



Course and Examination Fact Sheet: Autumn Semester 2021

7,048: Value Creation with (Big) Data - Enterprise Solutions and Technologies for Text Analytics

ECTS credits: 3

Overview examination/s

(binding regulations see below)

Decentral - Written examination (with defined exam duration) (50%, 60 mins.)

Examination time: term time

Decentral - examination paper written at home (in groups - all given the same grades) (50%)

Examination time: term time

Attached courses

Timetable -- Language -- Lecturer

[7,048,1.00 Value Creation with \(Big\) Data - Enterprise Solutions and Technologies for Text Analytics](#) -- Englisch -- [Grüttner Arne](#)

Course information

Course prerequisites

This course is designed for business students. It is not a course in computer science. Therefore, no special (IT) skills are required.

Learning objectives

At the end of this course, students are able to ...

- understand the most important technical terms relating to artificial intelligence and big data.
- identify, understand, and classify text analytics applications - from problem definition over data collection, data cleaning, and analysis up to the visualization.
- analyze and evaluate current text analytics applications using specific frameworks (e.g., AI canvas).
- discuss cross-functional use cases of text analytics applications with practitioners from different industries.
- apply and build out-of-the-box text analytics applications (e.g., a chatbot).

At the end of this course, students are not able to ...

- apply text analytics techniques such as Natural language Processing (NLP) with Python.

Course content

Our modern world is witnessing a growth of data in a variety of forms - structured, semi-structured, and unstructured - including e.g., web documents, blogs, social networks, digital libraries or medical records. Much of this data contains valuable information for businesses, such as emerging opinions in social networks, search trends from search engines, or consumer purchase behavior. Consequently, companies more and more use analytics techniques to draw value from a variety of diverse data sources.

This course will introduce you to the basics of "text analytics". We focus on the business value of text analytics solutions. You will learn about specific use cases across different industries that rely on innovative technical concepts and tools - especially when text data comes into play: Business and stock market news, customer reports, corporate websites, patents, analyst reports, social media, fraud detection, or documents of a political nature. Companies and especially start-ups use this data to optimize processes or offer completely new services. As an outlook, further analytical techniques such as voice and image recognition will be introduced in this course.

Course structure and indications of the learning and teaching design



This course counts 3 credits. Accordingly, the total workload for students is 90 hours. This includes self-study, campus time and all examinations. The course is conducted in hybrid format. The majority of the course (at least 80%) is conducted in presence in St. Gallen. The structure is planned as follows:

- Unit 1: Lecture-Kick-off and introduction
- Unit 2: Lecture- Overview use cases and technical basics/solutions
- Unit 3: Use case I
- Unit 4: Use case II
- Unit 5: Use case III + (IV)
- Unit 6: Excursion to a tech giant in Zurich
- Unit 7: Written exam

The structure of the contact study is planned as follows (including preparation time): 12 hours of lectures. 18 hours of guest lectures. 10 hours of excursions. The structure of the self-study is intended as follows: 30 hours for the group examination paper. 20 hours for the written examination.

Further explanation of the teaching and learning design: The course consists of three different learning formats: (1) Lecture given by Dr. Arne Grüttner. (2) Use cases presented by co-teachers from practice. (3) A highlight which is planned but not confirmed yet is an excursion to a tech giant in Zurich (probably Google). During the lecture, hands-on exercises are solved with the help of technical tools. A detailed list of confirmed and pending co-teachers will be continuously updated and can be found at [click here](#).

Course literature

Selected chapters of the book: Vollenweider, M. (2016). Mind+ Machine: A Decision Model for Optimizing and Implementing Analytics. New Jersey. John Wiley & Sons.

Selected course literature-Information provided in the kick-off lecture.

Additional course information

In the case of the President's Board having to implement new directives due to the SARS-CoV-2 pandemic in AS2021, the course information listed above will be changed as follows:

- The course is conducted online via the platform Zoom;
- The recordings of the course will not be saved;
- The lecturer informs via Canvas on the changed implementation modalities of the course;
- Course content such as the excursion are cancelled.

