

The English version of this curriculum is not legally binding and is for informational purposes only. The legal basis is regulated in the curriculum published in the University of Innsbruck Bulletin on 29 April 2008, issue 38, No. 267, with changes published in the University of Innsbruck Bulletin on 23 June 2010, issue 42, No. 329.

Curriculum for the
Master's Degree Programme in Molecular Cellular and Developmental Biology
at the Faculty of Biology of the University of Innsbruck

§ 1 Qualification profile

- (1) The Master's Degree Programme in Molecular Cellular and Developmental Biology belongs to the group of studies in the Natural Sciences.
- (2) The objective of the Master's Degree Programme in Molecular Cellular and Developmental Biology at the University of Innsbruck is to introduce students to modern methods in Molecular Biology and their application in the field of Cellular and Developmental Biology, using model animal organisms. Students shall acquire a general understanding of biological contexts, autonomous and integral thinking and flexibility. Based on special knowledge, the practical training is focused on the promotion of teamwork abilities and problem solving skills. As a central part of the Programme, students shall acquire the necessary skills to autonomously develop scientific work and publish scientific data. The Master's Degree Programme also prepares students for doctoral studies.
- (3) Graduates of the Programme have career prospects in the following fields:
 - Scientific activity in private companies (e.g. in the fields of Biotechnology, Pharmacy, Medicine, Toxicology, Bioanalytics)
 - Scientific activity in public and administrative institutions (e.g. in the fields of medicine, health care, food monitoring, forensics, promotion of scientific research, etc.)
 - Fundamental research in Biomedicine
 - Research in Molecular Biology and teaching activity in all fields of Biology
 - Further activities related to other disciplines (e.g. Journalism) in connection with additional qualifications

§ 2 Duration and scope

A total of 120 ECTS credits are awarded for the Master's Degree Programme in Molecular Cellular and Developmental Biology. This equals duration of 2 years (4 semesters). One ECTS credit equals a workload of 25 hours.

§ 3 Admission

- (1) Completion of a relevant University Bachelor Programme or a relevant Bachelor Programme at a university of applied science, or completion of other equivalent studies at an accredited Austrian or non-Austrian post-secondary educational institution is required for admission to the Master's Degree Programme.
- (2) Completion of the Bachelor Programme in Biology at the University of Innsbruck shall be deemed relevant for the purposes of para. 1 in any case.

- (3) If equivalency is given in principle, and only a few elements are missing for full equivalency, the rector's office is entitled to combine the determination of equivalency with the obligation to pass certain examinations in the course of the Master's Programme.

§ 4 Types of courses and maximum number of students per course

- (1) With the exception of lectures (VO), all courses are courses with continuous performance assessment. Decisive factors for the maximum number of students per course and the necessary support and mentoring to students are safety aspects, available space, and necessary equipment.
- (2) Courses are divided into the following types
1. **Lecture (VO):** In this type of course, significant content and schools of thought of a special area are presented and explained by a lecturer. Maximum number of students per course: 300.
 2. **Practical course (UE):** Practical courses enable participants to study and apply scientific knowledge and working methods in practice. Maximum number of students per course: 10.
 3. **Lecture with integrated practical parts (VU):** Integrated course where lecture parts are combined with practical parts. Maximum number of participants: 8 – 15.
 4. **Seminar (SE):** In guided self-study programmes, including lecture presentations, written contributions and/or scientific discussions, students reflect on subject matter and methods of a special area. Maximum number of students per course: 10 – 30.
 5. **Project study (PJ):** In these courses, selected scientific methods are applied in special projects. Maximum number of students per course: 10.

§ 5 Procedure for the allotment of places in courses with a limited number of participants

The following criteria shall be applied for the allotment of places in courses with a limited number of participants:

1. Presence at the preliminary meeting (personal or represented by a proxy)
2. Regular students of the Master's Programme in Molecular Cellular and Developmental Biology are to be given priority
3. Date of fulfilment of the necessary admission requirement(s); students who fulfilled the admission requirement(s) at an earlier time are to be given priority
4. Number of semesters the student has been enrolled for the Master's Programme in Molecular Cellular and Developmental Biology; students who have been enrolled for a longer time are to be given priority
5. By lot

§ 6 Mandatory and elective modules

- (1) Students have to complete mandatory modules equalling a total of 25 ECTS credits (one module with 7.5 ECTS credits and one module each with 15 and 2.5 ECTS credits) and elective modules equalling a total of 67.5 ECTS credits (nine modules with 7.5 ECTS credits each), which is a total of 92.5 ECTS credits. Mandatory modules 1, 2 and 3 as well as one elective module each from para. 3 and 4 have to be completed. The remaining elective modules can be freely chosen from para. 3 to 5.

