



# Study Regulations of the Doctoral Programme in Medical Science (Dr. scient. med.) of the Private University of the Principality of Liechtenstein (UFL)

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# **I. General provisions**

## **§ 1 Subject matter**

These Study Regulations define the doctoral programme in “Medical Science” (Dr. scient. med.) at the Private University in the Principality of Liechtenstein (UFL).

## **§ 2 Objective of the doctoral programme**

Para. 1 The doctoral programme in “Medical Science” (Dr. scient. med.) promotes systematic understanding of methods and competencies of independent scientific work in clinical research, basic research as well as health supply and health system research. It provides mastery of the skills and methods required in these areas. The programme supports students in developing an in-depth understanding of the methods and concepts of medical science in the course of their independent research activities and prepares them for independent scientific work mainly in clinical research but also in natural science and/or health science-oriented research. Students are enabled to critically analyse, evaluate and synthesise new and complex ideas. They demonstrate the ability to conceive, design, implement and adapt a substantial research process with scientific integrity. They are able to communicate with their professional environment, the larger scientific community and society in general about their subject area.

Para. 2 Students prepare a dissertation as an independent scientific contribution to medical and health science. They thereby contribute through independent research, which extends the boundaries of knowledge through the development of substantial research that deserves to be published nationally or internationally in accordance with the usual standard. They thus demonstrate their ability to drive forward progress in natural science or health science within academic and professional contexts.

## **§ 3 Residuary competence**

Any issues not covered by these Study Regulations – unless they are covered by another publication of the UFL – will be clarified by the University management.

## **§ 4 Governing bodies**

Institutions in the framework of the doctoral programme are the University council, the Appeals committee, the University management, the Faculty management and the Head of the doctoral study programme “medical science” (Dr. scient. med.).

## **II. Studies**

### **A. Admission to the doctoral programme and implementation of the study programmes**

#### **§ 5 Admission**

Students have no entitlement to be admitted to the doctoral programme.

#### **§ 6 Admission requirements**

Para. 1 Admission to the doctoral programme is open to students who have successfully completed a degree (Diploma, Master's degree) at a recognised university or higher education institution in one of the following fields of study:

- human medicine, dentistry or veterinary medicine
- pharmacy,
- have a Diploma or Master's degree in natural science,
- have a Diploma or Master's degree related to health science.

Proof must be furnished of a total of at least five years' study achievements or 300 ECTS.

Para. 2 In special cases, the university management may require proof that admission to doctoral programme is possible at the university of origin or at another recognised university of the country of origin.

#### **§ 7 Application documents**

Para. 1 The following documents are to be submitted on application:

- a) the completed registration form
- b) a CV with passport photo
- c) the certificate in the original or certified copy
- d) a copy of the passport or identity card
- e) a motivational letter

Para. 2 If the applicant for the doctoral programme wishes to have credit points already earned credited (when changing his degree programme or the university), any application for crediting the credit points already earned must be enclosed with his application documents. The application must contain a detailed description of the content and scope of the credit points earned.

#### **§ 8 Selection committee**

Para. 1 The Faculty of Medical Sciences appoints a selection committee to prepare the selection decision. The selection committee consists of a member of the scientific advisory board, the faculty management, the head of the study programme and a further qualified lecturer from the doctoral degree programme "Dr. scient. med."

Para. 2 The chair is held by the faculty management.

#### **§ 9 Selection procedure**

Para. 1 The selection decision is made according to the degree of suitability and strength of the motivation of the candidates for the chosen course of study.

Para. 2 Suitability is determined on the basis of the applicant's previous education in a relevant discipline, proof of which must be furnished, as well as his professional experience, any publications and presentations.

Para. 3 The University management, together with the head of the study programme, makes an initial pre-selection on the basis of the application documents. All candidates included in this pre-selection will be invited to a screening interview.

## **§ 10 Interview**

Para. 1 The interview is held with the selection committee. It can be conducted in German or English.

Para. 2 The selection discussion serves to capture the expectations and determination regarding the conclusion of the candidate's doctoral thesis and to enable a thorough assessment of their ability and motivation. For this purpose, the candidate is to present a maximum 10-minute presentation of their career so far, including their scientific work and results. Further, the candidate is to present a proposal for a research project in the course of the doctoral programme. In the third part of the selection, discussion questions will be asked about the qualification of the candidate, in particular on the medical scientific background.

Para. 3 After the selection discussion, the selection committee shall decide whether the candidate is qualified and make a recommendation regarding inclusion or refusal.

Para. 4 If the selection committee recommends the inclusion of an applicant who has submitted a request for recognition of already obtained benefits (in the course of study or university change), this recommendation also contains a proposal for recognition of all benefits already obtained in other doctoral programmes, including the eligible scope of services.

## **§ 11 Decision on admission**

Para. 1 The University management and the head of the study programme base their decision on admission on the recommendations made by the selection committee.

Para. 2 Admission may be subject to conditions or requirements.

Para. 3 The decision is final. An appeal may not be filed against it.

## **§ 12 Binding nature of registration**

Para. 1 The admission of candidates eligible for the course based on the study regulations is binding on the part of the UFL as soon as they send the deposit slip with the registration fee.

Para. 2 The application shall be binding on the part of the candidate when the registration fee has been paid. If payment is not made within the specified period, the UFL may allocate the study place elsewhere.

Para. 3 If the student does not start the course, the enrolment fee shall be retained by the UFL.

Para. 4 If the studies are terminated prematurely, the study fee for a prematurely aborted semester is passed to the UFL.

## **§ 13 Enrolment requirement**

Students must be enrolled for the entire duration of their studies. Students who are not enrolled are not allowed to attend regular courses or take examinations.

## **§ 14 Fees**

The fees due by the students (registration fee, semester fees) and their claim are determined by the university management in the financial regulations.

## **B. Structure of the doctoral programme**

### **§ 15 Holding of study programmes**

The University management and the foundation council decide on whether a study programme will be held.

### **§ 16 Duration and scope of studies**

Para. 1 The study period for the doctoral programme in “Medical Science” is four years. The course comprises 180 ECTS credit points.

Para. 2 The studies are organised into eight semesters. Of these, four semesters are attributable to the curricular share.

Para. 3 38 ECTS credits are attributable to the curricular share of the study, including the proofs of performance for cancelled courses. 142 ECTS credits are credited for the written dissertation and the doctoral examination.

### **§ 17 Courses**

Para. 1 Courses form the curricular part of the study. They include compulsory subjects, elective subjects as well as doctoral colloquia.

Para. 2 The attendance and active participation in the courses during the curricular part as well as the existence of the corresponding proof of performance constitute the prerequisite for admission to the doctorate.

Para. 3 Courses are offered so that participation in them can be concluded within four semesters.

