

## Curriculum

# **Master's Degree in Health Science, Clinical Biomechanics**

University of Southern Denmark



Approved by the dean for the Faculty of Health Sciences, 26 May 2009

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## Chapter 1 Introductory terms of reference

### § 1. COURSE TITLE IN DANISH AND ENGLISH

The Master's Degree course gives graduates the right to the title cand.manu. (candidata/candidatus manutigii = healing laying of hands), and in English: Master's Degree in Health Science, Clinical Biomechanics. The title cand.manu. refers to the theory and clinical practice in musculoskeletal system diagnostics and disorders.

### § 2. ADMISSION REQUIREMENTS FOR THE GRADUATE PROGRAMME

Entry to the graduate programme requires the student to have passed the bachelor programme in clinical biomechanics.

Para 2: Students who have passed the bachelor programme in clinical biomechanics at the University of Southern Denmark are entitled to continue their academic studies on the graduate programme in clinical biomechanics at University of Southern Denmark.

Para 3: The university may admit applicants who do not fulfil the requirements given in para 1 but who have been specifically assessed as having academic qualifications that are equivalent to these. The university may specify that the applicant has to take supplementary tests before the date established as the start of the course.

Para 4: Within the framework of the Admission Order the university may lay down more specific rules governing the criteria for admission of applicants for the master's degree if the number of applicants exceeds the number of places on the master's degree.

Para 5: The university may only use academic criteria as admission criteria. The university may not use age or random name selection as admission criteria. The admission criteria must be published on the university website alongside the publication of the admission restriction.

### § 3. FOUNDATION FOR EXECUTIVE ORDER

The graduate programme in clinical biomechanics is offered in accordance with the following executive orders:

- A. The Education Order: Order no. 814 on bachelor and graduate programmes at universities
- B. The Grade Order: Order no. 250 on grading scale and other forms of assessment on university courses (and later amendments).

The Examinations Order: Order no. 666 on examination and grading on university courses: with significant amendments concerning the individual examination: with significant revisions concerning re-examination and automatic registration for the examination.

Admission Order: Order no. 213 on admissions to graduate programmes at universities.

**§ 4. OTHER TERMS OF REFERENCE**

International accreditation at ECCE (European Council on Chiropractic Education)

See the ECCE website for information about the latest accreditation.

<http://www.cce-europe.com/institutions.php>

Para 2: The graduate programme in clinical biomechanics is offered by the Faculty of Health Sciences.

Para 3: The graduate programme in clinical biomechanics is administered by the Board of Studies for Clinical Biomechanics.

Para 4: The graduate programme in clinical biomechanics takes two years – equivalent to 120 ECTS.

## Chapter 2 Academic Profile

### § 5. THE COURSE AIMS

The graduate programme in clinical biomechanics aims to use a foundation in the natural and health sciences to produce graduates capable of fulfilling a function as chiropractors in a healthcare system and society under development. The course must provide students who have completed the graduate programme with a common basis for further studies and training that they can use in any area of chiropractics, including research areas and special studies that chiropractors will become involved in.

Chiropractic functions involve diagnostics, prevention and treatment of pain and disabling disorders of the musculoskeletal system.

### § 6. COMPETENCE PROFILE

On completion of their degree, graduates in clinical biomechanics will be able to:

#### GRADUATES' COMPETENCE PROFILE

##### **Knowledge**

##### *(a) The field of knowledge*

- With guidance, propose relevant laboratory tests

##### *(b) Understanding and reflection*

- Critically analyse and utilise research results

##### **Skills**

##### *(a) Type of skills*

- Independently record a patient's medical history
- Independently carry out objective studies
- Independently carry out the manual treatment of a patient's musculoskeletal system
- Carry out diagnostic imaging examinations
- Apply training programmes to patients
- Independently write and use case records

##### *(b) Assessment and decision*

- Synthesise patient medical history information, clinical and paraclinical findings for differential diagnoses
- Assess whether patients should be referred to other forms of treatment/examination
- Plan the course of treatment within the framework of evidence-based practice
- Plan and apply training programmes to patients
- With guidance, interpret relevant laboratory tests
- Independently interpret diagnostic imaging results

##### *(c) Communication*

- Communicate with patients and other healthcare professionals

- Provide outpatients with guidance about prevention

### Competences

#### (a) Ability to act

- Take knowledge from the clinical and biomedical course and apply it in clinical practice
- Reflect upon and analyse their own practice

#### (b) Collaboration and responsibility

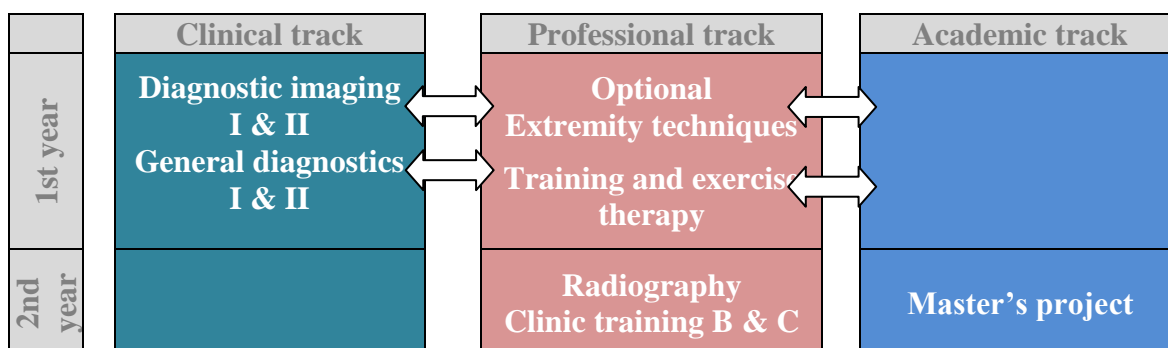
- Participate in cross-disciplinary rehabilitation collaborations
- Collaborate with patients and other healthcare professions
- Act with professionalism

#### (c) Learning

- Identify their own learning needs and act accordingly

## § 7. COURSE DESIGN AND ORGANISATION

The course is divided into eight modules. Each module covers eight weeks of tuition and each module is concluded with an examination. At the same time, the course is split into three tracks, which run in parallel throughout the entire course: The clinical track, the academic track and the professional track. Each of the eight modules consists of tuition elements taken from two or three course tracks.



The clinical track encompasses medical and radiological diagnostics. Teaching is based on group work, using real cases. Students diagnose, devise courses of treatment and treat patients with many different types of disorders.

The professional track is a continuation of the bachelor programme. Skills' training is continued, with extra focus on the extremities. Under supervision during clinical training, students will diagnose patients and will be responsible for courses of treatment.

The academic track is an independent scientific project. Competences are gained through a project, with a view to how a chiropractor becomes a critical user of information about musculoskeletal disorders.

The subjects in the three course tracks work progressively towards preparing students for treating patients during clinic training periods B and C. The content of the clinical track is built on knowledge gained from the biomechanical and the professional tracks on the bachelor programme. It follows four main topics: Rheumatology, orthopaedics, neurology

and general medicine, the first three being given most attention. Where possible, the teaching topics are integrated horizontally in the three main subjects. The clinical track prepares students for clinical training periods B and C, which take place in the second year. The professional track develops from the knowledge and skills gained on the bachelor programme and utilises the differential diagnostic competences gained from the clinical track. The academic track develops from the bachelor programme's academic track and commences with a review of relevant subjects, which enables students to independently plan and conduct a small research project.

The curriculum aims to create continuity between the bachelor and the graduate programme, to create a basis for lifelong learning and personal development and to provide students with a scientifically based foundation from which they can contribute to the continual development of chiropractic.

The course is designed so that active researchers are responsible for organising the course content and conducting the modules. As far as possible (and where relevant), teaching is conducted by researchers from the actual research environments at the Faculty of Health Sciences.

**Start autumn**

Semester	Module	Clinical track		Professional track		Academic track			
		Title	ECTS	Title	ECTS	Title	ECTS		
1	K1			Extremity techniques	6				
				Optional (2 x 5)	10				
	K2	General diagnostics 1	16	Training and exercise therapy	3				
2	K3	General diagnostics 2	15						
	K4	Diagnostic imaging 1	7.5	Radiography	5				
3	K5	Diagnostic imaging 2	6.5	Clinic training B	5				
		Summerschool	1.0					Clinic training B Examination	
	K6			Clinic training C	5				
4	K7			Clinic training C	5			Scientific method: <i>Master's project</i>	30
	K8			Clinic training C	5				
<b>ECTS total</b>		<b>46</b>		<b>44</b>		<b>30</b>			

**Start spring**

Semester	Module	Clinical track		Professional track		Academic track	
		Title	ECTS	Title	ECTS	Title	ECTS
1	K1	General diagnostics 2	15	Training and exercise therapy	3		
	K2	Diagnostic imaging 1	7.5	Radiography	5		
2	K3	Diagnostic imaging 2	6.5	Extremity techniques	6		
		Summerschool	1.0				
	K4	General diagnostics 1	16				
3	K5			Optional (2 x 5)	10		
				Clinic training B	5		
	Clinic training B Examination						
	K6			Clinic training C	5		
4	K7			Clinic training C	5		
	K8			Clinic training C	5		
<b>ECTS total</b>		<b>46</b>		<b>44</b>		<b>30</b>	



### Overview of module/subject/ECTS points

#### Autumn start

Module	Optional/ ECTS	Thesis/ ECTS	Clinic/ ECTS	Diagnostic Imaging/ ECTS	Radiography/ ECTS	General Diagnosis/ ECTS	Bio- mechanics/ ECTS	TOTAL/ ECTS
1	2 x 5						6	16
2						16	3	19
3						15		15
4				7.5	5			12.5
5			5	7.5				12.5
6		10	5					15
7		10	5					15
8		10	5					15
<b>Total</b>								<b>120</b>

#### Spring start

Module	Optional/ ECTS	Thesis/ ECTS	Clinic/ ECTS	Diagnostic Imaging/ ECTS	Radiography/ ECTS	General Diagnosis/ ECTS	Bio- mechanics/ ECTS	TOTAL / ECTS
1						15	3	18
2				7.5	5			12.5
3				7.5			6	13.5
4						16		16
5	2 x 5		5					15
6		10	5					15
7		10	5					15
8		10	5					15
<b>Total</b>								<b>120</b>

#### Subject distribution

Once per year	Twice per year
<i>Autumn</i>	Options:
General diag. 1	Technique 2
General dx. 2	Myofascial pain
Extremity techniques	Clinic training
<i>Spring</i>	Training and exercise therapy
General dx. 2	Clinic training B
Image dx. 1	Clinic training C
Radiography	Thesis

***Legal requirement for composition:***

- 120 ECTS in total
- Modules
- ‘Constituent course elements’ at least 60 ECTS
- Master’s project at least 30 ECTS
- The optional subject counts for 10 ECTS

***Legal requirement for content:***

- General diagnostics
- Clinical biomechanics
- Diagnostic imaging
- Radiography
- Clinic
- Master’s project

**§ 8. TEACHING METHODS**

Various teaching methods are used during the course. See individual modules for more details.

