

**Department of Chemistry and Applied Biosciences****Programme Regulations 2007****Master Programme in****Medicinal and Industrial Pharmaceutical Sciences**

27 February 2007

*(English is not an official language of the Swiss confederation. This translation is provided for information purposes only and has no legal force.)*

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**Department of Chemistry and Applied Biosciences**  
**Programme Regulations 2007**  
**Master Programme in Medicinal and Industrial Pharmaceutical**  
**Sciences**

of 27 February 2007

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*The ETH Zurich Executive Board,*

pursuant to Art. 4, Para. 1, Lit. a of the ETH Zurich Organisation Ordinance of 16 December 2003<sup>1</sup>,

*hereby decrees:*

**Chapter 1:           General Regulations**

**Section 1:           General**

**Art. 1           Subject-matter and Scope, Appendix**

<sup>1</sup> These Programme Regulations determine the requirements under which the Master degree in Medicinal and Industrial Pharmaceutical Sciences can be acquired at the Department of Chemistry and Applied Biosciences, ETH Zurich (hereafter referred to as D-CHAB).

<sup>2</sup> The Appendix is part of these Programme Regulations. Any modifications to the Appendix are decided by the Rector, upon the request of, or following a hearing with D-CHAB.

**Art. 2           Academic Title**

<sup>1</sup> The Master degree in Medicinal and Industrial Pharmaceutical Sciences entitles its holders to bear the following academic title:

Master of Science ETH in Medicinal and Industrial Pharmaceutical Sciences  
(abbreviated title: MSc ETH MIPS)

<sup>2</sup> Holders of this Master degree can also use the abbreviated title "MSc ETH".

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<sup>1</sup> RSETHZ 201.021

### **Art. 3** Legal Basis

These Programme Regulations are based on the following legal provisions:

- a. ETH Zurich General Ordinance on Performance Assessments of 10 September 2002<sup>2</sup> (AVL ETHZ – acronym for German document);
- b. Ordinance on Admission to Studying at ETH Zurich of 10 September 2002<sup>3</sup> (Zulassungsverordnung ETHZ).

### **Art. 4** Limited number of places available

The number of places available for the Master programme in Medicinal and Industrial Pharmaceutical Sciences (hereafter referred to as MIPS) can be limited. If necessary, D-CHAB defines the number of places available every academic year. D-CHAB is responsible for publishing the number of places available.

### **Art. 5** Course Catalogue

D-CHAB determines the Master programme courses for each semester, listing them in the course catalogue which is binding. This catalogue is submitted to the Rector for approval within the period stipulated. Specific details are outlined under Art. 28 AVL ETHZ<sup>4</sup> and in the corresponding implementation provisions.

### **Art. 6** Language of Instruction

<sup>1</sup> Teaching is normally in English. The language used in any particular course is given in the course catalogue. Performance assessments are normally in the language of the particular course.

<sup>2</sup> Students may complete a performance assessment in German even if the assessment is normally conducted in English. Students wishing to complete the assessment in German must inform the Director of Studies in writing at the latest when they register for the assessment. Courses not offered by ETH Zurich may be excluded from this provision.

<sup>3</sup> Students, who wish to complete a performance assessment in a language other than English or German, must obtain the agreement of the responsible examiner. An official request must be submitted within the deadline indicated under Para. 2.

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<sup>2</sup> SR 414.135.1, RSETHZ 322.021 (available in German only)

<sup>3</sup> SR 414.131.52, RSETHZ 310.5 (available in German only)

<sup>4</sup> SR 414.135.1, RSETHZ 322.021 (available in German only)

## **Section 2: Credit System**

### **Art. 7 Principle**

<sup>1</sup> The study programme is based on a credit system in accordance with the European Credit Transfer System (ECTS).

<sup>2</sup> The implementation of ECTS at ETH Zurich is defined in the Guidelines<sup>5</sup> on the Credit System.

### **Art. 8 Credits, Basis for Calculating Credits**

<sup>1</sup> Credits define the average amount of time required for a study performance.

