

EUROPEAN COUNCIL ON CHIROPRACTIC EDUCATION

COMMISSION ON ACCREDITATION

EVALUATION TEAM REPORT

**CLINICAL BIOMECHANICS – CHIROPRACTIC
INSTITUTE OF SPORTS SCIENCE AND CLINICAL BIOMECHANICS
SYDDANSK UNIVERSITET
Odense, Denmark**

04-06 February 2013

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1. EXECUTIVE SUMMARY

- 1.1 The Institute of Sports Science and Clinical Biomechanics of Syddansk Universitet (University of Southern Denmark) (henceforth referred to as the Department) is a part of the Faculty of Health Sciences at Syddansk Universitet (SDU) in Odense, Denmark.
- 1.2 The Department provides undergraduate chiropractic education and training for the BSc Clinical Biomechanics and MSc Chiropractic (Candidatus Manutigii) awards of the university. The MSc Chiropractic is the first level award that enables registration within Denmark.
- 1.3 The first students graduated from the programme in 1999. The programme was first accredited by the ECCE in 2002.
- 1.4 In February 2008, an Evaluation Team visit was undertaken by the ECCE as a part of the reaccreditation process. Following the visit, the Evaluation Team report was received by the Commission on Accreditation in May 2008. The Commission recommended that SDU Institute of Sports Science and Clinical Biomechanics be accredited for a period of five years.
- 1.5 In September 2012, SDU submitted its Self-Study Report (SSR) for the continuation of full accredited status with the ECCE. Following this, the CoA decided at its meeting in Brussels in November 2012 that the submission was satisfactory and that an Evaluation Visit could proceed.
- 1.6 A two and a half day Evaluation Visit took place on 04-06 February 2013. The site visit provided further documentary and oral evidence to the previously submitted documents. SDU was given feedback at the end of the visit and informed verbally of any strengths, weaknesses and/or concerns regarding its provision of chiropractic education and training.
- 1.7 Members of the Evaluation Team extend their thanks to SDU for the courtesy shown to them during the Evaluation Visit, and for conducting the Visit in an open and transparent manner, thereby affording the Team full access to members of staff, students and documentation.
- 1.8 This document is the Evaluation Report (henceforth referred to as the Report, or Evaluation Report) compiled by the Evaluation Team based on the evidence provided beforehand and during the on-site visit to SDU. The Report was sent in draft format to SDU for factual verification on 21 February 2013, and the final Report was submitted to CoA on 10 May 2013.
- 1.9 The Chair invited SDU to send representatives to the CoA meeting in Sitges, Spain, on 10 May 2013 where the Report will be discussed and a decision made on the re-accreditation of the university.
- 1.10 This Report addresses the compliance of SDU with each of the ECCE Standards in the provision of chiropractic education and training through the Candidatus Manutigii (MSc in Clinical Biomechanics) award. The outcomes of the Report are as follows:

Strengths:

- The excellent data support provided to the course by the Faculty.
- The excellent IT and pedagogic support that underpins the teaching and learning on the programme.
- The very thorough programme of evaluation, quality assurance and programme development administered by the faculty.
- The dedicated leadership provided by the Director of Studies raising the profile of chiropractic within the University.
- The commitment to and emphasis on high quality research continues to underpin both teaching and learning and enhances the ambitions of students.
- The links with medical sciences in both the Bachelor and Masters programmes.

Weaknesses:

- The exclusion of patients as stakeholders in the evaluation of all aspects of clinical biomechanics education.
- The reliance on the postgraduate internship to enhance practical therapeutic skills beyond the BSc/MSc framework.
- The continuing administrative burden placed on a relatively small academic staff needing to fulfil their role as researchers.
- The exposure of students to mainly chronic conditions with multiple co-morbidities in the Spine Centre may not provide a representative sample of patient encounters in a normal primary contact chiropractic clinic.

Concerns:

- There were no concerns.

2. INTRODUCTION

- 2.1 SDU delivers undergraduate chiropractic education and training in a BSc - MSc format that has been validated by the university. The university was founded in 1966 as the University of Odense but in 1998 it merged with another institution to form Syddansk Universitet which is spread over six city campuses with a total of 30 000 students. The Clinical Biomechanics - Chiropractic programme is delivered on the Odense campus and has been accredited since 1999.
- 2.2 At the last evaluation visit in 2008, the ECCE team identified five **strengths**, three **weaknesses**, and one **concern**.

Strengths:

- The leadership provided by the Dean, and the Director of Study who has raised the profile of Chiropractic within the Institute and the University, and provided a vision for the future of chiropractic in Denmark.
- The research ethos, which underpins the educational model of the Institute and results in high quality research informing the learning experience and academic aspirations of the students.
- The interdisciplinary links with other medical sciences throughout the programme that will foster integration of chiropractic within the wider health care community.
- The supportive role provided by student mentors/counsellors in the early semesters together with the support provided by student observers in the Study Board.
- The introduction of the intra-curricular activities to strengthen chiropractic identity within the Clinical Biomechanics programme.

Weaknesses:

- The patient mix in semesters 9 and 10 may not provide a representative sample of patients encountered in a primary contact chiropractic setting.
- The continuing challenge for the University to meet the Standard on Clinical Training of 400 treatment (patient) visits which is only ameliorated by the treatments that occur during the pre-registration internship.
- The Biomedical track as currently delivered, appears to be weighted in such a way that Clinical Biomechanics students have difficulty relating the material to chiropractic.

Concern:

- The extended use of part-time staff may make it difficult to ensure the quality of the student learning experience and may place an unnecessary administrative burden on the full time staff.

Post-approval note. *Full-Time staff include those who are employed by the University and who may have administrative and research responsibilities in addition to teaching.*

- 2.3 Members of the Evaluation Team were appointed by the ECCE Executive and each member received the SSR, addendum and written comments from CoA related to the documents prior to the visit. The members of the Evaluation Team were:

Dr Maria Browning BSc, DC, MSc (Chiro Paeds) Cert MEd.	Senior Clinical Tutor, AECC UK, Chair.
Dr Daniel Mühleemann, PT, DC, CCSP	Head of Clinical Education and Clinical Instructor, University of Zurich Medical Faculty.
Kristina Fagerli	Year 3 student, AECC.
David Burtenshaw MA, PgCE, FRGS, FEAC, MCIE	Evaluation Secretary ECCE, formerly Director Collaborative Programme Development, University of Portsmouth. Chair of Examiners, Welsh Joint Examinations Council, Cardiff.
Dr Philippe Moneger, BA, DC, CCSP	Private practitioner. Unable to attend for personal reasons but commented prior to the visit.

Mr David Burtenshaw acted as Secretary to the team and as a member of the team. The members of the team were allocated specific sections of the report as their areas of responsibilities before arriving at Odense.

- 2.4 The purpose of the Evaluation Visit was to verify the SSR and other evidence presented by SDU, and to evaluate the institution in terms of its compliance with the ECCE Standards in Chiropractic Education and Training (hereafter referred to as the ECCE Standards, or Standards). Based on the SSR and its supporting documents, and on oral and other documentary evidence given and consulted during the on-site visit, an Evaluation Report compiled by the Team was submitted to SDU for correction of any factual errors, and thereafter to the Commission on Accreditation for a decision on the accreditation of SDU.
- 2.5 All members of the team were presented by name beforehand to SDU and no objection to any member was received. All members of the team signed confidentiality and conflict of interest statements before the on-site visit. No conflicts of interest by any of the members were declared.
- 2.6 A draft timetable for the visit was sent to SDU on 10 December 2013, and the final schedule agreed with SDU on 15 December 2013. A copy of the further amended schedule is appended to this Report (Appendix 1).
- 2.7 Members of the team arrived in Odense on 03 February 2013. The team held a preliminary meeting on 03 February to confirm final arrangements for the visit. The on-site visit was from 04 February to 06 February 2013 (inclusive). Meetings were held with the institution over the first two days and time was allocated for the team to hold private meetings as the visit proceeded. This allowed the team to reflect on the (written and oral) evidence presented and enabled the team to request further evidence where clarification was necessary. The Report was compiled on an on-going basis during the visit and the final day (06 February) was set aside to complete the draft report and feedback orally to the institution.
- 2.8 Members of the Team were very well hosted by the Director of Studies, afforded every courtesy and had full access to documentation, much of which was in Danish. Access to staff

and students was occasionally minimal. Members of the Team and the ECCE extend their thanks and appreciation to SDU.

