



**Swiss School of Business and Management Geneva  
(SSBM Geneva)**

# **SSBM Geneva Program Outline**

## **MBA in Data Science**

**Method:** Online

**Duration of Program:** 12 months/2 semesters

**Total number of ECTS:** min. 60

Avenue des Morgines 12, 1213 Genève  
Switzerland

[www.ssbm.ch](http://www.ssbm.ch)

## **1. Enrollment criteria**

Admission to MBA studies is granted to people who fulfil the following requirements:

- Hold a Bachelor's degree in the related field or an equivalent university degree.

- Applicants who do not have a Bachelor's degree in the related field will have to complete at least 2 online management courses prior to being enrolled into master program and subject to the Recognition of Prior Learning policy. The Admissions Committee decides on the final number of the courses that have to be taken by the student.

- English requirements:

- TOEFL, IELTS or Cambridge
- Intensive English Program certificate
- Previous education in English speaking or Bilingual school with an official certificate
- Test/Interview with SSBM member staff (75 EUR cost which will be deducted from tuition fees upon enrolment).
- If a candidate is not from a majority English-speaking country, then an evidence of English language competency is required.

## **2. Credit Transfer and Recognition of Prior Learning**

Credit Transfer and Recognition of Prior Learning are described in the "Recognition of Prior Learning (RPL) Policy" of SSBM Geneva.

## **3. Graduation Requirements**

Upon successful completion of the MBA program in Data Science students will be awarded with an "MBA in Data Science" delivered by SSBM Geneva. To successfully complete the program, students must:

- Complete all program courses with a passing grade
- Have no outstanding financial obligations towards SSBM

### **Award of MBA with Distinction**

MBA with Distinction, is awarded to students who meet the following terms:

- Complete their studies with an average grade score of minimum 90%:
  - For 6.0 grade scale minimum average grade of 5.5
  - For 4.0 grade scale minimum average grade of 4.0 (letter grade A)

#### 4. Teaching Method and Learning Materials

This program is delivered entirely online through the SSBM Online Learning Portal used by Harvard and MIT. Modules can be completed in student's own time and pace.

Online learning is delivered through **asynchronous** and **synchronous** methods.

##### **Asynchronous learning takes form of:**

- prerecorded lectures supplemented by a variety of engaging activities such as quizzes, readings, assignments, capstone projects, knowledge checks, etc.

##### **Synchronous learning takes form of:**

- live lectures in form of Live Q&A Sessions, live seminars and webinars, guest lectures, live lectures on specific topics, one to one sessions with the lecturers, etc.

All learning materials for this program are made accessible through the SSBM Online Learning Portal.

Access to SSBM Connect is provided to all SSBM students. SSBM Connect is an online platform to socialize / exchange / engage and communicate with current students, alumni, professors and industry partners.

Access to SSBM e-Library and ESBCO (largest provider of research databases, e-journals, magazine subscriptions, e-books and discovery service) is provided to all students. SSBM Librarian is available to all students to further advance their access to literature.

#### 5. Grading system

Grade elements are described in the course syllabus and consist of formative and summative assessments.

The numerical assessment at a module level is expressed in the following whole grade points and half-grade points in between:

- 6 = very good
- 5 = good
- 4 = sufficient
- 3 = insufficient (fail)
- 2 = weak (fail)
- 1 = very weak (fail)

A grade of 4.0 is equivalent to 60% of the minimum possible performance:

<b>Percent Grade</b>	<b>6.0 Scale</b>
95-100	6.0
90-94	5.5

85-89	5.0
80-84	4.5
60-79	4.0
50-59	3.5
40-49	3.0
30-39	2.5

Additional conversion table for 4.0 and letter grade scales (for international students):

<b>Letter Grade</b>	<b>Percent Grade</b>	<b>4.0 Scale</b>
A	90-100	4.0
B	80-89	3.0
C	70-79	2.0
D	60-69	1.0
F	< 60	0.0

The exam is passed if the total number of points equals to or is above 60.

## **6. Regular exam deadlines**

If the student fails the 1st exam deadlines, he/she can attend regular examinations.

- Students who do not pass the exam in the 1st deadline take the next regular exam.
- Number of times the student can take the exam is 3+1, where the last one is considered as a commission exam. If the student fails, the commission exam he/she has to enroll in the course one more time.
- Commission exam is held through the commission.
- Commission exam cannot be cancelled.
- Grade achieved on the exam is considered to be the final grade of the student.

