Physics in Lund

MATHIEU GISSELBRECHT | FACULTY OF SCIENCE | LUND UNIVERSITY
Overview of the program structure

Bachelor
- 3 years

Master
- 2 years

Magister
- 1 year
General overview of the Bachelor program

- Basic courses, 120 hp
- Optional courses, 45 hp
- Bachelor diploma work, 15 hp
Option 1
“A flavor of physics...”

- Basic Quantum Mechanics FYSB11
  - Fall Period 2
  - Spring Period 4

- Classical Mechanics and Special Relativity FYTB14
  - Spring Period 3
  (follow up with FYTN09 advanced course)
Option 2

“Foundation of physics...”

Pink color denote courses that are given every semester.
Without modern Physics, this would be your laptop today...
**Option 3**

“A physics degree…”

Pink Color denote courses that are given every semester.
Our Bachelor programs in Physics

- Theoretical Physics
- Astrophysics / Astronomy
- Physics
- Chemistry / Physics
- Meteorology / Biogeophysics
- Sjukhusfysik - SWE
- Ämneslärare - SWE

http://utbildning.fysik.lu.se
http://edu.physics.lu.se
Master programs in Physics, 120 hp

Masters programme in Physics

FYSC01 – Physics 3 – Modern Physics – 30 hp
FYSC11 - Atomic and molecular physics - 7.5 hp
FYSC12 - Nuclear Physics and Reactors - 7.5 hp
FYSC13 - Solid State Physics - 7.5 hp
FYSC14 - Particle Physics, Cosmology, Accelerators, or
FYTB13 - Electromagnetic Field Theory - 7.5 hp

FYSM01 - Physics 4 - Intro. to advanced Physics - 30 hp
FYSN11 - Physics experiments in Research and Society 7.5 hp
FYSN13 - Electromagnetism - 7.5 hp
FYSN14 - Lasers - 7.5 hp
FYSN15 - Experimental tools - 7.5 hp
FYSN17 - Quantum mechanics - 7.5 hp
FYTN02 - Statistical Mechanics - 7.5 hp
FYTN03 - Computational Physics - 7.5 hp

Optional courses - 30 hp
Possible to start 30 hp Master’s degree project halftime
Continue 60 hp Master’s degree project halftime

Master’s degree project fulltime - 30 hp
Continue 30 hp Master’s degree project halftime
Continue 60 hp Master’s degree project halftime

60 hp or 30 hp master thesis work
30 hp optional courses
Master programs in Physics, 120 hp

- Physics - general
- Nanoscience
- Particle Physics
- Biological Physics
- Material Science
- Photonics
- Theoretical Physics
- Astrophysics

LU also have: “Synchrotron radiation based science” and “Organizing molecular matter” and other programs
What should I apply to?!

• Physics 1 → Maths 1
• Maths 1 → Physics 1

• Maths 1 + Physics 1 → Maths 2 // Physics 2

• Maths 1 + Physics 1 + Maths 2 // Physics 2 → Optional courses in Physics 3

• Physics 3: Atoms and molecules, Solid States, Particle and Nuclear Physics

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course code</th>
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<tbody>
<tr>
<td>Physics 1</td>
<td>FYSA01 (30hp)</td>
</tr>
<tr>
<td>Maths 1</td>
<td>MATA21 (15 hp), MATA22 (7.5hp), NUMA01 (7.5hp)</td>
</tr>
<tr>
<td>Maths 2 // Physics 2</td>
<td>MATB21 (7.5hp), MATB22 (7.5hp) // FYSB11 (7.5hp), FYSB12 (7.5hp)</td>
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<tr>
<td>Physics 3</td>
<td>FYSCx (x=11-14) + FYTB13 (7.5hp each)</td>
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How to find courses?!
Basic Level

Compulsory introduction meetings
A list of all the compulsory introduction meetings is found here.

General information
To the left you find a list of all the basic courses given at the department of physics. If you are looking for a specific course elements or subclass this is found under the course packages FYSA01, FYSA02 and FYS201.

These are the basic level courses and links to the course homepages. Courses with names in English are given in English.

Course webpages on Live@Lund
Contact
List of teachers for the basic level courses
Schedule
Find out more about course schedules in TimeEdit

General and Theoretical Physics

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Credits</th>
<th>Study Period</th>
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<tbody>
<tr>
<td>FYSA01</td>
<td>Physics 1, General Physics</td>
<td>30</td>
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<tr>
<td>FYSA02</td>
<td>Fysik 1, Almän Fysik</td>
<td>30</td>
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<tr>
<td>FYSA15</td>
<td>Målstyrka</td>
<td>15</td>
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<tr>
<td>FYSB11</td>
<td>Basic Quantum Mechanics</td>
<td>7.5</td>
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<tr>
<td>FYSB12</td>
<td>Basic Statistical Mechanics and Quantum Statistics</td>
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<tr>
<td>FYSB96</td>
<td>Applied Work</td>
<td>15</td>
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<tr>
<td>FYS201</td>
<td>Physics 3, Modern Physics</td>
<td>30</td>
<td></td>
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<tr>
<td>FYS211</td>
<td>Atomic and Molecular Physics</td>
<td>7.5</td>
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<tr>
<td>FYS212</td>
<td>Nuclear Physics and Reactors</td>
<td>7.5</td>
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<tr>
<td>FYS213</td>
<td>Solid State Physica</td>
<td>7.5</td>
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<tr>
<td>FYS214</td>
<td>Particle Physics, Cosmology and Acc</td>
<td>7.5</td>
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<tr>
<td>FYS211</td>
<td>Fundamental Combustion</td>
<td>7.5</td>
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<tr>
<td>FYS213</td>
<td>Process- and Component Technology</td>
<td>7.5</td>
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<tr>
<td>FYS221</td>
<td>Materials Analyses at the nanoscale</td>
<td>7.5</td>
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<tr>
<td>MXXB01</td>
<td>Introduction to Programming and Computing for Scientists</td>
<td>7.5</td>
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Study advisors / Coordinators

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  – Ämneslärare