DALARNA UNIVERSITY

Course Syllabus

Biomechanics (Powerlifting) 5 Credits*, First Cycle

Learning Outcomes
Upon completion of the course, students will, at a basic level, be able to:

- describe forces, levers and torque moments in a static equilibrium system
- explain the size and direction of external forces, work completed, power development and moment of inertia during physical activity
- demonstrate the ability to analyse forms of movement based on biomechanical principles.

Course Content
The course highlights the external forces that affect an athlete during physical activity. The student will gain an understanding of internal muscle power development requirements and leverage needed by the muscles to overcome, resist or slow down a given external force. Skills in calculating size and direction of external forces, completed work, power development and moment of inertia will be developed. From a biomechanical perspective, students will perform motion analyses of athletes to describe their movements during activity.

Assessment
Assignment and oral examination.

Forms of Study
Lectures and seminars.

Grades
The Swedish grades U–VG.

Number of credits:

- Assignment, examination, 5 credits

Prerequisites
General entry requirements

* 1 Credit = 1 ECTS

Other Information
The course is offered in collaboration with the Swedish Powerlifting Federation.

The course cannot be included in the same Dalarna University degree as Biomechanics (Judo) 5 credits.

Subject:
Sport and Health Science

Group of Subjects:
Sport Science

Disciplinary Domain:
Medicine, 50%
Social Science, 50%

This course can be included in the following main field(s) of study:
1. Sport and Health Science

Progression Indicator within (each) main field of study:
1. G1N

Approved:
Approved 14 February 2020
Valid from 31 August 2020

Revised:
Revised, 28 May 2020
Revision is valid from 28 May 2020