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Information Meeting – Course Applications for Spring 2026

3 OCTOBER 2025

Agenda

- General Information
  - Application Process, Programmes and Courses
  - Elective Courses
  - Special Studies LTH/ Exchange Studies
- Courses in Mathematics
- Courses in Mathematical Statistics
- Courses in Numerical Analysis
- Courses in Physics

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Admission Round for Courses – Spring 2026

- Application round is open **15 September – 15 October** on antagning.se

- Programme students
  - Apply primarily within the programme! Some courses are only available within the programme. Programme students usually have priority.
  - One can only be registered to the max of credits comprised within the programme!
  - Check the prerequisites that are stated in the course syllabi.

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  - One can only be registered to the max of credits comprised within the programme!
  - Check the prerequisites that are stated in the course syllabi.

- Stand-alone courses
  - Are available at other departments, no study place guarantee.
  - For courses at LTH not available on antagning.se, apply for special studies at LTH!

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Bachelor´s Programme in Mathematics

- 3 years, 180 higher education credits
- 3 main disciplines: Mathematics, Mathematical Statistics, Numerical Analysis

- Structure:
  - compulsory courses – 75 credits
  - alternative-compulsory courses, 30 credits in mathematics, statistics, numerical analysis - chosen from a pre-defined list
  - elective courses, 60 credits – at least 30 credits outside the mathematics
  - Bachelor's Degree Project, 15 credits – MATK11, MASK11, NUMK11

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Bachelor´s Programme in Mathematics

COMPULSORY COURSES – for students admitted before 2024

- First semester
  - MATA21 Analysis in One Variable, 15 credits
  - MATA22 Linear Algebra 1, 7.5 credits
  - NUMA01 Computational Programming with Pyhon, 7.5 credits
- Second semester
  - MATB21 Analysis in Several Variables 1, 7.5 credits – half pace, first half
  - MATB22 Linear Algebra 2, 7.5 credits – half pace, first half
  - MATB23 Analysis in Several Variables 2, 7.5 credits – half pace, second half
  - MATA23 Foundations of Algebra, 7.5 credits - half pace, second half
- Third semester
  - MASA02 Mathematical Statistics, Basic course, 15 credits

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Bachelor´s Programme in Mathematics

COMPULSORY COURSES – for students admitted 2024, 2025

- First semester
  - **MATA31 Analysis in One Variable, 15 credits**
  - **MATA32 Algebra and Vector Geometry, 7.5 credits**
  - NUMA01 Computational Programming with Pyhon, 7.5 credits
- Second semester
  - MATB21 Analysis in Several Variables 1, 7.5 credits – half pace, first half
  - **MATB32 Linear Algebra, 7.5 credits – half pace, first half**
  - MATB23 Analysis in Several Variables 2, 7.5 credits – half pace, second half
  - **MATB33 Introduction to Higher Analysis, 7.5 credits - half pace, second half**
- Third semester
  - **MASA03 Mathematical Statistics, Basic course, 15 credits**

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Bachelor´s Programme in Mathematics

ALTERNATIVE-COMPULSORY COURSES

- Mathematics
  - MATB34 Linear Analysis, 7.5 credits
  - MATB35 Discrete Mathematics, 7.5 credits
  - MATC21 Complex Analysis 1, 15 credits
  - MATC22 Ordinary Differential Equations 1, 7.5 credits
  - MATC31 Algebraic Structures, 7.5 credits
  - MATC35 Number Theory, 7.5 credits

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Bachelor´s Programme in Mathematics

ALTERNATIVE-COMPULSORY COURSES

- Mathematics – given in Spring 2026
  - MATB34 Linear Analysis, 7.5 credits
  - MATB35 Discrete Mathematics, 7.5 credits
  - MATC21 Complex Analysis 1, 15 credits
  - MATC22 Ordinary Differential Equations 1, 7.5 credits
  - MATC31 Algebraic Structures, 7.5 credits
  - MATC35 Number Theory, 7.5 credits

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Bachelor´s Programme in Mathematics