Para 2: The course comprises clinical training with the use of portfolios.

## Chapter 3 Course Content

### § 9. THE DANISH QUALIFICATIONS SYSTEM FOR GRADUATE PROGRAMMES IN FURTHER EDUCATION

The objectives are specified in accordance with the Danish qualifications system for advanced courses (see Table 1). The qualification key gives a general description of the knowledge and understanding, skills and competences required by each type of grade.

**Table 1 The Danish qualifications framework for advanced graduate programmes**

<b>Graduate programmes</b>	
<b>Knowledge and understanding</b>	<p><b>The field of knowledge</b> Must be knowledgeable in one or more academic fields, some of which are based on the highest level of international research in an academic field.</p> <p><b>Level of understanding and reflection</b> Must be able to understand and on a scientific basis reflect on the academic field(s) of knowledge and be able to identify scientific issues.</p>
<b>Skills</b>	<p><b>Type of skills</b> Must master the scientific methods and tools of the academic field(s) and master the general skills that are required of professionals working in the academic field(s).</p> <p><b>Assessment and decision</b> Must be able to assess the scientific theories, methods, tools and general skills of the academic field(s) and, on a scientific basis, make new models for analysis and solution.</p> <p><b>Communication</b> Must be able to communicate research-based knowledge and discuss professional and scientific issues with both peers and non-specialists.</p>
<b>Competences</b>	<p><b>Sphere of activity</b> Students must be able to manage situations of work and development that are complex, unpredictable and require new models to arrive at a solution.</p> <p><b>Collaboration and responsibility</b> Must independently be able to initiate and carry out professional and cross-disciplinary collaboration and take on professional responsibility.</p> <p><b>Learning</b> Must independently take responsibility for their own professional development and specialisation.</p>

## § 10. THE COURSE MODULES

### Extremity techniques

#### Aims

Knowledge and understanding

*Students can*

- Understand and explain biomechanical disorders, including articular dysfunctions that affect the upper and lower extremities
- Understand and explain objective clinical examinations of the extremities
- Understand and explain differential diagnostics of the extremities
- Propose timely referrals of patients with disorders of the extremities

#### Skills

*Students can*

- Employ skills proficiently and easily in objective examinations
- Independently carry out manipulation techniques on joints in the extremities
- Independently carry out selected soft tissue techniques
- Independently plan courses of treatment on the basis of diagnoses

#### Aims

Knowledge and understanding

*Students can*

- Understand and explain biomechanical disorders that are relevant for the extremities (e.g. Myofascial pain syndrome, scar tissue pain syndrome, joint dysfunction, trapped nerves, degenerative conditions, etc.)
- Independently record a patient's medical histories to:
  - Put forward differential diagnoses
  - Identify contraindications for manual treatment
  - Lay down an acceptable course of treatment
- Understand and explain objective examination procedure
- Analyse objective examination findings
- Understand and explain differential diagnoses based on the patient's case notes and objective findings
- Independently identify the optimal manual techniques for a given diagnosis
- Consider which disorders/situations have to be referred further (e.g. infections disorders, malignant conditions, post-trauma instability, etc.) in connection with planning of the course of treatment

#### Skills

*Students can*

- Under supervision, carry out a complete and objective examination of the different regions of the upper and lower extremities
- Independently carry out manipulation techniques on the different regions in the upper and lower extremities
- Independently carry out soft tissue techniques on the different regions in the upper and lower extremities
- Independently plan courses of treatments for given working diagnoses

**Grading scale***Grade 12 – for an excellent performance*

The student can carry out satisfactory basic examination procedures of painful conditions and functional disorders in the extremities with exceptional technical expertise, a considerable assurance in performance, good examination flow and good patient contact, communication and positioning. Furthermore, insignificant faults are few.

Moreover, the student can interpret and clarify subjective and objective findings in detail with only a few insignificant faults, while maintaining a clinical overview. Students can explain differential diagnoses, associated courses of treatment (incl. the total number of treatments, timing of the treatment, treatment modalities and general and ergonomic advice) and prevention initiatives on the basis of the subjective and objective findings at an exceptional level. Furthermore, the student can carry out a basic manual treatment of joints in the extremities with optimal proficiency, flow and patient contact.

*Grade 2 – for an adequate performance*

The student can carry out basic examination procedures of painful conditions and functional disorders in the extremities using adequate technique, with minimal assurance in execution and reasonable patient contact, communication and positioning. Furthermore, there are a number of faults.

In addition the student can interpret subjective and objective findings at a level that ensures no serious errors are made. The student can give differential diagnoses, associated courses of treatments and prevention initiatives on the basis of the subjective and objective findings at a level that ensures no serious errors are made. Moreover, students can carry out a manual treatment of joints in the extremities with minimal proficiency in the skills tested.

ECTS points:	6 ECTS points
Examination form:	Ordinary OSCE
Language:	Danish
Examiner:	Internal and external examiner
Assessment:	7-point scale
Participation requirements:	Bachelor in clinical biomechanics

**Optional subject**

(Technique 2)

**Aims**

Knowledge and understanding

*Students can*

- Understand and explain the existing rational basis for manual treatment in the manner of Gonstead
- Understand and explain the existing rationale basis for manual treatment in the manner of the Cox flexion-distraction technique
- Understand and explain reduced mobility in the spine and pelvis using the Gonstead listing system and in reverse, transform findings from dynamic mobility examinations to Gonstead listings

- Plan a responsible course of treatment that involves other healthcare professionals
- Use clinical judgement in the planning of chiropractic treatment

### Skills

#### *Students can*

- Independently carry out fine motor function exercises and training
- Independently carry out motion palpation examinations
- Independently carry out manual treatment in the manner of Gonstead
- Independently carry out manual treatment in the manner of the Cox flexion-distraction technique

### Objectives

#### Knowledge and understanding

#### *Students can*

- Describe the most important components and theories surrounding examination and manual treatment using the Gonstead method, including understanding and using the listings system
- Describe the most important components and theories surrounding examination and manual treatment using the method of Cox flexion-distraction technique
- Give an account of the procedures for manipulation techniques using the Gonstead method for the spine and pelvis
- Give an account of manual treatment techniques using the method of Cox-flexion distraction technique

### Skills

#### *Students can*

- Use previously learned skills in static and dynamic motion palpation and endplay
- Identify normal and abnormal motion examination findings and apply these to the Gonstead listings system
- Independently carry out manipulation techniques using the Gonstead method
- Independently carry out manual treatment techniques using the method of Cox flexion-distraction technique

### Grading scale

#### *Grade 12 – for an excellent performance*

The student can carry out satisfactory motion examination procedures of the spine and pelvis with exceptional proficiency and with only a few insignificant faults. The student can carry out manual treatment of the spine and pelvis using the Gonstead method with optimal proficiency, flow and good patient contact. The student can carry out manual treatment using the method of Cox flexion-distraction technique of the lumbar spine with optimal proficiency, flow and good patient contact.

#### *Grade 2 – for an adequate performance*

The student can carry out motion examination procedures of the spine and pelvis with adequate skills. The student can carry out manual treatment of the entire spine including the pelvis using the Gonstead method with minimal proficiency in the tested skills. The student can

carry out manual treatment using the method of Cox flexion-distraction technique of the lumbar spine with minimal proficiency in the tested skills.

ECTS points:	5 ECTS points
Examination form:	Ordinary OSCE
Language:	Danish
Examiner:	Internal and external examiner
Assessment:	7-point scale
Participation requirements:	Bachelor in clinical biomechanics

### **Optional subject**

(Clinic training, six days at a clinic spread over three weeks)

#### **Aims**

##### Skills

*Students can*

- Under supervision, treat chiropractic patients with the relevant clinical skills

##### Competences

*Students can*

- Analyse their own skills
- Reflect over their own skills
- Identify their own learning needs
- Exercise basic professional conduct at the clinic
- Communicate with patients, chiropractors and other personnel in an appropriate manner

#### **Objectives**

##### Skills

*Students can*

- Carry out at least one supervised medical history for a region in a patient's spine
- Carry out at least one supervised orthopaedic examination that is relevant to the spine
- Carry out at least one supervised motion examination of the spine
- On at least one occasion give an account of any x-ray indications
- Give an account of relevant differential diagnostic considerations for at least one new patient
- Propose a relevant treatment/course of action for at least one new patient
- Propose a relevant treatment technique for at least one new patient

##### Competences

*Students can*

- Identify their own strengths and weaknesses in a balanced manner
- Demonstrate self-knowledge
- Consider and define relevant learning needs in relation to actual weaknesses
- Keep agreed appointments
- Meet up with a neutral and professional demeanour (cf. personal hygiene, dress, hair, makeup, etc.)

- Place the needs of the patient and the needs of the clinic before personal needs
- Receive constructive criticism from a supervisor/staff member with a positive and proactive approach
- Show initiative, enthusiasm and willingness to learn when at the clinic
- Show basic self-confidence and assurance in meetings with patients, clinicians and staff
- Communicate with patients/clinicians/staff in a clear and straightforward manner, and in general be friendly and respectful
- In a clinical situation, communicate with the patients in a manner that ensures that adequate procedures can be carried out (medical history/examination/treatment, etc.)
- Pay attention to non-verbal communication in meetings with patients and treat them with consideration and empathy

### **Grading scale**

#### *Passed*

The portfolio is passed if the student can demonstrate a portfolio that is approved and signed by a supervisor as proof that the student has fulfilled each of the criteria specified above for: Reflection over his/her own learning, clinical skills, professional conduct and communication skills. To pass, the student must have an attendance record of at least 80%.

#### *Failed*

The portfolio is failed if the student cannot demonstrate a portfolio that is approved and signed by a supervisor as proof that the student has fulfilled each of the criteria specified above for: Reflection over his/her own learning, clinical skills, professional conduct and communication skills. Students have failed if their attendance is less than 80%.

