



**Karolinska
Institutet**

Course syllabus for

Sports Medicine and Sports Medicine Research Technique, 30 credits

Idrottsmedicin och idrottsvetenskaplig metodik, 30 hp

This course syllabus is valid from autumn 2014.

Please note that the course syllabus is available in the following versions:

[Autumn2010](#) , [Autumn2013](#) , [Autumn2014](#) , [Autumn2015](#)

Course code	2QA134
Course name	Sports Medicine and Sports Medicine Research Technique
Credits	30 credits
Form of Education	Higher Education, study regulation 2007
Main field of study	Not applicable
Level	Second cycle, in-depth level of the course cannot be classified
Grading scale	Pass with distinction, Pass, Fail
Department	Department of Molecular Medicine and Surgery
Decided by	Styrelsen för utbildning
Decision date	2010-05-25
Revised by	Board of Higher Education
Last revision	2014-03-03
Course syllabus valid from	Autumn 2014

Specific entry requirements

A Bachelor's degree or a professional degree of at least 120 credits is required in health care, sports and training or a Bachelor of Education in Physical Education. Or at least 240 credits from the Study Programme in Medicine. And proficiency in Swedish and English equivalent to Swedish B/Swedish 3 and English A/English 6.

Objectives

The student should have advanced knowledge and understanding on completion of the course for how medical subjects are related to physical activity and sports.

On completion of the course, the student should be able to:

1. on the basis of advanced knowledge in sports physiology, sports traumatology, sports rehabilitation, sports psychology and a sports injury epidemiology reflect and explain the relationship between sports/physical training and sports-related injuries, and between sports-related injuries and their

rehabilitation.

2. choose adequate evaluation instruments to evaluate both physical status of the uninjured athlete and different physical parameters after rehabilitation of an injured athlete before returning to sports.
3. design, carry out and document a literature study based on current scientific findings in the sports medical area.
4. identify and carry out preventive actions against sports injuries, and account for how adequate rehabilitation and evaluation after a sports injury should be conducted.

Content

The course gives a scientific insight into current research in sports medicine, including sports physiology, sports traumatology, sports rehabilitation, sports psychology and a sports injury epidemiology. The course is divided in 4 modules.

Sports Medicine, 15 hp Module 1. The following sub-parts are treated in the part:

- Specialisation in sports traumatology including strain injuries and problems
- Rehabilitation after sports-related injuries
- Sports physiology including diet and nutrition
- Risk factors of sports-related injuries and problems, injury mechanisms, and sports injury prevention

Areas of general medicine, 3 hp Module 2. The following sub-parts are treated in the part:

- Infection and sports
- Women and sports
- The special sports problems of children and youths
- Sports physiology
- Sports-related societal and behavioural science

Research methodology and statistics, 4 hp Module 3. The following sub-parts are treated in the part:

- Basic research methodology with different design of research projects
- Models for performance reports
- Documentation of research projects
- Reviewing of scientific articles
- Basic statistics
- Practical laboratory sessions with various measuring instruments used in sports medicine

Project work, 8 hp Module 4. The following sub-parts are treated in the part:

- Literature search
- Documentation of literature study
- Oral presentation of the study of literature

Teaching methods

The course sessions consist of lectures, video demonstrations and discussions of diagnostics, acute treatment and rehabilitation in different case studies, i.e. patients with typical sports-related injuries and clinical joint diagnostics. Some teaching will take place in seminars, in which the students work in groups with different problem-oriented assignments in the sports medical area. Furthermore, teaching of research methodology and statistics, and practical laboratory sessions with the use of various research equipments will take place. In addition to this, literature studies and review of scientific articles are included. All parts in the course should be dominated by a reflecting attitude to sports based on the sports positive both as negative effects on the health.

Compulsory participation: 80% attendance is required. If this is not fulfilled, individual written assignments are required. There is no possibility to re-take the course.

Examination

The course is examined in the following way:

Part 1: Written examination

Part 2: Written examination

Part 3: written and oral examination

Part 4: oral presentation and written documentation of literature study

For a Pass with distinction in the entire course, the grade Pass with distinction is required in all examination parts.

Transitional provisions

Examination will be provided during a period of two years after a close-down of the course.

Examination may take place under a previous reading list during a period of one year after the date of the renewal of the reading list.

Other directives

Language of instruction: mainly Swedish, but English-speaking guest lecturers may be involved. Part of the literature, especially the scientific papers, is in English.

Evaluation of the course will take place in connection with the course closure and be conducted in accordance with the guidelines established by the Board of Higher Education.

Literature and other teaching aids

Ekstrand, Jan; Karlsson, Jon

Fotbollsmedicin

Solna : Svenska fotbollförb., 1998 - 496 s.