- 2.9 The draft report was finalised by the Chair of the team, and sent to team members for comments. Based on these, the final draft report was sent to SDU for factual verification on 21 February 2013. The response was received from SDU on 01 March 2013. The Chair and Secretary finalised the report and this was submitted to the Chair CoA on 17 March 2013. A member of the Evaluation Team presented the report to CoA members on 10 May 2013 in Sitges, Spain.
- 2.10 The report includes an Executive Summary, a description of SDU and the findings of the team regarding compliance of SDU with the ECCE Standards. The report ends with the conclusions of the team and any strengths, weaknesses and/or concerns the team wishes to draw to the attention of the CoA. The Evaluation Report was based on the ENQA Guidelines for external reviews of quality assurance agencies in the European Higher Education Area (www.enqa.eu).

3. SYDDANSK UNIVERSITET, ODENSE, CLINICAL BIOMECHANICS

- 3.1 The Clinical Biomechanics section of the Institute of Sports Science and Clinical Biomechanics within the Faculty of Health Sciences at the University of Southern Denmark (Syddansk Universitet) (henceforth referred to as the department) is within a recognised Danish University. Although Chiropractic is not the name of the programme, the programme in “clinical biomechanics – chiropractic” is the formal title of the course seeking accreditation of the ECCE. The University Prospectus in English uses the title “Clinical Biomechanics – Chiropractic”. Clinical Biomechanics is but one of a number of departments in the university. The programme has two components, the Bachelor’s degree, *Bacheloruddannelsen i Klinisk Biomekanik* and a Master’s programme, *Kandidatuddannelsen i Klinisk Biomechanik*.
- 3.2 The Advisory Board for Clinical Biomechanics is responsible to the university and to the Danish government for the development of the curriculum and the quality assurance of the programme. An Advisory Board is a Danish legal requirement whose 12-14 members are stakeholders who provide another avenue for the continued development of the programme.
- 3.3 Chiropractic education and training provided by SDU is regulated by the 2010 declaration on Higher Education “Uddannelsesbekendtgørelsen” since the profession was granted legal recognition in 1992.
- 3.4 The following section details the findings of the Evaluation Team with regard to the compliance of the college with ECCE Standards in the provision of chiropractic education and training through the awards of “Bacheloruddannelsen i Klinisk Biomekanik” (BSc Clinical Biomechanics) and “Kandidatuddannelsen i Klinisk Biomechanik” (MSc Clinical Biomechanics). The findings of the Team are based on documentation presented by SDU, Odense, prior to and during the on-site visit. In the conclusions, the abbreviation SDU is used for the Institute of Sports Science and Clinical Biomechanics of the University of Southern Denmark.
- 3.5 The colour-coded system outlined below was used by the evaluation team to indicate the level of compliance with each standard:



Green = Fully compliant/no risk (This is on track and good.)



Light Green = Substantially compliant/low risk. (Broadly on track with some areas which need to be addressed.)



Yellow = Partially compliant/medium risk. (Some significant areas, which could be detrimental if not, addressed.)



Red = does not comply/high risk. (Serious concerns threaten this area; high risk in the organisation’s overall performance.)

4. ECCE STANDARDS COMPLIANCE

4.1 AIMS AND OBJECTIVES

4.1.1 Statement of Aims and Objectives

The institution/programme must define the overall aims and objectives of the first qualification chiropractic programme and make them known to its stakeholders. The statements must describe the aims and objectives resulting in a chiropractor that is competent and safe to enter practice as a primary contact practitioner in the current healthcare environment, with the appropriate foundation for postgraduate education and training, and a commitment to, and capacity for, life-long learning.


4.1.1a Description

The aims and objectives of the programme are clearly elucidated in the documentation for the BSc and MSc. The aims and objectives have been made available to the stakeholders through the work of the Advisory Board. The department has also published the competence profile for both courses. There is considerable emphasis placed on lifelong learning throughout the programme. Students are encouraged to consider higher degrees and to participate in professional activities after graduation, a process assisted by the postgraduate internship.

4.1.1b Analysis

The documentation regarding aims and objectives reflects the elements necessary for producing a safe and competent chiropractor.

4.1.1c Conclusion

SDU fully complies with Standard 1.1. 

4.1.2 Participation in formulation of aims and objectives

The overall aims and objectives of the chiropractic programme must be defined by its principal stakeholders.

4.1.2a Description

Stakeholder participation in the aims and objectives of the programme is ensured by the work of the Advisory Board and the use of student evaluations in formulating modules. The Danish Chiropractic Association (DCA) has been a major contributor to the process. The public are represented by the Danish Government through regulation of education and the profession.

4.1.2b Analysis

Stakeholder representation in the formulation of the programme is relatively comprehensive. However, patients whether they are patients being observed, patients in the Spine Centre or patients in a private clinic attended by a student or graduate are commonly regarded as stakeholders in the development of the education and training of a competent chiropractor. In the case of SDU, this group is under-represented as stakeholders.

4.1.2c Conclusion

SDU substantially complies with Standard 1.2. 

4.1.3 Academic autonomy

The institution/programme must have sufficient autonomy to design and develop the curriculum.

4.1.3a Description

The Study Board for Clinical Biomechanics has the legal right to develop the curriculum. The current curricula were developed in 2009 (MSc) and 2010 (BSc). The Advisory Board for Clinical Biomechanics continues to be consulted during the process. Further inputs come from the annual status meeting between the department and the faculty. Autonomy is also governed by Danish Law.

4.1.3b Analysis

There is a range of inputs into curriculum design reflecting the various interest groups in the field of biomechanics education in Denmark. Some developments that might enhance the educational process such as a student (staff managed) clinic as an integral part of the programme are not possible under current legislation.

4.1.3c Conclusion

SDU fully complies with Standard 1.3.



4.1.4 Educational outcome

The institution/programme must define the competencies (exit outcomes) that students will exhibit on graduation in relation to their subsequent training and future roles in the profession and the wider healthcare system.

4.1.4a Description

The competences expected of students are present in the department's documentation. At the end of the Bachelor programme the competencies are listed under three headings: Knowledge, Skills and Competencies. A similar set of competencies is listed in the Masters profile. Emphasis is placed on knowledge and skills, which are a foundation for the development of a researcher and practitioner. At the time of the evaluation no cohort had completed the revised Bachelor and Masters programmes. The first cohort to complete will not graduate until 2015 at the earliest.

4.1.4b Analysis

The postgraduate internship is an integral part of the chiropractic education. The internship is a post qualification element in the education of a Danish chiropractor and technically not a part of the first-degree qualification that is the subject of accreditation by the ECCE. The exit outcomes define the competencies for the BSc/MSc programme.

4.1.4c Conclusion

SDU fully complies with Standard 1.4.



4.2 EDUCATIONAL PROGRAMME

4.2.1 Curriculum model and educational methods

The institution/programme must define a curriculum model and educational (teaching and learning) methods consistent with the objectives of the curriculum.

The curriculum and educational methods must ensure the students have responsibility for their learning, and prepare them for lifelong, self-directed learning throughout professional life.

4.2.1a Description

Undergraduate programmes in Denmark are prescribed by the state and the Bachelor programme has been designed to fit the model based on ECTS points. The model has three domain tracks, Biomedical (115ECTS), Academic (31ECTS) and Professional (34ECTS). Nested within this structure are 11 modules in the Biomedical track delivered by the medical faculty, 10 in the Professional (Chiropractic) track and 7 in the Academic track. The detail of the Aims, Content and Assessment are found in the course curriculum documentation (2010). The Masters programme is also documented in detail in the curriculum document (2009). The curriculum model also conforms to the University's health education principle of three track/domains - Clinical Training (45ECTS), Academic (30ECTS) and Professional (45ECTS). The programme is delivered in the University, at the University Hospital (Radiography) and at the Spine Centre. To comply with the law the content must include; General Diagnostics, Clinical Biomechanics, Diagnostic Imaging, Radiography, a period in clinic and a Masters project (called thesis in the documentation).

The teaching and learning methods have increasingly focused upon student centred or active learning and the development of generic skills. At the Masters level, interactive lectures and interactive logbooks (portfolios) together with Problem Initiated Learning (PIL) ensure that students develop their knowledge, understanding and competences.