- (2) The following mandatory modules must be completed

Mandatory module 1: Selected topics in Cellular and Developmental Biology	7.5 ECTS credits
Mandatory module 2: Instruction to Scientific Work	15.0 ECTS credits
Mandatory module 3: Master's Thesis Defence (Defensio)	2.5 ECTS credits
Required total	25.0 ECTS credits

- (3) **Elective modules in the area of “Developmental Biology”**

Elective module 1: Molecular Developmental Biology	15.0 ECTS credits
Elective module 2: Molecular Biology of Organogenesis	7.5 ECTS credits
Elective module 3: Developmental Biology of Basal Metazoa	7.5 ECTS credits
Elective module 4: Molecular Neuro-Developmental Biology	7.5 ECTS credits
Elective module 7: Molecular Mouse Embryology	7.5 ECTS credits
Elective module 18: Developmental and Circulatory Biology	7.5 ECTS credits
Elective module 29: Developmental and Cellular Biology of Plants	7.5 ECTS credits
Elective module 8: Scientific Project Study – Developmental Biology	15.0 ECTS credits

- (4) **Elective modules in the area of “Cellular Biology”**

Elective module 9: Cell Physiology I: Cell Homeostasis	7.5 ECTS credits
Elective module 10: Cell Physiology II: Signal Transduction	7.5 ECTS credits
Elective module 11: Cell Culture and Life Cell Imaging	7.5 ECTS credits
Elective module 13: Histology and Cytology	7.5 ECTS credits
Elective module 14: Bioinformatics	7.5 ECTS credits
Elective module 15: Genomics	7.5 ECTS credits
Elective module 16: RNomics	7.5 ECTS credits
Elective module 19: Molecular Physiology	7.5 ECTS credits
Elective module 20: Molecular Ecophysiology	7.5 ECTS credits
Elective module 27: Molecular Cell Machines	7.5 ECTS credits
Elective module 28: Proliferation and Programmed Cell Death	7.5 ECTS credits
Elective module 17: Scientific Project Study – Cellular Biology	15.0 ECTS credits

- (5) **Elective modules in the area of "Other Disciplines"**

Elective module 24: Theory of Science and Gender Research	7.5 ECTS credits
Elective module 25 and 26: Modules from other Master's Programmes of the Faculty of Biology	7.5 ECTS credits each

Required total	67.5 ECTS credits
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§ 7 Courses of the mandatory and elective modules, including ECTS credits.

(1) The following mandatory modules must be completed:

1.	Mandatory module: Selected Topics in Cellular and Developmental Biology	Sem. hours	ECTS credits
a.	VO Current Topics in Cell Biology Students will gain an insight into the current scientific environment of research in Cellular Biology	3	4.5
b.	VO Current Topics in Developmental Biology Students will gain an insight into the current scientific environment of research in Developmental Biology	2	3
	Total	5	7.5
	Learning objectives: Students are able to understand current methods, techniques and research approaches in Cellular and Developmental Biology.		
	Admission requirements: none		

2.	Mandatory module 2: Instruction to Scientific Work	Sem. hours	ECTS credits
a.	PJ Instruction to Scientific Work Students are introduced to scientific methods for the design, realisation, interpretation and presentation of the Master's Thesis.	10	15
	Total	10	15
	Learning objectives: Students are able to design, elaborate and assess complex trials in the frame of the Master's Thesis.		
	Admission requirements: none		

3.	Mandatory module: Master's Thesis Defence (Defensio)	Sem. hours	ECTS credits
a.	Oral defence of the Master's Thesis before an examination board		2.5
	Total		2.5
	Learning objectives: Reflection on the Master's Thesis in the context of the Master's Studies in Molecular Cellular and Developmental Biology.		
	Admission requirements: positive completion of all other mandatory and elective modules and positive evaluation of the Master's Thesis		

