AALBORG UNIVERSITET

STUDIEORDNING FOR KANDIDATUDDANNELSEN I IDRÆTSTEKNOLOGI 2015

MASTER OF SCIENCE (MSC) IN TECHNOLOGY
AALBORG

Link to this studyline

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§ 1: PREFACE

Pursuant to Act 960 of August 14, 2014 on Universities (the University Act) with subsequent changes, the following curriculum for the Master's program in Sports Technology is stipulated. The program also follows the Framework Provisions and the Examination Policies and Procedures for the Faculties of Engineering, Science and Medicine.

§ 2: BASIS IN MINISTERIAL ORDERS

The Master's programme is organised in accordance with the Ministry of Higher Education and Science's Order no. 1328 of November 15, 2016 on Bachelor's and Master's Programmes at Universities (the Ministerial Order of the Study Programmes) and Ministerial Order no. 1062 of June 30, 2016 on University Examinations (the Examination Order). Further reference is made to Ministerial Order no. 111 of January 30, 2017 (the Admission Order) and Ministerial Order no. 114 of February 3, 2015 (the Grading Scale Order) with subsequent changes.

§ 3: CAMPUS

The programme is offered in Aalborg.

§ 4: FACULTY AFFILIATION

The Master's programme falls under The Faculty of Medicine, Aalborg University.

§ 5: STUDY BOARD AFFILIATION

The Master's programme falls under Study Board of Sports Science and Public Health

§ 6: AFFILIATION TO CORPS OF EXTERNAL EXAMINERS

The Master's programme is associated with the external examiners corps on Sport

§ 7: ADMISSION REQUIREMENTS

Admission to the Master's program in Sports Technology requires a Bachelor's degree in Sports Science from a Danish University or the like.

Students with another Bachelor's degree, upon application to the Board of Studies, will be admitted after a specific academic assessment if the applicant is deemed to have comparable educational prerequisites. The University can stipulate requirements concerning conducting additional exams prior to the start of study.

§ 8: THE PROGRAMME TITLE IN DANISH AND ENGLISH

The Master's programme entitles the graduate to the Danish designation Cand.scient.tech. i idrætsteknologi. The English designation is: Master of Science (MSc) in Technology (Sports Technology).

§ 9: PROGRAMME SPECIFICATIONS IN ECTS CREDITS

The Master's programme is a 2-year, research-based, full-time study programme. The programme is set to 120 ECTS credits.

§ 10: RULES CONCERNING CREDIT TRANSFER (MERIT), INCLUDING THE POSSIBILITY FOR CHOICE OF MODULES THAT ARE PART OF ANOTHER PROGRAMME AT A UNIVERSITY IN DENMARK OR ABROAD

The Study Board can approve successfully completed (passed) programme elements from other Master's programmes in lieu of programme elements in this programme (credit transfer). The Study Board can also approve successfully completed (passed) programme elements from another Danish programme or a programme outside of Denmark at the same level in lieu of programme elements within this curriculum. Decisions on credit transfer are made by the Study Board based on an academic assessment. See the Joint Programme Regulations for the rules on credit transfer.

§ 11: EXEMPTIONS

In exceptional circumstances, the Study Board study can grant exemption from those parts of the curriculum that are not stipulated by law or ministerial order. Exemption regarding an examination applies to the immediate examination.

§ 12: RULES FOR EXAMINATIONS

The rules for examinations are stated in the Examination Policies and Procedures - published at this website: https://www.studieservice.aau.dk/Studielegalitet/

§ 13: RULES CONCERNING WRITTEN WORK, INCLUDING THE MASTER'S THESIS

In the assessment of all written work, regardless of the language it is written in, weight is also given to the student's formulation and spelling ability, in addition to the academic content. Orthographic and grammatical correctness as well as stylistic proficiency are taken as a basis for the evaluation of language performance. Language performance must always be included as an independent dimension of the total evaluation. However, no examination can be assessed as 'Pass' on the basis of good language performance alone; similarly, an examination normally cannot be assessed as 'Fail' on the basis of poor language performance alone.

The Study Board can grant exemption from this in special cases (e.g., dyslexia or a native language other than Danish).

The Master's Thesis must include an English summary (or another foreign language: French, Spanish or German upon approval by the Study Board). If the project is written in English, the summary must be in Danish (The Study Board can grant exemption from this). The summary must be at least 1 page and not more than 2 pages (this is not included in any fixed minimum and maximum number of pages per student). The summary is included in the evaluation of the project as a whole.

§ 14: REQUIREMENTS REGARDING THE READING OF TEXTS IN A FOREIGN LANGUAGE

It is assumed that the student can read academic texts in modern Danish, Norwegian, Swedish and English and use reference works, etc., in other European languages.

§ 15: COMPETENCE PROFILE ON THE DIPLOMA

The following competence profile will appear on the diploma:

A Candidatus graduate has the following competency profile:

A Candidatus graduate has competencies that have been acquired via a course of study that has taken place in a research environment.

A Candidatus graduate is qualified for employment on the labour market based on his or her academic discipline as well as for further research (PhD programmes). A Candidatus graduate has, compared to a Bachelor, developed his or her academic knowledge and independence so as to be able to apply scientific theory and method on an independent basis within both an academic and a professional context.

§ 16: COMPETENCE PROFILE OF THE PROGRAMME

Technology has become an inherent part of sports and the democratization of sports and leisure activities has opened possibilities for the integration of technology not only for elite sportsmen but also for the population in general. Simultaneously, the acceptance of sports activities as an important factor for the general health has been fully recognized. This has made sports a significant field of interest for the industry.

