

Guide

This is an English translation of the legally binding original signed German language document dated 01/09/2023

Specialised Joint Master's Programme in Biomedical Engineering at the Medical Faculty of the University of Basel and at the School of Life Sciences (HLS) of the University of Applied Sciences & Arts Northwestern Switzerland

This guide is for courses offered at the HLS

01.09 2023

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Information

The joint Master's programme website at <https://biomedicalengineering.ch/> provides all relevant information.

The head of education and the head of the study programme are available for consultation.

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Office hours are listed on the joint website (<https://biomedicalengineering.ch/>).

Preliminary remarks

In these guidelines the term "module" refers to a group of courses. An individual course is referred to as a "course". (This is in accordance with the University of Basel and is different from the terms used in other FHNW study programmes).

The term "joint course catalogue" in this Guide (Part II), describes the curriculum of this Master's programme on the website, which lists the courses of the University of Basel and the HLS FHNW.

I. Scope

1. These guidelines are a supplement to the Regulations of 31.10.2022 for the specialised Joint Master's Programme in Biomedical Engineering, at the Medical Faculty of the University of Basel (hereafter "Faculty of Medicine") and at the FHNW School of Life Sciences (hereafter "HLS"), approved by the Council of the University of Basel on 29.11.2022, hereafter referred to as StO MSc BME.
2. These guidelines govern the implementation of courses offered by the HLS as part of the Joint Biomedical Engineering Master's Programme of the University of Basel and the FHNW, hereafter referred to as MSc BME,
3. These guidelines apply to courses offered by the HLS - including practical work - in accordance with the StO MSc BME Section IV. For courses offered by the University of Basel, StO MSc BME Section III applies.
4. These guidelines refer in particular to section IV of the StO MSc BME: "Courses and Performance Assessment at the HLS".

II. General provisions

1. Upon successful completion of the Master's programme, the academic title of Master of Science (MSc)

in Biomedical Engineering is awarded jointly by the Faculty of Medicine and the HLS.

2. Admission is in accordance with the legal provisions of the University of Basel.
3. Students admitted to the programme are enrolled at the University of Basel and are under the central study administration of the University of Basel, the Dean's Office of the Faculty of Medicine and the programme director.
4. The courses at the HLS are administered by the latter. To this end, students are registered as students at the FHNW and are given access to the FHNW Muttentz campus and rooms.
5. At the start of their studies, students receive an FHNW e-mail address and the associated access to the IT infrastructure of the HLS.

III. Teaching and Examination Commission

1. A joint Teaching and Examination Commission (UPK) is responsible for the degree programme. This commission consists of 4 members of the HLS (each with voting rights), 4 members of the University of Basel (each with voting rights), the Dean of Studies of the Faculty of Medicine (without voting rights), the Head of Education of the HLS (without voting rights), 2 students (each with voting rights except for individual applications (e.g. admission, examinations or hardship cases)). The commission is quorate if it has at least 8 votes.
2. The members of the UPK are elected by the Faculty Assembly or by the HLS for a period of two years and re-election is possible.
3. The students can send up to 2 representatives to the UPK.
4. The UPK may delegate tasks to the programme management. Decision-making cannot be delegated.
5. The programme management chairs the UPK.

IV. Programme management

1. The **programme director is** responsible for coordinating the joint elements of the programme in consultation with the sponsoring institutions.
2. The sponsoring institutions each delegate one professor to the programme management. They manage the degree programme by mutual agreement.
3. The programme management is responsible for all questions concerning the programme where these are not the responsibility of other bodies.
4. The programme management is listed on the joint website.

V. Study Programme

1. The structure of the study programme is regulated according to §8 of the StO MSc BME.
2. Details of individual courses are listed in the common course catalogue.
3. The study programme consists of modules of the Biomedical Engineering degree programme. A module is understood as a group of one or more courses, the coherence of which is derived from the study objectives. Modules are shown in Figure 1.
4. At the start of their studies students are assigned by the UPK to either the "Biomedical Basics" or "Engineering Basics" module, or a combination of these, based on their Bachelor's degree (Figure).
5. At the beginning of the second semester students choose which track to follow:
 - Medical Systems Engineering
 - Biomaterial Science and Engineering

In the third semester they select one specialisation module:

- Computer Assisted Surgery
 - Image Acquisition and Analysis
 - Diagnostic and Therapeutic Technologies
 - Implants and Regenerative Technologies.
6. Courses are divided into compulsory and elective, depending on the previous Bachelor's degree programme as well as on the chosen modules.
 7. Compulsory courses are those from either "Biomedical Basics" or "Engineering Basics", or an individual combination of these, as well as all courses from "BME Basics". The individual assignment acc. V.4. will be announced with the notification of admission.
 8. The assignment of individual courses to modules is fixed and is in the common course catalogue.

