

Course Syllabus

Biomechanics (Judo) 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, completed work, 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. Students 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

Other Information

The course is offered in collaboration with the Swedish Judo Federation.

The course cannot be included in the same Dalarna University degree as Biomechanics (Powerlifting), 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