ISBN:91-88474-06-2 (inb.) LIBRIS-ID:8381690

[Library search](#)

Förebygga, behandla, rehabilitera idrottsskador : en illustrerad guide

Bahr, Roald (red); Mæhlum, Sverre (red)

Stockholm : SISU idrottsböcker, 2004 - 416 s.

ISBN:91-88941-83-3 (inb.) LIBRIS-ID:9397588

[Library search](#)

Hassmén, Peter; Hassmén, Nathalie; Plate, Johan

Idrottspsykologi

Stockholm : Natur och kultur, 2003 - 398, [1] s.

ISBN:91-27-09149-X (inb.) LIBRIS-ID:9066912

[Library search](#)

Idrottsskador : frontlinjen inom behandling och rehabilitering

Karlsson, Jon; Renström, Per; Holmström, Eva; Forsberg, Artur

Stockholm : Centrum för idrottsforskning, 2007 - 336 s.

ISBN:91-87154-17-X LIBRIS-ID:10520361

[Library search](#)

Johansson, Fredrik

Fysisk träning för ungdom

Farsta : SISU idrottsböcker, 2003 - 135 s.

ISBN:91-88941-69-8 LIBRIS-ID:9122275

[Library search](#)*Kenttä, Göran; Svensson, Michael***Idrottarens återhämtningsbok : fysiologiska, psykologiska och näringsmässiga fakta för snabb och effektiv återhämtning**

Stockholm : SISU Idrottsböcker, 2008 - 376 s.

ISBN:91-88941-91-4 LIBRIS-ID:10902273

URL: <http://www.idrottsbokhandeln.se/Images/Article/Omslagsbild/Mellan/690.jpg>[Library search](#)*Michalsik, Lars; Bangsbo, Jens***Aerob och anaerob träning***Öland, Britt Mari; Gullstrand, Lennart*

Stockholm : SISU idrottsböcker, 2004 - 261 s.

ISBN:91-88941-87-6 LIBRIS-ID:9493250

[Library search](#)*Peterson, Lars; Renström, Per***Skador inom idrotten : handbok om förebyggande, behandlande och rehabiliterande åtgärder för aktiva, ledare, instruktörer, sjukgymnaster, läkare m.fl.***Tunek, Viveka; Brokop, Susanne; Roos, Ole*

3., [uppdaterade och omarb.] uppl. /b översättning av Viveka Tunek, Susanne Brokop, kapitel 21 ; [konstnärer: Lennart : Stockholm : Prisma, 2003 - x, 534 s.

ISBN:91-518-3995-4 (inb.) LIBRIS-ID:8904870

[Library search](#)*Svantesson, Ulla; Thomeé, Roland; Karlsson, Jon***Idrottarens spänstbok : spänst och elasticitet i muskler och senor**

Farsta : SISU, 2001 - 152 s.

ISBN:91-88941-02-7 LIBRIS-ID:7776774

[Library search](#)*Thomeé, Roland***Styrketräning : för idrott, motion och rehabilitering**

Stockholm : SISU idrottsböcker, 2008 - 352 s.b ill.c 27 cm

ISBN:978-91-85433-55-1 LIBRIS-ID:11224970

[Library search](#)*Thomeé, Roland; Swärd, Leif; Karlsson, Jon***Nya Motions- och idrottsskador och deras rehabilitering**

1. uppl. : Stockholm : SISU idrottsböcker, 2011 - 344 s.

ISBN:9789186323097 LIBRIS-ID:12130781

[Library search](#)**Tester och mätmetoder för idrott och hälsa***Bellardini, Helena; Henriksson, Anders; Tonkonogi, Michail; Roberts, Caroline; McAlexander, Jason M.; Flank, Håkan*

1. uppl. : Stockholm : SISU idrottsböcker, 2009 - 397 s.

ISBN:978-91-85433-13-1 LIBRIS-ID:11305284

URL: [Omslagsbild](#)[Library search](#)

Greenhalgh, Trisha

Att läsa vetenskapliga artiklar och rapporter : grunden för en evidensbaserad vård

1. uppl. : Lund : Studentlitteratur, 2012 - 309 s.

ISBN:978-91-44-07271-5 LIBRIS-ID:12543003

[Library search](#)

Hassmén, Nathalie; Hassmén, Peter

Idrottsvetenskapliga forskningsmetoder

Stockholm : SISU idrottsböcker, 2008 - 414 s.

ISBN:978-91-85433-29-2 LIBRIS-ID:10686708

URL: <http://www.idrottsbokhandeln.se/Images/Article/Omslagsbild/Mellan/674.jpg>

[Library search](#)

Patel, Runa; Davidson, Bo

Forskningsmetodikens grunder : att planera, genomföra och rapportera en undersökning

3., [uppdaterade] uppl. : Lund : Studentlitteratur, 2003 - 149 s.

ISBN:9789144022888 LIBRIS-ID:8868468

[Library search](#)