ECTS points: 5 ECTS points  
 Examination form: Portfolio and attendance  
 Language: Danish  
 Examiner: Internal  
 Assessment: Passed/failed  
 Participation requirements: Bachelor in clinical biomechanics

### **Optional subject**

(Diagnosis and treatment of myofascial pain syndromes)

#### **Aims**

Knowledge and understanding

#### *Students can*

- Give an account of trigger points' (TPs) characteristics, development, diagnostic and maintenance
- Synthesise a course of treatment for myofascial pain syndromes
- Assess indications and contraindications for dry needling
- Identify complications associated with dry needling
- Give an account of specific terms in TP treatment, specified under the objectives



- Give an account of differential diagnoses for specific myofascial pain syndromes

### Skills

#### *Students can*

- Independently identify and assess TPs
- Under supervision, treat TPs with dry needling
- Use the correct technique when carrying out intra-oral ischaemic compression, cryotherapy and electro dry needling

### Objectives

#### Knowledge and understanding

#### *Students can*

- Describe the structure of trigger points (TPs)
- Explain how TPs develop
- Give an account of factors that maintain TPs
- Give an account of criteria to distinguish between TPs that require treatment and TPs that do not
- Understand the principles behind the treatment of myofascial pain syndromes
- Synthesise a course of treatment for myofascial pain syndromes in consideration of the dosage-response factor
- Assess contraindications associated with dry needling
- Identify complications associated with dry needling
- Explain the term myotactic unit and functional unit
- Describe the term “satellite TPs”
- Give an account of overlapping referred pain from TPs
- Give an account of TPs in and around the spine, temporomandibular joint, over arm, hip and foot
- Give an account of differential diagnoses for myofascial pain syndromes around the shoulder, elbow, lower leg and lower back

### Skills

#### *Students can*

- Independently identify TPs using palpation
- Independently assess the intensity of a TP using palpation
- Use the treatment cascade for myofascial pain syndromes
- Use various techniques for dry needling
- Use the correct dry needling technique for selected muscles
- Use the correct technique when carrying out the dry needling of sinews, muscle dislocation and insertion and periosteum
- Identify TPs in the examined muscle groups
- Reproduce myotactic/functional units for the examined muscle groups
- Use the correct technique when carrying out intra-oral ischaemic compression, cryotherapy and electro dry needling

**Grading scale***Grade 12 – for an excellent performance*

The student can carry out satisfactory basic examination procedures of the relevant muscle with exceptional proficiency and with only a few insignificant faults. Moreover, the student can subjectively and objectively interpret and clarify the findings in detail with few faults and while maintaining a clinical overview. The student can synthesise differential diagnoses, associated courses of treatment and prevention initiatives based on the subjective and objective findings at an exceptional level. Furthermore, the student can carry out a basic manual treatment of myofascial pain syndromes with optimal proficiency, flow and patient contact.

*Grade 2 – for an adequate performance*

The student can carry out a basic examination procedure of the relevant muscle with adequate skills and can subjectively and objectively interpret the findings at a level that ensures no serious errors are made. Furthermore, the student can synthesise differential diagnoses, associated courses of treatment and prevention initiatives based on the subjective and objective findings at a level that ensures no serious errors are made. Moreover, the student can carry out a basic manual treatment of myofascial pain syndromes with minimal proficiency in the tested skills.

ECTS points:	5 ECTS points
Examination form:	Ordinary OSCE
Language:	Danish
Examiner:	Internal and external examiner
Assessment:	7-point scale
Participation requirements:	Bachelor in clinical biomechanics

**General diagnostics**

(Neurology and general medicine)

**Overall aims**

Knowledge and understanding

*Students can/have*

- Synthesise differential diagnoses for commonly occurring neurological disorders and illnesses
- Identify commonly occurring symptoms and disorders in the following disciplines:
  - Urology
  - Gynaecology
  - Paediatrics
  - Endocrinology
  - Gastroenterology
  - Cardiology
  - Pulmonary disorders
  - Infection medicine
  - Dermatology
  - Psychiatry
  - Oncology
  - Geriatrics
  - Social medicine

- Somatization conditions
- Assess when a patient should be referred for treatment/examination by another healthcare professional
- Use analytical and critical thinking

#### Competences

##### *Students can*

- Show a conscious awareness of their own responsibility, attitude and conduct in relation to the patient, colleagues and society

#### **Aims**

##### Knowledge and understanding

#### Neurology

##### *Students can/have*

- Analyse commonly occurring neurological disorders
- Assess paraclinical examinations for commonly occurring neurological disorders
- Differentiate between neurological disorders and musculoskeletal disorders
- Propose timely referrals of patients with neurological disorders
- Explain a complete neurological examination
- Knowledge of selected pharmacological medicines used in neurology

#### Urology

##### *Students can/have*

- Identify the urological disorders that are particularly serious, generally or especially important, in primary chiropractic practice
- Knowledge of aetiology, occurrence, symptoms, diagnostics, prevention treatment and prognosis for commonly occurring urological disorders at a basic level
- Knowledge of the spread of referred pain that has an urological origin
- Differentiate between urological disorders and musculoskeletal disorders
- Propose timely referrals of patients with urological disorders

#### Gynaecology

##### *Students can/have*

- Identify the gynaecological disorders that are particularly serious, common or important, in primary chiropractic practice
- Knowledge of aetiology, occurrence, symptoms, diagnostics, prevention treatment and prognosis for commonly occurring gynaecological disorders at a basic level
- Differentiate between gynaecological disorders and musculoskeletal disorders
- Propose timely referrals of patients with gynaecological disorders

#### Paediatrics

##### *Students can/have*

- Identify general paediatric disorders that commonly occur in primary clinical practice

- Differentiate between common paediatric disorders and musculoskeletal disorders
- Make timely referrals of patients with paediatric disorders to another relevant form of treatment.

### Endocrinology

#### *Students can/have*

- Identify the endocrinological disorders that are especially serious, common or especially important, in primary chiropractic practice
- Knowledge of aetiology, occurrence, symptoms, diagnostics, prevention treatment and prognosis for the above-named disorders at a basic level
- Differentiate between endocrinological disorders and musculoskeletal disorders
- Propose timely referrals of patients with endocrinological disorders
- Knowledge of selected pharmacological medicines used in endocrinology

### Gastroenterology

#### *Students can/have*

- Identify the gastroenterological disorders that are particularly serious, common or important in primary chiropractic practice
- Knowledge of aetiology, occurrence, symptoms, diagnostics, prevention treatment and prognosis for commonly occurring gastroenterological disorders at a basic level
- Knowledge of the spread of referred pain that has a gastroenterological origin
- Differentiate between gastroenterological disorders and musculoskeletal disorders
- Propose timely referrals of patients with gastroenterological disorders
- Knowledge of selected pharmacological medicines used in gastroenterology

### Cardiology

#### *Students can/have*

- Identify the cardiological disorders that are particularly serious, common or important, in primary chiropractic practice
- Knowledge of aetiology, occurrence, symptoms, diagnostics, prevention treatment and prognosis for commonly occurring cardiovascular disorders at a basic level
- Knowledge of the spread of referred pain of cardiological origin
- Differentiate between cardiological disorders and musculoskeletal disorders
- Propose timely referrals of patients with cardiological disorders
- Knowledge of selected pharmacological medicines used in cardiology

### Pulmonary disorders

#### *Students can/have*

- Identify the pulmonary and pleural disorders that are particularly serious, common or important, in primary chiropractic practice

- Knowledge of aetiology, occurrence, symptoms, diagnostics, prevention treatment and prognosis for commonly occurring pulmonary and pleural disorders at a basic level
- Knowledge of the spread of pain from the lungs
- Differentiate between pulmonary and pleural disorders and musculoskeletal disorders
- Propose timely referrals of patients with pulmonary and pleural disorders
- Knowledge of selected pharmacological medicines used in pulmonary disorders

### Infection medicine

#### *Students can/have*

- Identify the infections that are particularly serious or common in primary chiropractic practice
- Knowledge of aetiology, occurrence, symptoms, diagnostics, prevention treatment and prognosis for the most common or serious infections in primary chiropractic practice
- Differentiate between infectious diseases and musculoskeletal disorders
- Propose timely referrals of patients with infections
- Knowledge of selected pharmacological medicines used for infections

### Dermatology

#### *Students can/have*

- Identify the dermatological disorders that are particularly serious or common or especially important in primary chiropractic practice
- Knowledge of aetiology, occurrence, symptoms, diagnostics, prevention treatment and prognosis for commonly occurring dermatological disorders at a basic level
- Propose timely referrals of patients with dermatological disorders

### Psychiatry

#### *Students can/have*

- Knowledge, particularly of examination, diagnostics and differential diagnoses for the psychiatric conditions that are most relevant in chiropractic practice and, to a lesser degree, knowledge of treatment of these conditions
- Identify the most important psychiatric conditions that need to be identified in chiropractic practice
- Identify situations where referral to psychiatric treatment should take place prior to any chiropractic treatment
- Knowledge of selected pharmacological medicines used in psychiatry

### Oncology

#### *Students can/have*

- Knowledge of the most common forms of cancer seen from an overall oncological perspective
- Knowledge of the absolute and relative contra-indications for manual treatment of chiropractic patients who also have cancer
- Propose timely referrals of patients with cancer

### Geriatrics

#### *Students can/have*

- Identify commonly occurring geriatric disorders in primary clinical practice
- Differentiate between geriatric disorders and musculoskeletal disorders
- Make a timely referral of the geriatric patient to other relevant treatment

### Social medicine

#### *Students can/have*

- Knowledge and understanding of social medicine fundamental concepts used in maintenance services and the chiropractor's role in relation thereto

### Somatization conditions

#### *Students can/have*

- A superior knowledge of somatization conditions

## **Objectives**

Knowledge and understanding

### Neurology

#### *Students can/have*

- Explain the pathology behind the various neurological disorders
- In-depth and reflective knowledge about the neurological disorders indicated below in relation to:
  - Aetiology and occurrence
  - Medical history and symptoms
  - Diagnostics
  - Prevention treatment
  - Prognosis
- Determine which paraclinical examinations are relevant for the individual patient
- Analyse the paraclinical findings in relation to the neurological differential diagnostic
- Make differential diagnoses of neurological and musculoskeletal disorders
- Explain the optimal treatment for the various neurological disorders
- Discuss the course and complications of neurological disorders
- Explain an objective neurological screening examination consisting of:
  - Gait analysis
  - Cranium nerves
  - Motor function system
  - Sensory system
  - Sensibility and motor function of the trunk
- Knowledge of selected pharmacological medicines used in neurology