(2) In accordance with §6 para. 1, students have to complete modules equalling a total of 67.5 ECTS credits from the following elective modules

1.	Elective module 1: Molecular Developmental Biology	Sem. hours	ECTS credits
a.	VO Molecular Development Overview of molecular techniques for the analysis of embryonic development in selected model systems of vertebrates and basal metazoa	2	3
b.	SE Molecular Developmental Biology - Seminar Work with selected current original publications focussing on molecular-genetic mechanisms of embryonic development	2	3
c.	UE Molecular Developmental Biology –Course Practical work in the context of molecular mechanisms of embryonic development in selected model systems of vertebrates and basal metazoa; characterisation, expression and manipulation of development genes	6	9
	Total	10	15
	Learning objectives: Students have basic theoretical knowledge and practical skills in the area of the developmental biology of selected model systems of vertebrates and basal metazoa		
	Admission requirements: none		

2.	Elective module: Molecular Biology of Organogenesis	Sem. hours	ECTS credits
a.	VO Molecular Biology of Organogenesis How are organs developed and organised in the embryo: molecular and cellular-biological mechanisms in the development of organs and their significance for regenerative approaches in medicine.	1	1.5
b.	SE Organogenesis – Seminar Current publications on organogenesis centred on Molecular Biology will be presented and discussed in this seminar.	1	1.5
c.	UE Organogenesis – Practical Course Molecular-genetic studies on the development of organs in vertebrates: analysis of mutants and expression, experiments on over-expression, time resolved fluorescence microscopy	3	4.5
	Total	5	7.5
	Learning objectives: Students have basic theoretical and practical knowledge on molecular processes in organogenesis.		
	Admission requirements: none		

3.	Elective module: Developmental Biology of Basal Metazoa	Sem. hours	ECTS credits
a.	VO Developmental Biology of Basal Metazoa Students will be familiarised with techniques to study the development biology of original multicellular organisms. Respective topics will be treated in depth on the basis of practical examples in the practical course “UE Developmental Biology of Basal Metazoa”.	1	1.5
b.	SE Developmental- and Evolution Biology – Seminar Participants will work on current topics in the area of Developmental and	1	1.5

	Evolution Biology. On the basis of original publications, students will acquire skills in efficiently working with primary sources and presenting research results in the frame of the seminar.		
c.	UE Developmental Biology of Basal Metazoa – Practical Course Selected aspects of Experimental Embryology, Development Genetics and Genetic Expression Analysis of developmental-biologic model systems will be studied.	3	4.5
	Total	5	7.5
Learning objectives: Students are able to apply experimental methods and understand the scientific basis for the developmental biology of basal multicellular organisms.			
Admission requirements: none			

4.	Elective module: Molecular Neuro-Developmental Biology	Sem. hours	ECTS credits
a.	VO Neurodevelopment, Lecture How is the nervous system formed, how is it connected? Signal ways of neural induction, differentiation and axogenesis are presented.	1	1.5
b.	SE Neurodevelopment, Seminar In the frame of the seminar, current publications on molecular neuro-development biology will be presented and discussed.	1	1.5
c.	UE Neurodevelopment, Course Practical work on neural induction, differentiation and axogenesis. Research on mutants, application of micro injection, fluorescence microscopy	3	4.5
	Total	5	7.5
Learning objectives: Students have theoretical and practical knowledge on the development and differentiation processes of the nervous system.			
Admission requirements: none			

7.	Elective module: Molecular Mouse Embryology	Sem. hours	ECTS credits
a.	VO Molecular Mouse Embryology How to produce a knock-out and/or a knock-in mouse. Strategies to switch off or replace genetic functions in mice.	1	1.5
b.	SE Molecular Mouse Embryology In the frame of the seminar, current publications on Molecular Mouse Embryology will be presented and discussed.	1	1.5
c.	UE Molecular Mouse Embryology – Course Practical exercises to identify and analyse genetically modified mice; genotyping, establishment of primary cultures and staining techniques	3	4.5
	Total	5	7.5
Learning objectives:			