4.2.1b Analysis

The curriculum model makes extensive use of conventional medical training in the university hospital which enables the qualified chiropractor to work within an integrated health provision environment. At the Masters level, this integration continues as students work alongside a range of health care specialists in the Spine Centre at the hospital in Middelfart. Nevertheless, the curriculum, which focuses on integrated medical provision in a chronic setting, does not provide a wide range of everyday chiropractic encounters. Experience of working in a private chiropractic clinic is by observation in the Bachelor programme. In the final year of the Masters programme, there is a 4-day interactive training programme in a private chiropractic clinic with the option of an additional 6-day elective. Extensive private clinic experience does not occur until the compulsory postgraduate/post qualification year and is not a part of the first qualification degree. A graduate is able to move out of the Danish jurisdiction and practice unsupervised. The educational model is not ideally suited for the production of chiropractors ready for independent practice in a primary care setting.

The teaching and learning methods are diverse. Life-long learning is encouraged and fostered by the requirements of the post-graduation year, which cannot be assessed as a part of this evaluation.

4.2.1c Conclusion

SDU substantially complies with Standard 2.1.



4.2.2 The Scientific Method

The institution/programme must teach the scientific method, other forms of research inquiry and evidence-based practice, including analytical and critical thinking.

The curriculum must include elements for training students in scientific thinking and research methods.

4.2.2a Description

Students are introduced to the scientific method and evidence-based practice from their first semester. The subjects taught relevant to the scientific method amount to more than 15% of the Bachelor of Science programme. Modules B1 (start of study assignment including competences in acquiring scientific information and critical thinking), B3 (Theory of Science I, Scientific Methods I), B6 (Theory of Science II), B10 (Scientific Methods II), and B11 (Bachelor Project) all contribute to the topic. Critical appraisal of knowledge from research inquiry and other sources is the focus. The Master of Science programme offers a preparatory course for the Master dissertation before the Master dissertation is written. After graduating from the Master in Clinical Chiropractic programme, the student has the option to work toward a PhD degree at any university nationally or internationally.

4.2.2b Analysis

SDU's programme has an exceptionally strong focus on and commitment to the scientific method.

4.2.2c Conclusion

SDU fully complies with Standard 2.2. 

4.2.3 Biomedical Sciences

The institution/programme must identify and include in the curriculum those contributions of the basic biomedical sciences that enable a knowledge and understanding of the basic sciences applicable to the practice of chiropractic.


4.2.3a Description

The basic biomedical sciences are taught in the biomedical track within the Bachelor of Medicine programme (BMed) that spans over the 3 years of the Bachelor programme in Clinical Biomechanics. They total approximately two thirds of the programme and add up to 115 ECTS. Students in the Clinical Biomechanics programme must submit to the same standards as their colleagues in the BMed programme. The learning objectives in the biomedical track are complemented and integrated with clinical situations relevant to chiropractic throughout the Bachelor of Science programme.

4.2.3b Analysis

SDU's programme in Clinical Biomechanics has an exceptionally strong biomedical track. The integration of the biomedical sciences with SDU's BMed programme is one of the major strengths of SDU's programme in Clinical Biomechanics. The workload may not always seem appropriate in light of the future professional competencies of the chiropractor, but this is outweighed by the acquisition of a profound medical background and the interaction with future medical colleagues.

4.2.3c Conclusion

SDU fully complies with Standard 2.3. 

4.2.4 Behavioural and Social Sciences, Ethics and Jurisprudence

The institution/programme must identify and include in the curriculum those contributions of the behavioural sciences, social sciences, ethics, scope of practice and legal requirements that enable effective communication, clinical decision-making and ethical practice.

4.2.4a Description

There are no specific courses in social sciences. However, social, psychological and behavioural aspects are integrated within the modules in the biomedical track. The biopsychosocial model is covered in two undergraduate modules and two at the Masters level. Communication skills are integrated into the professional track of both degrees.

The legal requirements for practising are introduced at the post-graduate internship level. Students will be apprised of the legal requirements for Denmark and, if they take their internship in Norway or Sweden, they will be expected to be apprised of the legal requirements by the recognised chiropractor managing their internship.

4.2.4b Analysis

The behavioural and social sciences and ethics are introduced in a relevant format within the broader medical setting of the programme. Legal requirements are introduced during the Masters programme and mostly taught in the post-graduate internship.

4.2.4c Conclusion

SDU substantially complies with Standard 2.4.



4.2.5 Clinical sciences and skills

The institution/programme must identify and include in the curriculum those contributions of the clinical sciences that ensure students have acquired sufficient clinical knowledge and skills to apply to chiropractic practice in a primary contact setting.

4.2.5a Description

A major revision in 2009 has aligned the structure of the BSc and the MSc curriculum. The specific competencies (knowledge, skills and competences) leading to clinical proficiency upon graduation are taught in both the Bachelor and Masters programmes. Clinical Biomechanics is divided into three tracks. In the Bachelor programme, the biomedical track covers basic subjects in health and social sciences and is taught alongside medical students by well-qualified medical teaching staff. These skills are described using Bloom's taxonomy of educational objectives.

The professional track is taught by chiropractic staff and solely to the clinical biomechanics students and covers clinical skills training (including acute emergency response, biomechanics, history taking, orthopaedic and neurological examination, palpation, spinal manipulative and soft tissue techniques, patient care and management, patient advice and education relating to disease prevention and health promotion), communication and ethics training. In addition, final year Master students run voluntary practical treatment technique classes in the evenings for Bachelor students. The academic track covers scientific theory, scientific method and information competence and is taught by active researchers. In the Masters programme, the clinical track covers diagnostic imaging and general diagnosis. The professional track is a continuation of the Bachelor programme and includes extremity techniques and exercise therapy in year one. Radiography is taught at the Spine Centre during the second year where students also examine, diagnose and form a plan of management for patients with spinal pain, under close supervision. There may be an opportunity for students to gain hands-on experience treating patients at the Spine Centre if manual therapy is

deemed appropriate and has not previously been received by the patient. A trial of up to four treatments is permitted before onward referral to another health care practitioner. Students also experience four to six days of supervised practice in private chiropractic clinics where they gain hands-on experience of common conditions that may present to a chiropractor. The curriculum also covers referral procedures consistent with the scope of practice of a primary health care provider and hospital rounds (in the orthopaedic and rheumatology departments) in Year 2 (internship C1-3).

4.2.5b Analysis


There is a strong emphasis on the clinical sciences in the programme. The clinical skills, competencies and attitudes which the students are exposed to at the different levels of the programme are well constructed, horizontally and vertically integrated, and comprehensive. The students were of the opinion that studying alongside medical students will increase and stimulate multidisciplinary co-work and integration in their professional career. They also greatly valued the voluntary technique evening classes.

The clinical sciences on the Bachelor and Masters programmes include case-based problem solving in addition to the taught subjects. The intention is to foster students' clinical decision-making and management skills relevant for a chiropractor and are taught by field chiropractors on the part time staff. Therefore, a thorough training in patient evaluation, diagnostic skills and report writing is assured. Furthermore, the programme stresses conditions related to non-neuromusculoskeletal conditions as these are encountered in the Spine Centre.

Although conditions commonly encountered in private chiropractic practice in Denmark are reflected appropriately in the curriculum, there is little opportunity for students to gain hands-on practical treatment skills for this group of patients until the postgraduate year.

The clinical facilities at the Spine Centre in Middelfart are a vast improvement on the previous facility at Ringe (Back Centre Funen), providing an excellent learning environment of chronic conditions for the students.

4.2.5c Conclusion

SDU substantially complies with Standard 2.5. 

4.2.6 Chiropractic

The institution/programme must foster the ability to participate in the scientific development of chiropractic.

4.2.6a Description

Students are introduced to the philosophy and history of chiropractic in the academic track in semester 4 of the Bachelor. A unit that precedes the philosophy unit introduces evidence-based practice. The published learning outcomes cover both chiropractic history and current evidence-based knowledge on chiropractic

4.2.6b Analysis

The two courses provide the grounding for the student to be able to participate in the scientific development of chiropractic through their own Masters thesis and the opportunities to study for PhDs within the Faculty of Health Studies.

4.2.6c Conclusion

SDU fully complies with Standard 2.6. 

4.2.7 Clinical training

The institution/programme must identify and include a period of supervised clinical training to ensure the clinical knowledge and skills, communication skills and ethical appreciation accrued by the student can be applied in practice, and so enable the student to assume appropriate clinical responsibility upon graduation.

Every student must have early patient contact leading to participation in patient care.

