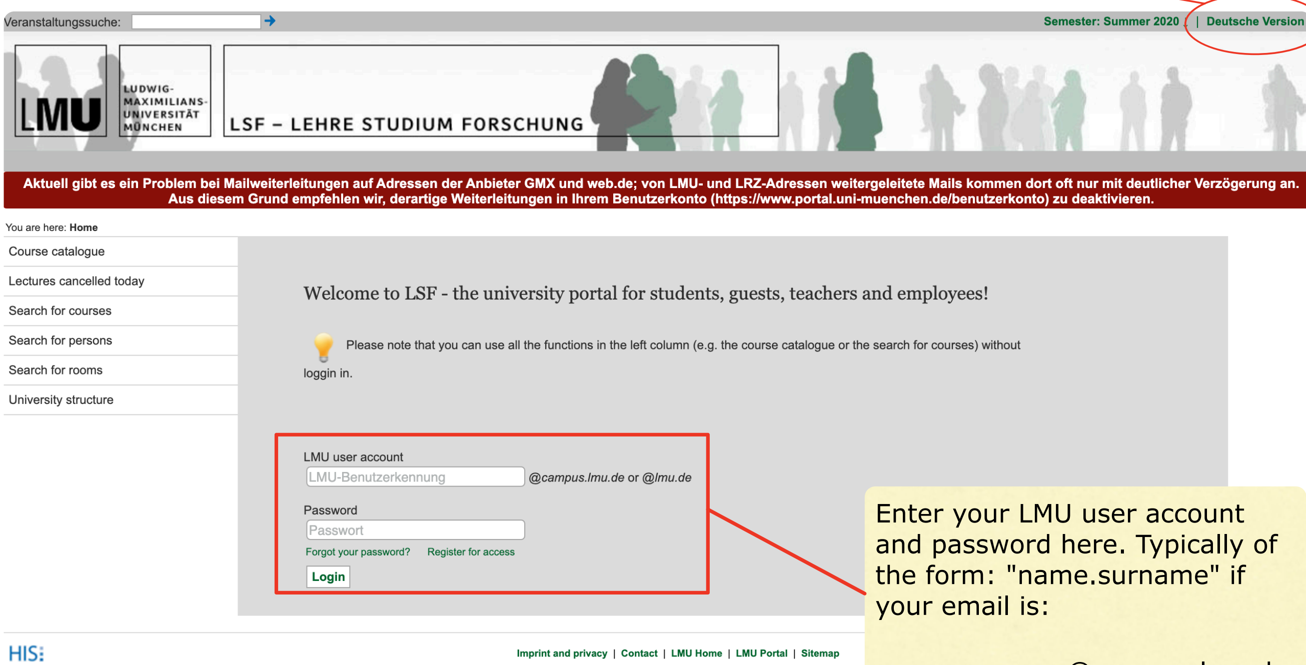
Access to course pages and online material

For more information see the following pages of the Workgroup Financial and Insurance Mathematics:

- Q&A pages of the student advisory
- Teaching pages
- Study program pages

Access to the central course catalogue

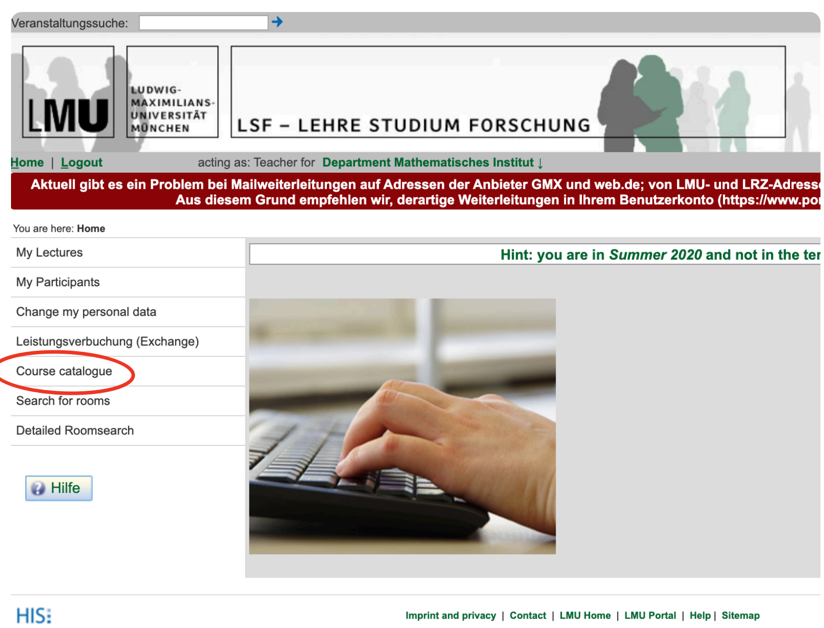
In case, Switch to English by clicking on English version on the up right-hand side.