	Students have theoretical and practical knowledge on the development of genetic diseases.
	Admission requirements: none

8.	Elective module 8: Scientific Project Study – Developmental Biology	Sem. hours	ECTS credits
a.	PJ Lab Rotations – Developmental Biology Collaboration in a current research project in the field of Developmental Biology. Students will summarise the results of the research work in a manuscript-like report and present them in a public symposium.	10	15
	Total	10	15
	Learning objectives: Students are familiar with methods in Developmental Biology and can apply them to solve current research issues. They are also able to elaborate and present their own research results in this area.		
	Admission requirements: none		

9.	Elective module: Cell Physiology I: Cell Homeostasis	Sem. hours	ECTS credits
a.	SE Cell Homeostasis - Seminar Discussion of original publications, preparation and evaluation of trials.	2	3
b.	UE Cell Homeostasis – Practical Course In the practical part of the course, some of the mechanisms of the cell for maintaining homeostasis will be verified in intracellular tests.	3	4.5
	Total	5	7.5
	Learning objectives: Students have basic theoretical and practical knowledge on cellular homeostasis and on mechanisms for maintaining homeostasis under modified conditions.		
	Admission requirements: none		

10.	Elective module: Cell Physiology II: Signal Transduction	Sem. hours	ECTS credits
a.	VO Signal Transduction Basics of cellular signal transduction and cell response to a modified extra-cellular environment	1	1.5
b.	SE Signal Transduction – Seminar Discussion of original publications, preparation and evaluation of trials.	2	3
c.	UE Signal Transduction – Practical Course In the practical part of the course, selected signal ways as well as their activation or inhibition under certain experimental conditions will be verified.	2	3
	Total	5	7.5
	Learning objectives:		

	Students are able to understand and describe the principles of signal transduction on the basis of specific practical examples.
	Admission requirements: none

11.	Elective module: Cell Culture and Live Cell Imaging	Sem. hours	ECTS credits
a.	VO Cell Culture and Live Cell Imaging Introduction to the basics of cell and tissue culture techniques and possible applications in the context of live cell imaging procedures.	2	3
b.	UE Cell Culture and Live Cell Imaging – Practical Course Practical implementation of cell culture as well as preparation techniques for live cell imaging and microscopy, including laser scanning microscopy (LSM) and electron microscopy.	3	4.5
	Total	5	7.5
	Learning objectives: Students are familiar with different cell culture techniques, possible applications for live cell imaging and selected microscopic methods.		
	Admission requirements: none		

13.	Elective module: Histology and Cytology	Sem. hours	ECTS credits
a.	VU Methods in Histology and Microscopy Introduction to histological preparation techniques and all relevant microscopic procedures in the context of Biology	2	3
b.	VU Methods of Histology and Scanning Electron Microscopy Overview of the analytic preparation techniques used for histology, such as enzyme-histochemistry and immunohistochemistry, as well as an introduction to scanning electron microscopy.	3	4.5
	Total	5	7.5
	Learning objectives: Students are able to employ histological and immunohistological methods in biological research and diagnostics.		
	Admission requirements: none		

14.	Elective module: Bioinformatics	Sem. hours	ECTS credits
a.	VO Bioinformatics The continuously expanding amount of data in Molecular Biology, including fully sequenced genomes, is creating – and requiring – new research approaches.	2	3
b.	UE Bioinformatics – Practical Course Computer-assisted data evaluation and database searches are major tools in Molecular Biology. On the basis of examples, students will be introduced to theoretical and practical approaches.	3	4.5
	Total	5	7.5

	Learning objectives: Students are familiar with the basics of computer-assisted data evaluation and database searches in Molecular Biology.
	Admission requirements: none

15.	Elective module: Genomics	Sem. hours	ECTS credits
a.	VO Functional Genomics The human genome, its organisation and its structure will be looked at and compared with other eukaryotic and prokaryotic genomes. In addition, techniques in genomics, i.e. genomic mapping and sequencing as well as transcriptome analyses (microchip analyses, micro arrays, etc.) will be discussed.	1	1.5
b.	SE Genomics Seminar The seminar will cover current publications on Genomics, particularly human diseases and their genetic makeup.	1	1.5
c.	UE Genomics Course In the practical course, students will apply a variety of modern techniques in genomics. The practical course is divided into four units which cover one special part of Genomics each: 1) Genome sequencing and bioinformatic analysis; 2) DNA fingerprinting; 3) Sequence polymorphisms and their phenotypic expression; 4) RNA enzymes for cutting nucleic acids.	3	4.5
	Total	5	7.5
	Learning objectives: Students have an in-depth knowledge of theoretical and practical aspects of Genomics.		
	Admission requirements: none		