4.2.7a Description

Five mandatory and two elective clinical internships make up the clinical training at SDU's programme in Clinical Biomechanics. In the fifth semester of the Bachelor programme, students observe a practitioner in a private chiropractic clinic and see patients with various conditions of the locomotor system. They also get an insight into the professional activities and duties of a chiropractor. In the sixth semester of the Bachelor programme and the first semester of the Masters programme, students have the option of an elective internship that again takes place in a private chiropractic clinic. The entire second year of the Masters programme is devoted to the clinical training of the students. In the pre-clinic module, Clinic Internship B, students learn skills relating to patient management. This happens in the Spine Centre in Middelfart, about 30 kilometres from Odense. Students learn to take a patient's history, perform a physical examination, interpret imaging and haematological results and establish a differential diagnosis. After integration and reflection of the case, students then have to be able to translate their findings and establish an effective multidisciplinary patient management strategy. The acquisition of adequate communication skills with patients and staff and proper referral strategies are emphasised. It is expected that students can perform physical exam routines covering all organ systems and the locomotor system in depth. Students work as members of a team consisting of rheumatologists, chiropractors, physiotherapists and nurses. They manage patients with a broad variety of predominantly chronic musculoskeletal conditions under supervision. In addition, students rotate through different departments in the Spine Centre (i.e. orthopaedics, radiology) so they are exposed to a wider spectrum of conditions. The students assume the function of a team physician with all its responsibilities and duties including patient assessment and care, communication with the patient, relatives, and other health professionals and electronic data management. Internship C consists of three modules. In each module, an 'out-of-the-house' internship of one week's duration at an orthopaedic or rheumatologic department or in private practice is organized. On average, students acquire 35 new patient visits and a number of follow-up visits. There may be an opportunity for students to gain hands-on experience treating patients at the Spine Centre if manual therapy is deemed appropriate and has not previously been received by the patient. A trial of up to four treatments is permitted before onward referral to another health care practitioner.

4.2.7b Analysis

There appears to be an emphasis on preparing the students to deal with patients suffering from chronic musculoskeletal conditions and multiple co-morbidities. Encounters with patients suffering from acute musculoskeletal conditions commonly seen in chiropractic practice seem less frequent and there is less emphasis on the skills necessary to manage these patients.

There are elements of practical training that are left until the student has graduated and is on the postgraduate training programme. The purpose of the postgraduate training programme is to turn theory/skills into practice. This year is not a part of the MSc.

4.2.7c Conclusion

SDU substantially complies with Standard 2.7.



4.2.8 Curriculum Structure, Composition and Duration

The institution/programme must describe the content, duration and sequencing of courses that guide both staff and students on the learning outcomes expected at each stage of the programme, and the level of integration between the basic sciences and clinical sciences.

4.2.8a Description

The curriculum satisfies all of the Danish requirements for graduate chiropractors prior to their post-graduation internship. The curriculum structure is both horizontally and vertically integrated. The close ties to medical training within the university enhances student learning. Self-directed student learning has increased and this will be further enhanced by the application of a range of e-learning and digital learning opportunities that the faculty has either already introduced or plans to introduce in the near future. The composition of the curriculum places a strong emphasis on research outcomes and the role of research within a university system. All of the learning outcomes and competences are effectively documented in the curriculum documentation.

The Bachelor programme lasts for three years and is followed by a two-year Masters programme. Danish law requires that there is a post-graduation internship programme before a student is licensed to practice.

4.2.8b Analysis

The post-graduation internship programme is supervised by the university on behalf of the profession and the government. Some elements of the Standards such as the law and jurisprudence and clinical training in the treatment of acute cases are covered at this stage. A student, having achieved the degree, could leave the programme without having completed the post-graduation training programme and practice in another country.

4.2.8c Conclusion

SDU fully complies with Standard 2.8.



4.2.9 Programme management

A curriculum committee (or equivalent (s)) must be given the resources, responsibility, authority and capacity to plan, implement and review the curriculum to achieve the aims and objectives of the chiropractic programme.

4.2.9a Description

Two independent bodies manage SDU's programme:

1 Study Board

The Study Board for the Clinical Biomechanics programme in the Faculty of Health is the regulatory body for both the education and its content. It consists of an equal number of teachers and students with a maximum of ten members. Based on the University Act, the Board organises, realises and develops all educational and teaching activities. The Director of Studies implements and enforces its decisions.

2 Director of Studies

The Director of Studies is responsible for the delivery of the Bachelor and Masters programmes. He is responsible for the curriculum design and initiates major changes via requests to the Dean of the Faculty of Health Sciences.

4.2.9b Analysis

There seems to be adequate representation of all the stakeholders (with the exception of patients) by means of the annual meeting of the Advisory Board to ensure the achievement of the aims and objectives of the chiropractic programme.

4.2.9c Conclusion

SDU fully complies with Standard 2.9. 

4.2.10 Linkage with subsequent stages of education and training, chiropractic practice and the health care system

Operational linkage must be assured between the first qualification programme and the subsequent stage of training or practice that the student will enter after graduation.

The curriculum must reflect the environment in which graduates will be expected to work and be responsive to feedback from graduates, the profession and the community.

4.2.10a Description

The curriculum design at SDU reflects the environment in Denmark in which the graduates are expected to practice after graduation. Both the Bachelor and Masters programmes in sequence prepare the students for their final stage of training, the post-graduate internship year, where the graduates practice in a supervised clinical environment before qualifying for registration.

Changes in the undergraduate programme have necessitated a revision of the aims and objectives of the post-graduate internship to align the competence description of the post-graduate internship to the demands of the Danish qualification.

4.2.10b Analysis

Chiropractic education in Denmark is based on:

- 1 An undergraduate degree which qualifies graduates to practice under supervision and
- 2 A post-graduate internship and training, which once completed allows for registration as a chiropractor and independent practice.

The transitions appear to be smooth so that graduates can transfer from one stage to the next with minimal effort.

4.2.10c Conclusion

SDU fully complies with Standard 2.10. 

4.3 ASSESSMENT OF STUDENTS

4.3.1 Assessment methods

The chiropractic institution/programme must define and document the methods used for assessment, including the criteria for progression and appeals procedures. Assessment methods must be regularly evaluated, and new assessment methods developed as appropriate.

4.3.1a Description

Assessment must conform to Danish law on assessment marking scales, awarding decisions and the use of external examiners. The curriculum handbooks, which are available online, contain details of the assessment methods, criteria for achieving a pass and progression to the next stage, and

whether the examination is internal or external. The latter are marked by both the internal marker and an external examiner. All external examiners are subject to appointment by the Ministry of Education. An extensive range of assessment techniques are used and are constantly evaluated.

4.3.1b Analysis

All examinations in the programme, with the exception of just five, will be on line from April 2013. This development is easy to implement because the nature of the assessments used in clinical biomechanics lend themselves to on line assessment. The faculty has developed "Scribble", software that enables students to be able to draw onto their laptop screen with a special digital pen. This enables the student to create diagrams in colour. Other software enables students to place spots placed upon on -screen images so that phenomena can be located.

4.3.1c Conclusion

SDU fully complies with Standard 3.1. 

4.3.2 Relation between assessment and learning

The assessment principles, methods and practices must be appropriate to the learning outcomes and the educational aims and objectives, and promote appropriate learning practices.

4.3.2a Description

Policies regarding assessment are well defined in the Study Guide for students. Rules for appeals are also well defined and students are informed of pre-requisites that must be passed to allow the students to progress to the following year. There is extra time given to students with specific disabilities, and special examinations in cases of mitigating circumstances. Anti-plagiarism rules are made known to students.


The Department uses a wide range of assessments, related to the different subjects and outcomes assessed. A new Masters curriculum was introduced in 2009 and a new Bachelors curriculum in 2010 in order to improve the relation between assessment learning. The changes made have been approved by the Study Board for Clinical Biomechanics. The Study Board is responsible for the ongoing evaluation and quality assurance of assessment methods as stipulated by University Law. The assessment methods have evolved during the last ten years to facilitate student centred learning, active learning, competence-based learning and reflective practice. They include OSCE's, continuous assessments and portfolio-based assessments. Some exams are assessed by two independent examiners, one internal (a course teacher) and one external, appointed by the chair (foreman) of the external examiner corps. The external examiner refers to the foreman of the external examiner corps and the foreman refers to the Ministry. There are precise rules on how decisions on grades must be reached between the two parties. An appeal procedure is in place.

4.3.2b Analysis

The students are provided with the learning outcomes and the assessment programme. They may benefit from more formalised feedback to enhance their learning experience.

On the Masters programme, it can be argued that the nature of the patient mix at the Spine Centre results in a more restricted relationship between assessment and learning.