Para. 4 The proof of performance for the courses must be filed no later than after six semesters at the latest.

### **§ 18 Compulsory subjects**

A total of 30 ECTS credits are attributable to the required subjects. Compulsory subjects must be taken by all students and must be passed with a proof of performance.

### **§ 19 Elective subjects**

Para. 1 Elective subjects must correspond to the intention of the doctoral programme of scientific medicine and correspond in their scientific depth to that of the doctoral programme.

Para. 2 Suitable elective subjects are courses offered by the UFL or other universities at a doctoral level and have been approved by the head of the study programme as elective subjects.

Para. 3 Elective subjects are to be completed with a total of 2 ECTS credits.

Para. 4 Registration to the elective subjects must take place at the latest by the end of the second semester and shall be binding after the confirmation by the UFL. The head of the study programme decides on the realisation of courses offered at the UFL as elective subjects, depending on the number of participants.

## § 20 Doctoral colloquia

Para. 1 In module 7, “Scientific Forum”, four mandatory doctoral colloquia of 6 ECTS credits are to be completed, which serve to facilitate a discussion between students and with the lecturers. Every student is obliged to attend the doctoral colloquia, whereby a presentation must be given and a written paper must be submitted. In the first doctoral colloquium, a report of the planned dissertation must be presented. The ensuing colloquia focus on the content and methodological aspects of the respective progress of work within the centre.

Para. 2 Four presentations must have been given and four papers submitted at the latest by the time the dissertation is submitted.

## § 21 Overview of the modules

The study programme is divided into the following modules. The overview of the respective courses and the recommendation for the time distribution of curricular teaching content according to the semesters are listed in the appendix.

<b>Module</b>	<b>ECTS CP</b>
Module 0: Introduction and orientation	1
Module 1: Scientific Writing	6
Module 2: Core skills of independent in-depth scientific work	8
Module 3: Subject-specific skills of independent in-depth scientific work	4
Module 4: Communication and presentation	3
Module 5: Biometrics and statistics	5
Module 6: Ethics in science and research	3
Module 7: Scientific Forum (Doctoral colloquia)	6
Module 8: Elective subjects	2
<b>Total ECTS credit points for modules (incl. proof of performance)</b>	<b>38</b>
Oral doctoral examination	2
Dissertation (cumulative work or classical dissertation)	140
<b>Total ECTS credit points for all studies</b>	<b>180</b>

## **§ 22 Attendance and crediting of other modules and courses**

Para. 1 Credit points already earned can be credited when changing degree programmes or universities. For this purpose, applicants must submit an application to have credit points already earned credited together with their registration documents. This application cannot be submitted at a later date.

Para 2. If the students cannot attend individual modules or courses after they have started their studies, the head of the study programme can credit them for attending equivalent modules or courses at other recognised universities upon prior request, with a maximum of two modules or courses, with a maximum of 10 ECTS credits. In any case, only modules or courses that are attended during the course of the doctoral programme and completed with a proof of performance can be counted.

Para. 3 Students are encouraged to present their work at conferences and other events serving the exchange of scientific information and ideas and to engage in critical discussion.

## **Compulsory attendance and certificates of achievement**

### **§ 23 Compulsory attendance**

Para. 1 The design of the course takes into account that students will complete it in a part-time manner. Consequently, block attendance at weekends at the University is scheduled. Some of the courses can also be held in the form of online courses. Attendance is compulsory for all courses.

Para. 2 In order to successfully complete the studies, a minimum presence of 80% per semester must be demonstrated. In the event of absenteeism, courses must be made up for to a corresponding extent. Missed doctoral colloquia must be made up for in any case (20§).

Para. 3 Divergent to Para. 2, in special cases of frequent absences due to illness or due to unforeseeable burdens in the family or professional environment, a compensation of the missed courses can be granted by the head of the study programme in coordination with the university management. However, there is no right to such an alternative compensation.

Para. 4 Students who have not attended a course are responsible for catching up on the subject matter of the course.

### **§ 24 Type of certificates of achievement**

Para. 1 A proof of performance must be provided for each course relevant to the examination. All examination-relevant courses are equally weighted.

Para. 2 Students are informed of examination-relevant courses on commencement of their studies.

Para. 3 The selection of the type of proof of performance is the responsibility of the lecturers. The proof of performance shall be knowledge and competence oriented and shall be reviewed and approved by the head of the study programme in this regard.

Para. 4 The proof of performance is an integral part of the curriculum, thus the students do not have to register separately for this. In the case of examinations, deregistration is possible until immediately before the examination date. In this case, the examination must be taken subsequently within a period of 6 months at the latest.

Para. 5 The proof of performance on doctoral colloquia will be provided in the form of a presentation and a written paper. Grades are not awarded for the presentation and the written paper. They are confirmed by the head of the study programme with the predicate "participated".



## **25 § Grading the proofs of performance**

Para. 1 The proof of performance is evaluated with the following grades (according to the Swiss grading scale). The following definitions are used in this context:

6	Very good:	The performance exceeds the requirements.
5.5	Good to very good:	The performance complies with the requirements in particular.
5	Good:	The performance fully complies with the requirements.
4.5	Sufficient to good	The performance generally meets the requirements.
4	Sufficient:	The performance contains deficiencies but as a whole meets the requirements.
3.5	Insufficient:	The performance does not meet requirements but shows that the student has the basic knowledge required and the deficiencies can be corrected in the foreseeable future.
3	Poor:	The performance does not meet requirements and it is unlikely that the necessary basic knowledge can be achieved in the foreseeable future.

The evaluations 2.5 (very weak to weak); 2 (very weak); 1.5 (unsuitable to weak); 1 (unsuitable) give the auditor the opportunity to make further differentiation within the spectrum of insufficient performance.

Para. 2 If a proof of performance is not sufficient, this partial examination must be repeated.

Para. 3 A proof of performance can be repeated once. A final repetition is possible as part of an oral examination before a committee.

## **§ 26 Communication and challenging of results**

Para. 1 The results of written proofs of performance are communicated electronically to the students.

Para. 2 Upon request, insight into the evaluation of proofs of performance is provided to the students.

Para. 3 If the result of a proof of performance is not sufficient, the students can challenge the evaluation within 30 days at the appeals committee.

## **§ 27 Certificate of attendance of the courses**

The students will be certified after the end of a semester, as soon as they have provided the respective proof of performance and proven their attendance.

## **D. Archiving**

### **§ 28 Certificates of achievement**

The originals or copies of the corrected proofs of performance as well as the assessed contributions to the doctoral colloquia shall be kept for at least five years.

### **§ 29 Expert opinions and records of doctoral examinations**

The assessments prepared for the dissertations and the records of the doctoral examinations shall be kept in the original for at least ten years.

