "Introduction to Exercises in Pharmaceutical Technology II" (VO 1.5)

## (4) Courses of the third section

The prerequisites for the courses of the third section are successful completion of the courses using continuous assessment of the second section.

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## $8^{th}/9^{th}$ semester

Course	Туре	Semh	Examinat ion	Subjec t <sup>a)</sup>	ECTS- Credit s	Number of participan ts b)
Laboratory Course in Biochemistry and Molecular Biology for Pharmacists	UE	2	IP	SP-1	1	15
Pharmacology and Toxicology, Practical Course	UE	1	IP	SP-1	2	15
Patient-oriented Aspects in Pharmacy	VO	2	LV-P	SP-2	4	
Patient-oriented Aspects in Pharmacy	SE	2	IP	SP-2	2	20
Elective Subject Pharmacognosy	see Appendix 1	2	see Appendix 1	SP-1	2	see Appendix 1
Elective Subject Pharmacognosy and Toxicology	see Appendix 1	1	see Appendix 1	SP-1	1	see Appendix 1
Elective Subject Medicinal Chemistry	see Appendix 1	2	see Appendix 1	SP-1	2	see Appendix 1
Elective Subject Pharmaceutical Technology	see Appendix 1	1	see Appendix 1	SP-1	1	see Appendix 1
Workflows in Pharmaceutical Sciences	UE	6	IP	SP-1	5	
Research in Pharmaceutical Sciences: Recent Progress	SE	2	IP	SP-1	2	
Research in Pharmaceutical Industry	EX	2	IP	SP-1	1.5	
Use of Modern Information Sources in Pharmaceutical Sciences	SE	2	IP	SP-1	2	
Computer Course	UE	2	IP	SP-1	2	15
Law for Pharmacists	VO	1	LV-P	SP-2	1	
Elective Subject Further Aspects of Pharmacy	see Appendix 1	1	see Appendix 1	SP-2	1	see Appendix 1
		29			29.5	

For the course "**Laboratory Course in Biochemistry and Molecular Biology for Pharmacists**" (UE 2), prerequisites [according to § 7(7) UniStG] do apply, which are to be assessed by presentation of the course examination certificate of "Biochemistry and Molecular Biology for Pharmacists" (VO 3):

## 8<sup>th</sup>/9<sup>th</sup> semester

b) Number of participants according to § 5(6)

- 12 -

a) Explanatory notes on the subjects are specified in § 4

Diploma Thesis (see § 6) 30 ECTS-Credits
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#### (5) Elective compulsory subjects

Elective compulsory subjects amounting to seven semester hours (two semester hours each from the subjects Pharmacognosy and Medicinal Chemistry as well as one semester hour each from the subjects Pharmacology and Toxicology, Pharmaceutical Technology and the subject ,Further Aspects of Pharmacy') are to be taken in the third section of the diploma programme. A catalogue of elective compulsory subjects as decided by the study committee is specified in Appendix 1 of the curriculum. The contents of elective compulsory subjects are updated annually by the study committee.

## (6) Courses with a limited number of participants [according to § 7(8) UniStG]

The number of participants in courses according to § 7(8) UniStG depends on e.g. room and staff requirements as well as security restrictions; the maximum number of participants is specified in § 5.

Course places are allocated as follows:

- The first criterion is the requirement of the relevant course for the study programme.
- The second criterion is the date of attainment of prerequisites.
- · The third criterion is the grade of the course required for registration of the relevant course.

## § 6 Diploma thesis

The diploma thesis has to be completed in the third section of the diploma programme. Successful completion of examinations using continuous assessment of the second section as well as the course "Workflows in Pharmaceutical Sciences" (UE 6) are required for allocating the diploma thesis' topic.