ALTERNATIVE-COMPULSORY COURSES

- Mathematical Statistics
  - MASC01 Probability Theory, 7.5 credits
  - MASC12 Inference Theory, 7.5 credits
  - MASC13 Markov Processes, 7.5 credits
  - MASC14 Stationary Stochastic Processes, 7.5 credits
  - MASC15 Design of Experiments, 7.5 credits

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Bachelor´s Programme in Mathematics

ALTERNATIVE-COMPULSORY COURSES

- Mathematical Statistics – given in Spring 2026
  - MASC01 Probability Theory, 7.5 credits, half pace, first half
  - MASC12 Inference Theory, 7.5 credits, half pace, first half
  - MASC13 Markov Processes, 7.5 credits
  - MASC14 Stationary Stochastic Processes, 7.5 credits
  - MASC05 Design of Experiments, 7.5 credits, half pace, second half

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ALTERNATIVE-COMPULSORY COURSES

- Numerical Analysis
  - NUMA41 Basic Course in Numerical Analysis, 7.5 credits
  - NUMB11 Numerical Linear Algebra, 7.5 credits

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Bachelor´s Programme in Mathematics

ALTERNATIVE-COMPULSORY COURSES

- Numerical Analysis
  - NUMA41 Basic Course in Numerical Analysis, 7.5 credits
  - NUMB11 Numerical Linear Algebra, 7.5 credits

- None of these courses are given next spring.

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Bachelor´s Programme in Mathematics

ELECTIVE COURSES – 60 CREDITS

- 30 credits must be outside the mathematical disciplines
- More courses in mathematics, statistics and numerical analysis are available
- See complete list of courses on
  - https://www.maths.lu.se/english/education/bachelors-programme/courses/
- See recommended study path on

  http://www.maths.lu.se/english/education/mathematics-bachelors-programme/programme-structure/recommended-study-path/

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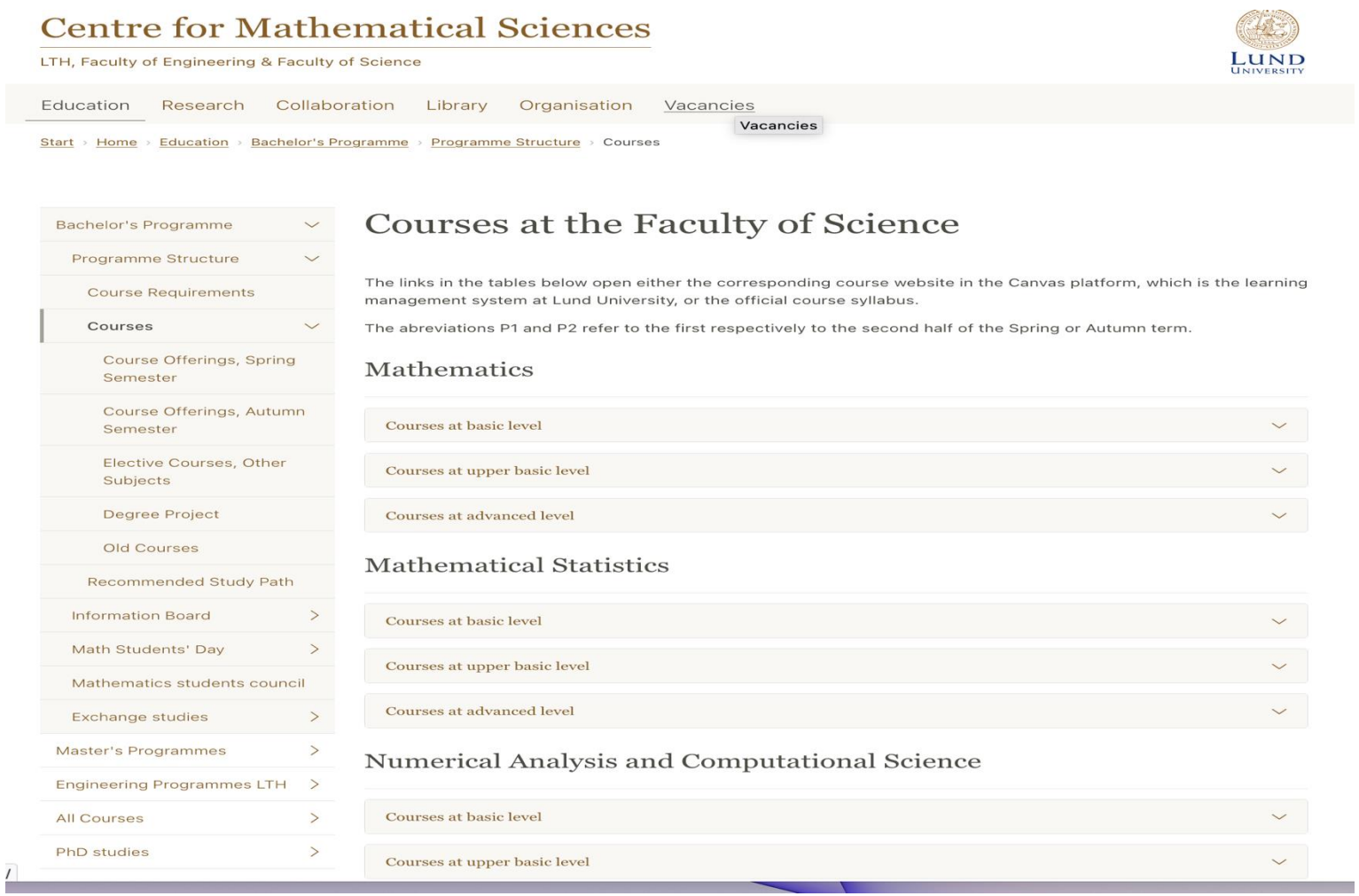
Complete list of courses