<sup>2</sup> When studying full-time, the entire student workload for each year of study comprises an average of 60 credits. The student workload includes all study-related activities necessary to obtain credits.

### **Art. 9 Allocation of Credits**

<sup>1</sup> D-CHAB allocates a certain number of credits to its own courses which are subsequently specified in the course catalogue.

<sup>2</sup> For courses that are part of the curriculum of several study programmes, D-CHAB uniformly allocates the credits following consultation with the departments concerned. The Rector decides in the case of disagreement.

### **Art. 10 Issuing Credits**

<sup>1</sup> Credits are only issued for satisfactory performance. Study performances are considered satisfactory, if they are graded with at least 4 or as "passed".

<sup>2</sup> No credits are issued for unsatisfactory performance.

<sup>3</sup> The full amount of credits is always issued for the course in question, once the prerequisites under Para. 1 have been fulfilled. Partial issuing of credits is not allowed.

<sup>4</sup> The number of credits to be issued is determined by the course catalogue valid at the time at which the performance assessment is completed.

### **Art. 11 Registering, Managing and Checking Credits**

D-CHAB registers, manages and checks the credits.

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<sup>5</sup> The guidelines can be accessed online at: [www.rektorat.ethz.ch/directives](http://www.rektorat.ethz.ch/directives) (available in German only)

## **Chapter 2: Content and Structure of the Master Programme**

### **Section 1: Content of the Programme and Structure**

#### **Art. 12 Content of the Programme**

The MIPS Master programme serves to broaden the basic knowledge acquired during the ETH Bachelor programme in Pharmaceutical Sciences as well as imparting knowledge and practical experience in the developmental processing of medicinal products from an industrial, regulatory and academic perspective.

The programme focuses on the various aspects of developing medicinal products in its broadest sense, starting from understanding diseases and possible targets, drug finding, pre-formulation and formulation, preclinical and clinical research and development, production, quality and safety aspects, registration, marketing, pre-/postmarketing pharmacovigilance and life-cycle management. It also places special emphasis on understanding and implementing procedures that enable and facilitate developmental processing in an industrial environment. This includes, among other things, professional communication with adequate technical vocabulary, project management, information and documentation progression, product life cycle management, and ethical aspects.

Scientific and methodological knowledge are complemented with elective courses in general education in the field of Humanities, Social and Political Sciences.

#### **Art. 13 Beginning the Programme**

The MIPS Master programme begins every autumn. Admission to the Master programme in the spring semester is usually only possible for students who have to compensate for any lacking knowledge by carrying out additional requirements (admission with additional requirements).

#### **Art. 14 Extent and Duration of the Programme; Limitation on the Duration of Studies**

<sup>1</sup> It is necessary to obtain 90 credits, as indicated under Art. 38, to acquire the Master degree. All the credits must be from the curriculum for the MIPS Master programme. Exceptions are specified in Art. 16.

<sup>2</sup> The MIPS Master programme is designed to be completed within one and a half years.

<sup>3</sup> The maximum duration of studies is three years. Upon request, the Rector can extend the duration of studies for compelling reasons.

<sup>4</sup> Should admission to the MIPS Master programme be stipulated with the need to fulfil additional requirements, this entitles the extension of the maximum duration of studies as follows:

- six months to acquire 21–30 additional credits;
- one year to acquire 31–60 additional credits.

Should less than 21 additional credits have to be acquired, the maximum duration of studies is not extended.

#### **Art. 15** Study Guide, Study Procedure, Study Advisory Service

<sup>1</sup> D-CHAB provides a study guide to the MIPS Master programme. It comprises an overview of the study programme.

<sup>2</sup> The study advisor or the Director of Studies assists students with planning their course of study.

<sup>3</sup> The D-CHAB student exchange advisor answers questions relating to study exchange. Further details are specified in Art. 17.

#### **Art. 16** Recognition of Study Achievements Acquired outside the Master Programme

The Director of Studies ultimately decides on the recognition of study achievements acquired in other ETH Zurich study programmes during the Master programme.