Enter your LMU user account and password here. Typically of the form: "name.surname" if your email is:

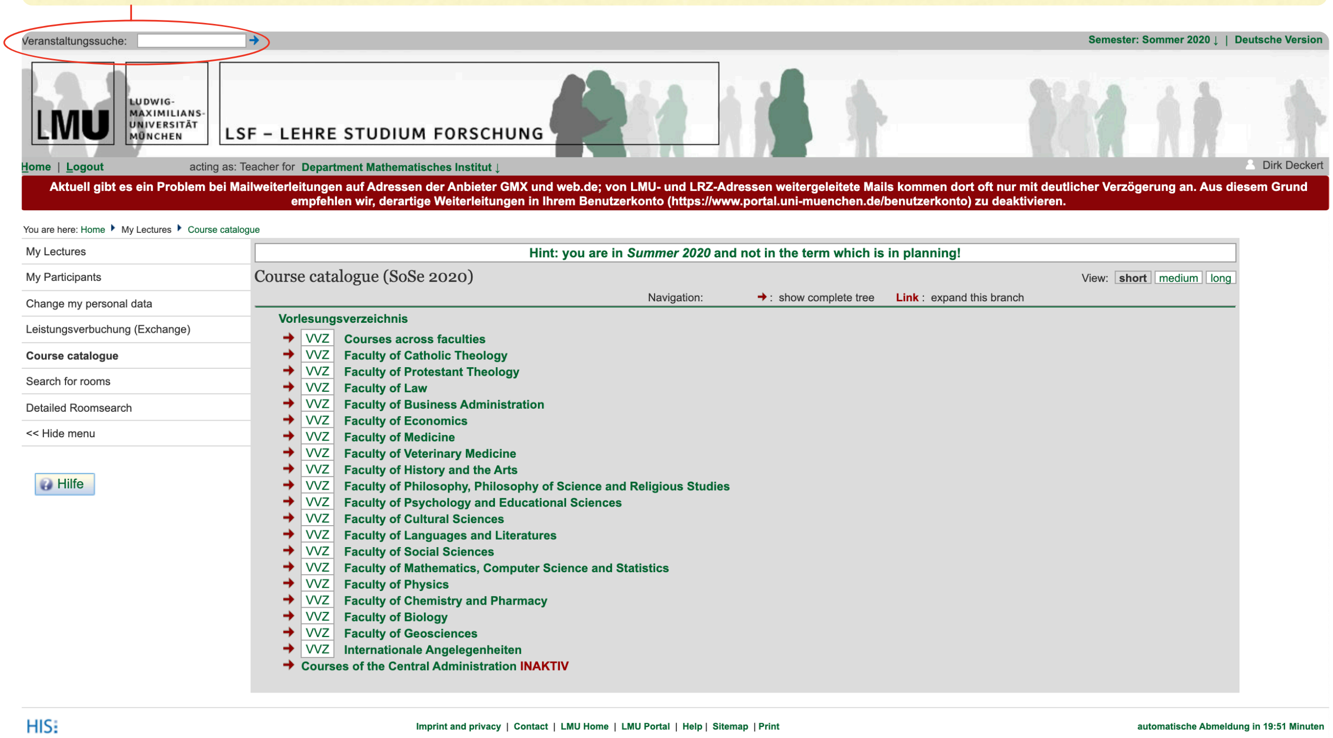
name.surname@campus.lmu.de

Course catalogue provides access to all course at the LMU.

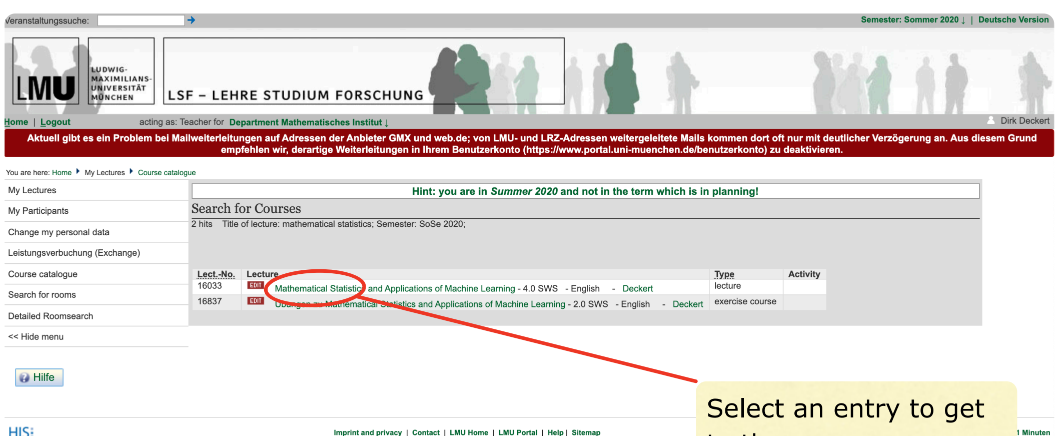


Searching the course catalogue

Search field: Enter title or part of it here. E.g. "mathematical statistics"...