## **III. Promotion**

### **A. General provisions**

#### **§ 30 Topic of the dissertation**

The selection of the dissertation topic is determined in consultation with the head of the study programme and is to be announced by the students by the end of the 1<sup>st</sup> semester as part of the dissertation agreement.

#### **§ 31 Supervisory agreement**

Para. 1. A supervisory agreement is concluded with every student without exception. The signed supervisory agreement stipulated by the university is to be submitted by the end of the 1<sup>st</sup> semester at the latest.

Para. 2 If the doctorate is to be embedded in the professional context of the student, the students provide a declaration of consent of the employer to carry out research work. The declaration of consent must be accompanied by a full description of the use of the employer's resources or the use of corporate or patient data. The form with the declaration of consent must be submitted as well.

Para. 3 The declaration of consent given by the university is to be signed by the students along with the signed supervisory agreement at the end of the 1<sup>st</sup> semester at the latest.

#### **§ 32 Admission requirements**

All students who have completed the required proofs of performance in the course of their doctoral programme in accordance with Articles 17 to 20 are admitted to the doctorate.

#### **§ 33 Basis of the doctorate**

Para. 1 The doctorate is based on a written medical-scientific paper (dissertation) and an oral examination (doctoral examination).

Para. 2 The ability to conduct a scientific discussion should be demonstrated in the doctoral examination.

#### **§ 34 Degree awarded**

The private university in the Principality of Liechtenstein (UFL) awards the internationally recognised academic degree of a doctor or a doctoral student of medical science (Dr. scient. med.).

### **B. Initiation of a doctoral procedure**

#### **§ 35 Registration**

Para. 1 Registration for the doctorate is to be addressed to the University management using the form provided for this purpose. The following documents must be submitted:

- a) the declarations named in § 36 of these Study Regulations;
- b) three copies of the completed dissertation and an electronic version of the dissertation. The requirements of UFL must be observed when drawing up the dissertation;
- c) the certificates of achievement from the doctoral programme.

## **§ 36 Declarations of doctoral students**

Para. 1 When submitting the doctoral thesis, the doctoral students declare that the dissertation is an independent work which conforms to the rules of good scientific practice.

Para. 2 The doctoral students also declare that the submitted dissertation or dissertation with a related topic as a whole or in parts has not already been submitted at another university as a dissertation or for obtaining another academic degree.

Para. 3 Furthermore, the doctoral students declare that they have written the work without the unauthorised help of third parties and have not used any other sources other than those indicated.

## **§ 37 Binding nature of registration**

The registration for the doctorate is binding. It cannot be withdrawn.

## **§ 38 Deadline**

Para. 1 Doctoral students must register for the doctorate at the beginning of the eighth semester at the latest.

Para. 2 An extension of the deadline by up to four semesters for the submission of the dissertation can be granted by the University management only upon receipt of a written and duly reasoned request. The University management decides on the acceptance of the dissertation after the expiry of the extended period.

## **Dissertation requirements**

### **§ 39 Scientific paper**

The thesis is a scientific work that serves to demonstrate the ability to manage scientific questions independently.

### **§ 40 Type of dissertation**

Para. 1 The doctoral thesis can be written as a classic dissertation or, preferably, as a cumulative dissertation.

Para. 2 The classic doctoral thesis is a detailed scientific paper containing original data of its own scientific investigation or comprehensive systematic review work or meta analysis.

Para. 3 The cumulative doctoral thesis encompasses at least two published or to be published works, which are in close thematic context with the overarching dissertation topic, as well as a unifying text. The work or unifying text in a cumulative doctoral thesis must meet the following requirements:

- a) The contribution must be an original work or a systematic review work or a meta analysis as the first author (or second author with proven "equal contribution" with the author in the first place) published in a peer reviewed journal or accepted for publication.
- b) The second contribution of the cumulative dissertation can be another article in a peer reviewed journal or a published peer reviewed abstract, written as a contribution to a specialised scientific congress.
- c) The binding unifying text is a text written by the doctoral students themselves to frame the work submitted as a dissertation. The unifying text goes beyond the published texts in terms of content and/or methodology and contains a binding discussion. It also serves to document the independent research performance and contributions of co-authors.

Para. 4 The dissertation may not have been published before.

## **§ 41 Language**

Para. 1 The dissertation must be written in German or English.

Para. 2 The dissertation must include a German and an English language summary.

## **§ 42 Formal requirements**

When writing the dissertation, the formal requirements (guidance) laid down by the UFL must be observed. The UFL can be used as an affiliation in all publications included in the doctoral thesis.

## **Supervision and assessment of the dissertation**

### **§ 43 The objective of the supervisors**

The supervisor is responsible for the overall management of the dissertation.

### **§ 44 Requirements for supervisors**

Para. 1 The management of the dissertations is usually carried out by qualified lecturers of the UFL.

Para. 2 Supervision by habilitated lecturers at other universities or higher education institution is possible upon request by students. Such a request is to be submitted to the head of the study programme.

Para. 3 With the supervisors from other universities or higher education institution, a contract is signed by the university management following the signing of the dissertation agreement.

Para. 4 In duly justified exceptional cases, the course of study may also allow for the supervision by an unqualified person with special knowledge in the subject field, provided that this person has a doctorate.

### **§ 45 Assessment**

Para. 1 The faculty examines the submitted dissertation for possible plagiarism.

Para. 2 The university management shall submit the dissertation with the plagiarism checking report to the supervisor for assessment as the first assessor.

Para. 3 The university management assigns a second habilitated person or a non-habilitated person with special expertise in the subject matter for a second assessment.

Para. 4 At least one of the two assessors must be external, so they must not belong to the UFL.

Para. 5 In consultation with the head of the study programme, the university management may obtain an expert opinion from another person, particularly in the event of inconsistencies between the two expert opinions or doubts as to their quality.

Para. 6 After completion of the procedure, the doctoral student receives insight into the assessment concerning the dissertation.

### **§ 46 Requests submitted by the assessors**

Para. 1 Each opinion shall include an application stating: 'Acceptance of the dissertation'; 'Acceptance of the dissertation with the requirement to make individual minor corrections prior to publication'; 'Rejection of the dissertation on revision' or 'Definitive rejection of the dissertation' and grading (§ 51).

Para. 2 The grading of the dissertation arises from the arithmetic mean of the applied grades.

#### **§ 47 The decision on the acceptance, repudiation or rejection of the dissertation**

Para. 1 If all the expert opinions are in favour of accepting a dissertation, the University management will accept the dissertation.

Para. 2 If all assessments are based on the acceptance of the dissertation, while one or more contain instructions to make individual corrections, the university management shall accept the dissertation and inform the doctoral student about those instructions. Corrections shall be submitted no later than one week before the doctoral examination. The acceptance of the correction or corrections takes place in the course of the doctoral examination.

Para. 3 If one or more expert opinions reject a dissertation for revision, the University management will reject the dissertation for one-off revision.