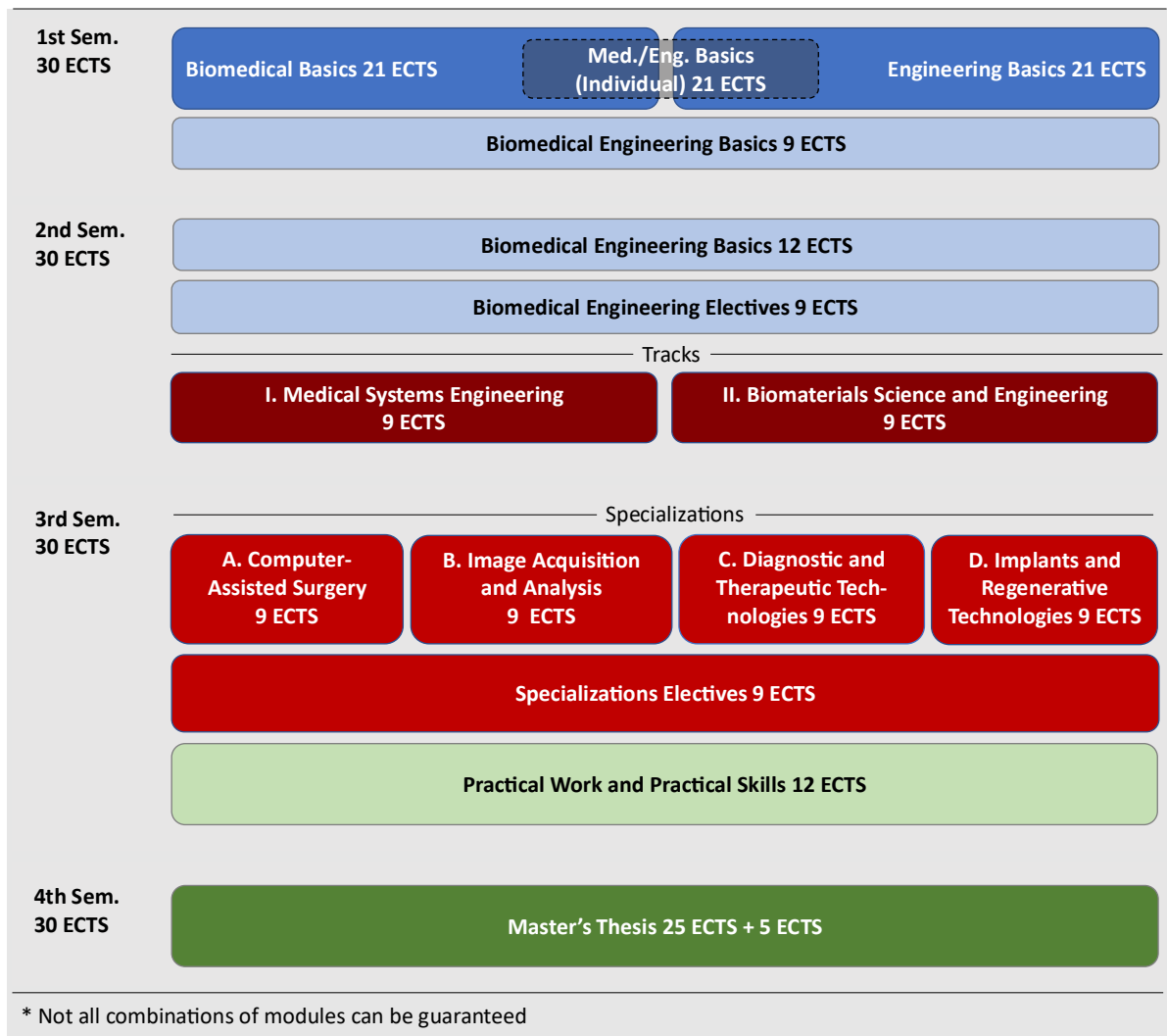


Figure 1: course of studies in individual modules

VI. Courses and assessment at the FHNW

1. §12-§22 of the StO MSc BME apply, taking into account the following:

Acquisition of credit points (ECTS)

2. Credit points (ECTS) are earned through student performance with a satisfactory grade; credit points are only awarded once for the same or similar academic performance. Satisfactory academic performance cannot be repeated.
3. The credits earned are transferred from the HLS to the University of Basel.