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Recommended Study Path

Education | Research | Collaboration | Library | Organisation | Vacancies

- Bachelor's Programme
  - Information Board
  - Programme Structure
    - **Recommended Study Path**
  - Courses
  - Math Students' Day
  - Mathematics students council
  - Exchange studies
- Master's Programmes
- Engineering Programmes LTH
- All Courses
- PhD studies

Recommended Study Paths

Students admitted to the Bachelor's Programme in Mathematics from 2024 are recommended to study according to the study paths below.

Year 1 - compulsory courses

Year 2 - alternative-compulsory and optional courses

The last compulsory course in the program is MASA03 Mathematical Statistics, Basic Course, 15 credits. The course is given at half-pace each autumn semester and can be read in parallel with a couple of other alternative compulsory courses within the programme. After the compulsory courses have been completed, a number of study paths are opened within the mathematical disciplines. Courses in pure and applied mathematics, mathematical statistics and numerical analysis are available.

According to the course requirements for a Bachelor's degree, students should read at least 30 credits additional (alternative compulsory) courses within the mathematical disciplines. Additionally they should read at least 30 credits, and at most 60 credits, optional courses in other subjects.

The list of alternative compulsory courses is specified within the course requirements for a Bachelor's degree in mathematics. The courses offered in this category comprise more than 30 credits, so students have the opportunity to either focus on a certain area or broaden their knowledge in the mathematical disciplines.

We strongly advise students to read at least one course in mathematical statistics and one course in numerical analysis before focusing on one particular discipline. We also recommend that students read more courses than the minimum requirement of 30 credits in the mathematical disciplines.

Autumn semester

The following compulsory and alternative-compulsory courses are given in the autumn semester.

Course	Study pace / Semester period
MASA03 Mathematical Statistics, Basic Course, 15 cr	50%, whole semester
MATB34 Linear Analysis, 7.5 cr	50%, first half (given every semester)
MATB35 Discrete Mathematics, 7.5 cr	50%, second half

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Bachelor´s Programme in Mathematics

ELECTIVE COURSES

- Physics – see www.fysik.lu.se/english/education

  - Physics 1 (given in Swedish every Autumn, and English every Spring)
    - FYSA22 Introduction to University Physics, with Mechanics, 7.5 cr
    - FYSA23 Introduction to University Physics, with Electricity, 7.5 cr
    - FYSA13 Introduction to University Physics, with Optics, Waves and Quantum Physics, 7.5 cr.
    - FYSA14 Introduction to University Physics, with Thermodynamics, Climate and Experimental Methodology, 7.5 credits