According to § 4(5) UniStG, the diploma thesis serves to prove that the student is qualified to work independently on scientific topics with regard to contents and in a methodically sound way. A topic is to be chosen from one of the four core subjects of the Diploma Programme in Pharmacy, i.e. Pharmacognosy, Pharmacology and Toxicology, Medicinal Chemistry or Pharmaceutical Technology. According to § 61(2) UniStG, students may suggest a topic or choose a topic from a number of suggestions of available supervisors. The diploma thesis' assignment shall be chosen so that students are able to complete it within one semester. The diploma thesis is to be assessed by the supervisor.

#### § 7 Elective courses

#### (1) General

Elective courses amounting to 23 semester hours are to be taken. Elective courses are courses according to § 4Z25 UniStG, which can be chosen from the courses offered by all recognised domestic and foreign universities and of which examinations are to be taken. On completion of studies, performance records are to be submitted according to the requirements for these subjects.

#### (2) Recommendations

It is recommended by the study committee to choose one additional specialisation in the diploma thesis subject, within the context of elective courses. In particular, courses from elective compulsory subjects of the third section are recommended. Moreover, completion of courses from the following subjects appears appropriate:

- Pharmacognosy
- · Pharmacology and Toxicology
- Medicinal Chemistry
- Pharmaceutical Technology
- Radiopharmacy
- · Inorganic, Analytical and Organic Chemistry
- Biochemistry
- Biology
- Medicine

- Environment and Ecology
- Languages
- · Management and Economics

## § 8 Examination regulations

## (1) General

Performance in courses using continuous assessment (IP) is assessed through successful completion and participation of students. Evaluation in continuous assessment courses is based on participation and required (or voluntary) written and/or oral contributions and/or practical contributions from the participants. A course has to be repeated in case of failure.

According to § 52(1) UniStG, course examinations are to be held by the instructor of the course. If possible, course examinations are based on written contributions. The method of testing is to be defined by the instructor before the start of the course according to § 7(6) UniStG. For re-examinations, § 58 UniStG is applicable.

#### (2) First diploma examination

The first diploma examination is concluded when all course examinations specified in § 5(2) are completed successfully:

#### (3) Second diploma examination

The second diploma examination is concluded when all course examinations specified in § 5(3) are completed successfully. Instead of individual course examinations, the following course examinations can electively be combined:

#### From the examination subject "Pharmacognosy":

- Pharmacognosy Biogenous Drugs I
- Pharmacognosy Biogenous Drugs II

#### From the examination subject "Pharmacology and Toxicology":

- Pharmacology and Toxicology I
- Pharmacology and Toxicology II
- Pharmacology and Toxicology III and Nutrition

#### From the examination subject "Medicinal Chemistry":

- Medicinal Chemistry I
- Medicinal Chemistry II
- Medicinal Chemistry III
- Medicinal Chemistry IV

#### From the examination subject "Pharmaceutical Technology":

- Pharmaceutical Technology I
- Pharmaceutical Technology II

## (4) Third diploma examination

The first part of the third diploma examination is concluded when all course examinations specified in § 5(4) are completed successfully.

The second part of the third diploma examination is concluded with successful completion of overall examination in front of an examination board comprising more than one examiner. Admission requirements for the second part of the third diploma examination are, in addition to successful completion of the first part of the third diploma examination, successful completion of all elective courses and successful completion of the diploma thesis (see § 5).

The second part of the third diploma examination includes one examination from a specific field of the subject allocated to the topic of the diploma thesis (whereas, if possible, the supervisor of the diploma thesis is to be appointed as examiner) and one examination from a specific field of another core subject of the diploma programme which can be chosen by the student. The board of examiners is to be appointed by the Dean of Studies according to § 56 UniStG, however, the wishes of the candidate are to be considered, if possible.

## § 9 Academic Degree

According to Appendix 1 of UniStG, graduates of the Diploma Programme in Pharmacy are awarded the academic degree "Magistra der Pharmazie"/"Magister der Pharmazie", Latin name "Magistra pharmaciae", abbreviated "Mag. pharm.".

