



In-house directives of the Institute of Physiology for the PhD Program in Integrative and Molecular Physiology

(Note that the German version of these directives is the legally binding version)

These in-house directives are based on, and complement, the directives for the PhD Program in Integrative and Molecular Physiology (03.02.2005, see www.zihp.unizh.ch) and the table of regulations for the PhD Program in Integrative and Molecular Physiology. The directives are based on the Regulation for Graduation (“Promotionsordnung”) and the conditions of study concerning promotion (“Studienordnung zur Promotion”) of the Faculty of Science from 8th July 2002 (including the amendments of 3rd July 2003 and 3rd February 2005).

The directives apply if you are:

- a PhD student at the Institute of Physiology
- a PhD student whose responsible faculty member (rFM) is a member of the Institute of Physiology, even though your experimental work is conducted at another institute („external PhD Students“).

The directives do not apply if you are:

- a PhD student at the Institute of Physiology and are not participating in the PhD Program in Integrative and Molecular Physiology but you are at the present time subject to the interim directives for the PhD Program in Physiology (September 2004, drawn up by C. Wagner und L. Borsig).
- a PhD student participating in the PhD Program in Integrative and Molecular Physiology but you are conducting your project at an institute other than the Institute of Physiology and your rFM is not a member of the Institute of Physiology.
- a PhD student conducting your experimental work at the Institute of Physiology but your doctoral advisor is from the ETH or another university. In this case, you will complete the PhD Program according to the directives of the relevant institution.

Before registering for the graduation examination, you must obtain 12 credit points (CP).

Compulsory CPs

1. Supervision of Physiology teaching laboratories (4 teaching labs, 4 semesters with active participation)	2 CP
2. Oral examination	2 CP

Concerning point 1.

If you are an external PhD student involved in the supervision of equivalent practical/course work at the institution where you are doing your doctorate, you can be relieved from your teaching obligations at the Institute of Physiology. The Thesis Committee will decide on the equivalence of the duties and whether it is necessary for you to participate in part of the Physiology teaching laboratory classes to achieve the 2 CPs.



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Concerning point 2.

After 2.5 years, a meeting with the Thesis Committee will be held (see paragraph 7, point 4 of the Detailed Directives) where you will be examined orally.

The examination will last 1 hour and comprise two parts:

- presentation and discussion of a previously defined advanced topic relating to the theoretical and methodical aspects of the thesis (approx. 30 minutes)
- integrative aspects of the teaching lab work undertaken at the Institute of Physiology or another institution together with the related theoretical material (approx. 30 minutes)

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Elective CPs

You must obtain the remaining 8 CPs by attending courses from the areas given in the detailed directives and the **list of regulations**. These courses concern:

- i) theoretical knowledge in Integrative Human Physiology, especially in the wider field that includes the thesis topic;
- ii) general skills for successful scientific work, including planning and development of project, data analysis and interpretation, communication of results;
- iii) ethical principles for the behavior as a scientist as well as dealing with test persons and the laboratory animals.

The courses can be chosen from a single area or from different areas (i and/or ii and/or iii).

Examples of courses (note, the list is not exclusive) offered by the Faculty of Science are given below. You can also attend additional courses offered by the Faculty of Medicine, the ETH and other training facilities after consultation with your Thesis Committee. PhD Students and the Thesis Committee are responsible for the composition of a reasonable and adequate selection of courses.

Winter Term 2005/06

V-Nr.	Titel	Termin	KP
2685	Philosophie der Biologie	Mo 10-12	2
2687	Kolloquium über anwendungsorientierte Statistik	Do 16-17:30	-
2704/2705	Einführung in die Statistik Biomathematics, Applied Probability and Statistics	Mo 13-15, Mi 13-15	7
2731	Research Seminar	Di 15-16.30	3
2844	Manipulation und Detektion von Biomolekülen	Mo 16-17	1
2876	Molekulare Zellbiologie	Di 8-10, Do 8-10, Fr 10-11	6
2882	Bioinformatics I	Mi 15-17	3
2888	Immunologie I	Mi 8-10	2
2889	Zellbiologie	Mi 13-17, Do 10-12, 13-17	3
2892	Anatomie und Physiologie des Menschen	Fr 15-17	3
2895	Molekularbiologie, Mikrobiologie	Mo 13-17, Di 13-17 Fr 10-12	3
2898	Anatomie und Physiologie des Menschen für Nicht-mediziner I	Mo 8-10, Mi 8-10, Do 10-12	6