Courses

4. Students in the 1st semester are automatically enrolled for HLS courses.
5. From the 2nd semester on students must register via the enrolment portal in calendar week 6 or 36 (i.e. before the start of the semester) for courses they wish to take in the spring or autumn semester.
6. Course registration automatically includes registration for the performance assessment.
7. Students must deregister (via e-mail to studierendenadministration.lifesciences@fhnw.ch) for modules they do not wish to attend in the spring semester or autumn semester. This must be done by the end of week 2 of the respective semester at the latest.
8. The courses offered are announced in the joint course catalogue.
9. Each course is assigned (a) course supervisor(s) and is announced in the common course catalogue.
10. Lecturers ensure the quality of examination delivery and compliance with the Code of Conduct at examinations (see sections VII. and XI).

Performance evaluation

11. A passing grade is when the overall assessment of the student's performance within a course is graded at least 4.0 or as a "pass".
12. The assessment of student performance can be a combination of partial evaluations associated with a single course.
13. The type of examination or combination of partial assessments of a course is detailed in the common course catalogue of the Master's programme. This can be adjusted after prior announcement by the person(s) responsible for the course (the form of the examination is subject to change).
14. The weighting of the individual partial evaluations is given in the common course catalogue and the overall assessment of the course is calculated accordingly. Grade averages are rounded up or down to the nearest tenth grade.
15. The number of repetitions of failed credits or partial credits can be limited to one repetition in accordance with StO MSc BME §16. Such restrictions are in the common course catalogue. If a further repetition is not permitted, the credit points of the course can no longer be acquired, which may prevent completion of the degree. A repeated failed performance record in courses subject to a restriction on repetition will be notified to the University of Basel, which leads to exclusion from the degree programme in accordance with § 16. Para. 7.
16. Individual partial performance for the acquisition of credit points retains validity for a maximum of 14 months, provided that the composition of the assessment (weighting and content) remains unchanged. After expiry of the time limit or if the assessment changes, it must be completed again.

Achievement assessment (examinations)

17. Written exams are organised during the examination sessions by the HLS FHNW education management.
18. Oral exams are organised by the relevant course instructor.

19. If a student does not attend an examination, it is marked as failed and given a grade of 1.0. Exceptions to this are regulated according to the StO MSc BME §24.

Course-related assessment

20. Details of the form, duration and time of course-related performance assessment are announced to the students in good time, e.g. via Moodle.
21. Assessed course work that has not been submitted will be given a grade of 1.0. If the failure to submit is for reasons valid under StO MSc BME §24.1, the element concerned may be omitted subject to approval by the UPK. In this event, the grades from the remaining assessments are recalculated proportionally.
22. If a student does not attend a performance assessment or does not submit the performance record on time, it is considered as failed and is graded with 1.0. Exceptions to this are regulated according to the StO MSc BME §24.

Project Work and Practical Skills Module

23. Students acquire practical experience worth 12 ECTS in the "Practical Work & Practical Skills" module.
24. These can be acquired in a laboratory project (up to 2 days per week, 12 ECTS max.), in literature research (6 ECTS max.) and/or in the form of internships.
25. Project or literature research work is agreed upon according to §19 of the StO MSc BME.
26. Possible internships are announced in the common course catalogue before the start of the semester.

Examination results

27. Examination results are published by the Student Administration on the HLS FHNW intranet portal.
28. Passed assessment records are sent to the administration of the University of Basel on a semester-by-semester basis.
29. Repeated failed credit assessments of courses subject to a restriction on repetition are sent to the University of Basel on a semester-by-semester basis.

Audit inspection

30. The person responsible for the course is the contact for queries regarding the performance record and examinations.
31. After completion of written examinations, candidates may see the examination paper upon request. This request must be submitted to the person responsible for the course within 30 days of the announcement of the mark. If not, the examination result is deemed to be accepted. The time, form and duration of the inspection are determined by the lecturer responsible.

Repeat exams

32. Repeat examinations are all exams or certificates of achievement that are not taken for the first time.
33. Repeat examinations take place in the following examination session. In the case of repeat examinations, students are automatically registered for the next possible exam session. Students must deregister (e-mail to studierendenadministration.lifesciences@fhnw.ch) from exams that they do not wish to take at the next possible time by the end of week 2 of the respective semester at the latest.
34. Repeat examinations correspond to the common course catalogue in terms of duration, examination mode and examination subject matter, and can be adapted by the person responsible for the course after prior notice (the form of the examination is subject to change).
35. The examination material for repeat examinations or partial performance always corresponds to the current learning content of the lecture. Thus, if the course is taught again before taking the repeat

examinations, then the learning content of the new lecture period is examined.