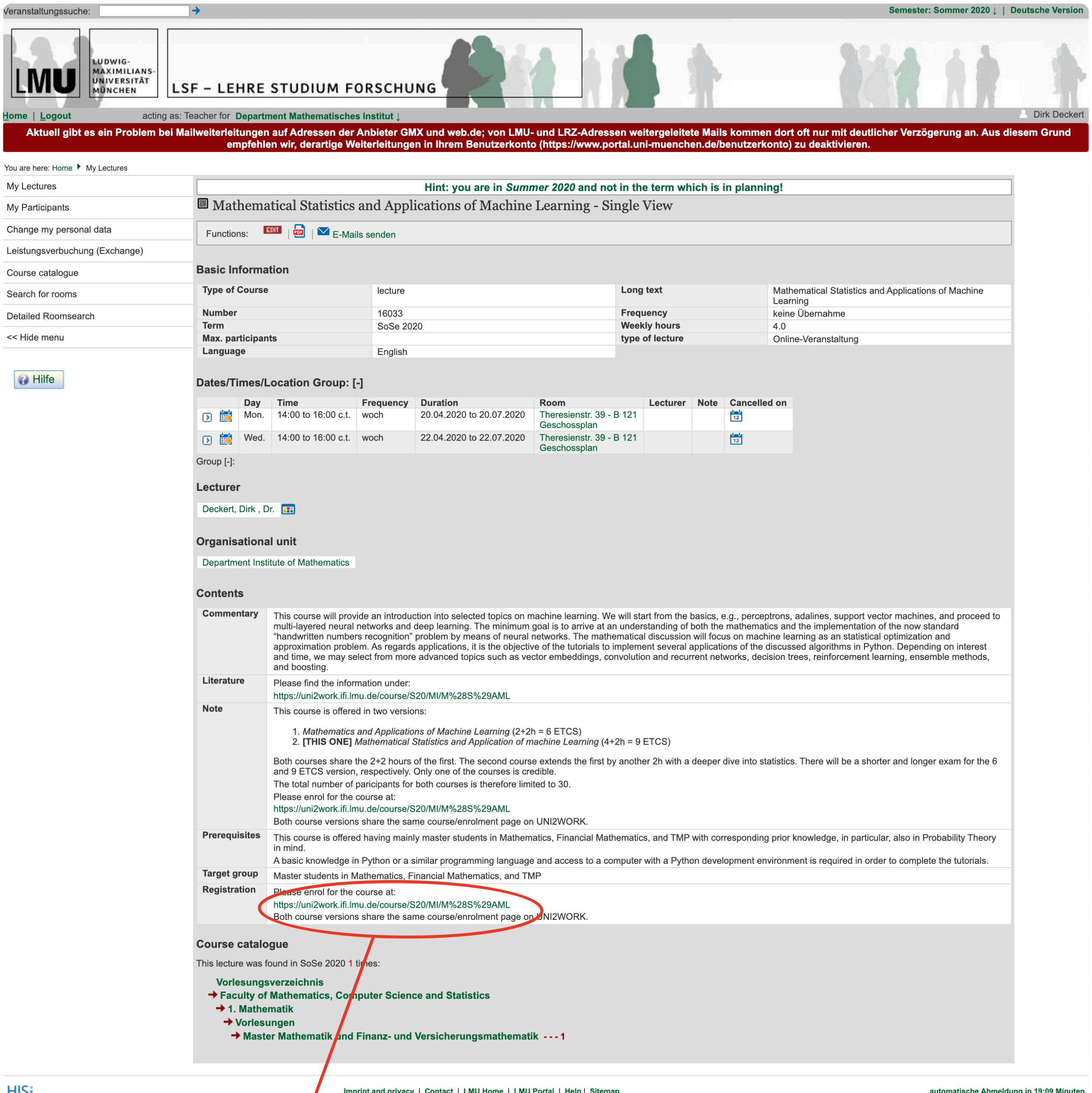


The next screen displayed the results:



Select an entry to get to the course page.

LSF course page



Veranstaltungssuche:

Semester: Sommer 2020 ↓ | Deutsche Version

LMU Ludwig-Maximilians-Universität München

LSF – LEHRE STUDIUM FORSCHUNG

Home | Logout acting as: Teacher for Department Mathematisches Institut ↓ Dirk Deckert

Aktuell gibt es ein Problem bei Mailweiterleitungen auf Adressen der Anbieter GMX und web.de; von LMU- und LRZ-Adressen weitergeleitete Mails kommen dort oft nur mit deutlicher Verzögerung an. Aus diesem Grund empfehlen wir, derartige Weiterleitungen in Ihrem Benutzerkonto (https://www.portal.uni-muenchen.de/benutzerkonto) zu deaktivieren.