  - Physics 2:
    - Basic Quantum Mechanics, Spring second half
    - Classical Mechanics and Special Relativity, Spring first half
    - More information to follow

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Bachelor´s Programme in Mathematics

ELECTIVE COURSES

- Economics – see www.nek.lu.se/en
  - In Swedish
    - NEKA12 – National Economy, Basic Course, 30 credits, consisting of several courses that can be taken separately.
      - Microeconomic Theory with Applications, 11 credits
      - Macroeconomic Theory and Economic Policy, 9 credits
      - International Economics, 5 credits
      - Financial Economics, 5 credits
  - In English
    - Bachelor´s Programme in International Business
    - Bachelor´s Programme in Economy and Society

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Bachelor´s Programme in Mathematics

ELECTIVE COURSES

- Computer Science – LTH
  - » EDAA01, Programming continuation course 7.5 credits, in Swedish, Spring, first half
  - » EDAF05, Algorithms, Datastructures and Complexity, in Swedish, 5 credits, Spring second half
  - » EDAF50 C++ Programming, in Swedish, 7.5 credits, Spring, first half
  - » EDAN40 Function Programming, 7.5 credits, in English, Spring, second half
  - » EDAN75 Optimizing Compilers, 7.5 credits, in Swedish, Spring, first half
  - » EDAP01 Artificial Intelligence, 7.5 credits, in English, Spring, first half

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Bachelor´s Programme in Mathematics

ELECTIVE COURSES

- Swedish – see https://www.sol.lu.se/en/education/courses/sfs
  - SVEH11 Swedish as a Foreign Language: Beginner's course 1, 7.5 credits, Spring, first half
  - SVEH12 Swedish as a Foreign Language: Beginner's course 2, 7.5 credits, Spring, second half
  - SVEH13 Swedish as a Foreign Language: Beginner's course 3, 7.5 credits, Spring, first half
  - SVEH14 Swedish as a Foreign Language: Beginner's course 4, 7.5 credits, Spring, second half

➢ Given both in spring and autumn

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Bachelor´s Programme in Mathematics

ELECTIVE COURSES

- Special studies LTH – see http://www.student.lth.se/studieinformation/specialstudier/
  - Up to 30 credits, online application
  - You need a letter of attestation from programme coordinator stating that the courses can be included in your programme

- Exchange studies– see https://www.science.lu.se/education/international-opportunities/outgoing-exchange
  - One or two semesters at one of our partner universities
  - You can apply for exchange studies in mathematics (department agreements), science (faculty agreements) or other subject areas (university agreements).

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Bachelor´s Programme in Mathematics

DEGREE PROJECT– 15 CREDITS

- Can be done in
  - Mathematics – course code MATK11 (requires 90 credits pure mathematics)
  - Mathematical Statistics - course code MASK11
  - Numerical Analysis – course code NUMK11

- These are only available within the programme! Before you apply contact
  - Anna-Maria Persson for MATK11
  - Magnus Wiktorsson for MASK11
  - Mengwu Guo for NUMK11

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Bachelor´s Programme in Mathematics

For third year students:

- Applications to Master programmes in Sweden opens on **16 October** on **universityadmissions.se**
- Master Programmes given at MC:
  - Master Programme in Mathematics, two specialisations: Mathematics and Numerical Analysis
  - Master Programme in Mathematical Statistics
  - Master Programme in Computational Science, four specialisations: Scientific Computing, Physics, Geoscience, Live Sciences

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Master's Programme in Mathematics

- 2 years, 120 higher education credits, starting only in an autumn semester

- Two specialisations: Mathematics and Numerical Analysis

- Structure – Mathematics specialisation
  - **Alternative-compulsory** courses at advanced level in mathematics, 45 credits, chosen from a pre-defined list
  - **Elective courses**, 45 credits, including additional 15 credits in mathematics, statistics and numerical analysis and at most 30 credits at basic level
  - **Degree project** – Master's thesis, 30 credits – MATM03