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2908	Regulation der Gentranskription	Blockkurs, 15.11-9.12.05	6
2909	Gene und Chromosomen	Blockkurs, 25.10.-16.11.05	6
2924	Struktur und Dynamik der Zellen	Blockkurs, 25.10.-16.11.05	6
2925	Zellbiologie viraler Infektionen	Blockkurs, 17.11.-9.12.05	6
2926	Moderne Genetik und Genomik	Blockkurs, 13.12.-10.02.06	12
2927	Verhaltensbiologie	Blockkurs, 25.10.-16.11.05	12
2935	Raumentorientierung	Mo, 17-18	1
2936	Funktionen des Körpers: vegetative Systeme	Blockkurs, 25.10.-9.12.05	12
2937	Krankheitsbilder der vegetativen Systeme einschliesslich molekularer Pathologie	Blockkurs, 13.12.-18.01.06	6
2938	Humangenetik und angeborene Stoffwechselkrankheiten	Blockkurs, 19.01-10.02.06	6
2939	Veterinärmedizin: vergleichende Morphologie und Pathophysiologie	Blockkurs, 19.01-10.02.06	6
2940	Methoden der Gesundheits- und Krankheitsforschung	Blockkurs, 19.01-10.02.06	6
2941	Einführung in die Labortierkunde	5-tägiger Kurs, Kalenderwoche 8	2
2942	Reproduktions- und transgene Techniken bei Labornagern	4-tägiger Kurs, Kalenderwoche 9	2
2943	Versuchstierkundliche Techniken	nach Ankündigung	2
2944	Sportphysiologie	Blockkurs, 13.12.-18.01.06	6
2950	Naturwissenschaftliche Illustrationen	Mo 16-18	1
2960	Gene and Proteine Technology	Mo 15-17, Mi 13-14	3
2961	Vergleichende Physiologie des Schlafs	Mo 12-13	1
2965	Course in Scientific Writing	Mo 15-16	2
2968	Entwicklung des Nervensystems	Mo 8-10	2
2970	Planung und statistische Auswertung biologischer Experimente	Mo 13-15	3
2972	Bildgebende Verfahren in der biomedizinischen Forschung und Diagnostik	Mo 10-12	2
2973	Struktur und Funktion des ZNS und der Sinnesorgane, Teil I	Mo 13-15	2
2974	Transgenic Mouse Models	Mo 16-17	1
3032	Scientific Writing and Exposition	23.09., 26.09., 9-18	1
3033	Science Ethics	19.09., 20.09., 9-17	1
3163	How to present experimental results	nach Ankündigung	1
3256/3257	Einsatz der Computersimulation in den Naturwissenschaften	Mo 13-17	
3260/3261	Biologische Datenanalyse	Mi 14-17	3
3268	Physiologische Grundlagen kognitiver Prozesse	Do 10-12	2
3269	The neurobiology of consciousness	Do 15-17	2
3271/3272	Biophysics of Neural Systems	Di 13-16	-
3273	Sinnesphysiologie II	Mi 8-10	-
3274	Dynamische Systeme in der Biologie II	Mi 14-16	2