You are here: Home ▸ My Lectures

- My Lectures
- My Participants
- Change my personal data
- Leistungsverbuchung (Exchange)
- Course catalogue
- Search for rooms
- Detailed Roomsearch
- << Hide menu

Hilfe

Hint: you are in *Summer 2020* and not in the term which is in planning!

Mathematical Statistics and Applications of Machine Learning - Single View

Functions: EDIT | PDF | E-Mails senden

Basic Information

Type of Course	lecture	**Long text**	Mathematical Statistics and Applications of Machine Learning
Number	16033	**Frequency**	keine Übernahme
Term	SoSe 2020	**Weekly hours**	4.0
Max. participants		**type of lecture**	Online-Veranstaltung
Language	English		

Dates/Times/Location Group: [-]

Day	Time	Frequency	Duration	Room	Lecturer	Note	Cancelled on
Mon.	14:00 to 16:00 c.t.	woch	20.04.2020 to 20.07.2020	Theresienstr. 39 - B 121 Geschossplan			
Wed.	14:00 to 16:00 c.t.	woch	22.04.2020 to 22.07.2020	Theresienstr. 39 - B 121 Geschossplan			

Group [-]:

Lecturer

Deckert, Dirk , Dr.

Organisational unit

Department Institute of Mathematics

Contents

Commentary	This course will provide an introduction into selected topics on machine learning. We will start from the basics, e.g., perceptrons, adalines, support vector machines, and proceed to multi-layered neural networks and deep learning. The minimum goal is to arrive at an understanding of both the mathematics and the implementation of the now standard "handwritten numbers recognition" problem by means of neural networks. The mathematical discussion will focus on machine learning as an statistical optimization and approximation problem. As regards applications, it is the objective of the tutorials to implement several applications of the discussed algorithms in Python. Depending on interest and time, we may select from more advanced topics such as vector embeddings, convolution and recurrent networks, decision trees, reinforcement learning, ensemble methods, and boosting.
Literature	Please find the information under: https://uni2work.ifi.lmu.de/course/S20/MI/M%28S%29AML
Note	This course is offered in two versions: 1. *Mathematics and Applications of Machine Learning* (2+2h = 6 ETCS) 2. **[THIS ONE]** *Mathematical Statistics and Application of machine Learning* (4+2h = 9 ETCS) Both courses share the 2+2 hours of the first. The second course extends the first by another 2h with a deeper dive into statistics. There will be a shorter and longer exam for the 6 and 9 ETCS version, respectively. Only one of the courses is credible. The total number of paricipants for both courses is therefore limited to 30. Please enrol for the course at: https://uni2work.ifi.lmu.de/course/S20/MI/M%28S%29AML Both course versions share the same course/enrolment page on UNI2WORK.
Prerequisites	This course is offered having mainly master students in Mathematics, Financial Mathematics, and TMP with corresponding prior knowledge, in particular, also in Probability Theory in mind. A basic knowledge in Python or a similar programming language and access to a computer with a Python development environment is required in order to complete the tutorials.
Target group	Master students in Mathematics, Financial Mathematics, and TMP
Registration	Please enrol for the course at: https://uni2work.ifi.lmu.de/course/S20/MI/M%28S%29AML Both course versions share the same course/enrolment page on UNI2WORK.

Course catalogue

This lecture was found in SoSe 2020 1 times:

Vorlesungsverzeichnis
➜ Faculty of Mathematics, Computer Science and Statistics
➜ 1. Mathematik
➜ Vorlesungen
➜ Master Mathematik und Finanz- und Versicherungsmathematik - - - 1