36. It is students' duty to find out about exam material, learning content and any restrictions for repeat examinations. The e-learning platform Moodle and students of the corresponding year are available for this purpose. Lecturers are not obliged to answer individual requests for material restrictions.

Plagiarism

37. Plagiarism is the complete or partial use of someone else's work without indicating the source and the author. Plagiarism is a violation of copyright. Shorter passages of another's work may be quoted, but this requires the quotation to be marked and the source to be indicated.
38. The university is entitled to check student work for possible plagiarism using technical resources.
39. The detailed procedure for detecting plagiarism at the HLS is described in 0.

VII. Rules and conduct during examinations

At all examinations of the FHNW School of Life Sciences, the following rules apply as a compulsory code of conduct:

1. Clear Desk applies! No aids or electronic devices are allowed, unless they are expressly permitted by the respective course instructor(s). Bags, folders, etc. including smart devices (any electronic storage media with external communication possibilities (e.g. wifi, Bluetooth, etc.)) are to be kept out of students' reach.
2. Official photo ID and student ID for checking must be kept visible on the desk. When asked by the examination supervisor, proof of registration for the examination must be provided on an electronic device via "my studium".
3. In the event of unregistered attendance at an examination, participation can be refused. Exams of unregistered participants will not be marked.
4. Names and matriculation numbers are to be written on the answer sheets.
5. If necessary, supplementary paper will be handed out by the examination supervisor.
6. The examination supervisor collects the examination in person.
7. All sheets (exam papers, notes, etc.) must be handed in.
8. If students feel unable to take the examination, this must be communicated to the examination supervisor before the examination papers are handed out. Once the examination papers have been distributed, the examination is deemed to have been taken.
9. Students are responsible for being present at the right time for the right exam.
10. If students arrive late they can only take part in the examination until the scheduled end of the exam. Furthermore, in this event the consent of the invigilator is required. If participation is refused (e.g. because the remaining time is too short), then grade 1.0 is given.
11. In the event of the use of unauthorised aids or inappropriate behaviour, in particular copying or cheating during the examination, mark 1.0 will be given.

VIII. Objections and appeals

1. An objection to an examination decision must be submitted in writing to the UPK within 14 days of the decision being announced. The UPK forwards appeals to the director of the HLS.
2. The objection must contain a clearly defined request and the signature of the complainant or the person representing him/her.
3. The complainant shall be heard via the complaints procedure. This hearing will be recorded.

4. The Director of the HLS examines the objection and the statements of the lecturers, the programme management as well as those made during the hearing, and issues a written decision.
5. An appeal against the decision of the Director of the HLS may be lodged in writing with the FHNW Appeals Commission, Klosterzelgstrasse 2, 5210 Windisch within a non-extendable period of 30 days from its notification. The appeal must contain a clearly defined request and the signature of the complainant or the person(s) representing him/her. A copy of the contested objection decision must be enclosed with the appeal.
6. A review of the performance evaluations within the framework of the grievance procedure is only carried out with regard to abuse and arbitrariness.
7. The appeal procedure is subject to a fee. The Administrative Jurisdiction Act of the Canton of Aargau shall apply.

IX. Graduation and diploma ceremony

1. Once a year, the HLS holds a graduation ceremony in the last week of September.
2. In addition to the written MSc thesis, the preparation of an A0 size poster is required. Selected posters can be uploaded to the FHNW publication and research database (in the Institutional Repository of the FHNW (IRF)) in consultation with the supervisor.

X. Intellectual property and confidentiality

1. The FHNW has the right to share the intellectual property of student work with the students.
2. Agreements deviating from para. 1 must be agreed in writing.
3. Students retain the right to be named as authors.
4. Student work may be subject to confidentiality. This confidentiality is regulated in writing at the beginning of the student work.
5. Student work may require a complete, exclusive, perpetual and unrestricted transfer of the rights to the work results. This transfer shall be regulated in writing at the beginning of the student work.

XI. Code of Conduct for Lecturers and Students

1. The HLS is a recognised educational institution. Ambitious young professionals study here. They receive a first-class education and are optimally prepared for careers in industry or applied science.
2. Lecturers, students and staff of the School of Life Sciences (HLS) FHNW treat each other with respect and decency. A climate of mutual respect is cultivated.
3. The use of mobile phones and other means of communication (with the exception of notebooks/tablets, see point 5) during lectures is prohibited. Lecturers may expel disruptive students from the course.
4. Recording lectures (in face-to-face classes or online) without the consent of the person responsible for the module or the lecturer is illegal and is an infringement of copyright, as is posting or distributing the recording online.
5. Notebooks/tablets are to be used during the course exclusively for activities required in the course.
6. Students arrive punctually for classes or log in punctually for online classes. Lecturers can exclude students from the course who are repeatedly late, even in online classes.
7. Attendance is compulsory for all practical modules and for all practical parts of modules. Exceptions are regulated by the relevant module supervisor.
8. Students are responsible for order and cleanliness in their classroom (including laboratories).
9. If special rules of conduct for the Muttenz campus or special teaching formats come into force at the HLS, information will be provided via e-mail or on the HLS intranet portal (Inside FHNW).