Para. 4 If an assessment reads in favour of a definitive rejection of the dissertation, while another assessment provides a different proposal, the University management also repudiates the dissertation for revision.

Para. 5 If a repudiation for the revision of a dissertation takes place, an appointment is agreed upon with the doctoral student for the re-submission of the dissertation. The deadline for revision shall not exceed six months. Exceptions must be approved by the University management.

Para. 6 If all assessments are based on definitive rejection of the dissertation, the dissertation is definitely rejected by the university management.

### **E. Doctoral examination**

#### **§ 48 Date**

Para. 1 If the dissertation is accepted, the University management sets up an appointment for the doctoral examination with the doctoral student.

Para. 2 The examination date may only be postponed for important reasons.

Para. 3 Whoever fails to attend the examination without excuse or breaks off the examination will fail the examination.

#### **§ 49 Content and procedure of the doctoral examination**

Para. 1 The doctoral examination lasts for 60 minutes in total. It usually takes place on the spot. In exceptional cases, the examination can also be carried out virtually.

Para. 2 The doctoral examination consists of the following:

- a) a presentation of the doctoral students on the topic of their dissertations lasting around 15 minutes and
- b) a survey of doctoral students by the persons referred to in Para. 3, in which doctoral students have to demonstrate deeper knowledge in the field of their dissertation (in the sense of a defense) as well as on the teaching content of the doctoral study programme.

Para. 3 The supervisor (first assessor) and the second assessor take part in the doctoral examination. In duly reasoned exceptional cases, they may be represented by other suitable persons with the consent of the University management.

Para. 4 The University management or the faculty management assumes the role of the examination chair, as long as they do not act as a supervisor (first assessor) or second assessor themselves. Following the examination, the auditors shall decide on the applications for appraisal of the doctoral examination and on any award of the dissertation. These applications are submitted to the University management for approval. Following the doctoral examination, the chair of the doctoral committee informs the doctoral students about the application for the evaluation of the doctoral examination.

Para. 5 Records are kept of the doctoral examination.

## **§ 50 Passing the examination**

Para. 1 The persons named in § 49 para. 3 of these Study Regulations agree on the grade for the doctoral examination.

Para. 2 If the doctoral examination is not passed, the dissertation is rejected as a whole. The doctoral examination cannot be repeated.

## **§ 51 Grades**

Para. 1 The assessment is graded as follows:

6 (summa cum laude, equivalent to ECTS grade A); 5.5 (insigni cum laude, equivalent to ECTS grade B); 5 (magna cum laude, equivalent to ECTS grade C); 4.5 (cum laude, equivalent to ECTS grade D); 4 (rite, equivalent to ECTS grade E); 3 (insufficient, equivalent to ECTS grade FX).

Para. 2 The grade 6 (summa cum laude) is only possible if both assessments on the dissertation suggest this evaluation and another external assessment confirms the assessment of the dissertation with summa cum laude. After the submission of the first and second assessment by the head of the study programme and before the acceptance of the doctoral examination, the university management shall obtain another external assessment for this purpose.

Para. 3 The grade for the doctoral examination consists of the grades of the dissertation, the thesis defence (“Defensio”) and answers to questions on the contents of teaching.

Para. 4 The grades for the doctoral examination and for the dissertation are noted in the examination record. The doctoral certificate only shows the overall grade.

## **F. Deposit copies and publication of the dissertation**

### **§ 52 Obligation to publish the dissertation**

Every dissertation must be published.

### **§ 53 Deposit copies**

Para. 1 After successfully passing the doctoral examination, the UFL must receive the specified number of deposit copies of the dissertation within one year.

Para. 2 The UFL shall be provided, free of charge, with 15 deposit copies as hard copies and one electronic version. The number of deposit copies is reduced to 10 if a publication is made with a publisher.

Para. 3 The UFL attends to the delivery of deposit copies to the relevant libraries.

Para. 4 Two deposit copies are handed over to the Liechtenstein National Library. Two copies are added to the UFL archives.

Para. 5 The UFL guarantees the accessibility of these dissertations in cooperation with the Liechtenstein National Library or another partner who can guarantee permanent electronic availability.

#### **§ 54 Publication requirements**

The University management regulates the requirements, in particular regarding the design of the front page, which must be observed when deposit copies and/or printed books are produced.

#### **§ 55 Changes to the text for publication**

If minor supplements and reductions of the text prove necessary following the acceptance of the dissertation, the doctoral student shall submit them to the supervisor, whereby the changes must be made comprehensible in an appropriate manner. For a substantive change of the dissertation after its acceptance, the approval of the Faculty management and the Head of the study programme is to be obtained. A note to this effect must be included in the publication.

#### **§ 56 Publication as a printed book**

If a dissertation is published in the UFL series of publications or by a scientific publishing house which ensures an adequate dissemination of the publication, the printed books must be submitted as deposit copies in the number specified in § 53 of these Study Regulations.

#### **§ 57 Register**

Para. 1 The UFL conducts a register in which all doctors receive the necessary information about their dissertation.

Para. 2 The names of the doctors as well as the titles of their dissertations and the information on their publications are publicly available and may be published electronically by the UFL with an abstract as well as in the annual report of the UFL.

Para. 3 The UFL also conducts a register of students whose dissertation has been rejected. This register may be inspected only if the applicant furnishes proof of having a legitimate interest in doing so.

### **G. Doctoral certificate and doctoral ceremony**

#### **§ 58 Doctoral certificate**

Para. 1 After the receipt of the deposit copies, the university management shall issue a certificate with the signature of the faculty and the university management, which shall be handed over at the annual doctoral celebration.

Para. 2 The certificate will be handed over to the doctoral students together with the diploma supplement in German and English as soon as the required number of deposit copies has been handed over.

Para. 3 The submission of deposit copies or printed books and electronic versions must take place no later than one year after the oral examination.

Para. 4 The title of doctor may not be used before the doctoral certificate has been presented.

## **IV. Withdrawal of the title and legal protection**

### **§ 59 Withdrawal of the title**

Para. 1 If, after the doctoral certificate has been presented, it transpires that admission to the doctoral programme was obtained by fraud or that unfair conduct was involved, the doctor title shall be withdrawn by the University council. The same shall apply in the event that other essential requirements for obtaining the doctor title were not fulfilled.

Para. 2 Before the withdrawal of the doctoral title the affected persons are heard. The decision of the University council is final.

Para. 3 The doctoral certificate will be confiscated if possible.

Para. 4 The UFL reserves the right to publish in an appropriate form the name of the data subject and the title of the dissertation concerned together with the circumstances leading to the withdrawal of the doctoral title.

### **§ 60 Legal protection**

Para. 1 The instructions of the head of the study programme can be appealed at the University management unless expressly excluded in these Study Regulations.