4.3.2c Conclusion

SDU fully complies with Standard 3.2. 

4.4 STUDENTS

4.4.1 Admission policies and selection

The institution/programme must have a clearly defined admission policy that is consistently applied, and that includes a clear statement on the rationale and process of selection of students.

4.4.1a Description

Currently, 65 students are admitted to Clinical Biomechanics every year, with the aim of increasing the number of students to 90 in 2013. The number of applicants to the course has been around 220 in the last two years. There is a standard requirement for 39% admission of Danish students on to the programme every year, and the remaining 61% are required to have the ability to understand both written and oral Danish, as this is the main language of teaching. The standards of entry to the Clinical Biomechanics are high. All applicants are required to sit a 2.5-hour Danish version of the Australian GAMSAT test, which tests the applicants' quantitative abilities, critical abilities, and verbal understanding. Half (33) of the 65 available spaces will be allocated to eligible applicants who score highest. The next highest scoring group of 50 eligible applicants will be invited to the admission interview. Of these 50 the top half (25) will be admitted. The interview process consists of Multiple Mini Interviews (MMI) in an OSCE format set of six content domains: basic ethics; motivation and knowledge; spatial visualisation; interpersonal skills (communication and social skills); English skills; psychomotor skills and palpation (grip strength, reaction time, learning by observation and reaction time).

The Clinical Biomechanics programme allows for the transfer of students from any other programme of higher education (chiropractic or other) into the appropriate level of the course, according to the applicant's level of relevant subjects and experience.

4.4.1b Analysis

The admissions process is thorough and of very high quality, and appears to successfully select only the most motivated students. An increased intake of applicants from 65 to 90 is currently being reviewed, and a more detailed description follows in 4.4.2a.

4.4.1c Conclusion

SDU fully complies with standard 4.1.



4.4.2 Student intake

The size of student intake must be defined and related to the capacity of the chiropractic institution/programme to provide adequate resources at all stages of the programme.

4.4.2a Description

Sixty-five students are admitted to the programme of Clinical Biomechanics every year. SDU aims to increase the intake to 90 students each year in 2013.

4.4.2b Analysis

The aim of increased intake is in the process of analysis by the unit of Educational Development and the Faculty of Health secretariat and Dean. Student capacity for the current educational and clinical facilities has to be taken into consideration when the possible increase in student intake is evaluated.

As the first three years of the course are integrated with the medical students, there has been a high dropout rate in past years, with students transferring from Clinical Biomechanics to Medicine. This has significantly reduced the year cohort transferring on to the Masters programme, thus leading to a graduating cohort of about 25 students a year. The opportunity to transfer from Clinical Biomechanics to Medicine ceased from August 2012 and this should lower the dropout rate from the programme. This change will place increased demands on the teaching resources especially at the Masters level.

4.4.2c Conclusion

SDU fully complies with Standard 4.2.



4.4.3 Student support and counselling

The institution/programme must offer appropriate student support, including induction of new students, counselling in terms of student progress and other academic matters, and personal and social needs of students.

4.4.3a Description

At departmental level, student support is offered by the University Counselling Services free of charge for the students with chaplains' services and financial advice, in addition to a Special Pedagogical Support Unit for students with physical or psychological conditions. The University provision depends on students addressing their own needs. However, there is a system in place for the staff to detect students who are falling behind with their studies early in the academic year to offer proactive assistance, and after assessment results. These students are offered additional follow-up by an assigned full-time employed staff member, or guided to the appropriate university service for help. All full time staff have set learner times, whereas part time staff are available to students during clinic hours or at the end of lectures. The department has trained a small selection of final year students to function as student tutors for practical skills evening sessions. The students feel that this is a positive addition to the practical classes being taught on the Bachelor programme. Five elected student representatives represent the student body on the Study Board and assist in making representations on some issues. The students have stated that they are very satisfied with the social activities being offered through the department and that there is a centred focus on social activities for the students of Clinical Biomechanics to encourage a sense of unity for the small cohort of Clinical Biomechanics students within a larger cohort of medical students.

4.4.3b Analysis

The student support and counselling services are well organised and supplied within the department and at University level. At-risk students are generally identified at an early stage and offered the appropriate assistance. The students feel well supported and respected by staff. There has been a positive response to the increased social focus for the students that has occurred since the last accreditation visit.

4.4.3c Conclusion

SDU fully complies with Standard 4.3.



4.4.4 Student representation

The institution/programme must support student representation and appropriate participation in the design, management and evaluation of the curriculum, and in other matters relevant to students.

4.4.4a Description

The students are fully represented on all of the relevant decision making bodies. They are represented by five student elected members on the Study Board for the Bachelor and Masters programmes. The Study Board deals with a variety of cases relevant to the students, and the students may also represent students whose case is being evaluated by the Study Board. A student may also request that their case will not be discussed with student representatives present in the room. Each year cohort within the Clinical Biomechanics programme is represented by a student elected academic representative. All the academic representatives meet with the Department once a month to deal with any concerns relevant to the students. The University also supports the students towards their involvement with the World Congress of Chiropractic Students (WCCS).

4.4.4b Analysis

Student involvement is fully supported throughout the University, where the interested students voluntarily choose to run for elections if they wish to become involved. During the development of the new curricula implemented in 2009 and 2010, the students have been consulted through their representation on the Study Board. The student representatives reported that concerns and comments have met with favourable responses and minor changes have been made to the curriculum. They have stated that they feel fully integrated into the work of the Study Board. There is student representation on all main decision making committees at the University, however these are not necessarily students on the Clinical Biomechanics programme. There is one exception to student election -where the Dean appoints the representing students upon recommendation of the Director of Studies – to the Advisory Board.

4.4.4c Conclusion

SDU fully complies with Standard 4.4.



4.5 ACADEMIC and CLINICAL FACULTY (STAFF)

4.5.1 Faculty (Staff) recruitment

The institution/programme must have a faculty recruitment policy, which outlines the type, responsibilities and balance of faculty required to deliver the curriculum adequately, including the balance between chiropractic and non-chiropractic faculty, and between full-time and part-time faculty.

4.5.1a Description

The university regards itself as a research and teaching institution. Therefore, staff have been recruited based on their research strengths and potential. The relatively small number of full-time academic and clinical staff in clinical biomechanics are able to deliver the curriculum partly because they are supported by a very strong research cohort of higher degree students. They are also able to make use of the excellent education provided by the medical staff especially in the Bachelor programme where they are 80% of the tutors, and in the Middelfart Spine Clinic where chiropractors make up 60% Of the staff. There is an induction programme for staff provided by the department.

4.5.1b Analysis

Staffing recruitment is administered by the university. The staff-student ratio cannot be calculated because of the complex teaching arrangements within the university. However, the number of staff and especially part-time clinicians is adequate for the delivery of the Bachelor and Masters programmes. Increased numbers of students on the Masters programme will place further demands on the existing staff.

4.5.1c Conclusion

SDU fully complies with Standard 5.1.



4.5.2 Faculty Promotion and Development

The institution must have a faculty policy that addresses processes for development and appraisal of academic staff, and ensures recognition of meritorious academic activities with appropriate emphasis on teaching and research.

4.5.2a Description

All staff are appraised on an annual basis by their line manager. Teaching, Research and Administration are reviewed at the appraisal with the emphasis being placed on research. Staff development is at the faculty and university levels and the majority of the provision is provided by a faculty expert team. The criteria for promotion in the university places emphasis on research. It was reported that the emphasis has shifted slightly so that excellent teaching can merit promotion.

4.5.2b Analysis

Staff indicated that the emphasis placed on research in promotion might hamper the development of teaching skills. Whereas research is a personal or team effort, teaching is mainly an individual task whose importance can be relegated so that research targets are met. Consequently, teaching commitments may change so that a research contract can be gained or met. The importance of administrative work can be undervalued. The department is also dependent on the medical staff for 80% of the teaching on the Bachelor programme and may have far less influence over the teaching/research balance of the medical staff with potential knock-on effects for the clinical biomechanics students. Pedagogic developments are promoted at a faculty level by an excellent local training and education committee team. However, chiropractic staff appear to depend on the faculty initiatives rather than develop their own teaching innovations.

Promotion in a small staff team will be slow. The criteria are known and understood but the relative youthfulness of chiropractic education means that only a few have all the necessary research qualifications to be able to apply for promotion. The potential increase in numbers on the Masters programme might call for special measures regarding promotion so that there is a responsible hierarchy of command within the department.