#### **Art. 17** Student Exchange

<sup>1</sup> During the Master programme, students can acquire credits at other universities. These mobility credits cannot be recognised for the Master degree. If requested by the student, the mobility credits are listed in the addendum to the final academic record.

<sup>2</sup> Credits for courses at other universities offered as part of the curriculum for the MIPS Master programme do not count as mobility credits.

## Section 2: Subjects and Grouping according to Category

### Art. 18 Grouping according to Category

<sup>1</sup> To acquire the Master degree, it is necessary to have study achievements in the following categories. The minimum number of credits required in each category is indicated in Art. 38.

- a. Core Subjects and Compensatory Courses
- b. Electives
- c. Research Project
- d. Compulsory Electives in Humanities, Social and Political Sciences
- e. Master Thesis

<sup>2</sup> D-CHAB specifies in the course catalogue which courses are allocated to each category as listed in Para. 1.

### Art. 19 Category Overview

<sup>1</sup> **Core Subjects:** They serve to deepen basic knowledge of Pharmacology and to acquire both knowledge and practical experience in the developmental processing of medicinal products from an industrial perspective. The topics include:

- a. Medicinal/Biological Aspects: Pharmacogenomics, Pharmacotherapy, Pharmacoepidemiology, Biotransformation and Pharmacokinetics, preclinical and clinical research.
- b. Technical and technological aspects: Interface and information management of medicinal developmental processing, new formulas, releasing medicinal products, miniaturising, scaling processes, quality management.
- c. Legal aspects: registration, patents.
- d. Social competency and conflict management in an industrial environment.

Further details, particularly on attending core subjects and on the performance assessments, are specified in Art. 34.

<sup>2</sup> **Compensatory Courses:** Should a student fail a core subject twice, he/she can attend compensatory courses to acquire the required number of credits for the Master degree. The number of credits acquired in this way are limited. Further details, also for the performance assessments, are specified in Art. 34.

<sup>3</sup> **Electives:** They transfer specialised knowledge and practical experience in developing medicinal products in the industry. The main topics are Medicinal Products and the Environment, Logistics, Pharmacovigilance, Pharmamarketing, Phytopharmaceutics, Vaccines, Medicinal Products and Interface and Information Management. Details on the performance assessments are specified in Art. 34.

<sup>4</sup> **Research Project:** The research project serves to deepen knowledge in a specific field, to become familiar with scientific working methods and to work on a current research or developmental topic. Details are specified in Art. 35.

<sup>5</sup> **Compulsory Electives in Humanities, Social and Political Sciences:** Students have to choose courses from the general education courses in Humanities, Social and Political Sciences (GESS). Further details are specified in the Rector's directives on GESS compulsory electives and in Art. 36 of these Programme Regulations.

<sup>6</sup> **Master Thesis:** It normally concludes the Master programme. By writing up the Master thesis, students show their ability to independently produce a coherent and scientific piece of work. Details are specified in Art. 37.

## Chapter 3: Admission to the Master Programme

### Art. 20 Application Prerequisites for Admission

<sup>1</sup> To apply for admission to the MIPS Master programme, candidates must fulfil the following prerequisites:

- a. They hold a university Bachelor degree corresponding to at least 180 ECTS credits, or an equivalent university degree in a scientific discipline qualifying for the MIPS Master programme. The scientific disciplines that normally qualify for the MIPS Master programme and further details on the required scientific knowledge (requirement profile) are listed in the Appendix under Items 1 and 2.
- b. Candidates have adequate knowledge of English. If requested, they must be able to produce suitable evidence.
- c. If requested, candidates must be able to produce evidence that they would be admitted to the Master programme of the corresponding discipline at their home university or in their country of origin, should such a programme be available.

<sup>2</sup> The Rector decides on any exceptions on the request of D-CHAB.