Para. 2 An appeal may be lodged with the appeals committee against decisions of the University management.

Para. 3 The tasks, objects of appeal, composition and procedures of the Appeals committee are governed by the "Regulations of the Appeals Committee".

Para. 4 Decisions of the appeals committee are final.

Para. 5 The results of proofs of performance and promotions are checked by the appeals committee only for infringements and violations of procedural regulations. Complaints of inappropriateness are excluded.

## **V. Final provisions**

### **§ 61 Entry into effect**

Para. 1 These Study Regulations enter into force on 1 August 2022.

Para. 2 They apply without restriction to all students enrolled in the doctoral programme in "Medical Science" (Dr. scient. med.) which started in October 2022 and enrolled in all subsequent doctoral courses.

Para. 3 For all other students, the doctoral regulations of 1 December 2016 and those of 1 October 2003 shall apply in the second rev. of 28 May 2010 and 1 July 2019 respectively. If the previous doctoral regulations do not contain any regulations on specific points, these Study Regulations automatically come into effect.



# APPENDIX 1

## Overview of module-related courses and recommended semester classification

Courses	1 <sup>st</sup> semester	2 <sup>nd</sup> semester	3 <sup>rd</sup> semester	4 <sup>th</sup> semester
<b>Module 0: Introduction and orientation</b>				
Introduction and orientation on studies	x			
Self-management/working techniques and reflection skills	x			
<b>Module 1: Scientific writing</b>				
Scientific writing: Basic rules and theory	x			
Scientific writing: Methods		x		
Scientific writing: Results		x		
Scientific writing: Discussion and acknowledgements			x	
How to satisfy an editor				x
<b>Module 2: Core skills of independent in-depth scientific work</b>				
Systematic literature research	x			
Tools (hardware/software) used for scientific work incl. data management	x			
Project management, experimental planning, data management in research		x		
Project applications and third-party funds			x	
Legal aspects of human research				x
Scientific theory I: Developments in epistemology and science theory	x			
Scientific theory II: Quantitative and qualitative research. Research issues and research methods			x	

<b>Module 3: Subject-specific skills of independent in-depth scientific work</b>				
Clinical epidemiology	x			
Health literacy	x			
Systematic reviews, critical study analysis and evaluations		x		
value and limits of guidelines			x	
<b>Module 4: Communication and presentation</b>				
Presentation techniques			x	
Scientific presentations		x		
Dealing with media				x
<b>Module 5: Biometrics and statistics</b>				
Statistics	x			
Detailed statistics		x		
Statistics exercises		x		
Meta analyses I	x			
Laboratory methods, data collection and measuring instruments			x	
<b>Module 6: Ethics in science and research</b>				
Ethical requirements in science and research		x		
Good Clinical Practice			x	
Ethical Ambiguities in Research and Industry				x

<b>Module 7: Scientific Forum (Doctoral colloquia)</b>				
Preparation of doctoral colloquium: Successful dissertation	x			
Doctoral colloquium: Scientific report of the students	x			
Doctoral colloquium: Progress report of the students		x		
Doctoral colloquium: Presentation of work/rehearsals I			x	
Doctoral colloquium: Presentation of work /rehearsals II				x
Journal Club 1			x	
Journal Club 2				x
<b>Module 8: Elective subjects</b>				
Variable offer of subject-specific and thematic in-depth courses, possible topics offered by the UFL. Annex II, Module Descriptions				x

## **ANNEX 2**

### **MODULE DESCRIPTION**

In the course of the study, the following types of courses are offered:

#### **Lecture (LC)**

The main contents and doctrines of a subject area are presented and discussed during lectures (which, as a rule, are not examination-relevant).

#### **Lecture with exercise (LE)**

Integrated course in which parts of the lecture involve exercises.

#### **Seminar (SE)**

Seminars serve to consider the contents and methods of a subject area in the form of talks, presentations, written papers and/or scientific discussions.

#### **Introductory seminar (IS)**

Conveys basic knowledge in the respective subjects with the active participation of students.

#### **Workshop (WS)**

Tutors teach students how to actively and interactively work on a subject area (usually not examination-relevant).

The attendance of a course before fulfilling the required participation requirement is subject to the explicit approval of the head of the study programme.

## Module 0: Introduction and orientation

ECTS CP: 1

### Language of instruction

German or English

### Module form

Compulsory

### Duration of the module

1 semester

### Module structure

None

### Module cycle

Once a year

### Prerequisite for credit points

Attendance time (Study Regulations § 23)

### Amount of work involved

26 hours of work (h)

### Certificate of achievement

Attendance time (Study Regulations § 23)

Talk

### Course types (attendance)

LE 1h / WS 6h

### Usability of the module

Dr. scient. med.

### Participation requirements for module

None

### Learning objectives of the module

Students...

- Students understand the basic requirements of a doctoral programme, i.e. the acquisition and practice of the ability to work independently and in-depth on scientific research
- know the structure and structure of the doctoral programme
- develop an awareness of the challenges presented during the doctoral programme
- learn methods of self-management and efficient working techniques

### Content of the module

- Presentation of an overview of the doctoral programme: regulations, study curriculum with examination-relevant courses, ECTS, publications, doctoral colloquium, learning platform, supervision, assessment, thesis defence
- Challenges: scientific objectives, applicable self-management, input on time management and working techniques, mental techniques to increase focus and concentration, personal transfer plan, priority matrix
- Students receive a preparatory and a follow-up assignment

### Course 1 – Introduction and orientation to studies

*Participation requirements: none*

### Course 2 – Self Management/Work Techniques and Reflective Competence

*Participation requirements: none*

### Module-specific literature

- Private University in the Principality of Liechtenstein (UFL), 2022. Study Regulations of the Doctoral Programme in Medical Science (Dr. scient. med.) of the Private University of the Principality of Liechtenstein (UFL)
- Currey, M. (2013). Daily rituals: how great minds make time, find inspiration, and get to work.
- Kregel, M. (2018). Golden Rules: Learning and working successfully: everything you need. Self confidence, motivation, concentration, time management, organisation (8th Edition). Lauchhammer: Eazybookz.

- Dülcke, D. (Hg.), Moes J. (Hg.), Plietzsch A. (Hg.), Schüle J. (Hg.), Steidten T. (Hg.) (2021). Promovieren mit Perspektive. Das GEW-Handbuch zur Promotion. 3. vollst. aktual. Aufl., Verlag: wbv Publikation, DOI: 10.36198/9783838556826
- Course-related literature will be provided to students on the Internet platform in the Extranet.