4.5.2c Conclusion

SDU substantially complies with Standard 5.2.



4.6 EDUCATIONAL RESOURCES

4.6.1 Physical facilities

The institution/programme must have sufficient physical facilities for the faculty, staff and the student population to ensure that the curriculum can be delivered adequately, and library facilities available to faculty, staff and students that include access to computer-based reference systems, support staff and a reference collection adequate to meet teaching and research needs.

4.6.1a Description

The Bachelor and Masters programmes are taught at three university locations plus the Spine Centre in Middelfart. The teaching facilities and the two technique rooms on the university campus are all well equipped. The conventional lecture facilities are shared by departments on the campus and all are equipped for modern teaching and learning techniques. The university campus offers all of the facilities that are commonly expected for undergraduate study including cafeterias, support services, IT and a library. Further library facilities are located at the University Hospital and the Nordic Institute of Chiropractic and Clinical Biomechanics (NIKKB).

4.6.1b Analysis

The team did not visit the radiological facilities at the University Hospital. The Institute of Sports Science and Clinical Biomechanics has been allocated a brand new building that will be used primarily for research. NIKKB are moving to this site, which will be more beneficial for the students who will not have to travel to get to the NIKKB facilities. By the time of the next accreditation, the University Hospital will have been moved into new buildings on the university campus site.

4.6.1c Conclusion

SDU fully complies with Standard 6.1.



4.6.2 Clinical training resources

The institution/programme must ensure adequate clinical experience and the necessary resources, including sufficient patients with an appropriate case-mix, and sufficient clinical training facilities including sufficient equipment and treatment rooms.

4.6.2a Description:

The clinical experience is gained in internships at:

- 1 Private chiropractic practices
- 2 Hospitals
- 3 The Spine Centre of Southern Denmark

Training resources include the facilities of the private chiropractic offices, the hospital wards and the Spine Centre respectively.

Infrastructure provided by the Spine Centre is extensive and includes among other facilities:

- 75 examination/treatment rooms fitted with all necessary equipment to perform a full examination and treatment,
- several rehabilitation and exercise gyms,
- several rooms fitted with video equipment (used by students for self-evaluation of clinical skills)

- An X-ray unit, 2 MRI scanners, 3 ultrasound scanners (one unit reserved for student training) and an electro diagnostic unit (EMG)
- a dedicated student area containing 25 work-units with PCs

The requirements and the use of facilities as well as the logistics for the internships are coordinated and adapted to current needs by the clinical lecturer and chiropractor in charge at the Spine Centre in Middelfart. He also represents the Spine Centre on the Study Board to ensure proper communication and regular quality assurance with regard to the students' internship at the Spine Centre.

4.6.2b Analysis

Training resources are a strength of SDU's programme. They are in the enviable position that they can make use of a multitude of chiropractic offices as well as hospital wards and the Spine Centre for the clinical education of their students.

4.6.2c Conclusion

SDU fully complies with Standard 6.2.



4.6.3 Information Technology

The institution/programme must have sufficient IT facilities for faculty, staff and students to ensure the curriculum can be delivered adequately, and that IT is effectively used in the curriculum.

Students must be able to use IT for self-learning, accessing information and managing patients.

4.6.3a Description

Information Technology underpins all of the work in the university, which aims to support the 2011 policy to be a student centred university. The Rector of the university and the University Board have determined that the university should be as paperless as possible in all of its activities. All students must have personal access to a computer and those who cannot afford their own computer may loan one from the university. The service from the university is comprehensive and supportive of teaching, learning, research and staff development at all the teaching locations. The E-learning platform, Blackboard, is used to support almost every aspect of teaching and learning. Video podcasts are under development. The university is in the luxurious position of being able to support extensive developmental and support mechanisms for IT which is not achievable in many countries. Assessment is increasingly online and only 5 examinations are still paper based. Patient management in the Spine Centre is on line.

4.6.3b Analysis

E-learning facilities are excellent and are in constant development within the faculty. The faculty has its own E-learning development officer who is able to assist the staff in further advances in E-learning. Innovations include aspects of clinical teaching through the use of video records of patient encounters. However, the facilities of the university do not extend to the offices of the external post-graduation internship supervisors who are responsible for an important element in the training of a chiropractor to be a safe and competent practitioner.

Assessment on line has been carefully developed and the faculty are aware of the potential pitfalls of the system. However, an unswerving dependence upon on-line assessment may restrict the potential for future assessment innovation based on personal interaction between the tutor and the student.

4.6.3c Conclusion

SDU fully complies with Standard 6.3.



4.6.4 Educational expertise

The institution must ensure the appropriate use of educational expertise in the design and development of the chiropractic curriculum and instructional (teaching and learning) and assessment methods.

4.6.4a Description

The Unit for Educational Development (UED) has been closely involved in the revisions to the Bachelors and Masters Programmes and reports to the Study Board (as described in standards 4.1.3, 4.2.9 and 4.10.1) which meets monthly and is the regulatory body of education and content. It abides by Danish University Law. Any minor changes to the curriculum and assessments are implemented by the Director of Studies via the Faculty of Health. Major changes to the curriculum are initiated by the Director of Studies who files a request to the Dean of the Faculty of Health. On approval, the UED implements the changes.

A variety of methods of teaching, learning and assessment are used for programme delivery. On the Bachelors programme students benefit from the wide range of non-chiropractor lecturers who bring their considerable expertise to bear on the programme. In addition, the use of PhD students to follow up the main lectures also brings the undergraduates in contact with research. PhD students are provided with pedagogical advice and assistance and the UED arranges regular seminars and courses for the staff to enhance their pedagogical competences.

4.6.4b Analysis

Appropriate educational expertise is available for design and development of the chiropractic curriculum and a robust management structure enables quality assurance at every level. There are some excellent teaching and learning experiences within the current programme and the teaching staff have many opportunities to enhance their pedagogical competences.

4.6.4c Conclusion

SDU fully complies with Standard 6.4.



4.6.5 Administrative and technical staff and management

The administrative and technical staff of the institution/programme must be appropriate to support the implementation of the institution's undergraduate programme and other activities, and to ensure good management and deployment of its resources.

The management must include a programme of quality assurance, and the management itself should submit itself to regular review.

4.6.5a Description

There is a very robust administrative structure with the Faculty of Health whose officers' work spans all of the eight institutes in the faculty. In particular support staff are strongly represented in the annual meeting between the Institute and the Dean. This meeting reviews progress from the previous year's plan of action and determines actions for the following year. Secretarial support is provided and the secretaries of the institutes meet four times a year with a view to improving

administrative performance. The faculty also provides “White Books”; these are statistics on student performance that enhance the ability of the department to react to issues concerning student success, progression and failure.

4.6.5b Analysis

The administrative and technical staff are of a very high calibre and provide appropriate and innovative support to the programme. All support staff are subject to annual review by their line manager and are set performance targets.

4.6.5c Conclusion

SDU fully complies with Standard 6.5.



4.7 RELATIONSHIP BETWEEN TEACHING AND RESEARCH

The chiropractic institution/programme must facilitate the relationship between teaching and research, and must describe the research facilities to support this relationship as well as the research priorities at the institution/programme.

4.7.1a Description

SDU is highly regarded in the world of research and the Clinical Biomechanics Faculty, most of whom are qualified researchers (PhD's or professors), have 50% of their contracted hours allocated for research activity. Therefore, research is actively pursued and integrated throughout both the programme with 34 ECTS in the Bachelor programme and 30 ECTS in the Master programme allocated for research. The faculty's research philosophy together with collaboration with medical experts from other institutes produces high quality, evidence-based research related to pain and disability of the musculoskeletal system. Around 20 international papers are published per year. The Clinical Biomechanics faculty achieve a good balance of teaching and research, and share their knowledge and skills with the chiropractic students. Research is supported by the excellent provision of resources and new technology. The Director of Research integrates research with the teaching programme. In addition, there are eight PhD students engaged in research and teaching. Research is largely financed by the government but private funding has increased five-fold over the past 10 years.

The study guide outlines the processes and procedures for students to complete their research. When students propose a research project, they must be aware of the ethical dimension to their work. Three staff deal with the initial approval request and if they deem that there is no intervention the project is permitted to proceed. If, however, the research is ethically sensitive, a submission is made to the regional ethics committee for the University of Southern Denmark (Den Videnskabetiske Komite for Region Syddanmark) for approval. The Bachelors project is based on reading articles and critically analysing the literature. The Masters dissertation is more practically orientated and students may choose their own project. However, most are given a project by their supervisor. Students work in pairs during the project but are assessed independently. They must pass their dissertation before they can obtain the qualification. The University also provides the opportunity for students to take one year out, usually between semesters 7 and 8, to engage in research full-time.