### Art. 21 Admission Procedure

Candidates should send their application for admission to the MIPS Master programme to the Rectorate, ETH Zurich. They can submit their application before they have acquired their degree. The way in which applications are managed is determined by the Rector. The following also applies:

- a. Along with their application, candidates should include:
  1. a personal letter of application in English, outlining their motivation and goals in pursuing the MIPS Master programme;
  2. a recommendation letter from a professor who knows the applicant either from teaching him/her or acting as a tutor;
  3. other documents (if any) relevant for the evaluation of their application.<sup>6</sup>
- b. The responsible Admissions Committee evaluates the candidates' applications in terms of their academic qualifications and aptitude for the Master programme. The Committee requests to either admit or reject the candidate, and, if necessary, it suggests the additional requirements.
- c. Upon the request of D-CHAB, the Rector decides on admission or rejection, as well as determining any additional requirements.

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<sup>6</sup> Such documents include, for example, awards, information on scientific or technical publications, previous studies, confirmation letters for internships, or the results of Graduate Record Examinations Test (GRE-Test) (Scores should be submitted using the ETH Institution Code: R 3331).

## **Art. 22** Entry to the Master Programme

<sup>1</sup> ETH Zurich Bachelor students with a positive decision on admission can enrol for the MIPS Master programme once they only need to acquire a maximum of 8 credits for the Bachelor degree. The following also applies:

- a. The regular dates and deadlines for enrolment at ETH Zurich are applicable.
- b. Admission is conditional if the Bachelor degree still has to be completed. The conditional admission is revoked, if the Bachelor degree has not been acquired or cannot be acquired.

<sup>2</sup> Students, who have not studied at ETH Zurich and who hold a positive decision on admission to the programme, can only enrol for the Master programme once they have completed the preceding (Bachelor) programme.

<sup>3</sup> The Rector decides on any exceptions on the request of D-CHAB.

## **Art. 23** Admission without Additional Requirements

<sup>1</sup> Admission to the MIPS Master programme without having to fulfil additional requirements is normally only granted to applicants who fulfil the prerequisites of Art. 20 as well as the requirement profile listed in the Appendix under Item 2.

<sup>2</sup> University degrees that fully meet the scientific requirement profile are, as far as possible, listed in the Appendix under Item 3.

## **Art. 24** Rejection of Admission

Applicants are not admitted to the MIPS Master programme, if they are required to take additional courses (additional requirements):

- a. amounting to more than 60 credits; or
- b. amounting to more than one-third of the credits for the area of basic knowledge specified in the requirement profile (see Appendix, Item 2.2).

## **Chapter 4: Performance Assessment Regulations**

### **Section 1: General Regulations**

#### **Art. 25** Types of Performance Assessment, Performance Evaluation

<sup>1</sup> The MIPS Master programme primarily involves the following types of performance assessment:

- a. examinations;
- b. written reports;
- c. presentations.

<sup>2</sup> Performance in an examination is graded. Other types of performance assessments are evaluated with a grade or with “passed/failed”.

#### **Art. 26** Conditions of Admission to Performance Assessments in Core Subjects, Compensatory Courses and Electives

<sup>1</sup> Admission is granted to the performance assessments in core subjects, compensatory courses and electives, if:

- a. the student is enrolled for the MIPS Master programme;
- b. any additional requirements to gain admission the MIPS Master programme have been completely fulfilled.

<sup>2</sup> The Director of Studies decides on any exceptions.

#### **Art. 27** Conditions of Admission to the Research Project

<sup>1</sup> Students following the ETH Zurich Bachelor programme in Pharmaceutical Sciences can carry out the research project during the Bachelor programme. Once all the core subjects (excluding compensatory courses) and practical courses for the first two years of the Bachelor programme have been passed, the research project can be started. Reservation is made for the special provisions of research projects in certain fields.

<sup>2</sup> All other students can only begin with the research project when they have enrolled for the MIPS Master programme, have fully completed their preceding Bachelor programme, and have fulfilled any additional requirements to gain admission to the MIPS Master programme.

<sup>3</sup> The Director of Studies decides on any exceptions.