## Module 1: Scientific writing

ECTS CP: 6

### Language of instruction

German or English

### Module form

Compulsory, examination-relevant

### Duration of the module

4 semesters

### Module structure

Cross-seminar (see course level)

### Module cycle

Once a year

### Prerequisite for credit points

Proof of module-related courses  
(Study Regulations § 21)

### Amount of work involved

155 hours of work (h) including exam

Attendance time (Study Regulations § 23)

Talk

### Course types (attendance)

LE 35h

### Certificate of achievement

Performance points are awarded with the successful completion of the module-related courses (Study Regulations § 24)

### Participation requirements for module

None

### Usability of the module

Dr. scient. med.

## Learning objectives of the module

Students...

- can conceive and write scientific texts independently
- enhance their writing skills step by step
- know how scientific results are documented and presented in a structured way
- can successfully publish scientific papers independently

## Content of the module

- Teaching the structure of scientific texts (function and structure as well as important aspects and contents of a manuscript, abstracts)
- Publication requirements in terms of form and content
- Peer-review process; role of editor and reviewer; understanding scientific criticism;
- Students receive a preparatory and a follow-up assignment

### Course 3 – Scientific writing: Basic rules and theory

*Participation requirements: none*

### Course 4 – Scientific writing: Methods

*Participation requirements: Course 3*

### Course 5 – Scientific writing: Results

*Participation requirements: Course 3*

### Course 6 – Scientific writing: Discussion and acknowledgements

*Participation requirements: Course 3*

### Course 7 – How to satisfy an editor

*Participation requirements: Course 3*

## Module-specific literature

- Greenhalgh, T. (2004). How to read a paper: the basics of evidence-based medicine (2<sup>nd</sup> ed., 7<sup>th</sup> impression, repr. 2004). London: BMJ.
- Hall, G. M. (ed.). (2019). How to write a paper (5<sup>th</sup> ed.). London: BMJ Books.

- Heinemann, M. K. (2016). How not to write a medical paper: a practical guide. Dehli Stuttgart New York: Thieme.
- Course-related literature will be provided to students on the Internet platform in the Extranet.



## Module 2: Core competences of independent in-depth scientific work

ECTS CP: 8

### Language of instruction

German or English

### Module form

Compulsory, examination-relevant

### Duration of the module

4 semesters

### Module structure

None (see course level)

### Module cycle

Once a year

### Prerequisite for credit points

Proof of module-related courses  
(Study Regulations § 21)

### Amount of work involved

216 hours of work (h) incl. exam

Attendance time (Study Regulations § 23)

Talk

### Course types (attendance)

LE 49h

### Certificate of achievement

Performance points are awarded with the successful completion of the module-related courses (Study Regulations § 24)

### Participation requirements for module

None

### Usability of the module

Dr. scient. med.

## Learning objectives of the module

Students...

- increase their expertise in systematic literature research and the independent, critical, evidence-based analysis of studies
- acquire in-depth knowledge of medical information sources
- acquire in-depth knowledge of technical tools for efficient work in science
- have the skills to independently carry out effective project management (planning, financing, research applications, legal aspects) in biomedical research
- acquire in-depth knowledge of international, European and national standards as well as legal framework conditions for biomedical research.

## Content of the module

- Method of systematic literature research, presentation of important medical information sources, assessment of the external and internal validity of a study, literature management
- Presentation of different tools (hardware/software) for scientific work
- Success factors for independently executed projects and planning, project environment analysis, team and meeting management
- Financing of projects; important criteria and aspects for project applications
- Legal framework conditions in biomedical research
- Students receive a preparatory and a follow-up assignment

### Course 8 – Systematic literature research

*Participation requirements: none*

### Course 9 – Tools (hardware/software) in use for scientific work incl. data management

*Participation requirements: none*

### Course 10 – Project management, experimental planning, and data management in research

*Participation requirements: none*

### Course 12 – Project applications and third-party funds

*Participation requirements: none*

### Course 13 – Legal aspects of human research

*Participation requirements: none*

**Course 47 – Science Theory I: Developments in epistemology and science theory**

*Participation requirements: none*

**Course 48 – Science Theory II: Quantitative and qualitative research. Research issues and research methods**

*Participation requirements: none*

**Module-specific literature**

- Brezina, H., & Grillenberger, A. (2008). Step by step to scientific work in health professions: It starts with a question (2<sup>nd</sup> revised and extended edition). Vienna: Facultas.wuv.
- Herkner, H., & Müllner, M. (2011). Erfolgreich wissenschaftlich arbeiten in der Klinik: Grundlagen, Interpretation und Umsetzung: Evidence Based Medicine (3<sup>rd</sup> revised and extended edition). Vienna New York: Springer.
- Neugebauer, E. A. M., Mutschler, W., & Claes, L. (2011). Von der Idee zur Publikation: Erfolgreiches wissenschaftliches Arbeiten in der medizinischen Forschung. Retrieved from: <http://dx.doi.org/10.1007/978-3-642-16069-1>
- Radau, W. C. (2006). Die Biomedizinkonvention des Europarates: Humanforschung, Transplantationsmedizin, Genetik, Rechtsanalyse und Rechtsvergleich. Berlin: Springer.
- Course-related literature will be provided to students on the Internet platform in the Extranet.

## Module 3: Specific competences of in-depth independent scientific work

ECTS CP: 4

### Language of instruction

German or English

### Module form

Compulsory, examination-relevant

### Duration of the module

3 semesters

### Module structure

None (see course level)

### Module cycle

Once a year

### Prerequisite for credit points

Proof of module-related courses (Study Regulations § 21)

### Amount of work involved

123 Working hours (h) examination incl.

Attendance time (Study Regulations § 23)

Talk

### Course types (attendance)

LE 28h

### Certificate of achievement

Performance points are awarded with the successful completion of the module-related courses (Study Regulations § 24)

### Participation requirements for module

None

### Usability of the module

Dr. scient. med.

## Learning objectives of the module

Students...

- acquire in-depth knowledge of the contents of biomedical research, epidemiology and public health
- acquire a deeper knowledge of the methods of different research approaches and can apply and implement them independently.
- deepen the competence to analyse and evaluate studies independently and to independently identify the relevant literature for their dissertation.

## Content of the module

- Evidence-based medicine, public health, types of studies, diagnostic tests, risk and risk reduction, presentation of gold standard RCTs and other designs as well as guidelines, economic analyses, developing an evidence-based training lecture, analytical methods
- Presentation and discussion of critical assessment of intervention studies (RCTs), systematic review work/meta analyses and qualitative studies, application of methodology using sample studies
- Students receive a preparatory and a follow-up assignment

### Course 14 – Clinical epidemiology

*Participation requirements: none*

### Course 15 – Health literacy

*Participation requirements: Course 14*

### Course 16 – Systematic reviews, critical study analysis and evaluations

*Participation requirements: Course 14*

### Course 17 – Value and limits of guidelines

*Participation requirements: Course 14*

## Module-specific literature

- Gordis, L. (2009). Epidemiology (4<sup>th</sup> ed). Philadelphia: Elsevier/Saunders.
- Greenhalgh, T. Introduction to evidence-based medicine, 3<sup>rd</sup> edition 2015 Bern: Huber.