If the student decides to refuse the grade achieved on the exam, he/she is obligated to communicate his/her decision to the head of the course and take another exam.

## **7. Program Outcomes**

Master's core Learning Outcomes applicable to all Masters:

- Graduating students will demonstrate fundamental knowledge of the functional areas of business
- Master students will be able to demonstrate proficiency in technical and digital literacy.
- Master students will demonstrate effective teamwork and leadership roles
- Master students will demonstrate good written and oral communications skills
- Master students will be able to communicate effectively and efficiently
- Master students will acquire analytical skills

### **Program-specific Learning Outcomes:**

- Graduates will proficiently apply statistical techniques and machine learning algorithms to extract insights from large datasets.
- Graduates will understand the strategic implications of artificial intelligence for business and be able to effectively incorporate AI technologies into organizational strategies.
- Graduates will develop the ability to make data-driven decisions and communicate insights effectively through data visualization and storytelling techniques.
- Graduates will demonstrate agility in adapting to digital transformations and driving innovation in data-driven business environments.

## 8. Program Curriculum

Course ID	Course	Lecturer	ECTS
26908	Big Data and Data Science (BD01)	Sabrina Suman	6
26657	Data Analytics and Decision Making (DADM01)	Mario Silic	6
26909	Introduction to AI for Managers (ITAI01)	Aco Momcilovic	5
26748	Digital Business Acceleration (DBA01)	Damir Gavran	5
26813	Data Visualization and Storytelling with Data (DVSD01)	Andrea Back	5
26705	Strategic Management (SMGM01)	Anna Provodnikova, Mario Silic	6
26784	Corporate Security and Business Intelligence (CS01)	Luka Lesko	8
26910	Customer Data Driven Marketing (DDM01)	Damir Gavran	7
26633	Project Management (PM01)	Mario Silic	7
26916	Introduction to Cloud Computing (ICCM01)	Tomislav Tepes	5
<b>TOTAL:</b>			<b>60</b>

## **Course Descriptors**

# DATA ANALYTICS AND DECISION MAKING

## Course Description

This course provides a conceptual and practical overview of analytical tools, techniques, and practices used to support data driven decision making in an organization. It places an emphasis on working with data, databases, and performing and interpreting descriptive analytics and visualization techniques in the context of contemporary, data- rich decision-making environments including various business and management applications and contexts.

## Course objectives

The goal of this course is to help you develop your skills as a data-savvy manager who are managers that are not necessarily data-science experts, but understand what analytics can and cannot do, how to ask the right questions, and, most importantly, how to interpret data to make better decisions. To that end, we will study several basic analytics techniques, focusing on how you, yourself, can apply them in practice, interpret their output, build intuition, and leverage them in decision-making. Specifically, we will focus on Data Exploration, Data Aggregation, Data Visualization, various analytics and software tools such as Excel, Power Query, Power BI, Python, SQL, Azure ML, Machine Learning, etc. From various data sets you will be able to give sense to data and convert data into a manageable insight for decision-making.

## Course Learning Outcomes

At the end of this course, you will be able to:

- Explain the key ideas behind fundamental techniques in data analytics, including dashboarding, visualization, classification, aggregation of data
- Identify new opportunities to use these techniques across business domains to guide decision-making
- Apply these techniques to novel problems using a combination of Excel, Power Query, Power BI, SQL, Python or machine learning
- Formulate and communicate actionable business recommendations based upon your analysis, including its limitations
- Critically assess the validity of analytics-based recommendations in the context of specific business decisions

## Overview of student workload

Learning activities	Number of Hours	ECTS Allocation
Lectures – videos	5.5	0.2
• Problem Solving Exercises – Excel	30	1.2
• Preparations for the lectures	20	0.8



Preparations for the practical work	20	0.8
• Readings (presentations/lectures and literature)	35	1.4
• Learning for final assignment + time for solving	40	1.6

### Course materials and textbooks

A First Course in Database Systems (3rd Edition), Jeffrey D. Ullman, Jennifer Widom, Pearson (2007). ISBN-10: 013600637X  
[\[Companion page\]](#)

Business Analytics (2nd Edition), James R. Evans, Pearson (2015). ISBN-10: 0321997824. [\[Pearson web site\]](#)

Data Analysis Using SQL and Excel, Gordon S. Linoff, second edition, Wiley Publishing (2015). ISBN-10: 111902143X [\[Companion page\]](#)

Additional learning resources:

[SQLite page](#) (with documentation and tutorials)

[SQLite Tutorial](#) (Tutorials point)

[Using SQLite in Python](#)

[Using SQLite in R](#)

[SQL Tutorial](#) (Tutorials point)

[Database Systems: The Complete Book](#) by Hector Garcia-Molina, Jeff Ullman, and Jennifer Widom. [Companion web site.](#)

[Database Management Lecture](#) by Jennifer Widom

[7 Steps to Mastering SQL for Data Science](#) (KDnuggets)

## INTRODUCTION TO AI FOR MANAGERS

### Course Description

Artificial Intelligence has become a buzzword many years ago. In the recent decade we are witnessing rapid rise in AI research, development and application. AI as a field has become much more than just software development – engineering and technical issue. Many more fields are getting included in this area, and making significant contribution from economic, philosophical, ethical, or social side. Ways to get included are growing, as are the concerns about mismanagement of future

AI projects and services. We believe that is a good time to learn and expand knowledge of people in business about different aspects of AI. Aim of this course is to combine scientific research on different AI related topics, with different business analytics and predictions, and to maximize understanding by use of different sources.

We are always open for questions, discussions and suggestions of our students through especially e-mail communication.

**Course objectives**

Explore different definitions of AI as a basis for exploration of different aspects and approaches. Get familiar with the widely used AI connected terminology. Position AI development in the broader context of digitalization and tech development that is progressing in the last few decades. Get an overview of the main technologies that are used in the AI projects. Get familiar with already existing best practices and areas of implementation of AI. Discuss economic and social consequences for different countries and be able to compare them. Put the development of AI technologies in the broader geopolitical framework. Identify most common ethical questions about AI development. Raise awareness about already existing international regulations or recommendations that are applied to AI. Discuss different career paths for non-engineering positions that are required in the AI projects.

**Course Learning Outcomes**

After this course, the students will be able to:

- Compare different definitions and choose most suitable for your business.
- Understand interconnectedness of different technologies and areas of implementation.
- Create new ideas about AI products and services.
- Create broader framework about consequences of AI and its development on the geopolitical and economic level.
- Get inspired to explore AI field further.
- Gather number of sources for additional AI education.
- Think about impact of AI and new technologies in the broader global context, and on the different levels: from individual to company to country level

**Overview of student workload**

Learning activities	Number of Hours	ECTS Allocation
• Video material	4	0.2
• Preparations for the practical work	10	0.4
• Readings (presentation and literature)	60	2.4

<ul style="list-style-type: none"> <li>• Learning for final assignment</li> </ul> + time for solving	50	2.0
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### Course materials and textbooks

Main literature:

1. Artificial Intelligence – A Modern Approach (3rd Edition)
2. Machine Learning for Dummies
3. Make Your Own Neural Network
4. Machine Learning: The New AI
5. Fundamentals of Machine Learning for Predictive Data Analytics: Algorithms, Worked Examples, and Case Studies

## DIGITAL BUSINESS ACCELERATION

### Course Description

Digital transformation is an abused buzzword nowadays and vast oceans of solutions and technologies makes it very hard to navigate. Making a winning strategy for a concrete business can be confusing and time consuming. Gap between “nice ideas” and proven and applicable strategical solutions seems quite difficult to bridge in everyday life. The goal of the course is to provide a navigation map for business leaders. The course is made of a combination of lectures, case studies and team projects.

### Course objectives

In this course, we will start out by introducing a concept of a sort of holistic framework, looking at digital strategies through five key domains of strategy that are changing and being transformed by digital technologies. Customers are being changed, our competition, how we think about data, how we think about innovation, and how we define the value of our business and our industry. Those are the five domains of digital transformation, because each of these areas of strategy are changing so dramatically today.

Topics we would address include:

- Domains of Digital Transformations,
- Digital Customers networks and New Path to purchase,
- Understanding of Digital customers behaviours,
- Platform Business models,
- Cooperation’s,
- Disintermediation and Asymmetric competition,

- Building Data as Strategic Assets for Business,
- Big Data,
- Innovation through Experimentation,
- Translation of the Lean Start-up to Enterprise Innovation,
- Adaptation of Value proposition.

