UNIVERSITY OF GOTHENBURG

DEPARTMENT OF FOOD AND NUTRITION, AND SPORT SCIENCE

IIG196 Human Movement and Biomechanics, 7.5 credits

Rörelselära och biomekanik, 7,5 högskolepoäng

First Cycle

Confirmation

This course syllabus was confirmed by Department of Food and Nutrition, and Sport Science on 2013-06-03 and was last revised on 2020-01-29 to be valid from 2020-01-29, spring semester of 2020.

Field of education: Science 100%
Department: Department of Food and Nutrition, and Sport Science

Position in the educational system

The course is part of the following programme: 1) Sport Coaching, Bachelor's Programme. The course is also a freestanding course.

The course can be part of the following programmes: 1) Health Promotion, Bachelor's Programme (S1HPM) and 2) Sports Coaching, Bachelor's Programme (S1SPC)

Main field of studies	*Specialization*
Sport Science	G1N, First cycle, has only upper-secondary level entry requirements

Entry requirements

General entrance requirements

Learning outcomes

After passing the course, students should be able to:

Knowledge and understanding

- explain human movement with biomechanical principles in relation to sport

- describe injury prevention strategies in relation to sport
- describe how movement is central to sport (running, jumping, throwing, and striking) and how human movement data can be analyzed and compiled
- describe how different biomechanical measurement methods are used and be familiar with common sources of error associated with measurements

Competence and skills

- design simple movement experiments with sport-specific relevance
- calculate data from simple movement experiments

Judgement and approach

- evaluate appropriate methodological choices based on biomechanical research questions
- analyze and discuss results from biomechanical measurements

Course content

The course covers how human movement is controlled and adjusted with a focus on the athlete. This takes place through practical and theoretical integration of a number of biomechanical, anatomical and physiological principles. Motion analysis, ground reaction force and strength measurements form key course components. Central measuring methods are motion-capture and force- and pressure distribution where the focus is to describe, explain and discuss the results.

Form of teaching

Teaching will be conducted through lectures, laborations and workshops.

Teaching will be conducted in English and Swedish.

Assessment

The course is assessed through a written examination. If students cannot complete this work, it is their responsibility to contact the course coordinator to find a suitable time to catch up on the work or to be given alternative assessment tasks. The number of examinations is limited to five.
If a student, who has failed the same examined component twice, wishes to change examiner before the next examination, a written application shall be sent to the department responsible for the course and shall be granted unless there are special

reasons to the contrary (Chapter 6, Section 22 of Higher Education Ordinance). In the event that a course has been discontinued or major changes have been made to the course, students are guaranteed at least three examination occasions (including the ordinary examination) during a period of at least one year from the last time the course was given.

Grades

The grading scale comprises: Pass with Distinction (VG), Pass (G) and Fail (U).
To receive the course grade Pass with Distinction (VG), VG (80 %) is required on the written examination.

Course evaluation

The course is evaluated in writing via the university's learning management system and the results are used to develop and plan future courses. The results of and possible changes to the course will be shared with students who participated in the evaluation and students who are starting the course. The course coordinator summarises the course evaluation information in a course report.

Additional information

The course includes elements of physical activity that may involve changing into training clothes.