## **Art. 28** Conditions of Admission to the Master Thesis

Only students, who fulfil the following criteria, are allowed to write up their Master thesis:

- a. They have completed the preceding (Bachelor) programme.
- b. They have fulfilled any additional requirements necessary to gain admission to the MIPS Master programme.
- c. They have passed the research project (see Art. 35).

## **Art. 29** Checking Compliance with the Conditions of Admission

D-CHAB checks that the conditions of admission to the performance assessments listed in Art. 26 – 28 have been fulfilled.

## **Art. 30** Registration for End-of-Semester Examinations and Examination Sessions, Carrying out Examinations

The AVL ETHZ regulations<sup>7</sup> and the Rector's directives apply with respect to registering for end-of-semester examinations and for examinations in the examination sessions as well for carrying out examinations.

## **Art. 31** Registration for other Performance Assessments

Registration for performance assessments that do not come under Art. 30 is normally done directly via the responsible examiner.

## **Art. 32** Performance Assessments for Additional Requirements

<sup>1</sup> Performance assessments for courses defined as additional requirements for admission to the MIPS Master programme can be grouped into examination blocks. Any such examination blocks are to be specified in the admission decree.

<sup>2</sup> If no examination blocks are formed, an appropriate means of compensation is to be provided should a performance assessment be failed twice.

<sup>3</sup> Students may complete a performance assessment in English even if the performance assessment is normally conducted in German. Students wishing to complete the assessment in English must inform the Director of Studies in writing at the latest when they register for the performance assessment.

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<sup>7</sup> SR 414.135.1, RSETHZ 322.021

<sup>4</sup> Should the additional requirements not be completely fulfilled due to the student having failed performance assessments, admission to the MIPS Master programme is revoked. Should such candidates apply for a Bachelor programme at ETH Zurich and be admitted, the following rules are effective for performance assessments already carried out to fulfil additional requirements:

- a. Performance assessments or examination blocks that have been passed can be recognised for the Bachelor programme. Any recognised performance assessments are allocated credits.
- b. No credits are allocated for performance assessments that have not been passed.
- c. The Rector decides on the recognition of credits upon the request of the responsible department.

### **Art. 33 Dishonest Behaviour**

Details on dealing with dishonest behaviour with respect to performance assessments are specified in the ETH Zurich Disciplinary Code<sup>8</sup> of 2 November 2004.

## **Section 2: Performance Assessments**

### **Art. 34 Core Subjects and Compensatory Courses, Electives**

<sup>1</sup> Each course pertaining to the categories Core Subjects and Compensatory Courses as well as Electives is evaluated with a performance assessment. The type and the timing of the performance assessments are specified in the course catalogue.

<sup>2</sup> The performance is normally graded. The Director of Studies decides on any exceptions.

<sup>3</sup> A performance assessment is considered as passed if it is graded with at least 4 or as “passed”.

<sup>4</sup> A performance assessment considered as failed can be repeated once.

<sup>5</sup> The following also applies for the category Core Subjects and Compensatory Courses:

- a. Each core subject must be attended and the respective performance assessment be done to acquire the Master degree. If a performance assessment is failed once, it must be repeated.

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<sup>8</sup> SR 414.138.1, RSETHZ 361.1 (available in English: RSETHZ 361.1 engl.)

- b. At least 35 of the 40 credits must be acquired in the Core Subjects. Students acquiring 35 credits, but less than 40 credits, must acquire the remaining credits in the Compensatory Courses.
- c. Any course that can also be chosen as an elective can be selected as a compensatory course. If requested, the Director of Studies can approve other courses as a compensatory course.

<sup>6</sup> The following also applies for the category Electives:

- a. The courses that can be selected as an elective are listed in the course catalogue.
- b. If requested, the Director of Studies can approve courses as an elective other than those listed for selection.

### **Art. 35**     Research Project

<sup>1</sup> The research project is an individual piece of work. It is not permitted to carry it out in groups.

<sup>2</sup> Students must carry out at least one research project in an area from a core subject or from an elective course. If requested, the Director of Studies can approve exceptions.

<sup>3</sup> The research project is supervised and graded by a professor<sup>9</sup> from the D-CHAB Institute of Pharmaceutical Sciences. If requested, the Director of Studies can grant permission to certain experts to supervise and grade research projects.