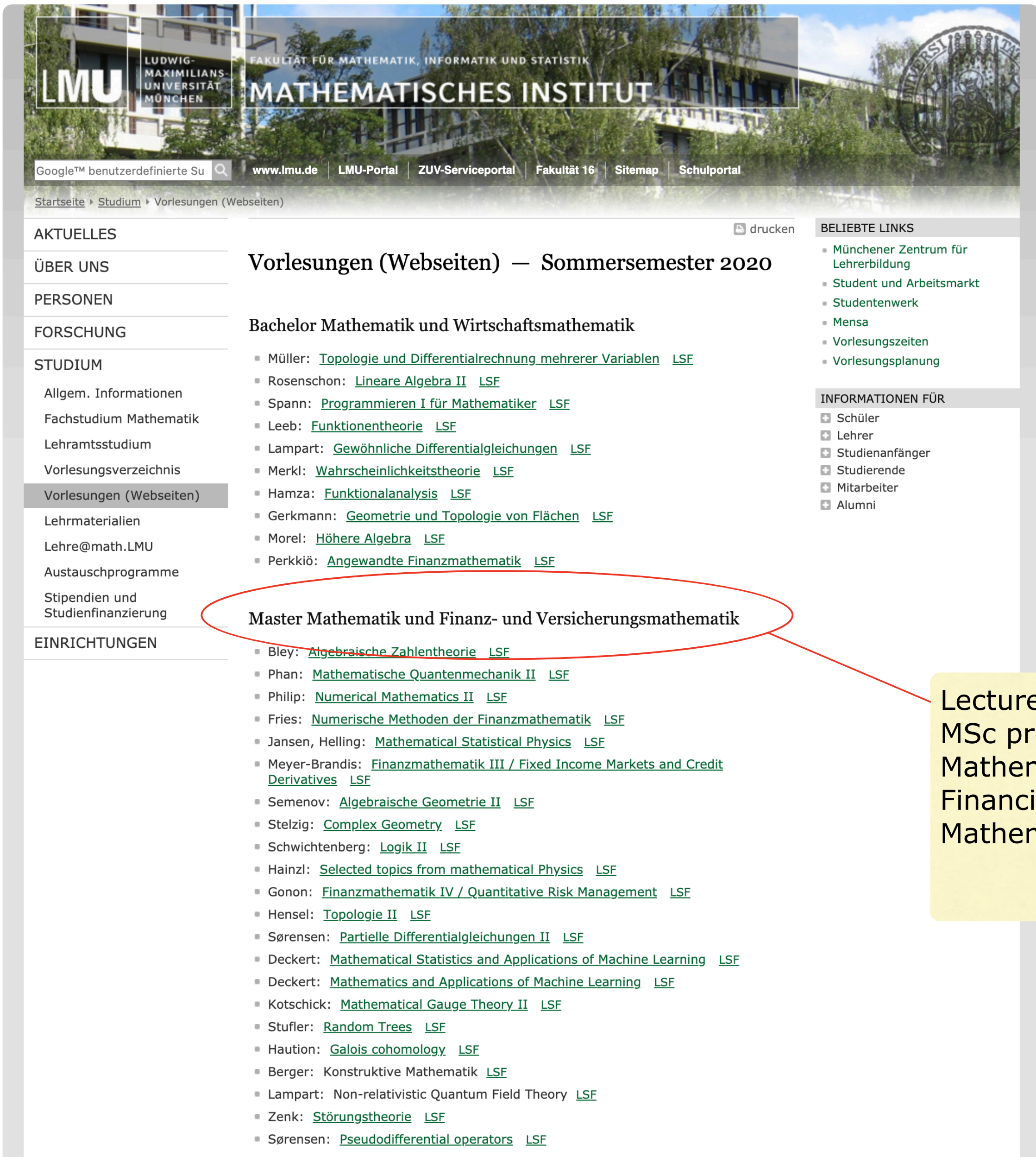
HIS:

Imprint and privacy | Contact | LMU Home | LMU Portal | Help | Sitemap

automatische Abmeldung in 19:09 Minuten

Beside the general information about the course, its schedule, accreditation, etc. it provides a link to the course page and registration information. On this site you will be able to access the course material. Typically, mathematical lecturers use UNI2WORK or Moodle both described below.

Quick access links for lectures at the Mathematical Department



LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

FAKULTÄT FÜR MATHEMATIK, INFORMATIK UND STATISTIK

MATHEMATISCHES INSTITUT

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Startseite › Studium › Vorlesungen (Webseiten)

- AKTUELLES
- ÜBER UNS
- PERSONEN
- FORSCHUNG
- STUDIUM
  - Allgem. Informationen
  - Fachstudium Mathematik
  - Lehramtsstudium
  - Vorlesungsverzeichnis
  - Vorlesungen (Webseiten)
  - Lehrmaterialien
  - Lehre@math.LMU
  - Austauschprogramme
  - Stipendien und Studienfinanzierung
- EINRICHTUNGEN

drucken

Vorlesungen (Webseiten) — Sommersemester 2020

Bachelor Mathematik und Wirtschaftsmathematik

- Müller: Topologie und Differentialrechnung mehrerer Variablen LSF
- Rosenschon: Lineare Algebra II LSF
- Spann: Programmieren I für Mathematiker LSF
- Leeb: Funktionentheorie LSF
- Lampart: Gewöhnliche Differentialgleichungen LSF
- Merkl: Wahrscheinlichkeitstheorie LSF
- Hamza: Funktionalanalysis LSF
- Gerkmann: Geometrie und Topologie von Flächen LSF
- Morel: Höhere Algebra LSF
- Perkkiö: Angewandte Finanzmathematik LSF

