

# Tutorial Business Analytics

## Overview and Organization

Prof. Dr. Martin Bichler

Decision Sciences & Systems

Department of Informatics

Technical University of Munich

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# Tutorial Business Analytics

## Contacts

### Teaching Assistants:



Nils Kohring  
[nils.kohring@in.tum.de](mailto:nils.kohring@in.tum.de)



Stefan Heidekrüger  
[stefan.heidekrueger@in.tum.de](mailto:stefan.heidekrueger@in.tum.de)



Johannes Knörr  
[knoerr@in.tum.de](mailto:knoerr@in.tum.de)



Markus Ewert  
[markus.ewert@in.tum.de](mailto:markus.ewert@in.tum.de)

### Tutors:

- Ata Canpolat
- Diego Mediel Cuadra
- Natalie Dach
- Maximilian Harst
- Aldo Kacorri
- Hlib Kilichenko

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# Tutorial Business Analytics

## Course Structure as Hybrid Semester

A lecture is followed by corresponding tutorials in the next week. In these tutorials, we try to apply the concepts taught in the lectures.

### Format and Registration

- There are ten tutorial groups each week
- Depending on the demand, the first  $n$  tutorials will take place online, the others are on-site at the campus in Garching
  - Deadline for online/on-site demand (Moodle): Today, 21.10.21, 11:00
  - Announcement of online/on-site formats: Today, 21.10.21, 16:00
  - **Register for a group (TUMonline), deadline Friday, 22.10.21, 23:59**
- Registration procedure
  - Ordering: students for which this module is compulsory are prioritized
  - We prevent the allocation of confirmed places in case of overlapping of course dates

### Materials

- There will be short recap videos uploaded each week
- There will be exercise sheets that are solved within the tutorials
- There will be additional homework sheets (solutions for exercises and homework will be uploaded after the week)

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# Tutorial Business Analytics

## Tutorial Groups and Time Slots

Group 01:	Monday	12:00 – 14:00
Group 02:	Monday	14:00 – 16:00
Group 03:	Tuesday	10:00 – 12:00
Group 04:	Tuesday	14:00 – 16:00
Group 05:	Wednesday	08:30 – 10:30
Group 06:	Wednesday	10:30 – 12:30
Group 07:	Thursday	14:00 – 16:00
Group 08:	Thursday	16:00 – 18:00
Group 09:	Friday	12:30 – 14:30
Group 10:	Friday	14:30 – 16:30

Online

On-Site

# Tutorial Business Analytics

## Course Schedule

### Calendar Week

2021

42 (18.10. – 22.10.)

43 (25.10. – 29.10.)

44 (01.11. – 05.11.)

45 (08.11. – 12.11.)

46 (15.11. – 19.11.)

47 (22.11. – 26.11.)

48 (29.11. – 03.12.)

49 (06.12. – 10.12.)

50 (13.12. – 17.12.)

51 (20.12. – 24.12.)

2022

02 (10.01. – 14.01.)

03 (17.01. – 21.01.)

04 (24.01. – 28.01.)

05 (31.01. – 04.02.)

06 (07.02. – 11.02.)

### Tutorial

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01. Introduction to R (*online only*)

02. Inferential Statistics Revisited

03. Multiple Linear Regression and Panel Data

04. Generalized Linear Models (Logit and Poisson Regression)

05. Naïve Bayes and Bayes Networks

06. Decision Tree Classifiers

07. Data Preparation

08. Evaluation of Classifiers

09. Clustering

*AC Tutorial: Analytics Cup Support*

10. Principal Component Analysis

11. Association Rule Mining and Recommenders

12. SGD and Neural Networks

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- Please bring your laptop to the on-site tutorials
- Please follow the “R Installation Instructions” on Moodle to install R, R Studio, and required packages **before** the first tutorial

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# Tutorial Business Analytics

## Analytics Cup (AC)

### What is it?

- A datasets with a classification/regression task will be published
- Students group up in teams of up to four
- Each team solves the task and publishes its solution

### What is the benefit?

- Firsthand experience with an exemplary analytics task
- Receive bonus for your grade
  - This project will be graded for each team; if the grade a student received is better than their exam grade, the project will be weighted by 33% and the exam by 67%, otherwise, only the exam will count

→ **You can only improve your grade!**

### Dates

Detailed information will follow in the “*Introduction to Analytics Cup*” lecture on 23<sup>rd</sup> December 2021 and on the corresponding [Moodle page](#).

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# Tutorial Business Analytics

## Grading

Grading consists of a mandatory **final exam** (endterm/retake) and a voluntary **Analytics Cup**.

### Exams

- Both exams will be written examinations with a duration of 90 minutes
- They are expected to take place on-site at TUM in Garching
- Allowed resources are a non-programmable calculator and a dictionary
- The tasks are expected to be of similar type as the tutorial exercises
- You will not be asked to write code in the exam, but you are expected to know and understand the concepts taught
- Registration for the final exam via TUMonline

### Analytics Cup

Bonus is only valid for this year's exams **passed on the first attempt!** (You will only get the bonus for the retake exam if you were **not** registered for the endterm exam.) Bonus is not valid for next year's course.

### Grading Examples

Can be found on our [Moodle Introduction page](#).