¹⁰. In the event of violations of this Code of Conduct, lecturers may exclude students from the course.

XII. Entry into force

These guidelines come into force with the approval of the Director of the School of Life Sciences on 1. September 2023. They replace all previous guidelines.

Muttenz, the 01.09.2023

School of Life Sciences
University of Applied Sciences Northwestern Switzerland FHNW



Prof. Dr Falko Schlottig
Director



Prof. Dr Julia Rausenberger
Joint-Head of Further Education

Appendix: Plagiarism

1. Plagiarism is the complete or partial adoption of another's work without indicating the source and the author. Plagiarism is a violation of copyright. Shorter passages of another's work may be quoted. However, this requires the quotation to be marked and the source to be indicated.
2. The following acts constitute plagiarism in the broader sense: (Schwarzenegger, Ch. (2006) - Plagiarism forms and disciplinary consequences. Unijournal 4/06, University of Zurich, 19 June 2006, p. 3)
 - a. The author submits work done for them by another person (e.g. a ghostwriter) under his/her own name.
 - b. The author submits another person's work under his/her own name (full plagiarism).
 - c. The author submits the same work (or parts of it) for different exams or courses (self-plagiarism).
 - d. The author translates foreign-language texts or parts of foreign-language texts and submits them as his/her own without citing the source (translation plagiarism).
 - e. The author uses parts of text from another's work without indicating the source with a citation. This also includes the use of text from the internet without citing the source.
 - f. The author uses parts of a text from another's work and makes slight adaptations or rearrangements (paraphrasing) without identifying the source with a reference.
 - g. The author takes parts of a text from another's work, paraphrases them if necessary and cites the corresponding source but not in the context of the part(s) of the text taken (e.g. hiding the plagiarised source in a footnote at the end of the work).
3. Scientific ethics require that intellectual creations, ideas or theories of others be identified by a reference, even if they are only reproduced in the text in essence. In individual subjects or modules special citation regulations must be observed when writing academic texts. The following applies in general:
 - a. Each quotation must be accompanied by an exact reference to the source so that readers can check the reference. (As a rule, the original source should be cited).
 - b. Verbatim quotations must be placed in quotation marks.
 - c. The rearrangement of a sentence or a sequence of sentences, a translation or the use of synonyms does not exempt the author from disclosing the origin.
 - d. Other forms of using others' ideas - such as the identical adoption of a structure - are also subject to the citation obligation.

Procedure in the event of detection of plagiarism

4. The procedure when plagiarism is found is based on the measures set out in the framework regulations for Bachelor's and Master's degree programmes at the FHNW (FHNW Framework Regulations §11).

The procedure varies depending on the severity of the plagiarism:

A) Trivial cases

Cases judged to be trivial (a few forgotten citations, negligence, etc.) fall below the threshold of a warning and are dealt with informally by lecturers.

B) Minor cases

In the case of incomplete or incorrect information or the paraphrasing of texts without reference to the source, a deduction of at least one mark will be made in the grading of the work in question. If a longer section of text is reproduced identically without reference to the source, the work in question will be given the mark 1, or the corresponding record of achievement will be declared a failed piece of coursework.

In minor cases, lecturers take steps with the Head of Further and Continuing Education.

C) Serious cases

A serious case exists in particular if:

- the plagiarism is of greater quantitative or qualitative significance
- the plagiarist is in a higher semester or the work is a thesis
- it is a repeated case of plagiarism.

In such cases the work in will be declared a failed assignment and disciplinary action will be taken.

The following disciplinary measures are possible:

- Written warning by the Course Head after consultation with the Head of Further and Continuing Education and the Director.
 - Exclusion from examinations for one to six semesters by the Director at the request of the Head of Further and Continuing Education.
 - If a case of plagiarism only becomes known afterwards, e.g. after the award of the diploma, that diploma can also be withdrawn retrospectively.
5. In determining the type and duration of the disciplinary measure, the quantitative or qualitative significance of the plagiarism on one hand, and the fault, motives and conduct of the plagiarist on the other are decisive.