Master Mathematik und Finanz- und Versicherungsmathematik

- Bley: Algebraische Zahlentheorie LSF
- Phan: Mathematische Quantenmechanik II LSF
- Philip: Numerical Mathematics II LSF
- Fries: Numerische Methoden der Finanzmathematik LSF
- Jansen, Helling: Mathematical Statistical Physics LSF
- Meyer-Brandis: Finanzmathematik III / Fixed Income Markets and Credit Derivatives LSF
- Semenov: Algebraische Geometrie II LSF
- Stelzig: Complex Geometry LSF
- Schwichtenberg: Logik II LSF
- Hainzl: Selected topics from mathematical Physics LSF
- Gonon: Finanzmathematik IV / Quantitative Risk Management LSF
- Hensel: Topologie II LSF
- Sørensen: Partielle Differentialgleichungen II LSF
- Deckert: Mathematical Statistics and Applications of Machine Learning LSF
- Deckert: Mathematics and Applications of Machine Learning LSF
- Kotschick: Mathematical Gauge Theory II LSF
- Stufler: Random Trees LSF
- Haution: Galois cohomology LSF
- Berger: Konstruktive Mathematik LSF
- Lampart: Non-relativistic Quantum Field Theory LSF
- Zenk: Störungstheorie LSF
- Sørensen: Pseudodifferential operators LSF

BELIEBTE LINKS

- Münchener Zentrum für Lehrerbildung
- Student und Arbeitsmarkt
- Studentenwerk
- Mensa
- Vorlesungszeiten
- Vorlesungsplanung