<sup>4</sup> The performance assessment for research projects is in the form of a written report and, additionally, if deemed necessary, a presentation (oral presentation, poster presentation, etc.).

<sup>5</sup> The performance achieved in a research project is evaluated with “passed” or “failed”.

<sup>6</sup> A research project considered as failed can be repeated once.

### **Art. 36**     GESS Compulsory Electives

<sup>1</sup> Each course pertaining to the category GESS Compulsory Electives are evaluated with a performance assessment. The type and the timing of the performance assessments are specified by the ETH Zurich department or by the university offering the course.

<sup>2</sup> A performance assessment is considered as passed if it is graded with at least 4 or as “passed”.

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<sup>9</sup> Adjunct professors (Titularprofessoren) are not allowed to act as supervisors.

<sup>3</sup> A performance assessment considered as failed can be repeated once, provided that the ETH Zurich department or the university offering the performance assessment does not have any other regulations about repeating performance assessments.

## **Art. 37** Master Thesis

<sup>1</sup> The Master thesis is an individual piece of work. It is not permitted to carry it out in groups.

<sup>2</sup> The Master thesis is supervised and graded by a professor<sup>10</sup> from the D-CHAB Institute of Pharmaceutical Sciences. If requested, the Director of Studies can grant permission to certain experts to supervise and grade Master theses.

<sup>3</sup> The Master thesis is carried out in an area from a core subject or an elective course. If requested, the Director of Studies can approve exceptions. The topic for the Master thesis is determined by the responsible supervisor following consultation with the student.

<sup>4</sup> The Master thesis concludes with a written report and, additionally, if deemed necessary, with a presentation (oral presentation, poster presentation, etc).

<sup>5</sup> The Master thesis, including the written report, is written over a period of 22 weeks. The responsible supervisor determines the beginning of the Master thesis and the date of submission. Upon request, the Director of Studies can extend the duration of work for compelling reasons.

<sup>6</sup> The Master thesis is graded. It is considered as passed if it is graded with at least 4.

<sup>7</sup> A Master thesis considered as failed can be repeated once. If the Master thesis is repeated, a new topic must be treated. It can be repeated under the supervision of another supervisor.

<sup>8</sup> Having consulted with both the responsible supervisor and the student, the Director of Studies determines the date for repeating a Master thesis that has been failed.

<sup>9</sup> The Director of Studies decides on any exceptions unless another rule or regulation are specifically effective.

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<sup>10</sup> Adjunct professors (Titularprofessoren) are not allowed to act as supervisors.

## Chapter 5: Issuing the Master Degree

### Art. 38 Credits in each Category

<sup>1</sup> The 90 credits required to obtain a Master degree must be acquired in the following categories in the minimum number indicated for each category. Further details are specified in Art. 2 – 4.

- |   |            |
|---|------------|
| a. Core Subjects and Compensatory Courses | 40 credits |
| 1. Core Subjects (minimum 35 credits)     |            |
| 2. Compensatory Courses                   |            |
| b. Electives                              | 8 credits  |
| c. Research Project                       | 10 credits |
| d. GESS Compulsory Electives              | 2 credits  |
| e. Master Thesis                          | 30 credits |

<sup>2</sup> Out of the required 40 credits in the category Core Subjects according to Para. 1, Lit. a, at least 35 credits must be acquired in the subcategory Core Subjects. If needed, the remaining credits must be acquired in the subcategory Compensatory Courses.

<sup>3</sup> Any course that can also be chosen as an elective can be selected as a compensatory course. If the credits acquired for an elective are recognised for the subcategory Compensatory Courses, these same credits can then not also be recognised for the category Electives.

<sup>4</sup> Credits for courses that are part of both Bachelor and Master programmes can only be recognised for the Master degree, if they have not already been recognised for the Bachelor degree.