In order to integrate technology in sports, basic knowledge in human biomechanics, physiology and psychology is required in combination with skills within human performance assessment, technology, product design and manufacturing.

The graduate of the Master's program

Knowledge
• Has knowledge of the following key areas within Sports Technology, based on the highest international level of research within the areas,

- Applied technology and Measurement techniques in sports
- Movement analysis
- Modelling of human function OR Digital processing of biomechanical signals
- Mechanics of materials

- Manufacturing processes
- Numerical modelling OR Embedded/mobile systems and their applications in sports

• Has knowledge of scientific communication and methods

• Has knowledge within the selected key areas of Sports Technology and is able to reflect on a scientific basis about this knowledge, and is able to identify scientific problems related to basic, experimental and clinical research within the area;

Skills
• Masters the scientific methods and tools relevant in Sports Technology, and masters general skills related to jobs within Sports Technology, either within the public sector or in the industry,

• Is able to assess and choose from the discipline's scientific theories, methods, tools and general skills, and is able, on a scientific basis, to propose new models for analysis and problem solving within Sports Technology,

• Is able to communicate research-based knowledge and is able to discuss professional and scientific problems with engineers and designers, as well as users;

Competences
• Is able to control and administrate situations that are complex, unpredictable and which require new solutions,

• Is able to independently initiate and to perform collaboration within the discipline and also interdisciplinary, and to take professional responsibility,

• Is able to independently take responsibility for his or her own professional development and specialization.

Competence profile on the diploma

The following competence profile will appear on the diploma:

A Candidatus graduate has the following competency profile:
A Candidatus graduate has competencies that have been acquired via a course of study that has taken place in a research environment.

A Candidatus graduate is qualified for employment on the labour market on the basis of his or her academic discipline as well as for further research (PhD programmes). A Candidatus graduate has, compared to a Bachelor, developed his or her academic knowledge and independence so as to be able to apply scientific theory and method on an independent basis within both an academic and a professional context.

§ 17: STRUCTURE AND CONTENTS OF THE PROGRAMME

The program is structured in modules and organized as a problem-based study. A module is a program element or a group of program elements, which aims to give students a set of professional skills within a fixed time frame specified in ECTS credits, and concluding with one or more examinations within specific exam periods. Examinations are defined in the curriculum.

The program is based on a combination of academic, problem-oriented and interdisciplinary approaches and organized based on the following work and evaluation methods that combine skills and reflection:

• Lectures

• Classroom instruction

• Project work

• Workshops

• Exercises (individually and in groups)

• Teacher feedback

• Reflection

• Portfolio work

A sports science technologist should be able to work with technology for performance assessment and should at the same time understand the technology behind the sports equipment the sportsman is using or is in contact with.

The focus in the course modules in the first semester will be on gaining knowledge and skills in assessing human performance and data analysing. The project during the first semester gives the opportunity to get in depth knowledge and skills in one of the human performance assessment methods.

The focus in the second semester relates to the equipment and technology surrounding the sportsman. The course modules in the second semester will result in a gain of knowledge and skills in assessing the characteristics of this equipment including the relationship with production in the industry.

The third semester gives the student the possibility to get experience in applying scientific methods and/or performing scientific experiments related to Sports Technology at Aalborg University or in a company or another university in Denmark or abroad. This empowers the acquired skills from the previous semesters to new applications or fields.

Finally, the Master's thesis is the last element of the scientific education, with the aim to integrate and/or deepen previously acquired skills and to display the ability to perform scientific work.

§ 18: OVERVIEW OF THE PROGRAMME

Offered as: 1-professional					
Module name	Course type	ECTS	Applied grading scale	Evaluation method	Assessment method
1 SEMESTER					
Instrumentation and Physical Performance	Project	15	7-point grading scale	Internal examination	Oral exam based on a project
Applied technology and Measurement Techniques in Sports	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Movement Analysis	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Elective courses 1 semester Choose 1 course = 5 ECTS					
2 SEMESTER					
Interplay Between Athlete and Equipment	Project	15	7-point grading scale	External examination	Oral exam based on a project
Mechanics of Materials	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Manufacturing Processes	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Elective courses 2 semester Choose 1 course = 5 ECTS					
3 SEMESTER					
Application of Scientific Methods in Sports Technology	Project	30	7-point grading scale	Internal examination	Oral exam based on a project
4 SEMESTER					
Master's Thesis	Project	30	7-point grading scale	External examination	Oral exam based on a project

Elective courses 1 semester Choose 1 course = 5 ECTS

Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method
Modelling of Human Function	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Digital Processing of Biomechanical Signals	Course	5	Passed/Not Passed	Internal examination	Written or oral exam

Elective courses 2 semester Choose 1 course = 5 ECTS					
Module name	Course type	ECTS	Applied grading scale	Evaluation Method	Assessment method
Numerical Modelling	Course	5	Passed/Not Passed	Internal examination	Written or oral exam
Embedded/mobile Systems and Their Applications in Sports	Course	5	Passed/Not Passed	Internal examination	Written or oral exam

§ 19: ADDITIONAL INFORMATION

§ 20: COMMENCEMENT AND TRANSITIONAL RULES

The curriculum is approved by the Dean of The Faculty of Medicine and enters into force as of September 1st 2015.

Students who wish to complete their studies under the previous curriculum from 2010 must conclude their education by the summer examination period 2016 at the latest, since examinations under the previous curriculum are not offered after this time.

§ 21: AMENDMENTS TO THE CURRICULUM AND REGULATIONS

Minor editorial changes have been made in connection with the digitisation of the study curriculum.