## § 10 Legal basis

The legal basis is the University Study Act 1997 (UniStG), the University Organisation Act 1993 (UOG 93), the General Administrative Law Act 1991 as well as the decrees of the Federal Minister for the development of degree programmes in the relevant version. Further legal basis is the decisions of the Academic Senate and the Faculty of Natural Sciences of the University of Innsbruck.

## § 11 Transitional provisions

- (1) Regular degree students who began the Diploma Programme in Pharmacy at the University of Innsbruck before 1 October 2001, when the curriculum described in this document came into effect, are entitled to complete the second section of the diploma programme ("zweiter Studienabschnitt") within the legal duration of studies plus three semester.
- (2) The modifications to the curriculum are effective as of 1 October 2006 and apply to all students.
- (3) The modification to the curriculum is effective as of 1 October 2010. Modifications of § 2 Para 5 and § 5 Para 2 (Introduction of Studies Induction and Orientation Stage according to § 66 Para 1 UG) apply to students admitted to study at the university for the first time in winter semester 2010/2011. Modifications of § 5 Para 3 and 4 apply to all students.
- (4) § 2 Para 5 in the version published in the University of Innsbruck Bulletin of 8 June 2011, Issue 26, No 459 is effective as of 1 October 2011 and applies to students admitted to study at the university for the first time in winter semester 2011/2012.
- (5) § 2 Para 5 in the version published in the University of Innsbruck Bulletin of 8 June 2011, Issue 26, No 459 ceases to be effective at the end of 30 September 2014.

 $\underline{Appendix\ 1} \qquad \textbf{Elective\ compulsory\ subjects\ of\ the\ third\ section}$ 

Course	Туре	Semh	Examina tion	ECTS- Credits	Number of participants
Thermomicromethods in Pharmacy	VU	1	IP	1	10
Systematic of Medicinal Plants	VO	1	LV-P	1	10
Pharmacobotanical Excursion	EX	1	IP	1	10
Phytopharmaceuticals: From Cultivation to the Finished Medicinal Product	VO	1	LV-P	1	10
Analysis of Medicinal and Agricultural Plants I: Practical Applications of Modern Analytics	VU	1	IP	1	10
Analysis of Medicinal and Agricultural Plants II: Phytotherapeutics	VU	1	IP	1	10
Elective subject Pharmacology and Toxicol	OGY				
Course	Туре	Semh	Examina tion	ECTS- Credits	Number of participant
Stem Cells and Gene Therapy	VO	1	IP	1	10
Pharmacol. and Toxicol Aspects in Drug Development, Drug Safety and Economic Aspects	SE	1	IP	1	10
Clinical Aspects of Drug Therapy	SE	1	IP	1	10
Elective subject MEDICINAL CHEMISTRY  Course	Туре	Semh	Examina tion	ECTS-Credits	Number of participants
Modern Synthetic Methods in Pharmaceutical Chemistry	VU	2	IP	2	10
Modern Analytical Methods in Pharmaceutical Chemistry	VU	2	IP	2	10
Computer-Assisted Methods in Drug Discovery	VU	2	IP	2	10
Selected Topics in Pharmaceutcial Chemistry	SE	2	IP	2	20
Elective subject PHARMACEUTICAL TECHNOLOG	Y				
Course	Туре	Semh	Examina tion	ECTS- Credits	Number of participant
New Trends and Development in Drug Delivery Systems	VO	1	LV-P	1	10
Special Topics on Industrial Development and Production of Drug Delivery Systems	VO	1	LV-P	1	10
Selected Preformulation and Formulation Methods	VO	1	LV-P	1	10
Cosmetics	VO	1	LV-P	1	20
Elective subject Further Aspects of Pharma	CY				

a) Number of participants according to § 5(6)

History of Pharmacy	VO	1	LV-P	1	10
Complementary and Homeopathic Medicine	VO	1	LV-P	1	30