16.	Elective module: RNomics	Sem. hours	ECTS credits
a.	VO RNomics This lecture covers the so-called non-coding RNAs (ncRNAs). NcRNAs play an important role in gene regulation. The mechanisms of this regulation will be discussed on the basis of examples of ncRNAs (miRNAs, siRNAs, RNA-interference). The role of ncRNAs in protein synthesis and their interaction with antibiotics will be demonstrated. In addition, particular focus will be put on RNA enzymes (= ribozymes).	1	1.5
b.	SE RNomics – Seminar The seminar will cover current publications on RNomics, particularly RNA interference, and their therapeutic applications in medicine.	1	1.5
c.	UE RNomics – Practical Course In the practical course, students will be able to gain an insight into experimental work with cellular RNAs, the construction of cDNA libraries of non-coding RNAs and the mechanisms of RNA enzymes.	3	4.5
	Total	5	7.5
	Learning objectives: Students have an in-depth knowledge of theoretical and practical aspects of RNomics.		
	Admission requirements: none		

17.	Elective module: Scientific Project Study – Cellular Biology	Sem. hours	ECTS credits
a.	PJ Project Study: Cell Biology Collaboration in a current research project in the field of Cellular Biology. Students will summarise the results of the research work in a manuscript-like report and present them in a public symposium.	10	15
	Total	10	15
	Learning objectives: Students are familiar with methods in Cellular Biology and can apply them to solve current research issues. They are also able to elaborate and present their own research results in this area.		
	Admission requirements: none		

18.	Elective module: Developmental and Circulatory Biology	Sem. hours	ECTS credits
a.	VO Development and Flexibility of the Cardiovascular System Aspects of the developmental biology of the cardiovascular system as well as its flexibility in embryonic, juvenile and adult stages of vertebrates, including humans	2	3
b.	SE Development and Flexibility of the Cardiovascular System – Seminar Literature seminar on aspects of the developmental biology of the cardiovascular system as well as their flexibility in embryonic, juvenile and adult stages of vertebrates, including humans	1	1.5
c.	UE Development and Flexibility of the Cardiovascular System – Practical Course Practical training on aspects of the developmental biology of the cardiovascular system as well as its flexibility in embryonic and juvenile vertebrates on the basis of model vertebrates; flexibility of the adult cardiovascular system of humans	2	3
	Total	5	7.5
	Learning objectives: Students are able to understand basic aspects of the development and flexibility of the cardiovascular system and apply and analyse non-invasive methods in the context of current research projects.		
	Admission requirements: none		

19.	Elective module: Molecular Physiology	Sem. hours	ECTS credits
a.	VO Molecular Physiology On the basis of selected genes and proteins (blood pigments, digestive enzymes, detoxification molecules), students shall develop an understanding of basic physiologic mechanisms, with particular focus on the relationship between gene regulation, protein expression and function on a cellular and organismic level.	2	3
b.	SE Molecular Physiology – Seminar Literature seminar to expand and deepen the students' understanding of	1	1.5

	processes in molecular physiology, with particular focus on the relationship between gene regulation, protein expression and function on a cellular and organismic level		
c.	UE Molecular Physiology – Practical Course Practical course to deepen the students' understanding of processes in molecular physiology, with particular focus on the relationship between gene regulation, protein expression and function on a cellular and organismic level	1	1.5
	Total	5	7.5
	Learning objectives: Students are able to understand and evaluate correlations between molecular and physiologic processes.		
	Admission requirements: none		