4.7.1b Analysis

There is a strong research department, with highly qualified teaching and research staff, which is well supported by the university. The research facilities are excellent and ample funding is available, producing high quality research. Students have sufficient supervision during their research projects.

4.7.1c Conclusion

SDU fully complies with Standard 7.1.



4.8 PROGRAMME EVALUATION

4.8.1 Mechanisms for programme evaluation

The institution/programme must establish a mechanism for programme evaluation that monitors the curriculum, quality of teaching, student progress and student outcomes, and ensures that concerns are identified and addressed.

4.8.1a Description

The Faculty of Health has developed a range of mechanisms for programme evaluation. Electronic student evaluations are used throughout the Bachelor and Masters programmes. A further evaluation is carried out for the postgraduate internship programme, an extension to the accredited programme as far as evaluation is concerned. The SSR gives prominence to the role of external examiners in programme evaluation. All evaluations are discussed at the Study Board, the annual status meeting between the faculty and the department and, in some cases, at the Advisory Board. SDU is also linked to an external quality assurance system or programme of accreditation that complies with the Standards and Guidelines for Quality Assurance in the European Higher Education Area.

4.8.1b Analysis

Programme evaluation is very thorough and because it is mainly electronic and the results can be acted upon very rapidly at a variety of levels within the university.

4.8.1c Conclusion

SDU fully complies with Standard 8.1.



4.8.2 Faculty and student feedback

Both faculty and student feedback must be systematically sought, analysed and responded to so as to develop and improve the curriculum.

4.8.2a Description

Staff involved in each module meet regularly to discuss issues and these are acted upon quickly. Evaluative feedback from students is elicited via electronic questionnaires at the end of each module and produces, on average, about 60-70% returns. The lecturer concerned evaluates the responses and reports to the Study Board. The Study Board in turn considers the summative data and may request changes to a module.

Evaluation of the clinical experience in semesters 9 and 10 takes place in accordance with university practice. Student progress in the Spine Centre is discussed at a monthly meeting of the supervisors.

4.8.2b Analysis

The Study Board manages the process of student feedback on modules and abnormal marks profiles, addressing any problems in a timely fashion. Feedback from evaluations results in action at the departmental level and actions taken are clearly conveyed to the student body. Student progress is closely monitored at regular intervals.

4.8.2c *Conclusion*

SDU fully complies with standard 8.2.



4.8.3 Student cohort performance

Student cohort performance must be analysed in relation to the curriculum and the aims and objectives of the programme.

4.8.3a *Description*

The faculty-managed database called “White Book” provides wide ranging statistical data on the students throughout their university career. It enables the department to benchmark particularly against medical students, and to identify students at risk. Student progression data enables the department to be able to enhance the progression of students towards graduation. The quality of the data made available to the department has been appreciated by the Commission on Accreditation. The annual monitoring data, which understandably is in a format based on the university’s system, does enable international comparisons to be discussed.

4.8.3b *Analysis*

The SSR stresses benchmarking against the medical programme, which has been in receipt of many student transfers in the past. Transfers to medicine are no longer permitted by new regulations. Therefore, the department might consider giving increased prominence to benchmarking against other subjects in the faculty and the university. As skilled labour migration increases, it is important that cohort data can be subject to international comparisons initially within the context of the ECCE.

4.8.3c *Conclusion*

SDU fully complies with Standard 8.3.



4.8.4 Involvement of stakeholders

Programme evaluation must involve the governance and administration of the institution, the faculty, staff and the students, and the outcomes communicated to a range of stakeholders.

4.8.4a *Description*

Being a state run university it is axiomatic that the Danish government through its legislative programme for education and its financial support for higher education is deeply involved in the evaluation of the programme on behalf of Danish society. The Danish Chiropractic Association (DCA) has a strong input into the Advisory Board. The Advisory Board is the main locale for programme evaluation by the stakeholders although it lacks much externality beyond those who teach, research, supervise and practice chiropractic. The existing stakeholders were all made aware of changes to the programme although some stakeholders were not as aware as others, especially concerning aspects of the post-graduation internship.

4.8.4b *Analysis*

The input of the Danish Chiropractic Association is within the context of the Nordic Union. The evaluation team had hoped to meet representatives of the association but none were available. At present, it is not common in Denmark for patients to be regarded as stakeholders other than as members of Danish society. There is an opportunity to involve patients or indeed ex-patients, in the evaluation of the clinical elements of the programme. Despite the post-graduation internship programme being subsequent to the first qualification, patient evaluation of the educational

elements of the programme could be utilised to improve the undergraduate experience prior to qualification.

4.8.4c Conclusion

SDU substantially complies with Standard 8.4. 

4.9 GOVERNANCE AND ADMINISTRATION

4.9.1 Governance

Governance and committee structures and functions of the chiropractic institution/programme must be defined, including their relationships within the university (as appropriate).


4.9.1a Description

The Institute of Sports Science and Clinical Biomechanics is located within the Faculty of Health, one of the five faculties of the University Of Southern Denmark. The University is governed according to Danish Law and its Board of Governors formulates the overall vision and direction for the university within the parameters set by the Ministry of Science, Technology and Innovation.

4.9.1b Analysis

The structures of the university enable the department to function effectively as a teaching and research institute. The structures are designed to enhance the role of the institute as a research-oriented department. The team learned that the university is placing more emphasis on teaching alongside research in its structures. This shift in emphasis should enable the department to evaluate and develop its teaching function especially on those areas that will enable the course itself to produce safe and competent primary care practitioners.

4.9.1c Conclusion

SDU fully complies with Standard 9.1. 

4.9.2 Academic leadership

The responsibilities of the academic head of the first qualification chiropractic programme, and of the academic management structures, must be clearly stated.

4.9.2a Description

Programme management resides under the umbrella of Syddansk Universitet's Faculty of Health Sciences. The academic leadership is provided at the level of Faculty by the Dean of Faculty and at departmental level by the Director of Studies. Beyond, there is an upward extension of the chain of academic leadership to the Deputy Vice Chancellor, then to the Vice Chancellor and ultimately the Senate and subsequently the Ministry of Education. The Director of Studies has leadership responsibility for individual subject lecturers within the Department. The Research Director provides good support for the Director of Studies and is responsible for the research effort of the staff. The leadership provided by the Research Director is excellent and it has inspired both staff and students alike. The roles and responsibilities of all parties in the chain of academic leadership are clearly defined in the university system. The Director of Studies was appointed on the recommendation of the Study Board in 2007 and since then has worked tirelessly to improve Danish chiropractic education and raise the profile of chiropractic in Denmark. The Director of Studies has revised both

the Masters programme (in 2009) and the Bachelors programme (in 2010) to enable flow from the Bachelor to Masters programme.

4.9.2b Analysis

The responsibilities of the Director of Studies and the academic management structures are robust and clear. However, the University should be made aware of its reliance on a single person in the event of unforeseen circumstances.

4.9.2c Conclusion

SDU fully complies with Standard 9.2. 

4.9.3 Educational budget and resource allocation

The institution/programme must have a clear line of responsibility and authority for the curriculum and its resourcing, including remuneration of teaching staff, in order to achieve the overall aims and objectives of the chiropractic programme.


4.9.3a Description

At SDU, as in any other large state university, budget and allocation processes are intricate and complicated. SDU has defined the process for budgeting for all faculties including the Faculty of Health Sciences. The budgeting process ensures adequate distribution of the available funds to all shareholders. The Faculty of Health Science regularly conducts status meetings for all educations offered at SDU. The purpose of these meetings is, among other things, to establish a realistic budget through agreement between the Dean and the Director of Studies. This allows adequate financing of decisions on educational strategy, goals and plans of action with financial consequences. The budget for the education in Clinical Biomechanics closely matches the needs of the curriculum as the continuous development of the curriculum necessitates a continuous process of financial adjustments. SDU is currently looking into areas of research that deserve increased funding. The Institute for Clinical Biomechanics currently has three projects that are being considered.

4.9.3b Analysis

Both the educational budget and the allocation of resources seem to be adequate and allow the Institute to fulfil its duties and responsibilities in education and research.

4.9.3c Conclusion

SDU fully complies with Standard 9.3. 