### Urology

#### *Students can/have*

- Knowledge of basic urological terminology
- Knowledge of the pathology behind various urological disorders
- Understand and use relevant medical histories and examinations in the case of urological disorders
- Knowledge of the symptoms of the various urological disorders and ability to use this in differential diagnostics
- Knowledge of the course, prognosis and complications
- Give an account of the difference between urological and musculoskeletal disorders

### Gynaecology

#### *Students can/have*

- Knowledge of basic gynaecological terminology
- Knowledge of the pathology behind various gynaecological disorders
- Understand and use relevant medical histories and examinations in the case of gynaecological disorders
- Knowledge of the symptoms of the various gynaecological disorders and ability to use this in differential diagnostics
- Knowledge of the course, prognosis and complications
- Give an account of the difference between gynaecological and musculoskeletal disorders
- Knowledge of pregnancy and associated complications
- Knowledge of the frequency of metastasis and dispersal regions of commonly occurring types of cancer in gynaecology

### Paediatrics

#### *Students can/have*

- Knowledge of the paediatric medical histories and examinations of infants and older children, including reflexes
- Knowledge of a child's development (walking stage, sitting stage, speaking stage, when a child can hold his head, loss of instinctive reflexes, etc.)
- Knowledge of differential diagnostics, paraclinical examinations and treatment options for commonly occurring paediatric disorders
- Knowledge of acute and chronic infection disorders in children
- Knowledge of serious paediatric conditions, e.g. cancer, meningitis, etc.
- Knowledge of a topographical approach to children's musculoskeletal pain
- Knowledge of asthma and allergies in children
- Knowledge of the abuse of children and the legal obligation to inform the authorities

### Endocrinology

#### *Students can/have*

- Knowledge of hormones and their effect on the body
- Understand and use relevant medical histories and examinations in connection with endocrinological disorders

- Knowledge of the pathology behind the various disorders, the individual disorder's symptoms and possible paraclinical examinations
- Knowledge of treatment for the various endocrinological disorders
- Knowledge of the course and complications of endocrinological disorders
- Knowledge of calcium metabolic disorders and diabetes mellitus with late diabetic complications
- Knowledge of selected pharmacological medicines used in endocrinology

### Gastroenterology

#### *Students can/have*

- Knowledge of basic gastroenterological terminology
- Knowledge of the pathology behind various gastroenterological disorders
- Understand and use relevant medical histories and examinations in the case of gastroenterological disorders
- Knowledge of the symptoms of the various gastroenterological disorders and ability to use this in differential diagnostics
- Knowledge of the pathology, prognosis and complications
- Give an account of the difference between gastroenterological and musculoskeletal disorders
- Knowledge of selected pharmacological medicines used in gastroenterology

### Cardiology

#### *Students can/have*

- Knowledge of the basic terminology in cardiology
- Knowledge of the pathology behind various cardiological disorders
- Knowledge of the occurrence, symptoms and differential diagnostic of ischemic heart disorders, arrhythmias, heart insufficiency and cardiovascular disorders
- Understand and use relevant medical histories in cardiovascular disorders
- Propose relevant examinations for cardiovascular disorders
- Knowledge of the treatment options and prognoses for commonly occurring cardiovascular disorders
- Knowledge of prevention treatment for cardiovascular disease
- Give an account of the difference between cardiovascular and musculoskeletal pain
- Knowledge of selected pharmacological medicines used in cardiology

### Pulmonary disorders

#### *Students can/have*

- Understand and use the relevant medical histories in pulmonary and pleural disorders
- Knowledge of the pathology behind various pulmonary and pleural disorders
- Knowledge of occurrence, symptoms, paraclinical examination methods and differential diagnostics for disorders in relation to the lungs and pleura



- Knowledge of the treatment options for pulmonary and pleural disorders
- Knowledge of prevention treatment for pulmonary and pleural disorders
- Give an account of the difference between pulmonary pain and musculoskeletal pain
- Knowledge of selected pharmacological medicines used in pulmonary disorders

### Medical treatment of infection

*Students can/have*

- Knowledge of the immune defence system
- Understand the inflammatory reaction
- Understand and use relevant patient histories and examinations in connection with infections
- Knowledge of the pathology behind the various disorders, the symptoms and possible paraclinical examinations for individual disorders
- Knowledge of prevention and treatment for the various infections
- Knowledge of the course and complications of infections
- Knowledge of selected pharmacological medicines used in infection medicine

### Dermatology

*Students can/have*

- Knowledge of the skin's makeup and function
- Knowledge of the elements in an dermatological examination at a basic level
- Knowledge of basic dermatological terminology
- Knowledge of the skin's epidemiology at a basic level
- Identify the most serious and most commonly occurring types of skin tumours
- Identify skin lesions that are associated with musculoskeletal disorders (connective tissue disorders, arthritis)
- Identify the ordinary infectious skin diseases, and especially infectious skin diseases that pose acute risk of infection in practice
- Identify the most commonly occurring skin disorders
- Knowledge of timely treatment/referral of the dermatological disorders named above

### Psychiatry

*Students can/have*

- Knowledge of the symptoms of a psychiatric illness
- Knowledge of the psychiatric medical history
- Knowledge of abuse/dependence on alcohol and sedative-hypnotic drugs
- Knowledge of dissociative somatic phenomena (conversion condition)
- Knowledge of somatoform conditions
- Knowledge of eating disorders
- Knowledge of general forms of dementia, though at an overall level
- Knowledge of schizophrenia, though at an overall level
- Knowledge of affective disorders, though at an overall level

- Knowledge of the most common conditions of anxiety at a general level
- Knowledge of mental illness in old age, though at a general level
- Knowledge of personality disorders at a general level
- Knowledge of selected pharmacological medicines used in psychiatry

### Oncology

#### *Students can/have*

- Knowledge of the specific and general symptoms of cancer
- Knowledge of medical history and objective findings and diagnosis of primary and secondary forms of cancer
- Knowledge of the differential diagnoses for primary and secondary forms of cancer
- Knowledge of the most important paraclinical examinations for primary and secondary forms of cancer
- Knowledge of the diseases' course, prognosis and metastasisation, and knowledge of the regions to which individual forms of cancer most frequently metastasise
- Knowledge of the various treatment techniques and their indications, contra-indications and complications seen in relation to primary and secondary forms of cancer
- Knowledge of the complications in the manual treatment of cancer patients

### Geriatrics

#### *Students can/have*

- Knowledge of the common aging mechanisms and ageing theories
- Understand and use relevant patient histories and examinations in connection with the geriatric patient
- Knowledge of the pathology behind various disorders
- Knowledge of the occurrence of individual disorders, their symptoms and possible paraclinical examinations and potential differential diagnoses
- Knowledge of treatment for the various disorders associated with geriatrics
- Knowledge of the course and complications of disorders associated with geriatrics

### Social medicine

#### *Students can/have*

- Knowledge of social medicine fundamental concepts
- Knowledge of laws in
  - Sickness benefit
  - Social security
  - Flexible job
  - Incapacity benefit and light duties
  - Knowledge of obtaining certificates from chiropractors to municipal social services

**Somatization conditions***Students can/have*

- Knowledge of basic definitions, differential diagnostics considerations and treatment options in relation to somatization conditions

**Grading scale***Grade 12 – for an excellent performance*

The student can make a nuanced synthesis of differential diagnoses on the basis of a comprehensive knowledge of aetiology, occurrence, medical history and symptoms of neurological and general medical disorders. Furthermore, the student has a thorough knowledge of the treatment and the pathology, and at the same time can confidently and correctly assess when the patient should be referred to another treatment or examination.

*Grade 2 – for an adequate performance*

The student can synthesise acceptable differential diagnoses on the basis of knowledge of aetiology, occurrence, medical history and symptoms of the most frequent neurological and general medical disorders at a level that ensures no serious errors are made. Furthermore, the student has a minimum knowledge of the treatment and the pathology, and at the same time can at a basic level assess when the patient should be referred to another treatment or examination.

ECTS points:	16 ECTS points (Neurology 5,5 ECTS, General Medicine 10,5 ECTS)
Examination form:	Two separate written examinations
Language:	Danish
Examiner:	External examiner
Assessment:	7-point scale
Participation requirements:	Bachelor in clinical biomechanics

**Training and exercise therapy****Aims**

Knowledge and understanding

*Students can*

- Understand and explain theories and rationale for spine stabilisation
- Give an account of the McKenzie theory's different syndromes
- Give an account of the rationale of using postural corrections on the basis of the postural analysis
- Plan stability training programmes

**Skills***Students can*

- Independently demonstrate skills in spine stabilisation and sensory-motor function training
- Independently carry out a posture analysis

## Objectives

Knowledge and understanding

*Students can*

- Understand and explain existing theories for spine stabilisation (e.g. theories described by McGill, Hodges, Jull, P. Kolár, et al.)
- Give an account of the indicators for the use of stability training and sensory-motor function training
- Give an account of rationale behind relevant motion patterns and stability tests
- Give an account of the rationale for the choice of stability exercises on the basis of motion patterns and stability tests
- Devise an individual stability training programme based on objective findings
- Analyse and assess when a rehabilitation programme should be continued in a functional training programme
- Give an account of the rationale for the selection of a training programme on the basis of the findings of a posture analysis
- Give an account of when McKenzie exercises are indicated as the treatment modality
- Give an account of the characteristics of medical history and of objective features of the four syndromes described in the McKenzie theory.

Skills

*Students can*

- Independently carry out relevant motion patterns and stability tests
- Independently carry out stability training and sensory-motor function training
- Independently modify stability training techniques and sensory-motor function training
- Independently modify a stability training programme in relation to relevant progression and regression
- Independently carry out a thorough and complete posture analysis with the correct naming of the relevant postural findings
- Independently carry out a posture corrections on the basis of a posture analysis

## Grading scale

*Grade 12 – for an excellent performance*

The student can give a comprehensive account of the theories behind stability exercises and McKenzie exercises. Furthermore, the student can guide and instruct patients in stability training with considerable assurance and with only a few insignificant faults.

The student can confidently and correctly carry out a posture analysis, in which relevant findings and observations are named with only a few insignificant faults. This information can be interpreted and refined to create well-considered postural correction and/or training for sensory-motor function.

*Grade 2 – for an adequate performance*

The student can give a basic account of the theories behind stability exercises and McKenzie exercises. Furthermore, the student can guide

and instruct patients in stability training but with more substantial errors and faults.

The student can carry out an acceptable posture analysis, naming relevant findings and observations. And on the basis of these observations, the student can guide the patient in a minimum of postural correction and/or a sensory-motor function training initiative.