- Kahn KS, Kunz R, Kleijnen J, Antes G (2004). Systematische Übersichtsarbeiten und Meta-Analysen: Introduction to Instruments of evidence-based medicine for doctors, clinical researchers and healthcare professionals, Berlin: Springer.
- Wetterich C, Plänitz E (2021) Systematic literature analyses in social sciences, Leverkusen – Berlin: Publisher Barbara Budrich
- Course-related literature will be provided to students on the Internet platform in the Extranet.

## Module 4: Communication and presentation

ECTS CP: 3

### Language of instruction

German or English

### Module form

Compulsory, examination-relevant

### Duration of the module

3 semesters

### Module structure

None (see course level)

### Module cycle

Once a year

### Prerequisite for credit points

Proof of module-related courses  
(Study Regulations § 21)

### Amount of work involved

85 working hours (h), examination incl.

Attendance time (Study Regulations § 23)

Talk

### Course types (attendance)

LE 19h

### Certificate of achievement

Performance points are awarded with the successful completion of the module-related courses (Study Regulations § 24)

### Participation requirements for module

None

### Usability of the module

Dr. scient. med.

## Learning objectives of the module

Students...

- acquire in-depth knowledge of the make-up and structure of a scientific presentation (in oral and written form) and its formal criteria
- are able to independently design oral scientific presentations with appropriate tools.
- gain increased competence to create and maintain a scientific presentation for an oral presentation at congresses independently.
- gain a deeper level of competence to present and position themselves in the public and in scientific committees.

## Content of the module

- Requirements for scientific presentation
- Visualisation possibilities (lectures and posters)
- Interactive media and speaker training (video recording and feedback)
- Students receive a preparatory and a follow-up assignment

## Course 18 – Presentation techniques

*Participation requirements: none*

## Course 19 – Scientific presentations

*Participation requirements: none*

## Course 20 – Dealing with media

*Participation requirements: none*

## Module-specific literature

- Birkenbihl, V. F. (2018). Kommunikationstraining: zwischenmenschliche Beziehungen erfolgreich gestalten (38<sup>th</sup> Edition). Munich: mvg Verlag.
- Purrington, C. (o.J.). Retrieved on 31 May 2019, from <http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm>
- Watzlawick, P., Bavelas, J. B., & Jackson, D. D. (2003). Human communication: Forms, disorders, paradoxes (reprint of 10<sup>th</sup>, unchanged edition 2000). Bern: Huber.
- Course-related literature will be provided to students on the Internet platform in the Extranet.

## Module 5: Biometrics and Statistics

ECTS CP: 5

### Language of instruction

German or English

### Module form

Compulsory, examination-relevant

### Duration of the module

3 semesters

### Module structure

None

(See course level)

### Module cycle

Once a year

### Prerequisite for credit points

Proof of module-related courses

(Study Regulations § 21)

Attendance time (Study Regulations § 23)

### Amount of work involved

146 Working hours (h) examination incl.

### Course types (attendance)

LE 28h

IS 7h

### Certificate of achievement

Performance points are awarded with the successful completion of the module-related courses (Study Regulations § 24)

### Participation requirements for module

None

### Usability of the module

Dr. scient. med.

## Learning objectives of the module

Students...

- have in-depth knowledge of descriptive and inferential statistics and are able to independently critically evaluate data from clinical and medical research
- have the skills to independently apply statistical methods to their own dissertation project
- have in-depth knowledge concerning the adequate and independent use of suitable software programs
- know the application requirements of each of the methods, apply the correct diagnostic instruments and take corrective measures if necessary

## Content of the module

- Recapitulation statistics: univariate and bivariate data types and corresponding methods of descriptive statistics, overview of elementary sources of distortion, handling of error values, important distributions and their parameters, limit value sets, knowledge and delimitation, different concepts of probability, estimation theory, confidence intervals, statistical tests, case number planning
- Statistical tests: univariate, bivariate and multivariate procedures (e.g.: linear and multiple regression, correlation, diagnostic tests, survival analysis, factor analysis)
- Statistical exercises include interactive learning of statistical content, modelling of quantitative issues, the solution of these with the help of SPSS, interpretation and discussion of the results as well as the independent analysis of medical data sets using a statistical program
- Meta-analysis: important aspects and methods of meta-analysis, presentation of the MedCalc statistical software, practical exercise
- Measurement methodology and test principle in medicine and their application areas, presentation of medical analysis methods (examples: photometry, electrodes, chromatography, immunological methods, molecular biology), influencing variables and errors, disturbance factors (immutable vs. variable), sample material random and systematic errors, uncertainty of measurement results, validation of measurement methods or measurement results, data assessment (measured value and measurement inaccuracy vs. measurement errors), calculations of sensitivity and specificity, diagnostic procedure vs. the characteristics of diagnostic tests, clinical chemical analysis – method comparison
- Students receive a preparatory and a follow-up assignment

**Course 21 – Statistics**

*Participation requirements: none*

**Course 22 – Detailed statistics**

*Participation requirements: Course 21*

**Course 23 – Statistics exercises**

*Participation requirements: Course 21*

**Course 24 – Meta analysis I**

*Participation requirements: Course 21*

**Course 25 – Laboratory methods, data collection and measuring instruments**

*Participation requirements: none*

**Module-specific literature**

- Egger, M., Higgins J., Smith GD (eds.). (2022). Systematic reviews in healthcare: meta-analysis in context (3<sup>rd</sup> ed.). London: John Wiley and Sons Ltd.
- Held, L., Rufibach, K., & Seifert, B. (2013). Medical statistics: Concepts, methods, applications. Munich: Pearson.
- Müllner, M. (2005). Erfolgreich wissenschaftlich arbeiten in der Klinik: Evidence Based Medicine. Springer Vienna: Springer e-books.
- Norman, G. R., & Streiner, D. L. (2008). Biostatistics: the bare essentials (3<sup>rd</sup> ed.). London: Eurospan.
- Ziegler, A., Lange, S., & Bender, R. (2007). Systematische Übersichten und Meta-Analysen. DMW – German medical weekly, 132 (S 01), e48–e52. <https://doi.org/10.1055/s-2007-959042>
- Course-related literature will be provided to students on the Internet platform in the Extranet.

## Module 6: Ethics in science and research

ECTS CP: 3

### Language of instruction

German or English

### Module form

Compulsory, examination-relevant

### Duration of the module

3 semesters

### Module structure

None

(See course level)

### Module cycle

Once a year

### Prerequisite for credit points

Proof of module-related courses

(Study Regulations § 21)

Attendance time (Study Regulations § 23)

Talk

### Amount of work involved

93 Working hours (h) examination incl.

### Course types (attendance)

LE 21h

### Certificate of achievement

Performance points are awarded with the successful completion of the module-related courses (Study Regulations § 24)

### Participation requirements for module

None

### Usability of the module

Dr. scient. med.