4.9.4 Interaction with professional sector

The institution/programme must have a constructive interaction with the chiropractic and chiropractic-related (health-related) sectors of society and government.

4.9.4a Description

The Danish Law on Universities requires each university education programme to appoint an Advisory Board. The board's responsibilities and objectives are described in 4.1.3, 4.8.1, 4.9, and 10. Besides the Advisory Board, an Educational Committee was set up in 2011, including, among others, representatives from SDU, the DCA, the Danish Society of Chiropractic and Clinical Biomechanics, the Nordic Institute for Chiropractic and Clinical Biomechanics and the chair of the postgraduate clinic

internship. It coordinates all activities related to chiropractic education by mutual orientation and the sharing of knowledge.

4.9.4b Analysis

Both the Advisory Board and the Educational Committee along with the fact that the educational programme and the institute are embedded within the SDU ensure constructive interaction with the chiropractic profession as well as health related sectors of society and government. The inclusion of patients or patient organisations could contribute to a more encompassing interaction between all shareholders.

4.9.4c Conclusion

SDU fully complies with Standard 9.4. 

4.10 CONTINUOUS RENEWAL AND IMPROVEMENT

The chiropractic institution/programme must have procedures for regular reviewing and updating of its structure and functions to rectify deficiencies and meet changing needs. (See 8.1 of standards)

4.10.1a Description

Renewal and improvement is managed by the Faculty of Health. The current curricula were first delivered in 2010 for the MSc and 2009 for the BSc. At the time of evaluation, no student had experienced the complete new programme. It is the role of the Study Board for Clinical Biomechanics to design and develop the curriculum within the limits set by Danish Law. Any changes must be approved by the Dean of the Faculty of Health. In making any changes the Study Board will have utilised the results of student evaluations. The Advisory Board is the link between the university (faculty and teachers) and outside society as represented by practising chiropractors, chiropractic associations, insurance companies and the region. It receives the external examiner and postgraduate internship evaluations, which will inform any recommendations to the Study Board. An Annual Status meeting between the Faculty and the department is also designed to enhance the programme. It receives reports on actions approved in the previous year and sets targets, goals and actions for the coming year(s).


The faculty support system is able to provide innovative improvements in line with university policies. An E learning consultant and the Digital Quality Advisor for example, have been able to enhance student learning and staff teaching as the university moves towards a paperless environment.

4.10.1b Analysis

In utilising the feedback from the postgraduate internship programme, the Study Board is able to enhance the undergraduate student experience. However, the sixth year is not a part of the chiropractic education in the university although it is being used to export some aspects of chiropractic education to other providers. All these enhancements are governed by the FAIR principle; *Feedback* from students, the *Activity* needing to be enhanced, *Individual* learning needs and *Relevance* to the curriculum.

Staff are being trained to make even greater use of E Learning and digital assessment of students both in formal examinations and in clinic settings.

4.10.1c Conclusion

SDU fully complies with Standard 10.1. 

5. CONCLUSIONS

5.1 Summary

In conclusion, the Evaluation Team was impressed by the overall quality of the chiropractic education and training provided by the university. The following strengths, weaknesses and concerns are highlighted:

5.2 STRENGTHS AND WEAKNESSES AND CONCERNS

For the purposes of this report, the Evaluation Team adopted the following definitions from the Standards:

- **Strengths** – Areas that meet or exceed the *Standards* and are worthy of specific recognition.
- **Weaknesses** – Areas requiring specific attention and action by an institution.
- **Concerns** – Areas of substantial weakness/concern as to jeopardise the accreditation of an institution that require specific attention and action by the institution *as a matter of urgency*.

5.2.1 Strengths:

- 5.2.1.1 The excellent data support provided to the course by the Faculty.
- 5.2.1.2 The excellent IT and pedagogic support that underpins the teaching and learning on the programme.
- 5.2.1.3 The very thorough programme of evaluation, quality assurance and programme development administered by the faculty.
- 5.2.1.4 The dedicated leadership provided by the Director of Studies raising the profile of chiropractic within the University.
- 5.2.1.5 The commitment to and emphasis on high quality research continues to underpin both teaching and learning and enhances the ambitions of students.
- 5.2.1.6 The links with medical sciences in both the Bachelor and Masters programmes.

5.2.2 Weaknesses:

- 5.2.2.1 The exclusion of patients as stakeholders in the evaluation of all aspects of clinical biomechanics education.
- 5.2.2.2 The reliance on the postgraduate internship to enhance practical therapeutic skills beyond the BSc/MSc framework.

5.2.2.3 The continuing administrative burden placed on a relatively small academic staff needing to fulfil their role as researchers.

5.2.2.4 The exposure of students to mainly chronic conditions with multiple co-morbidities in the Spine Centre may not provide a representative sample of patient encounters in a normal primary contact chiropractic clinic.

5.2.3 Concerns:

There were no concerns.

5.3 Acknowledgements

The Team wishes to extend its thanks to the university, faculty and department for the hospitality and courtesy afforded to it during the on-site visit.

APPENDIX 1 – TIMETABLE

Time	Meeting with	Personnel	Team members	2011Standards
Sunday 3 February				
21.00	Preliminary team meeting in hotel		ALL	

Monday 4 February				
09.00	Arrival	Key personnel	All	
09.00-09.15	Private meeting of the Team	None	All	
9.15-10.30	Preliminary meeting with SDU Executive to include Governance	Director of Studies, a representative of the Study Board plus Manager	All	1, 2, 3 , 5.2,6.1, 6.3. 6.5, 9.1, 9.3, 9.5
10.30-10.45	Coffee break			
10.45-11.45	Meeting with students on Bachelor of Science in Clinical Biomechanics (NB Not master's students)	4 students from each year Only 2 students were present both from year 3	All	4.1, 4.2, 4.3, 4.4, 6.1, 6.3, 8.2, 8.4
11.45-12.30	Private meeting Team to review institution's documentation.		All	
12.30-13.30	Lunch with Teaching Staff	Full time academic staff (Only Director of Studies attended)	All	
13.30-15.00	Meeting with Full Time Teaching Faculty	Teaching faculty to cover all areas of teaching (content, delivery and assessment) (excluding Director of Studies) Another Study Board representative. Director attended	All	1, 2, 3 , 5.2,6.1, 6.3. 6.5

15.00-16.30	Meeting with Part time Teaching Staff– postgraduate student teachers.	Teaching faculty to cover all areas of teaching (content, delivery and assessment) (excluding Director of Studies) Director attended	All	1, 2, 3 (with exception of 2.6), 5.2,6.1, 6.3. 6.5
16.30-17.30	Meeting with students on Master of Science in Clinical Biomechanics	6-8 students in total from Years 4 and 5. (Only 2 students attended)	MB/KF/DM	4.2, 4.3, 4.4, 8.2, 6.1, 6.3, 2.6 and 6.2
16.30-17.30	Meeting with managers of external clinical experience	2 or 3 chiropractors	DB	
17.30-18.00	Private meeting		All	

Tuesday 5 February				
09.00-13.00	Visit to Spine Centre Middelfart and meeting with Clinic teaching faculty	Key personnel including representatives of the multi-disciplinary teams	MB/KF/DM	2.5,2.6, 6.2
10.30-11.30 at (the University Hospital)	Admissions Learning Resources including IT support	Admissions Personnel including someone who administers GAMSAT Librarian and/or Learning Resources, IT personnel involved in on line developments.	DB	4.1, 4.2 6.1 and 6.3
12.30-13.30	Lunch with students	As appropriate. No students were present.	All	
14.00-15.00	Quality Assurance	Members of the Study Board (only 2 student members attended beside the Director of Studies)	All	3.1,3.2, 8.1,8.2, 8.3, 8.4, 10
15.00-16.00	Research	Key personnel	DM/MB/KF	7
15.00-16.00	Programme Management	Programme management including Director of Studies	DB	4.3, 4.4, 5.1, 5.2, 6.4, 6.5, 9.2, 9.4
16.00-17.00	Private meeting – writing up			

17.00-17.45	Subsequent stages and professional sector	DCA representative (did not attend), 3 chiropractors receiving students.	All	2.7, 9.4
17.45-18.00	Private meeting		All	

Wednesday 6 February				
09.00-12.30	Writing up		All	
12.30-13.00	Private Lunch		All	
13.00-15.00	Private meeting of the Team		All	
15.00	Feedback to institution	Key personnel as appropriate. Associate Dean, Director of Studies, Director of Research and Head of Section attended	All	