ECTS score:	3 ECTS points
Examination form:	Ordinary OSCE
Language:	Danish
Examiner:	Internal and external examiner
Assessment:	7-point scale
Participation requirements:	Bachelor in clinical biomechanics

## **General diagnostics 2**

(Orthopaedics and rheumatology)

### **Overall aims**

Knowledge and understanding

*Students can/have*

- Synthesise differential diagnoses for commonly occurring orthopaedic and rheumatologic disorders and illnesses
- Assess when a patient should be referred for treatment/examination by another healthcare professional
- Use analytical and critical thinking

Competences

*Students can*

- Show a conscious awareness of their own responsibility, attitude and conduct in relation to the patient, colleagues and society

### **Aims**

Knowledge and understanding

#### Rheumatology

*Students can/have*

- Analyse the most commonly occurring rheumatologic disorders
- Assess paraclinical examinations for the most commonly occurring rheumatologic disorders
- Differentiate between rheumatologic disorders and musculoskeletal disorders
- Analyse appropriately when to implement pharmacological and non-pharmacological treatment
- Knowledge of selected pharmacological medicines used in rheumatology

#### Orthopaedics

*Students can/have*

- Analyse the most commonly occurring orthopaedic disorders
- Assess paraclinical examinations for the most commonly occurring orthopaedic disorders
- Differentiate between the orthopaedic disorders
- Knowledge of orthopaedic surgical treatment techniques

- Use non-surgical treatment techniques where relevant
- Propose timely referrals of patients with orthopaedic disorders
- Knowledge of selected pharmacological medicines used in orthopaedics

## **Objectives**

Knowledge and understanding

### Rheumatology

*Students can/have*

- Explain the pathology behind the various rheumatologic disorders
- In-depth and reflective knowledge about the rheumatologic disorders indicated below in relation to:
  - Aetiology and occurrence
  - Medical history and symptoms
  - Diagnostics
  - Prevention treatment
  - Prognosis
- Determine which paraclinical examinations are relevant for the individual patient
- Analyse the paraclinical findings in relation to the rheumatologic differential diagnostics
- Provide differential diagnosis of rheumatologic and musculoskeletal disorders
- Explain the optimal treatment of the various rheumatologic disorders
- Discuss the course and complications of rheumatologic disorders
- Knowledge of selected pharmacological medicines used in rheumatology

### Orthopaedics

*Students can/have*

- Explain the pathology behind the various orthopaedic disorders
- In-depth and reflective knowledge about the orthopaedic disorders indicated below in relation to:
  - Aetiology and occurrence
  - Medical history and symptoms
  - Diagnostics
  - Prevention treatment
  - Prognosis
- Determine which paraclinical examinations are relevant for the individual patient
- Analyse the paraclinical findings in relation to the orthopaedic differential diagnostics
- Make differential diagnoses of orthopaedic and musculoskeletal disorders
- Knowledge of surgical orthopaedic treatment techniques
- Knowledge of indications, contra-indications and complications for orthopaedic surgical treatment
- Use conservative treatment techniques in:
  - The general traumatology in upper and lower extremities
  - Stress injuries
  - Structurally related disorders
  - Degenerative disorders

- Explain the optimal treatment of the various orthopaedic disorders
- Discuss the course and complications of orthopaedic disorders
- Knowledge of selected pharmacological medicines used in orthopaedics

### **Grading scale**

#### *Grade 12 – for an excellent performance*

At the highest professional level the student can make nuanced syntheses of differential diagnoses on the basis of in-depth knowledge of aetiology, occurrence, medical history and symptoms of orthopaedic and rheumatologic disorders. Furthermore, the student has a thorough knowledge of treatment and pathology, and at the same time can confidently and correctly assess when the patient should be referred to another treatment or examination.

#### *Grade 2 – for an adequate performance*

The student can synthesise acceptable differential diagnoses on the basis of knowledge of aetiology, occurrence, medical history and symptoms of the most frequent orthopaedic and general medical disorders at a level that ensures no serious errors are made. Furthermore, the student has a minimum knowledge of the treatment and progression, and at the same time can at a basic level, assess when the patient should be referred to another treatment or examination.

ECTS points:	15 ECTS points (Rheumatology 7,5 ECTS and Orthopaedics 7,5 ECTS)
Examination form:	Casuistries. Two separate written examinations
Language:	Danish
Examiner:	External examiner
Assessment:	7-point scale
Participation requirements:	Bachelor in clinical biomechanics

## **Imaging diagnostics 1**

### **Aims**

Knowledge and understanding

*Students can*

- Independently analyse diagnostic imaging examinations

Skills

*Students can*

- Independently devise a diagnostic image description

### **Objectives**

Knowledge and understanding

*Students can*

- Define advantages and disadvantages of various diagnostic imaging modalities
- Assess image quality of diagnostic imaging examinations
- Describe indications for x-ray imaging in accordance with the Danish Society of Radiology guidelines

- Describe indications for MR scanning in accordance with the Danish Society of Radiology guidelines
- Describe the recorded images that are part of standard imaging diagnostics for the musculoskeletal system and the thorax
- Give an account of supplementary images and indication of their use
- Describe and state the individual bones' various regions and features on radiological images
- Describe the normal anatomy of osseous, articulate and soft tissue structure
- Describe general radiological standard variants and development anomalies
- Describe normal variations of radiological dimensioning (angles, lines, distance)
- Describe primary, secondary and tertiary ossification centres in children
- Describe normal anatomical structures that can be mistaken as pathological
- Describe normal pulmonary and cardiovascular features on a thorax image.
- Describe typical degenerative disorders in the musculoskeletal system

### Skills

#### *Students can*

- Independently identify:
  - The individual bones' various regions and features
  - Describe the normal anatomy of osseous, articulate and soft tissue structure
  - Describe general radiological standard variants and development anomalies
  - Describe normal anatomical structures that can be mistaken as pathological
  - Radiological dimensioning (angles, lines, distance)
  - Primary, secondary and tertiary ossification centres in children
  - Normal pulmonary and cardiovascular features on a thorax image.
  - Typical degenerative disorders in the musculoskeletal system
- Independently devise a correct diagnostic imaging description

### **Grading scale**

#### *Grade 12 – for an excellent performance*

The student can with proficiency give an account of normal anatomy in diagnostic images. Furthermore, the student can confidently and accurately give an account of, localise and identify conditions that deviate from the normal in diagnostic images.

The student can proficiently devise a radiological description and with only a few insignificant deficiencies.

#### *Grade 2 – for an adequate performance*

The student can adequately give an account of normal anatomy in diagnostic images. Furthermore, the student can give an account of,



localise and identify conditions that deviate from the normal in diagnostic images at a level that ensures no serious errors are made.

The student can devise an adequate radiological description at a level that ensures no serious errors are made.

ECTS points:	7.5 ECTS points
Examination form:	OSCE
Language:	Danish
Examiner:	Internal and external examiner
Assessment:	7-point scale
Participation requirements:	Bachelor in Health Science, Clinical Biomechanics

## **Radiography**

### **Aims**

#### **1. Radiographic imaging**

Knowledge and understanding

*Students can*

- Give an account of the theories that form a basis for the design and function of various modalities
- Independently analyse radiographic examinations

Skills

*Students can*

- Independently carry out and assess radiographic examinations
- Reflect at a fundamental level on the technology used

#### **2. Radiation protection**

Knowledge and understanding

*Students can*

- Give an account of the choice of radiation protection measures in the use of ionising radiation in the professional radiographic field

Skills

*Students can*

- Independently carry out radiation protection measures in the professional radiographic field

#### **3. Projection theory /Examination technique**

Knowledge and understanding

*Students can*

- Give an account of projection theory and method using x-ray examinations of the spine, pelvis, and the upper and lower extremity

Skills

*Students can*

- Radiographically visualise an observed diagnosis, with a view to diagnosis or confirmation
- Independently carry out x-ray examinations of spine, pelvis and the upper and lower extremity

## Objectives

### 1. Radiographical imaging

Knowledge and understanding

*Students can*

- Explain selected physical principles as a basis for producing ionised radiation
- Explain the interaction of electromagnetic radiation with various tissue structures
- Explain how images are formed using electromagnetic radiation for commonly occurring examinations
- Explain digital technique
- Explain contrast, optical density, sharpness, resolution, noise and distortion
- Explain the inverse square law, including rasters' impact on image quality and dose

Skills

*Students can*

- Assess image quality and post-processing using CR/DR
- Assess the physics and the technique behind the modality and CR/DR
- Assess the optimal parameter settings in relation to picture quality

### 2. Radiation protection

Knowledge and understanding

*Students can*

- Explain the properties of ionised radiation
- Explain the fundamental genetics, mutations in DNA and chromosomes and the body's repair mechanism
- Explain the fundamental radiation protection principles for patients and personnel
- Explain Danish legislation relevant to the basic practice of radiography
- Explain the fundamental dose terminology and dosage limits
- Explain stochastic and deterministic damage
- Explain dosage terminology
- Explain stochastic and deterministic damage

Skills

*Students can*

- Assess information about the choice of radiation protection for patients and their relatives
- Assess the use of dosage-saving initiatives in relation to equipment and parameter settings
- Assess relevant radiation protection principles in connection with basic examinations

### 3. Projection theory/Examination technique

Knowledge and understanding

*Students can*

- Correctly assess criteria with x-ray imaging of spine, pelvis and the upper and lower extremity
- Assess their own images on the basis of criteria taught
- Assess the radiographic procedure and describe proposed modifications to projection and technique
- Explain the significance of positioning using x-ray imaging
- Explain the significance of superpositioning

Skills

*Students can*

- Independently carry out x-ray examinations of spine, pelvis and the upper and lower extremity
- Assess other examinations of the above

#### Grading scale

*Grade 12 – for an excellent performance*

The student can carry out/assess basic examination procedures of the spine, pelvis and upper and lower extremity examinations with exceptional accuracy and with only a few insignificant faults.

Furthermore, the student can with a large degree of accuracy, give an account of, localise and identify quality criteria and deviations from correct diagnostic images and propose a new procedure

Moreover, the student can justify and discuss the technology and parameter settings used with a high degree of professional insight.

Furthermore, the student can demonstrate comprehensive insight into the use of radiation protection principles.

*Grade 2 – for an adequate performance*

The student can carry out and/or assess basic examination procedures for spine, pelvis and upper and lower extremity examinations at a level that ensures no serious errors are made. Furthermore, the student can with minimal accuracy give an account of, localise and identify the most important quality criteria and deviations from correct diagnostic images and propose a new procedure.

Moreover, the student can justify and discuss the technology and parameter settings used at a level that ensures no serious errors are made.