### Learning objectives of the module

Students...

- critically and independently question ethical preconditions in science and research, discuss in the special grey areas of biomedical ethics and deepen their knowledge in good clinical practice.
- can independently apply ethical standards to their research process
- can independently formulate an application for an ethics committee and describe and reflect on critical ethical topics concerning a specific research project

### Content of the module

- Distinction of empirical descriptive statements and morally normative statements (explicit and implicit value): Science and research culture, value-reflection, ethical core competence
- GCP basic course, focal points and definitions of terms, Clinical Trial Unit (CTU), detailed knowledge of regulations for human research (history, goals, code), clinical trials, Human Research Act (HFG – Humanforschungsgesetz),
- Role of the ethics committee, roles, duties and responsibilities in research, insurance in research, ISO norms
- Data protection in research
- Students receive a preparatory and a follow-up assignment

### Course 26 – Ethical requirements in science and research

*Participation requirements: none*

### Course 27 – Good Clinical Practice

*Participation requirements: none*

### Course 28 – Ethical ambiguities in research and industry

*Participation requirements: none*



### **Module-specific literature**

- Beauchamp, T. L., & Childress, J. F. (2013). Principles of biomedical ethics (7<sup>th</sup> ed). New York: Oxford University Press.
- Schulz, S., Steigleder, K., Fangerau, H., & Paul, N. (ed.). (2012). History, Theory and Ethics of Medicine: an Introduction (3<sup>rd</sup> Edition). Frankfurt am Main: Suhrkamp.
- Taupitz, J. (ed.). (2002). Das Menschenrechtsübereinkommen zur Biomedizin des Europarates: taugliches Vorbild für eine weltweit geltende Regelung? = The convention on human rights and biomedicine of the Council of Europe. Berlin: Springer.
- Course-related literature will be provided to students on the Internet platform in the Extranet.

## Module 7: Scientific Forum

ECTS CP: 6

### Language of instruction

German or English

### Module form

Compulsory, examination-relevant

### Duration of the module

4 semesters

### Module structure

None (see course level)

### Module cycle

Once a year

### Prerequisite for credit points

Proof of module-related courses

(Study Regulations § 21)

Attendance time (Study Regulations § 23)

Talk

### Amount of work involved

155 hours of work (h) including exam

### Course types (attendance)

LE 8h

IS 7h

SE 28h

### Certificate of achievement

Performance points are awarded with the successful completion of the module-related courses (Study Regulations § 24)

### Participation requirements for module

None

### Usability of the module

Dr. scient. med.

## Learning objectives of the module

Students...

- present and discuss the dissertation topic in its progress.
- develop independently under guidance the research design, data collection, the specific evaluation procedures, the reasoning logic as well as the results and their conclusion for their doctoral thesis.

## Content of the module

- Result seminars
- Students receive a preparatory and a follow-up assignment

### Course 29 – Preparation of the doctoral colloquium: Successful dissertation

*Participation requirements: none*

### Course 30 – Doctoral colloquium: Scientific PROGRESS REPORT of the students Scientific report of the students

*Participation requirements: none*

### Course 31 – Doctoral colloquium: Scientific Progress Report of Students

*Participation requirements: Course 30*

### Course 32 – Doctoral colloquium: Scientific PROGRESS REPORT of the students Presentation of work/rehearsals I

*Participation requirements: none*

### Course 33 – Doctoral colloquium: Scientific PROGRESS REPORT of the students Presentation of work /rehearsals II

*Participation requirements: course 32*

### Course 34 – Journal Club 1

*Participation requirements: course 3, course 21*

### Course 35 – Journal Club 2

*Participation requirements: Course 34*

## Module-specific literature

- Greenhalgh, T. (2004). How to read a paper: the basics of evidence-based medicine (2<sup>nd</sup> ed., 7<sup>th</sup> impression, repr. 2004). London: BMJ.
- Hall, G. M. (ed.). (2004). How to write a paper (3<sup>rd</sup> reprint). London: BMJ Books.
- Hey, B. (2018). Presentation in science and research (2<sup>nd</sup>, revised edition). Berlin: Springer Berlin.
- Course-related literature will be provided to students on the Internet platform in the Extranet.

## Module 8: Elective subjects

ECTS CP: 2

### Language of instruction

German or English

### Module form

Compulsory, examination-relevant

### Duration of the module

1 semester

### Module structure

None (see course level)

### Module cycle

On demand (Study Regulations § 18 Elective subjects)

### Prerequisite for credit points

Proof of module-related courses (Study Regulations § 21)  
Attendance time (Study Regulations § 23)  
Talk

### Amount of work involved

63 Working hours (h) examination incl.  
At least 2 elective subjects

### Certificate of achievement

Performance points are awarded with the successful completion of the module-related courses (Study Regulations § 24)

### Course types (attendance)

LE 14h

### Participation requirements for module

see below

### Usability of the module

Dr. scient. med.

## Learning objectives of the module

Students...

- expand methods, deepen their knowledge and skills in methods of independent scientific work.
- acquire deeper knowledge of current biomedical issues where they can deepen their expertise in the independent critical assessment of biomedical content.

## Content of the module

- Variable offer of subject-specific and thematic in-depth courses (VO); this can be extended at the suggestion of the students.
- Students receive a preparatory and a follow-up assignment

Range of elective compulsory subjects of the UFL includes:

### Course 36 – News from medical research

*Participation requirements: Course 14, course 21*

### Course 37 – Genetics: From the building blocks of life to “Genomics”

*Participation requirements: none*

### Course 38 – Quality, Quality Development, PREMs, PROMs, value-based healthcare

*Participation requirements: Course 14, course 21, course 26*

### Course 39 – Fundamentals of metabolic medicine

*Participation requirements: Course 14, course 21*

### Course 40 – Questionnaires (creation and validation of questionnaires)

*Participation requirements: Course 14, course 21*

### Course 41 – Meta-analyses II

*Participation requirements: Course 21, course 24*

### Course 42 – Health system comparisons

*Participation requirements: Course 15*

### Course 43 – Current health policy

*Participation requirements: Course 15*

### Course 44 – Health economics – microeconomics

*Participation requirements: Course 15*

**Course 45 – Health economics – financing health systems and services**

*Participation requirements: Course 15*

**Course 46 – Ethics and/or monetics in healthcare**

*Participation requirements: Course 15 Course 26, course 27, course 28*

**Module-specific literature**

- Course-related literature will be provided to students on the Internet platform in the Extranet.