

**SYLLABUS**

# **Solar Physics 7.5 credits**

## **F7006R**

**Solens fysik**

**Course syllabus admitted: Spring 2017 Sp 3 - Present**

**DECISION DATE**  
**2016-06-15**

# Solar Physics 7.5 credits F7006R

## Solens fysik

### Second cycle, F7006R

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	G U 3 4 5	Rymd- och atmosfärsvetenskap	Space Technology

## Entry requirements

Physics 2 (F0005T), Electromagnetic fieldtheory (F0007T), Functions of Several Variables and Computer Tools (M0032M) or similar qualifications.

## Selection

The selection is based on 30-285 credits

## Examiner

Mathias Milz

## Course Aim

The aim of the course is to give a basic knowledge of solar physics and deeper knowledge in certain areas including a glimpse of current research in the field.

The students shall be able to describe the general structure and the sun and the physical principles behind this. The students should gain knowledge on the different types of activity of the sun, related time scales and connections inbetween. This is shown by the ability to describe and discuss different processes related to the activities.

The students shall be able to describe different ways to observe the sun and consider the differences for various observables

The students shall be aware of the differences between observations and facts deduced from theoretic assumptions and models.

## Contents

The Sun and its activity. The basics of solar physics. The quiet Sun, its interior and atmosphere. The active Sun, helioseismology, explosions on the Sun, active regions. The solar cycle. The hot corona and the solar wind. The heliosphere. Highlights in modern solar research.

## Realization

Each course occasion's language and form is stated and appear on the course page on Luleå University of Technology's website.

The course consists of classical lectures. In parallel the students will work on a project within the field of Solar physics. Depending on the circumstances, a different realization of the course can be required. Guest teachers from research groups.

## Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.

Written or oral exam, approved report and presentation of the project. In order to pass the course it is required that all examinations and obligatory tasks are completely satisfactory.

The final grade given for the course reflects the results obtained in the various components of the course. There can be alternative examination method.

## Overlap

The course F7006R is equal to RYM025

## Literature. Valid from Autumn 2011 Sp 2

Michael Stix,  
The Sun  
2nd Edition,  
ISBN 978-3-540-207410-2

## Course offered by

Department of Computer Science, Electrical and Space Engineering

## Items/credits

Number	Type	Credits	Grade
0005	Project work	3	U G#
0006	Written or oral exam	4.5	G U 3 4 5

## Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

## Last revised

by Jonny Johansson, HUL SRT 2016-06-15

## Syllabus established

by Dept of Space Science 2007-02-28