Furthermore, the student can demonstrate adequate insight into the use of radiation protection principles that ensures the patient is not unnecessarily exposed to radiation.

ECTS points:	5 ECTS points
Examination form:	OSCR examination or theory/practical test in the x-ray imaging laboratory. The test is divided equally between elements from: <ol style="list-style-type: none"> <li>1. Radiographical imaging</li> <li>2. Radiation protection</li> <li>3. Projection theory/examination technique</li> </ol>
Language:	Danish
Examiner:	Internal examiner
Assessment:	7-point scale

Participation requirements: Bachelor in clinical biomechanics

## **Imaging diagnostics 2**

### **Aims**

Knowledge and understanding

*Students can*

- Independently interpret and analyse examinations using diagnostic imaging

Skills

*Students can*

- Independently devise a diagnostic image description

### **Objectives**

Knowledge and understanding

*Students can*

- Give an account of the typical neurological disorders/illnesses on the basis of clinical, pathological and radiological presentations.
- Give an account of the typical orthopaedic radiological diseases/disorders in the spine, including:
  - Give an account of clinical, pathological and radiological imaging in degenerative disorders of the musculoskeletal system
  - Give an account of the various types of fractures and dislocations
  - Give an account of the typical complications associated with various types of fractures
  - Describe the different healing phases for a bone
  - Describe diagnostic imaging characteristics in osteomyelitis under the heading of spondylolysis
  - Describe the classification of spondylolysis
  - Give an account of the diagnostic images that are used as part of an imaging diagnosis for spondylolysis.
  - Give an account of the various measuring methods for the diagnosis and prognosis of spondylolysis under the heading of scoliosis
  - Describe the classification of scoliosis
  - Give an account of the diagnostic images that are used as part of a imaging diagnosis for scoliosis
  - Give an account of the typical measuring methods for the diagnosis and prognosis of scoliosis
  - Give an account of the various types of scoliosis on the basis of clinical, pathological and radiographical imaging
  - Describe the typical complications associated with scoliosis
- Give an account of the various types of inflammatory/rheumatologic disorders of the musculoskeletal system on the basis of clinical, pathological and radiological imaging
- Explain and use the overall guidelines for radiological differential diagnostics for the diagnosis of inflammatory, degenerative and metabolic disorders
- Give an account of the various types of metabolic disorders the basis of clinical, pathological and radiological imaging

- Give an account of the haematological disorders, including being able to
  - Give an account of osteonecrosis on the basis of the clinical, pathological and radiological imaging Describe the clinical, pathological and radiological imaging for epiphyseal disorders
- Give an account of the various types of osteonecrosis on the basis of clinical, pathological and radiographical imaging
- Give an account of the clinical, the pathological and the radiological imaging for typical nutritional, metabolic and endocrinological disorders
- Give an account of the clinical, pathological and radiological imaging for tumours in the peripheral skeleton

### Skills

#### *Students can*

- Independently localise, identify and describe typical findings on diagnostic images in relation to:
  - Neuroradiological disorders
  - Traumas/fractures
  - Degenerative disorders
  - Spondylolysis
  - Scoliosis
  - Inflammatory/rheumatologic disorders
  - Osteoporosis
  - Osteonecrosis
  - Epiphyseal disorders
  - Osteomyelitis
  - Tumours in the peripheral skeleton
  - Musculoskeletal manifestations of nutritional and metabolic disorders
  - Musculoskeletal manifestations of endocrinological disorders
- Independently devise a diagnostic image description

### **Grading scale**

#### *Grade 12 – for an excellent performance*

The students can accurately give an account of, localise and identify conditions that deviate from the norm in diagnostic images. Students can accurately give an account of pathological changes in diagnostic images. The student can with confidence and accuracy devise a radiological description and with only a few insignificant faults.

#### *Grade 2 – for an adequate performance*

The student can give an account of, localise and identify conditions that deviate from the norm in diagnostic images at a level that ensures no serious errors are made. Students can adequately give an account of some pathological changes in diagnostic images. The student can devise an adequate radiological description at a level that ensures no serious errors are made.

ECTS points:                   6.5 ECTS points  
Examination form:           OSCE

Language: Danish  
 Examiner: Internal and external examiner  
 Assessment: 7-point scale  
 Participation requirements: Students have passed Imaging diagnostics 1

### **Summer school in musculoskeletal imaging**

The summer school is a 5-days diagnostic imaging course which usually commences at the beginning of week 34. The course covers the seven categories of bone diseases including normal soft tissue pathologies which are seen on diagnostic imaging modalities of the spinal column. The presentations are interactive and case-based focusing on integration of clinical information and diagnostic imaging findings leading to a diagnosis and treatment plan. It is expected that the students are active participants in the teachings.

#### **Goals**

Knowledge and understanding

*The student can*

- Independently interpret and analyse diagnostic images

#### **Objectives**

Knowledge and understanding

*The student can*

- Make evidence-based decisions about appropriate use of diagnostic imaging modalities
- Perform a complete but flexible search pattern when evaluating diagnostic images
- Recognise and describe abnormal findings on conventional x-rays, CT and MRI of:
  - Normal variants and congenital anomalies
  - Rheumatic diseases
  - Benign and malignant bone tumours
  - Bone- and joint infections
  - Fractures and dislocations
  - Vascular diseases
  - Endocrine and metabolic diseases
  - Soft tissue abnormalities
- Recognize the difference between significant and non-significant abnormal diagnostic imaging findings
- Seek and link related abnormal diagnostic imaging findings
- Relate diagnostic imaging abnormalities to information from the case history and objective examination and generate a working diagnosis and differential diagnoses
- Choose appropriate follow-up procedures if indicated
- Choose appropriate management of specific diseases
- Communicate diagnostic imaging findings and diagnosis to relevant collaborators and patients

Total ECTS points: 1 ECTS-point, 5 whole days  
 Examination form: 80% compulsory attendance  
 Language: English  
 Examiner: Internal

Assessment: Passed/failed  
Requirements for participation: Passed Diagnostic Imaging 1

## **Clinical Training B** (Prior to clinical training)

### **Aims**

Knowledge and understanding

*Students can*

- Analyse and discuss medical history information under supervision
- Analyse and discuss the findings of clinical examinations under supervision
- Analyse and discuss the need for paraclinical examinations under supervision
- Analyse and discuss the results of diagnostic imaging examinations under supervision
- Analyse and discuss diagnostic prioritisation under supervision
- Analyse and discuss the need for patient information under supervision
- Analyse and discuss relevant treatment/course of action with supervisor
- Analyse and discuss their own professional limitations under supervision
- Give an account of the principles for evidence-based practice
- Give an account of lege artis within their own area of activity

### **Skills**

*Students can*

- Under supervision, carry out an adequate anamnesis of a patient
- Under supervision, carry out an adequate clinical examination
- Under supervision, devise an adequate referral
- Under supervision, carry out an adequate diagnosis
- Under supervision, complete adequate case notes
- Under supervision, complete an adequate diagnostic imaging description
- Under supervision, communicate effectively with other professionals
- Under supervision, inform patients in a satisfactory manner
- Under supervision, satisfactorily perform a treatment/course of action
- Gradually take on the role of chiropractor

### **Competences**

*Students can*

- Demonstrate professional attitudes and conduct
- Take theoretical knowledge from clinical biomedical and academic subjects and apply it to the clinical situation
- Take responsibility for their own learning

## Objectives

Knowledge and understanding

*Students can*

- Interpret information in medical histories
- Assess the clinical significance of information in medical histories
- Interpret the findings in clinical examinations
- Assess the clinical importance of findings in clinical examinations
- Analyse the advantages and disadvantages of paraclinical examinations
- Prioritise between different paraclinical examinations
- Assess the clinical significance of the results of paraclinical examinations
- Interpret the results of examinations using imaging diagnostics
- Analyse the clinical significance of the results of examinations using imaging diagnostics
- Synthesise relevant diagnostic considerations based on clinical and paraclinical information
- Prioritise diagnostic considerations in relation to the given patient
- Analyse the need for, level of and method for individual patient information
- Formulate and discuss a relevant treatment/course of action for the given patient

Skills

*Students can*

- Under supervision, record a patient's medical history that is adequate and structured
- Under supervision, record a patient's medical history that is adapted to the given patient
- Under supervision, carry out a clinical examination that is adequate and technically correct, including:
  - the cardiovascular system
  - the respiratory system
  - the gastrointestinal system
  - the genito-urinary system
  - the haematological system
  - the musculoskeletal system
  - the neurological system
  - the endocrinological system
- Under supervision, carry out a clinical examination adapted for the given patient
- Under supervision, devise adequate referrals for paraclinical examinations
- Under supervision, devise adequate referrals for further examinations/treatments in another department
- Under supervision, carry out competent differential diagnostics of patients with disorders that fall within the field of chiropractics
- Under supervision, make an overall assessment of the patient's state of health
- Under supervision, diagnose the patient's requirements for further examination/treatment for disorders that fall within the field of chiropractics
- Under supervision, complete adequate case notes



- Complete adequate diagnostic imaging descriptions
- Under supervision, execute a relevant treatment/course of action for the given patient

### Competences

#### *Students can*

- Communicate effectively when recording a patient's medical history
- Communicate effectively during a clinical examination
- Under supervision, give the patient information in a professional, effective and empathetic manner
- Demonstrate that he/she can take on the role of a competent, independent, responsible clinician and healthcare professional
- Take responsibility for their own learning, on-going professional development and keeping up to date with the latest developments in the field

### Grading scale

#### *Grade 12 – for an excellent performance*

The student has advanced practical competences, where the applied clinical and paraclinical information is comprehensive and accurate for the given patient. The student clearly possesses advanced practical skills and technical accomplishment and has the ability to adapt standardised procedures to suit the individual patient's clinical condition. The student has advanced intellectual and academic competences and independently can rationally and correctly analyse clinical information. The student can independently implement his/her clinical considerations in a comprehensive clinical conclusion (diagnosis, course of treatment etc.) and act in accordance with this. The student can act independently, proficiently and competently in a clinical environment without endangering the patient. The student is able to correctly assess the level of supervision that is required. The student shows a natural attitude and conduct appropriate to the role of chiropractor.

#### *Grade 2 – for an adequate performance*

The student's practical competences are at a level where the clinical and paraclinical information collected can be presumed to be accurate for the patient in question. The student has a level of intellectual and academic competence that allows the applied clinical and paraclinical information to be analysed rationally and to result in a reasonable conclusion and conduct in relation to the patient in question. The student can with reasonable proficiency act independently in clinical practice under supervision as a backstop, without endangering the patient. The student shows attitude and conduct appropriate to the role of chiropractor.