The examination information listed below would be changed as follows:

- The written examination is conducted online and is being recorded;
- There are no changes necessary to the group examination paper.

Examination information

Examination sub part/s

1. Examination sub part (1/2)

Examination time and form

Decentral - Written examination (with defined exam duration) (50%, 60 mins.)

Examination time: term time

Remark

60mins.

Examination-aid rule



Open Book

Students are free to choose aids but will have to comply with the following restrictions:

- All the pocket calculators that are not of the Texas Instruments TI-30 series are explicitly inadmissible.
- In addition, any type of communication, as well as any electronic devices that can be programmed and are capable of communication such as electronic dictionaries, notebooks, tablets, mobile telephones and others, are inadmissible.
- Students are themselves responsible for the procurement of examination aids.

Supplementary aids

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Examination languages

Question language: English

Answer language: English

2. Examination sub part (2/2)

Examination time and form

Decentral - examination paper written at home (in groups - all given the same grades) (50%)

Examination time: term time

Remark

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Examination-aid rule

Term papers

Written work must be written without outside help according to the known citation standards, and a declaration of authorship must be attached, which is available as a template on the StudentWeb.

Documentation (quotations, bibliography, etc.) must be carried out universally and consistently according to the requirements of the chosen/specified citation standard such as e.g. APA or MLA.

The legal standard is recommended for legal work (cf. by way of example: FORSTMOSER, P., OGOREK R., SCHINDLER B., Juristisches Arbeiten: Eine Anleitung für Studierende (the latest edition in each case), or according to the recommendations of the Law School).

The reference sources of information (paraphrases, quotations, etc.) that has been taken over literally or in the sense of the original text must be integrated into the text in accordance with the requirements of the citation standard used. Informative and bibliographical notes must be included as footnotes (recommendations and standards e.g. in METZGER, C., Lern- und Arbeitsstrategien (latest edition)).

For all written work at the University of St.Gallen, the indication of page numbers is mandatory, regardless of the standard chosen. Where page numbers are missing in sources, the precise designation must be made differently: chapter or section title, section number, article, etc.

Supplementary aids

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Examination languages

Question language: English

Answer language: English

Examination content

Group examination paper: A topic defined to provide value to the companies of the co-teachers or to the Institute for Information Management (IWI-HSG).

Written examination: Subject specific knowledge provided through the course content.



Examination relevant literature

Selected chapters of the book: Vollenweider, M. (2016). Mind+ Machine: A Decision Model for Optimizing and Implementing Analytics. New Jersey. John Wiley & Sons.

Selected course literature-Information provided in the kick-off lecture.

Please note

Please note that only this fact sheet and the examination schedule published at the time of bidding are binding and takes precedence over other information, such as information on StudyNet (Canvas), on lecturers' websites and information in lectures etc.

Any references and links to third-party content within the fact sheet are only of a supplementary, informative nature and lie outside the area of responsibility of the University of St.Gallen.

Documents and materials are only relevant for central examinations if they are available by the end of the lecture period (CW51) at the latest. In the case of centrally organised mid-term examinations, the documents and materials up to CW 42 are relevant for testing.

Binding nature of the fact sheets:

- Course information as well as examination date (organised centrally/decentrally) and form of examination: from bidding start in CW 34 (Thursday, 26 August 2021);
- Examination information (regulations on aids, examination contents, examination literature) for decentralised examinations: in CW 42 (Monday, 18 October 2021);
- Examination information (regulations on aids, examination contents, examination literature) for centrally organised mid-term examinations: in CW 42 (Monday, 18 October 2021);

Examination information (regulations on aids, examination contents, examination literature) for centrally organised examinations: two weeks before the end of the registration period in CW 45 (Monday, 8 November 2021).