### Art. 39 Request to Issue the Degree

<sup>1</sup> Once the requirements have been fulfilled in accordance with Art. 38, students can apply within three years after having begun the Master programme to be issued with the Master degree. Upon request, the Rector can extend this time limit for compelling reasons.

<sup>2</sup> The application should indicate the performance assessments passed from the categories specified in Art. 38, Para. 1 to be listed in the final academic record. The total number of credits for each category must correspond to the minimum number of credits specified in Art. 38, Para. 1.

<sup>3</sup> A maximum of 100 credits are recognised for the Master degree. If requested by the students, additional credits are listed in the addendum to the final academic record.

**Art. 40** Interim Academic Record, Final Academic Record,  
Grade Point Average

<sup>1</sup> Interim academic records are generally issued at the end of the examination sessions and contain any study performances evaluated since the last interim academic record.

<sup>2</sup> The following are listed in the final academic record:

- a. The grades and other performance evaluations in accordance with Art. 39, Para. 2, and the grade point average calculated from the grades.
- b. Additional performance evaluations are listed in the addendum to the final academic record in accordance with Art. 39, Para. 3.

<sup>3</sup> The grade point average in the final academic record (= final grade) is calculated as a weighted mean of the following two grades:

- a. The Master thesis grade weighting 1
- b. The weighted mean of all other grades weighting 3  
in the application where the weight of each  
grade corresponds to the allocated number  
of credits

<sup>4</sup> D-CHAB records, manages and checks the grades and other performance evaluations, and issues the academic records.

**Art. 41** Certificate, Diploma Supplement, Publication

<sup>1</sup> Graduates, who obtain the Master degree, receive a certificate and a diploma supplement.

<sup>2</sup> The Rectorate publishes the names of graduates who acquire a Master degree.

## **Chapter 6: Final Regulations**

### **Art. 42 Exclusion from the Master Programme**

Exclusion from the MIPS Master programme normally results from not being able to acquire the required number of credits for the Master degree as indicated in Art. 38, due to

- a. having failed the performance assessments twice; or
- b. having exceeded the allowed maximum duration of study.

### **Art. 43 Transcript of Records**

Should a student be excluded from the MIPS Master programme before he/she acquires the Master degree, or drops out of the study programme, he/she is given a transcript of records. This transcript lists all the evaluated study achievements carried out before being excluded from or dropping out of the programme.

### **Art. 44 Effective Date**

These Programme Regulations come into effect at the beginning of the Autumn Semester 2007. These regulations are effective for students who begin the Master programme on or after this date.

On behalf of the ETH Zurich Executive Board

President a.i.: Osterwalder

Delegate: Bretscher

## Appendix

to the 2007 Programme Regulations for the  
Master Programme in Medicinal and Industrial Pharmaceutical Sciences (MIPS)

approved by the Rector on 8 May 2007

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### 1. University degrees that qualify to apply for admission to the MIPS Master programme (qualifying scientific disciplines)

(Ref: Art. 20, Para. 1, Lit. a of the Programme Regulations)

To be able to apply for admission to the MIPS Master Programme, candidates should hold a Bachelor degree corresponding to at least 180 ECTS credits or an equivalent university degree, or be enrolled at the time of their application in one of the scientific disciplines qualifying for the MIPS Master programme.

The qualifying scientific disciplines are, in particular, the following (in alphabetical order):

- Biology
- Biotechnology
- Chemical Engineering
- Chemistry
- Food Science
- Pharmaceutical Sciences

### 2. Knowledge required to gain admission to the MIPS Master programme (requirement profile)

(Ref: Art. 20, Para. 1, Lit. a of the Programme Regulations)

- 2.1 The MIPS Master programme requires basic and subject-specific knowledge and practical experience in the fields of Mathematics, Physics, Computer Science, Natural Sciences, Medicinal and Pharmaceutical Sciences. This knowledge forms the minimal scientific requirement profile that must be fulfilled to gain admission to the programme.

The requirement profile specified in Item 2.3 is based on the knowledge and practical experience imparted during the ETH Zurich Bachelor programme in Pharmaceutical Sciences, and comprises **125 ECTS credits**. A technical and scientific way of thinking is also a prerequisite.