ECTS points:	5 ECTS points
Examination form:	Log book and OSCE examination
Language:	Danish
Examiner:	Internal and external examiner
Assessment:	Passed/failed, 7-point scale
Participation requirements:	None

## **Clinical Training C**

### **Aims**

Knowledge and understanding

*Students can*

- Independently analyse information in medical histories
- Independently analyse the findings of clinical examinations
- Independently assess the need for paraclinical examinations
- Independently analyse the results of image diagnostic examinations
- Independently analyse diagnostic prioritisations based on clinical and paraclinical information
- Independently analyse the need for patient information
- Independently analyse (prioritise) relevant treatment/course of action initiatives

Skills

*Students can*

- Independently carry out a satisfactory medical history
- Independently carry out a satisfactory clinical examination
- Independently carry out satisfactory referral for paraclinical examinations
- Independently carry out a satisfactory diagnosis
- Independently complete satisfactory case notes
- Independently complete satisfactory diagnostic imaging descriptions
- Independently execute a relevant treatment/course of action
- Independently carry out manual treatment
- Independently plan and use training programmes
- Independently guide and direct prevention measures in the field of chiropractics

Competences

*Students can*

- Independently analyse their own professional limitations and assess need to confer with a supervisor
- Transfer theoretical knowledge from clinical biomedical and academic subjects and apply it to the clinical situation
- Discuss the need for continuous professional development
- Communicate effectively with other professionals
- Independently give patients information in a satisfactory manner
- participate in cross-disciplinary rehabilitation of patients
- Collaborate with other professionals
- Take on the role of chiropractor
- Act professionally
- Take responsibility for their own learning

### **Objectives**

Knowledge and understanding

*Students can*

- Independently interpret information in medical histories
- Independently assess the clinical significance of information in medical histories
- Independently interpret the findings of clinical examinations
- Independently assess the clinical significance of clinical examinations

- Independently analyse the advantages and disadvantages of various paraclinical examinations
- Independently prioritise between various paraclinical examinations
- Analyse the clinical significance of the results of other paraclinical examinations
- Independently interpret the results of examinations using imaging diagnostics
- Independently assess the clinical significance of the results of imaging diagnostic examinations
- Independently synthesise relevant diagnostic considerations based on clinical and paraclinical information
- Independently prioritise diagnostic considerations relating to a given patient
- Independently analyse the need for, level of and method for provision of patient information
- Independently analyse the advantages and disadvantages of various treatments/courses of action initiatives for the given patient
- Discuss the evidential basis for various treatment initiatives within the field of chiropractics
- Discuss the indications and contra-indications for various treatment initiatives within the field of chiropractics
- Independently analyse indications for prevention, treatment and rehabilitation of disorders in the field of chiropractics

## Skills

### *Students can*

- Independently perform an anamnesis that is complete, focused, relevant and structured
- Independently perform an anamnesis that is adapted to the given patient
- Independently, carry out a clinical examination that is complete and technically correct, focused and relevant, including:
  - the cardiovascular system
  - the respiratory system
  - the gastrointestinal system
  - the genitor-urinary system
  - the haematological system
  - the musculoskeletal system
  - the neurological system
  - the endocrinological system
- Independently carry out a clinical examination that is adapted to a given patient
- Independently devise precise, complete, focused and relevant referrals for paraclinical examinations
- Independently devise precise, complete, focused and relevant referrals for further examination/treatment in another department
- Independently carry out qualified differential diagnostics of patients with disorders in the field of chiropractics
- Independently devise precise, complete, relevant, focused and structured case notes
- Independently devise precise, complete, relevant, focused and structured diagnostic imaging descriptions
- Independently adapt and execute a relevant treatment/course of

action for the given patient, which can include manual treatment and training therapy

- Independently advise about or direct relevant preventive initiatives in the field of chiropractic practice

### Competences

#### *Students can*

- Communicate effectively when recording a patient's medical history
- Communicate effectively during a clinical examination
- Independently make an overall assessment of the patient's state of health
- Independently diagnose the patient's requirements for further examination/treatment for disorders that fall within the field of chiropractics
- Independently inform the patient in a professional, effective and empathetic manner
- Participate in or lead the cross-disciplinary rehabilitation of patients within the field of chiropractics
- Collaborate effectively and respectfully with other professionals acknowledging and respecting the limitations of their own competences and those of others
- Take on the role of a competent, independent, responsible clinician and authorised healthcare professional
- Display professional attitudes as something natural
- Take responsibility for their own learning, for on-going professional development and for keeping up to date with developments in the field

### **Grading scale**

#### *Grade 12 – for an excellent performance*

The student has advanced practical competences, the applied clinical and paraclinical information being satisfactory and accurate for the given patient. The student is in command of practical skills with technical accomplishment and has the ability to depart from standardised procedures to suit the individual patient's clinical condition. The student is able to independently assess the degree of uncertainty and clinical significance should be ascribed to practical procedures. The student has advanced intellectual and academic competences and can independently provide a rational and accurate analysis of clinical information. The student can independently bring his/her clinical considerations to a satisfactory clinical conclusion (diagnosis, course of treatment, etc.) and act in accordance with this. The student can act independently, confidently and competently in a clinical environment for the benefit of the patient. The student can include other professionals in cross-disciplinary collaboration concerning the given patient. The student shows an entirely natural attitude and conduct appropriate to the role of chiropractor.

#### *Grade 2 – for an adequate performance*

The student's practical competences are at a level where the clinical and paraclinical information collected is complete and accurate for the given patient. The student clearly possesses practical skills and technical ability and manages to adapt standardised procedures to suit the individual

patient's clinical condition. The student's intellectual and academic competences are at a level that allows him/her to independently analyse clinical information rationally and correctly. The student can independently bring his/her clinical considerations to a complete clinical conclusion (diagnosis, course of treatment, etc.) and act in accordance with this. The student can act independently, with confidence and competence in a clinical environment without being a danger to the patient. The student is able to correctly assess the level of supervision that is required. The student demonstrates in a natural manner attitudes and conduct appropriate to the role of chiropractor.

ECTS points:	5 ECTS/module. 15 ECTS in total
Examination form:	Portfolio is, passed with every module (K6, K7 and K8)
Language:	Danish
Examiner:	Internal examiner
Assessment:	Passed/failed
Participation requirements:	Passed the modules K1-K5

## **Master's thesis**

### **Aims**

Knowledge and understanding

*Students can*

- interpret and put scientific results into perspective in relation to clinical practice

Skills

*Students can*

- Use the relevant scientific theory and method when carrying out his/her thesis assignment
- Formulate a relevant scientific research question
- Devise a project description

Competences

*Students can*

- Plan and carry out a research task:
  - Study the literature
  - Analyse available data
  - Carry out minor clinical or experimental studies
- Communicate the completed research work and the results in a clear and comprehensible fashion
- Interpret and reflect on scientific results in writing or in speech

### **Objectives**

Knowledge and understanding

*Students can*

- Analyse subject questions using a natural scientific approach
- Critically assess scientific literature
- Carry out minor clinical or experimental scientific tasks

## Skills

### *Students can*

- Use commonly occurring health science methods in relation to the answers to scientific questions
- Use basic bio-statistical methods to describe and analyse data and hypotheses
- Independently carry out searches of scientific literature
- Independently recapitulate scientific literature
- Under supervision, identify relevant scientific methods
- Under supervision, analyse natural scientific data
- Use scientific results in clinical contexts in quality development processes

## Competences

### *Students can*

- With guidance, plan their own thesis project
- Discuss and formulate relevant scientific questions and hypotheses
- Take theoretical knowledge and apply it practically in feasible scientific protocols
- Plan the course of scientific examinations
- Independently collect scientific data using relevant methods
- Independently give written and oral accounts of their own results in a scientific format
- Discuss their own results and turn them into clinical recommendations where possible
- Understand and explain to professionals and to the general public their own and general scientific results
- Assess the applicability of research results in clinical practice

## **Grading scale**

### *Grade 12 – for an excellent performance*

The student's written assignments have shown that the student has with few exceptions been able to use the competences taught in classes. The student has independently identified in an original fashion a relevant scientific issue based on existing literature or on some other insight. Furthermore, under supervision, the student has collected or processed existing data using the relevant scientific methods and has subsequently interpreted the results accurately and with a grasp of the whole topic. The student has independently and with considerable confidence interpreted his/her own results in writing in relation to other relevant literature. Furthermore, the student's oral presentation of the thesis has demonstrated an overview and ability to reflect on the process and results.

### *Grade 2 – for an adequate performance*

The student's regular written assignments have shown that the student is familiar with the competences taught in classes. The student has with help identified a relevant scientific issue. Furthermore, under supervision, the student has used relevant scientific methods to carry out the collection of data or processing of existing data and has subsequently interpreted the results with some degree of uncertainty. The student has discussed his/her own results in writing in relation to other relevant literature with a limited degree of overview. Furthermore, the student's oral presentation of the

thesis has demonstrated insight into the subject and some ability to reflect on the process and results.

Placing	K6-K8
ECTS points:	30 ECTS points: 22.5 ECTS points for the lesson plan in evidence based practice and the completion of thesis and its oral presentation. 7.5 ECTS points for the case report
Examination form:	Case report and written report with an oral defence
Language:	Danish, a Nordic language or English
Examiner:	Internal examiner in the case report. External examiner on the written dissertation and oral defence
Assessment:	7-point scale

Participation requirements: Passes in K1–K5 subjects.

## Chapter 4 Examination

### § 11. GENERAL EXAMINATION PROVISIONS

Examinations are held and conducted in accordance with Provision no. 666 of 24 June 2012 the examination of university courses provision (Examinations Order), on the grade scale and other assessment of university courses no. 250 of 15 March 2007, provision on the grade scale and other assessment of university courses.

### § 12. EXAMINATION REGISTRATION

In the case of registration with a module that has one or more examinations, students are automatically registered for the examination (amendment in Examinations Order provision no. 666 of 24 June 2012).

Para 2: Students must register for the course within a set deadline on the Faculty of Health Sciences website.

Para 3: In the case of an examinations/test where there is no course registration, e.g. in the case of second or third examination attempts, the examination registration must be executed within the deadlines given in the course's website.

Para 4: In the case of electronic registration, students are responsible for ensuring they are registered and have an electronic receipt that confirms registration.

### § 13. EXAMINATION DE-REGISTRATION

A student can de-register himself/herself from the examination. A student must de-register himself/herself on-line or in writing at the latest on the weekday prior to the examination. Incorrect de-registration (or missing the de-registration deadline) means that the examination will be counted as a valid examination attempt.