20.	Elective module 20: Molecular Ecophysiology	Sem. hours	ECTS credits
a.	SE Molecular Ecophysiology - Seminar Analysis of the impact of changes in environmental conditions (oxygen deficiency, changes in temperature, osmotic stress) on gene expression in different tissues; discussion of the resulting physiological adaptations, partly on the basis of original publications; preparation and evaluation of trials	2	3
b.	UE Molecular Ecophysiology –Course On the basis of selected examples, changes in gene expression in defined stress situations will be verified.	3	4.5
	Total	5	7.5
	Learning objectives: Students are able to analyse the impact of changes in environmental conditions on gene expression and understand the significance of these changes in expression for physiological adaptation		
	Admission requirements: none		

24.	Elective module: Theory of Science and Gender Research	Sem. hours	ECTS credits
a.	VO Nature as a Political Issue Concept of and reference to nature in the context of science, culture and society	2	3
b.	VO Theory of Science und Ethics – Lecture Introduction to Science Theory and its relation to other scientific disciplines, Science Theory in Biology (particularly Evolution Biology) as well as basics in Scientific and Environmental Ethics under consideration of gender aspects.	2	3
c.	SE Theory of Science und Ethics – Seminar In-depth discussion of selected problems treated in the lecture “Theory of Science und Ethics”	1	1.5

	Total	5	7.5
	Learning objectives: Under consideration of gender aspects, students will acquire a basic knowledge of Science Theory in Biology, its relation to other scientific disciplines and its historical development, as well as a basic instrument of terms and concepts related to ethics, which will enable them to autonomously reflect on ethical questions related to science and the application of their knowledge in Biology.		
	Admission requirements: none		

25/26	Elective module: Modules from other Master's Programmes of the Faculty of Biology	Sem. hours	ECTS credits
a.	A maximum of two modules (7.5 ECTS credits each) from the Master's Programmes in "Botany", "Ecology and Biodiversity" or "Microbiology" at the University of Innsbruck can be selected.		2x 7.5
	Total		7.5/7.5
	Learning objectives: Students will acquire an insight into other areas of Biology according to the learning objectives defined for the respective module.		
	Admission requirements: Students must meet the admission requirements defined in the respective curricula.		

27.	Elective module: Molecular Machines of the Cell	Sem. hours	ECTS credits
a.	VO Molecular Machines of the Cell Molecular machines are essential for cell development and cell function. How do molecular machines work, and what are the impacts of dysfunctions on the development of diseases?	1	1.5
b.	SE Molecular Machines of the Cell Presentation and discussion of current publications on the basic functions of molecular machines.	1	1.5
c.	UE Function of Molecular Machines Based on crystal structures of protein complexes, models for the role of molecular machines will be prepared and verified using molecular genetic approaches in yeast: 'in silico' mutation design; creating yeast mutants by 'inverse-PCR'; analysis of the mutants by gene complementation, Western blot and in-vivo fluorescence microscopy.	3	4.5
	Total	5	7.5
	Learning objectives: Students have a basic knowledge in the molecular functions and biologic relevance of molecular machines.		
	Admission requirements: none		

28.	Elective module: Proliferation and Programmed Cell Death	Sem. hours	ECTS credits
a.	VO Proliferation and Programmed Cell Death	2	3

	This lecture covers basic aspects of the control of cell proliferation and programmed cell death, as well as their significance during the development, differentiation and homeostasis of adult tissues. Further, the relevance of proliferation and cell death in the development of tumours and other diseases will be illustrated.		
b.	SE Proliferation and Programmed Cell Death - Seminar Based on current publications, students shall apply their knowledge from the lecture for the interpretation and critical discussion of data. The publications shall be presented and discussed in the context of a 'journal club'.	1	1.5
c.	UE Methods of Detecting Cell Death and Cell Proliferation In the practical course, students will perform methods to verify cell death and cell proliferation. The results will be presented in a final joint event.	2	3
	Total	5	7.5
	Learning objectives: The students have an understanding of the molecular basics of cell proliferation and cell death and the relevance of cell proliferation and cell death for development and tissue homeostasis.		
	Admission requirements: none		