- 2.2 The responsible Admissions Committee evaluates to what extent the applicants' previous education corresponds to the requirement profile (individual evaluation of dossier). Any lacking knowledge and practical experience must be compensated for by fulfilling additional requirements. In this respect, the following is applicable:

- a. Admission to the MIPS Master programme is not granted, if:
  - 1) the additional requirements amount to more than 60 credits; or
  - 2) the additional requirements amount to more than one-third of those credits belonging to the area of basic knowledge specified in the requirement profile (in particular, Parts 1 – 3 of the requirement profile).
- b. If the additional requirements are not completely fulfilled, admission to the MIPS Master programme is revoked.

**2.3** The **requirement profile** is divided into the following four parts. Each part defines the knowledge and practical experience that constitute the mandatory essential basis for the Master programme.

Courses completed by applicants are evaluated according to the content of the ETH Zurich Bachelor programme in Pharmaceutical Sciences indicated below. Course details are specified in the course catalogue ([www.courses.ethz.ch](http://www.courses.ethz.ch)).

**Part 1: Subject Areas – Mathematics, Statistics, Physics and Computer Science (approx. 25 credits)**

Part 1 comprises approx. 25 credits and includes basic knowledge of the following subject areas: Mathematics, Statistics, Physics and Computer Science. The corresponding courses form part of the first and second year Bachelor programme in Pharmaceutical Sciences.

**Part 2: Subject Area - Chemistry (approx. 30 credits)**

Part 2 comprises approx. 30 credits and includes subject-specific knowledge and practical experience in the field of Chemistry. The corresponding courses are largely part of the first and second year Bachelor programme in Pharmaceutical Sciences.

**Part 3: Subject Area – Biology (approx. 25 credits)**

Part 3 comprises approx. 25 credits and includes subject-specific knowledge and practical experience in the field of Biology. In particular, the following subject areas: Cell Biology, Microbiology, Medicinal Microbiology, Immunology and Gene Technology. The corresponding courses are largely part of the first and second year Bachelor programme in Pharmaceutical Sciences.

**Part 4: Pharmaceutical/Medicinal Subject Areas (approx. 45 credits)**

Part 4 comprises approx. 45 credits and includes subject-specific knowledge and practical experience in pharmaceutical/medicinal subject areas with particular emphasis on the following: Anatomy, Physiology, Histology, Medicinal Chemistry and Biophysics, Biopharmacy, Pharmaceutical Biology – Phytochemistry, Galenics, Pharmacology and Toxicology, Clinical Chemistry, Pathobiology, and Quality Management. The corresponding courses are largely part of the third year Bachelor programme in Pharmaceutical Sciences.

### **3. University degrees that fully meet the scientific requirement profile for the MIPS Master programme**

(Ref: Art. 23, Para. 2 of the Programme Regulations)

A **Bachelor degree in Pharmaceutical Sciences** awarded by one of the universities listed below fully meets the scientific requirement profile for the MIPS Master programme:

- ETH Zurich (exams held in Zurich)
- University of Basel (exams held in Basel)
- University of Geneva (Ecole de Pharmacie Genève-Lausanne, exams held in Geneva)

### **4. Additional requirements for admission for holders of an ETH Zurich Bachelor degree in a qualifying scientific discipline (without Pharmaceutical Sciences)**

For holders of an ETH Zurich Bachelor degree in *Biology, Biotechnology, Chemistry, Chemical Engineering, or Food Science*, the scientific requirement profile for the MIPS Master programme is partially fulfilled. In the case of admission, the lacking knowledge must be compensated for by carrying out additional requirements (= additional courses). Depending on the scientific discipline studied, additional requirements normally amount to 50-60 credits. The number of credits is decided upon following individual evaluation of each dossier.

An overview of additional requirements listed according to the scientific discipline studied can be accessed at: [www.chab.ethz.ch/lehre/pw\\_mips\\_msc/Admission](http://www.chab.ethz.ch/lehre/pw_mips_msc/Admission)