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Master's Programme in Mathematics

- 2 years, 120 higher education credits, starting only in an autumn semester

- Two specialisations: Mathematics and Numerical Analysis

- Structure – Numerical Analysis specialisation
  - **Compulsory courses,** 15 credits**:** NUMN27, NUMN32
  - **Alternative-compulsory** courses at advanced level in mathematics and numerical analysis, 30 credits, chosen from a pre-defined list,
  - **Elective courses**, 45 credits, including additional 15 credits in mathematics, statistics and numerical analysis and at most 30 credits at basic level
  - **Degree project** – Master's thesis, 30 credits – NUMM03

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Master's Programme in Mathematics

COURSE SELECTION

- First semester: courses are selected at the introductory meeting
- Upcoming semesters: you apply for the courses within your programme on antagning.se, deadline 15 October for courses in Spring 2025
- Follow your specialisation, check prerequisites, consult the student counsellors
- Practical information: http://www.maths.lu.se/english/education/mathematics-masters-programme/

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Courses in Mathematics, Spring 2026

UPPER BASIC LEVEL

- MATB21 Analysis in Several Variables 1, 7.5 cr – 50 % pace, first half
- MATB32 Linear Algebra 2, 7.5 cr – 50 % pace, first half
- MATB23 Analysis in Several Variables 2, 7.5 cr – 50 % pace, second half
- MATB33 Introduction to Higher Analysis, 7.5 cr – 50 % pace, second half

- MATB34 Linear Analysis, 7.5 cr – 50 % pace, first half
- MATC31 Algebraic Structures, 7.5 cr – 50 % pace, second half
- MATC25 Calculus of Variations, 7.5 cr – 25 % pace, whole semester

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Courses in Mathematics, Spring 2026

ADVANCED LEVEL

- MATM32 Complex Analysis 2, 7.5 cr – 50 % pace, first half
- MATM36 Topology, 7.5 cr – 50 % pace, first half
- MATM38 Fourier Analysis, 7.5 cr –50 % pace, second half
- MATM39 Integration Theory, 7.5 cr – 50 % pace, first half
- MATM42 Ordinary Differential Equations 2, 7.5 cr – 50 % pace, first half
- MATM43 Specialised Course in Differential Geometry, 7.5 cr – 25 % pace, whole semester
- MATM44 Introduction to Algebraic Topology, 7.5 cr – 25 % pace, whole semester
- MATM46 Representation Theory, 7.5 cr – 50 % pace, second half
- MATP36 Partial Differential Equations , 7.5 cr – 50 % , second half
- MATP39 Specialised Course in Integration Theory, 7.5 cr - 50 % pace, second half

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Courses in Numerical Analysis, Spring 2026

ADVANCED LEVEL

- NUMN26 Simulation Tools, 7.5 cr – 50 % pace, first half
- NUMN28 Numerical Simulations of Flow Problems, 7.5 cr – 50 % pace, second half
- NUMN33 Numerical Methods for Partial Differential Equations, 7.5 cr – 50 % pace, first half
- BERN07 Uncertainty Quantification and Data-driven Modelling, 7.5 cr – 50 % pace, second half

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Courses in Mathematical Statistics, Spring 2026

UPPER BASIC LEVEL

- MASC01 Probability Theory, 7.5 cr – 50% pace, first half
- MASC06 Data Analysis, Statistical Learning and Visualization with Project, 7.5 cr – 50%, first half
- MASC12 Inference Theory, 7.5 cr – 50% pace, first half
- MASC15 Design of Experiments, 7.5 cr – 50% pace, second half

ADVANCED LEVEL

- MASM11 Monte Carlo Based Statistical Methods, 7.5 cr – 50% pace, first half
- MASM15 Statistical Modeling of Extreme Values, 7.5 cr – 50% pace, second half
- MASM22 Linear and Logistic Regression, 7.5 cr – 50% pace, second half
- MASM26 Stationary and Non-stationary Spectral Analysis, 7.5 cr – 50% pace, first half
- MASM27 Non-parametric Inference, 7.5 cr – 50% pace, first half

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