29.	Elective module: Developmental and Cellular Biology of Plants	Sem. hours	ECTS credits
a.	VU Developmental Biology of Plants I On the basis of growth-related morphological changes, physiological and molecular mechanisms and their effect on the development of plants will be analysed. In the practical part, students will study the influence of phytohormones and environmental factors on growth and development, statistically analyse the results and present them in the form of a publication.	3	4.5
b.	VO Cellular Biology of Plants This lecture will treat special features of cellular biology in plants (e.g. cell wall, vacuole, plastids) on the basis of foundations of Cellular Biology (organelles, cytoskeletal elements). A brief overview of representation methods will also be given.	2	3
	Total	5	7.5
	Learning objectives: Students will acquire knowledge on the principals of plant development and special features of cellular structures in plants.		
	Admission requirements: none		

§ 8 Master's Thesis

- (1) Students of the Master's Degree Programme in Molecular Cellular and Developmental Biology have to write a Master's Thesis equalling 27.5 ECTS credits. The Master's Thesis is a scientific piece of work which serves to prove the student's ability to autonomously cope with scientific questions using adequate scientific methods. Possible topics include all questions related to knowledge creation in modern research in Molecular, Cellular and Developmental Biology.
- (2) Students must orally defend their Master's Theses before an examination board.

§ 9 Examination regulations

- (1) A module is completed when the student has passed all the required courses.
- (2) For lectures, the lecturer is required to communicate evaluation methods and criteria (oral and/or written) before the course starts.
- (3) The evaluation of courses with continuous performance assessment (VU, UE, PS, SE, PJ) is based on the student's regular, written and/or oral and/or practical contributions. The lecturer is required to communicate evaluation methods and criteria before the course starts.
- (4) The evaluation of the student's final dissertation defence (Defensio) is based on an oral exam before an examination board which is made up of three examiners including the Master's Thesis supervisor.

§ 10 Academic degree

Graduates of the Master's Programme in Molecular Cellular and Developmental Biology are awarded the academic degree of "Master of Science", or "MSc", in brief.

§ 11 Implementation

- (1) This curriculum comes into force on 1 October 2008.
- (2) The changes to the curriculum in the version published in the University of Innsbruck Bulletin of 23 June 2010, Issue 42, No. 329, shall come into effect on 1 October 2010 and shall be applied to all students.

§ 12 Transitional provisions

- (1) Regular students who enrolled in the "Magister" Programme in Molecular Biology (Curriculum of 7 July, 2003) at the University of Innsbruck before 1 October 2008 shall be entitled to complete their studies within a period of six semesters following the implementation of this curriculum.
- (2) Unless the student completes the "Magister" Programme in Molecular Biology (Curriculum of 7 July, 2003) within this period, he/she shall be subjected to the Curriculum for the Master's Degree Programme in Molecular Cellular and Developmental Biology. Students shall be entitled to choose to be subjected to the Curriculum for the Master's Degree Programme in Molecular Cellular and Developmental Biology at any time.
- (3) In compliance with § 11 Para. 3, course examinations according to the Curriculum for the Master's Programme in Molecular Cellular and Developmental Biology in the version published in the University of Innsbruck Bulletin of 29 April 2008, Issue 38, No. 267, shall correspond to course examinations according to the Curriculum in the version published in the University of Innsbruck Bulletin of 23 June 2010, Issue 42, No. 329, as follows:

Course according to the Curriculum of 2008	Course according to the Curriculum of 2010
Elective module 5: Evolution und Body Plans in Animals	Students can choose one elective module from the field of Developmental Biology in accordance with § 6 para. 3
Elective module 6: Marine Biology – Developmental Biology	Students can choose one elective module from the field of Developmental Biology in accordance with § 6 para. 3
Elective module 9a and Elective module 9c: Cell Homeostasis VO1 and UE2	Elective module 9b: Cell Homeostasis UE3
Elective module 12: Ultra Structure of the Cell	Students can choose one elective module from the field of Cellular Biology in accordance with § 6 para. 4
Elective module 20a and Elective module 20b: Molecular Ecophysiology SE3 and UE2	Elective module 20a and Elective module 20b: Molecular Ecophysiology SE2 and UE3
Elective module 21 to 23:	Students can choose one elective module from the field of Cellular Biology in accordance with § 6 para. 4

For the Curriculum Committee:

Ao.Univ.Prof. Mag. Dr. Paul Illmer

For the Senate:

Univ.Prof. Dr. Ivo Hajnal