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Summer Term 2006

V-Nr.	Titel	Termin	KP
555	Transgenic Animal Models (für Hörerinnen und Hörer aller Fakultäten)	Mi 11-12	-
1099	Gehirn und Verhalten für Mediziner, Psychologen und Biologen	Mi 14-15	-
871	Kolloquium über anwendungsorientierte Statistik	Do 16-18	-
2643	Einsatz von Computersimulationen in den Naturwissenschaften	Fr 13-14	1
2575/2758	Bioinformatics II	Mi 15-19	3
2759/2760	Biologische Modellierung	Mi 14-17	3
3308/3309	Computation in Neural Systems	Di 17-19	3
2904	Molekulare Medizin	Di 15-17, Fr 13-15	4
2902/2903	Protein Biophysics	Mi 8-10, Fr, 8-10	5
2911	Immunologie II	Do 8-10	2
2922	Anatomie und Physiologie des Menschen für Nicht-Mediziner II	Mi 10-12, Do 8-10	4
2923	Praktikum in Histologie	Do 14-16	2
2928	Vergleichende Anatomie	Blockkurs, 4.4.-26.4.06	6
2936	Gene expression II: RNA and molecules	Blockkurs, 27.4.-19.5.06	6
2937	Signalübermittlung und Krebs	Blockkurs, 4.4.-26.4.06	6
2938	Gene und Umwelt	Blockkurs, 15.6.-7.7.06	6
2991	Molekularbiologischer Kurs	Blockkurs, 6.3.-24.3.06	6
2947	Medizinische Virologie und Parasitologie	Blockkurs, 3.5.-19.5.06	8
2948	Medizinische Mikrobiologie	Blockkurs, 24.5.-9.6.06	6
2949	Modellierung und Simulation in der Biologie	Blockkurs, 4.4.-26.4.06	6
2917	Experimentelle Biochemie mit Bezug zur Pathobiochemie	Blockkurs, 15.6.-7.7.06	6
2952	Experimentelle Entwicklungsbiologie	Blockkurs, 23.5.-7.7.06	12
2953	Neurobiologie	Blockkurs, 4.4.-19.5.06	12
2956	Struktur und Funktion des ZNS und der Sinnesorgane (Teil II)	Blockkurs, 4.4.-26.4.06	6
2957	Krankheiten des Nervensystems und der Skelettmuskulatur	Blockkurs, 23.5.-14.6.06	6
2958	Pharmakologie und klinische Pharmakologie	Blockkurs, 23.5.-14.6.06	6
2959	Experimentelle Humanstudien	Blockkurs, 15.6.-7.7.06	6
2960	Angewandte Mikroskopie	Blockkurs, 23.5.-14.6.06	6
2961	Membranen und Epithelien: Von der Struktur zur Transportfunktion	Blockkurs, 4.4.-26.4.06	6
2965	Ethische Aspekte der biologischen Forschung am Menschen	Mo, 13-15	2
2966	Biomedical Imaging and Scientific Visualization	Mo, 10-12	2
2969	Zell-Stress und seine Auswirkung auf Alterungsvorgänge und Krebsentstehung	Mo, 12-13	1
2976	Mechanismen der Geschlechterbestimmung	Mo 10-12	2
2977	Zellbiologie und Entwicklung	Mi 8-10	2
3312	Sinnesphysiologie I	Mo 8.30-10, alle 14 Tage	1
2981	Tumore: Immunologie und Molekularbiologie	Mo 15-17	2
2982	Klinische Epidemiologie und Gesundheitssystemforschung	Mo, 13-15	2
3041	Scientific Presentation Practice	22.8-23.8.06	1
1796	Einführung in die SPSS Data Entry	4 Halbtage	-



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You will find additional information about the postgraduate courses offered by other PhD Programs in Zurich that you can attend by arrangement with your Thesis Committee and the organizers at the following sites:

- PhD Program in Molecular Life Sciences
<http://www.lifescience-zurich.ch/phd/mls/index-en.asp>
- PhD Program in Neuroscience
<http://www.neuroscience.unizh.ch/e/tra000.htm>
- Postgraduate Program of the Plant Science Centre
http://www.plantscience.unizh.ch/education/graduate_study

Places in the suggested courses cannot be guaranteed. It is possible that you will have to attend a course having second priority or postpone attendance by a year. You can obtain information concerning the enrolment procedures and contact persons from the course listing of the corresponding institutions

You will be awarded credit points only if your active contribution is confirmed (e.g. by examination, oral presentation, written report).

If you choose courses from non-accredited course listings or courses at faculties other than the Faculty of Science or at the ETH, the responsible lecturers can still award credit points for confirmed attendance. You can find further information in the leaflets „Merkblatt zum Gesuch für die Anerkennung von an anderen Fakultäten erbrachten Studienleistungen für Studierende der MNF“

(http://www.mnf.unizh.ch/pdf/MNF_AndFak_Merkbl.pdf) and „Merkblatt zum Gesuch für die Anerkennung von an der ETH-Zürich erbrachten Studienleistungen für Studierende der MNF“ (http://www.mnf.unizh.ch/pdf/MNF_ETH_Merkbl.pdf). The corresponding forms are available from the web (http://www.mnf.unizh.ch/pdf/MNF_AndFak_Form.pdf and http://www.mnf.unizh.ch/pdf/MNF_ETH_Form.pdf).

Participation in congresses, preparation of scientific publications or the presentation of the candidate's own work at internal seminars and activities of the Centre of Integrative Human Physiology (CHIP) are not awarded with credit points as these are intrinsic parts of the thesis.

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