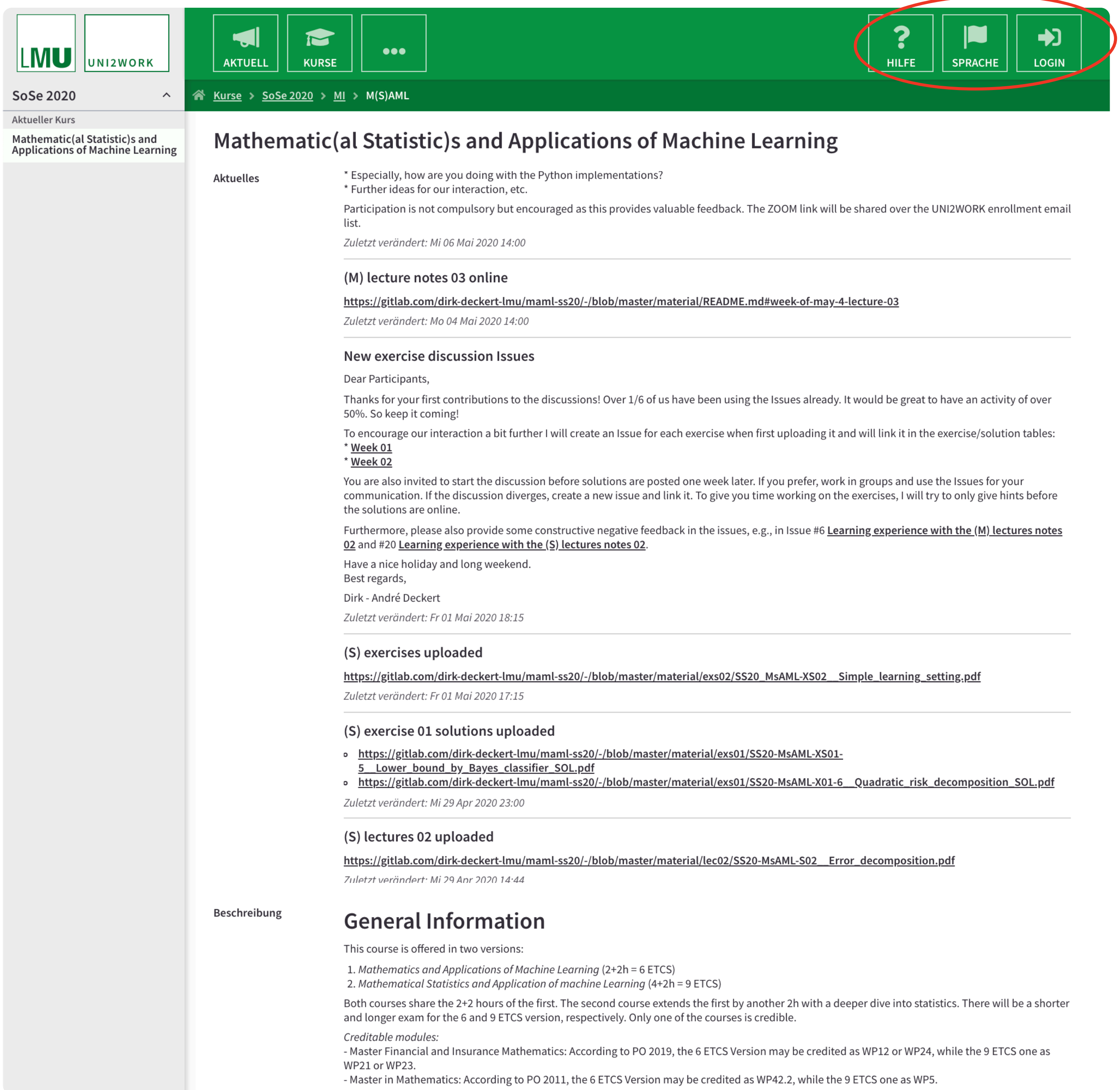
INFORMATIONEN FÜR

- Schüler
- Lehrer
- Studienanfänger
- Studierende
- Mitarbeiter
- Alumni

Lectures of the MSc programs in Mathematics and Financial Mathematics

Switch to an English version or log in with your campus user account information:

UNI2WORK course page



LMU UNI2WORK

AKTUELL KURSE ••• HILFE SPRACHE LOGIN

SoSe 2020

Aktueller Kurs

Mathematic(al Statistic)s and Applications of Machine Learning

Kurse > SoSe 2020 > MI > M(S)AML

Mathematic(al Statistic)s and Applications of Machine Learning

Aktuelles

* Especially, how are you doing with the Python implementations?
* Further ideas for our interaction, etc.

Participation is not compulsory but encouraged as this provides valuable feedback. The ZOOM link will be shared over the UNI2WORK enrollment email list.

Zuletzt verändert: Mi 06 Mai 2020 14:00

(M) lecture notes 03 online

https://gitlab.com/dirk-deckert-lmu/maml-ss20/-/blob/master/material/README.md#week-of-may-4-lecture-03

Zuletzt verändert: Mo 04 Mai 2020 14:00

New exercise discussion Issues

Dear Participants,

Thanks for your first contributions to the discussions! Over 1/6 of us have been using the Issues already. It would be great to have an activity of over 50%. So keep it coming!

To encourage our interaction a bit further I will create an Issue for each exercise when first uploading it and will link it in the exercise/solution tables:
* Week 01
* Week 02

You are also invited to start the discussion before solutions are posted one week later. If you prefer, work in groups and use the Issues for your communication. If the discussion diverges, create a new issue and link it. To give you time working on the exercises, I will try to only give hints before the solutions are online.

Furthermore, please also provide some constructive negative feedback in the issues, e.g., in Issue #6 Learning experience with the (M) lectures notes 02 and #20 Learning experience with the (S) lectures notes 02.

Have a nice holiday and long weekend.
Best regards,

Dirk - André Deckert

Zuletzt verändert: Fr 01 Mai 2020 18:15

(S) exercises uploaded

https://gitlab.com/dirk-deckert-lmu/maml-ss20/-/blob/master/material/exs02/SS20_MsAML-XS02__Simple_learning_setting.pdf

Zuletzt verändert: Fr 01 Mai 2020 17:15

(S) exercise 01 solutions uploaded

- https://gitlab.com/dirk-deckert-lmu/maml-ss20/-/blob/master/material/exs01/SS20-MsAML-XS01-5__Lower_bound_by_Bayes_classifier_SOL.pdf
- https://gitlab.com/dirk-deckert-lmu/maml-ss20/-/blob/master/material/exs01/SS20-MsAML-X01-6__Quadratic_risk_decomposition_SOL.pdf

Zuletzt verändert: Mi 29 Apr 2020 23:00

(S) lectures 02 uploaded

https://gitlab.com/dirk-deckert-lmu/maml-ss20/-/blob/master/material/lec02/SS20-MsAML-S02__Error_decomposition.pdf

Zuletzt verändert: Mi 29 Apr 2020 14:44

Beschreibung

General Information

This course is offered in two versions:

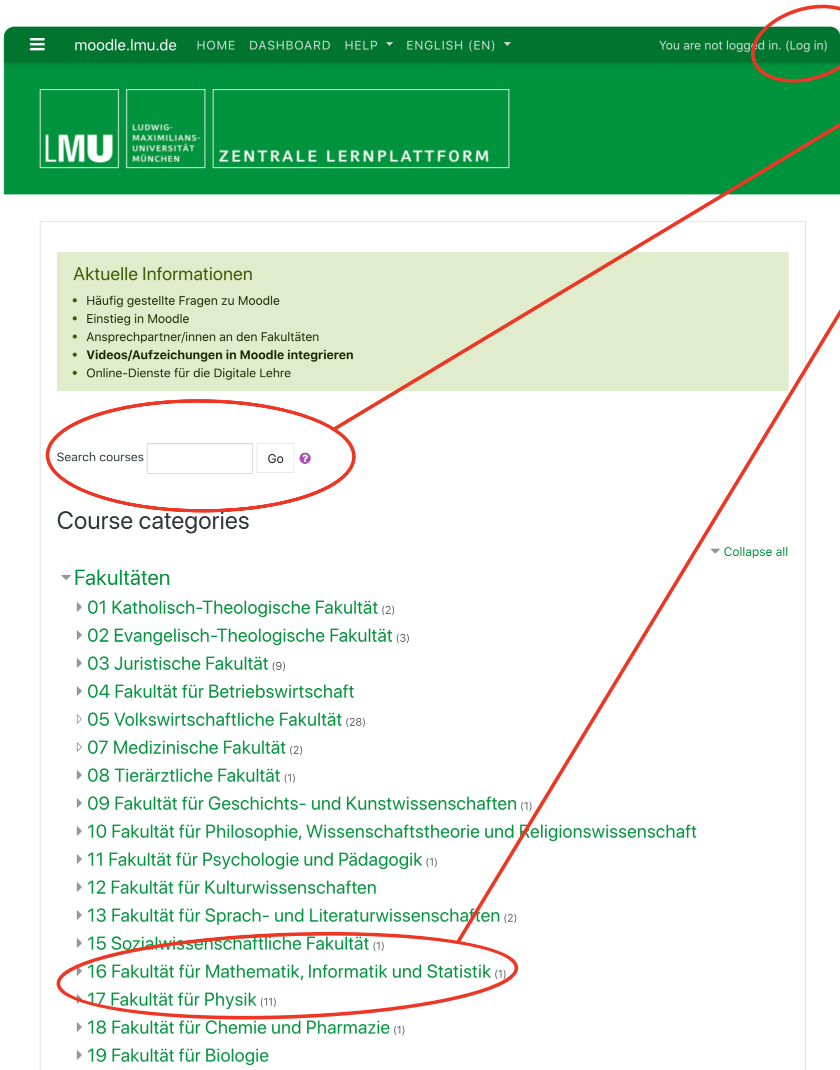
1. *Mathematics and Applications of Machine Learning* (2+2h = 6 ETCS)
2. *Mathematical Statistics and Application of machine Learning* (4+2h = 9 ETCS)

Both courses share the 2+2 hours of the first. The second course extends the first by another 2h with a deeper dive into statistics. There will be a shorter and longer exam for the 6 and 9 ETCS version, respectively. Only one of the courses is credible.

Creditable modules:
- Master Financial and Insurance Mathematics: According to PO 2019, the 6 ETCS Version may be credited as WP12 or WP24, while the 9 ETCS one as WP21 or WP23.
- Master in Mathematics: According to PO 2011, the 6 ETCS Version may be credited as WP42.2, while the 9 ETCS one as WP5.

After being logged in, this pages allows to enroll, get news on the course, and browse the course material.

Course pages on Moodle



Log in with your campus credentials as above.

Search for course.

Or browse the departments.

Teaching Pages (Workgroup Financial and Insurance Mathematics)

You can access a comprehensive list of all teaching events for each semester, covering both the master's and bachelor's programs, here.

DEPARTMENT OF MATHEMATICS - WORKGROUP FINANCIAL AND INSURANCE MATHEMATICS

Research Teaching News

SKIP TO CONTENT

Teaching Winter Term 2023/24

Teaching Summer Term 2023

Teaching Winter Term 2023/24

Lectures

- Finanzmathematik II / Stochastic Calculus and Arbitrage Theory in Continuous Time
- Finanzmathematik in diskreter Zeit
- Modellierung und Enterprise Risk Management
- Personenversicherungsmathematik
- Schadenversicherungsmathematik
- Stochastic Processes

Seminars

- Advanced Topics in Mathematical Finance (Forschungsseminar)
- Convex optimization
- Credit risk modelling
- Extremwerttheorie (mit Anwendungen im Bereich der Finanz- und Versicherungsmathematik)
- LMU Christmas Workshop in Stochastics and Finance
- Oberseminar Finanz- und Versicherungsmathematik
- Quantitative Finance Interview Preparation Class
- Versicherungsmathematisches Kolloquium

DEPARTMENT OF MATHEMATICS - WORKGROUP FINANCIAL AND INSURANCE MATHEMATICS

Research Teaching News DE

Teaching Summer Term 2023

Lectures

- Angewandte Finanzmathematik
- Finanzmathematik III / Fixed Income Markets and Credit Derivatives
- Finanzmathematik IV / Quantitative Risk Management
- Introduction to Object-Oriented Programming in Java
- Numerical Methods for Financial Mathematics

Seminars

- Ausgewählte Themen der Versicherungsmathematik
- Forschungsseminar Finanzmathematik
- LMU Spring Workshop on Finance, Stochastics, and Statistics
- Oberseminar Finanz- und Versicherungsmathematik
- Pricing and Hedging Techniques in Incomplete Markets: Mean-Variance Hedging and Risk Minimization
- Quantitative Finance Interview Preparation Class
- Versicherungsmathematisches Kolloquium