### § 14. WRITTEN EXAMINATIONS (DIGITAL)

Please find the necessary information on the following website:

[http://www.sdu.dk/Information\\_til/Studerende\\_ved\\_SDU/Eksamen/generelt\\_om\\_eksamen/under\\_eksamen/Skriftlig\\_proeve\\_digital](http://www.sdu.dk/Information_til/Studerende_ved_SDU/Eksamen/generelt_om_eksamen/under_eksamen/Skriftlig_proeve_digital)

### § 15. EVALUATION OF EXAMINATION AND TESTS

The examination is evaluated in accordance with the 7-point scale or as pass/fail for the individual module (The Grade Order § 1).

Para 2: In the case of tests which are evaluated in accordance with a grade scale, a grade 12 is awarded for an excellent performance that demonstrates complete attainment of the module's aims with none or few insignificant deficiencies (The Grade Order § 2).

Para 3: In the case of tests which are evaluated in accordance with a grade scale, a grade 2 is awarded for an adequate performance that demonstrates the minimal acceptable level of attainment of the module's aims (The Grade Order § 6).



Para 4: In the case of tests which are evaluated in accordance with pass/fail, a pass is awarded for an adequate performance, which demonstrates the minimal acceptable level of attainment of the module's aims.

## **§ 16. EXAMINATION RESULT**

The overall examination result is expressed as an average quotient. Each individual grade has a weighting of 1. Only subjects with a number grade are included in the calculation.

Para 2: All course modules must be passed for the graduate programme to be completed.

Para 3: For a module to have been passed, all of its requirements must be approved/passed.

Para 4: For OSCE examinations on the professional track there are minimum requirements for passing a 'track' (see also "Description of pass requirements for OSCE examinations on the professional track", which is on the website for "Your course – Clinical Biomechanics").

## **§ 17. OSCE EXAMINATION**

A detailed description of the various OSCE examinations on the professional track, including their scheduling and the minimal requirements to pass a "track", is provided in the document "Description of OSCE examinations on the professional track". The document is available on the University of Southern Denmark website under "Your course" >>> practical information. Under § 10 the course modules, the type of OSCE examination that to taken is described under each single subject.

## **§ 18. ILLNESS AND ABSENCE**

In the event of an unforeseen withdrawal from the examination, the examination attempt may be annulled if:

1) Illness occurred after the final deadline for registering withdrawal had expired. The student must immediately report this to the Examinations Office.

2) Illness occurred during the examination. The student must summon the supervisor. The student and the supervisor sign a declaration that the examination has been interrupted because of illness.

Para 2: A medical note from a doctor confirming the illness must be produced. The doctor's medical note must be written by the student's customary doctor, unless there are special circumstances. The Examinations Office must have received the doctor's medical note within three days of the date of the examination.

Para 3: If the registration of illness and the doctor's medical note are received in due time, the respective examination is not counted as an examination attempt.

Para 4: Unregistered absence or absence due to illness will count as an examination attempt. Absence does not entitle the absentee to take a re-examination.

Para 5: If the student has been prevented from participating in an ordinary examination because of illness, the student must have the opportunity to resit the examination provided

§15 para 3 of this curriculum is fulfilled (Examinations Order no. 666 of 24 June § 18, part 2).

Para 6: If the student fails the resit or becomes ill again at the resit, he/she is not entitled to another resit.

## **§ 19. RE-EXAMINATION**

Students who have participated in an ordinary examination and who have failed the examination are entitled to take a new examination within six months after the first attempt (Examinations Order no. 666 of 24 Juni 2012 § 18, para 2).

Para 2: In order to qualify for a re-examination, it is a requirement that the student has previously participated in the subject's ordinary examination. A resit or new ordinary examination takes place within six months of the ordinary examination being held.

Para 3: The resit is held either in connection with the module's next ordinary examination or at the re-examinations in August.

Para 4: Students may only participate in two resits in the same examination period.

Para 5: Students cannot resit any examinations they have passed.

Para 6: Students must register to resit an examination no later than one week after the publication of the results of the ordinary examination. De-registration from a re-examination must take place no later than on the weekday (one week) before the date of the resit.

## **§ 20. AIDS**

The uses of aids are not prohibited, unless otherwise indicated.

Para 2: Students are not permitted to use their own computers in the examination.

## **§ 21. CHEATING IN EXAMINATIONS**

Refer to University of Southern Denmark rules on examinations and to the "Examinations Order".

## **§ 22. LANGUAGE OF EXAMINATION**

The examination language will be Danish, unless otherwise stated in the curriculum. Students whose native language is Swedish or Norwegian may take the examination in their native language.

### **§ 23. SPECIAL EXAMINATION CONDITIONS**

The Board of Studies may - according to the "Examinations Order" § 7 - offer special examination conditions for students with physical or mental disabilities and for students with a mother tongue other than Danish.

Application including relevant attachments ex. medical documentation should be submitted to the study board secretary at the beginning of the semester in question.

### **§ 24. EXAMINATION APPEAL**

Examination appeals or appeals against other judgements that impact on an examination must be made by students and presented to the Dean of the Faculty of Health Sciences. All appeals must be justified and made in writing.

Para 2: Students may appeal against

- 1) The basis of the examination
- 2) The course of the examination
- 3) The result

Para 3: Appeals must be made no later than two weeks after the day results are published. However, that day will be no earlier than the date given for publication of the assessments. The university may grant dispensation from the required deadline.

In general, refer to the Examinations Order, Chapter 7.

### **§ 25. TOTAL NUMBER OF EXAMINATION ATTEMPTS**

Students are entitled to a maximum of three attempts to pass an examination. The Board of Studies may allow further examination attempts in exceptional circumstances. In the assessment of whether there are appropriate exceptional circumstances, the question of the student's eligibility for the course cannot play a part.

Reference is made to "Examinations order" § 13 para 2.

### **§ 26. OTHER EXAMINATION PROVISIONS**

The University of Southern Denmark examination rules apply to any other circumstances that are not named in the Examinations Order.

Para 2: The Board of Studies may under exceptional circumstances give dispensation from the university's curriculum rules.

Para 3: In the case of illness or a resit, the form of the examination may be altered in relation to the ordinary examination.

## **Chapter 5 Other Provisions**

### **§ 27. TIME LIMITS**

On the basis of their professional development, students must commence the graduate programme in clinical biomechanics within two years of passing the bachelor programme (Admission Order § 7).

Para 2: Students must pass the graduate programme within four years of commencing the course.

Para 3: The Board of Studies may under exceptional circumstances give dispensation from the deadlines in para 1 and para 2.

### **§ 28. STUDENT ACTIVITY**

Students who have been inactive for a year are offered counselling.

Para 2: Enrolment may be terminated if students have been inactive for a continuous period of at least one year (Admission Order § 19 part 1).

Para 3: The Board of Studies may under exceptional circumstances give dispensation from the requirements in para 1 and 2.

### **§ 29. OPTIONAL SUBJECTS**

During the graduate programme in clinical biomechanics, students must take at least two optional subjects, each carrying 5 ECTS points. The optional subject is included under the professional track.

Para 2: Only an optional subject approved by the Board of Studies for clinical biomechanics may be included. Credits are not given for optional subjects.

Para 3: Optional subjects are placed in Module K1 and K5, for “Autumn start” and “Spring start” respectively except from Clinic training. Clinic training is scheduled in Module K1 for “Autumn start” and in Module K3 for “Spring start”. Other opportunities to take Clinic training at other times can be made according to the rules of self-organized clinics as described in “Rules and procedures for the clinic stay”. The document is available at SDU’s website under “Din uddannelse” >>> ”Praktiske informationer”.

Para 4: An optional subject requires at least five participants to be established. However there is no requirement for a number of attendants in the Optional subject in Clinical training.

### **§ 30. WRITTEN ASSIGNMENTS**

Students must write a master’s project in the final year of the course. The thesis carries 30 ECTS points. A Danish/Nordic and an English summary must be written and both of them will be part of the assessment. There is given one final grade for both the written assignment and the examination.

Para 2: The project is completed as described in the current curriculum and in the “Thesis

Rules”.

Para 3: In the case of written work, subject content is given most weight, cf. Examinations Order § 24, para 1. The ability to spelling and to express oneself are included in the overall assessment of the examination performance (see “Thesis Rules”).

Para 4: The Board of Studies may under exceptional circumstances give dispensation from the deadline in para 1.

### **§ 31. CREDITS**

On application the Board of Studies recognise that certain course elements passed on another course in Denmark or abroad at the same level can replace course elements on the graduate programme in clinical biomechanics.

Decisions will be based on an academic assessment.

Para 2: A thesis that was completed on another graduate programme cannot be accredited.

### **§ 32. DISCHARGE FROM STUDIES**

Students are discharged from their studies when they

- 1) Have completed the graduate programme in clinical biomechanics
- 2) Are precluded from continuing the course because they have used all of their examination attempts
- 3) Are precluded from continuing the course as a consequence of expired deadlines ((§ 4 part 4) or because of activity requirements (§ 5)
- 4) Withdraw from the course
- 5) Are permanently dismissed from the university

### **§ 33. LEAVE OF ABSENCE**

Students may apply for a leave of absence from the graduate programme in clinical biomechanics in accordance with the “Rules on leave of absence for students at the University of Southern Denmark”

Para 2: Leave of absence may only be granted after students have completed the first semester of the graduate programme and have passed the examinations placed in the course's first six months, unless the application for leave of absence is due to pregnancy, adoption or National Service.

Para 3: The university may under exceptional circumstances give dispensation from the requirements in para 2.

### **§ 34. APPROPRIATE CLOTHING ON THE PROFESSIONAL TRACK**

Students on the professional track of the clinical biomechanics must be prepared to contribute to classes in a state of undress. A state of undress means that the students will retain their underwear. Gender does not have any influence on the matter of dress. Students are permitted to wear a "patient gown" during lessons. It is important to emphasise that clinical biomechanics cannot be practised or performed on a clothed individual (whatever the region of the body in question), in a professionally responsible manner. Students who attempt to practise on clothed students whose skin is covered with clothing during the

lessons are typically asked to ensure the patient is sufficiently undressed in relation to the procedure that is being practised. Dispensation from this rule may be granted for shorter or longer periods in exceptional circumstances (e.g. documented illness).

**§ 35. ADVISORY COMMITTEE**

The Advisory Committee consists of partners (course students) and new graduate(s).

**§ 36. IMPLEMENTATION**

The above named curriculum enters into force on 1 September 2009 and applies to students who have commenced the course after this date.