### Course Learning Outcomes

At the end of this course, students will be able to:

- Understanding the customer habits and digital behaviour driving the customers across different markets
- Analysis of data – building data as a strategic asset in business
- Value creation from analysed data
- Apply the principles and best practices of the leading start-ups to enterprise large scale organizations

### Overview of student workload

Learning activities	Number of Hours	ECTS Allocation
Lectures – videos	4.5	0.2
Preparations for the lectures	10	0.4
Preparations for the practical work	30	1.2
<ul style="list-style-type: none"> <li>• Readings (presentations/lectures and literature and reading assignments)</li> </ul>	30	1.2
Learning for final assignment + time for solving	50	2

### Course materials and textbooks

Main literature:

David L. Rogers (2016): The Digital Transformation Playbook

Additional literature:

Geoffrey G. Parker, Marshall W. Van Alstyne, Sangeet Paul Choudhary (2017): Platform revolution

Alexander Borek, Nadine Prill (2020): Driving Digital Transformation through data and AI.

# **CORPORATE SECURITY & BUSINESS INTELLIGENCE**

## **Course Description**

In contemporary business conditions, characterised by rapid globalisation and hypercompetition, business information simultaneously present power, capital and knowledge, competitive advantage, i.e. key management resource.

Timely, quality and accurate business information are the precondition for making quality business decisions, as well as achieving business success, both on the level of national economy and its role in the world economy, and on the level of individual business entity.

The course is focused on the dimension of business decision-making process based on business information converted into knowledge and the management of business information process (business intelligence). It refers to the process and activities in economic area that are planned, organised and implemented by national economies and individual business entities, whereby these activities imply the process of legal collection of public data available to all through ethical means, their analysis and conversion into business analyses („knowledge”) for the purpose of supporting leadership in national economy system or business entity (management) with the aim of quality business decision-making and the realisation of those decisions directed towards the preservation of existing position of national economy and business entity in business environment, avoiding any threats or minimising their effects and, finally, the overall qualitative progress and strengthening of competitiveness of national economy and individual business entity.

Business information converted into knowledge enable the detection of suitable business opportunities on the market before they become visible to the competition (other national economies or individual business entities), as well as the detection of threats early enough so that management (macro and micro level) has enough time to react, i.e. avoid those threats or minimise their effects.

Due to the importance that business information have in the process of business decision-making and the realisation of those decisions, the application of the overall mechanism from the aspect of business information (collection of information, their processing and interpretation, creating business analyses and their distribution to the management) presents a separate form of socioeconomic activity on a national-state level and a separate business function on the level of individual business entity.

This element is processed from the aspect of its social situatedness, role in the strategic management of business processes, organisation in business systems (macro and micro level) and management of that system, practical application of methods and resources of that system, as well as its achievement in relation to business.

At the same time, the course introduces students with the importance of achieving security of own business information, meaning that it introduces them with the

model, process and development of business information security system (business counterintelligence) on the level of national economy and in individual business systems.

### Course objectives

- understanding the meaning of business information in corporate business and decision- making processes
- getting the basic knowledge of the term, content, model, process and system of business intelligence,
- learning to collect, interpret, use and keep information with the interest of achieving business success of a company and its business security.
- understand business intelligence process (business counterintelligence), its products and its role in managing companies, as well as the ability to organise and manage business (counter)intelligence process and use its end products.

### Course Learning Outcomes

Learning outcomes – after the course the students will be able to:

- analyse business intelligence model and process
- analyse the model and process of business information security (business counterintelligence)
- evaluate business intelligence
- • examine the techniques of collecting business information
- discuss the meaning of business information
- create business analyses based on business information
- compare business intelligence models in EU Member States
- compare business intelligence models in different types of economy systems in the world
- gain competences necessary for the analysis and management of business information process, i.e. defining the needs of macro and micro management for business information, collection of necessary information, processing and interpretation of collected information, creation of business analyses that are based on such information and that serve the management as support in the process of business decision-making and the realisation of those decisions.

### Overview of student workload

Learning activities	Number of Hours	ECTS Allocation
Lectures – video	5	0.2
Preparations for the lectures	35	1.4
Preparations for the practical work	55	2.2

Readings (presentations/lectures and literature and reading assignments)	55	2.2
· Learning for final assignment + time for solving	50	2.0

### **Course materials and textbooks**

Main literature:

Marr, B. (2017). Data Strategy: How to Profit from a World of Big Data, Analytics and the Internet of Things. Kogan Page

Howson, C. (2013). Successful Business Intelligence, Second Edition: Unlock the Value of BI & Big Data. McGraw-Hill Education; 2nd edition

Additional literature:

Moss, T., Atre, S. (2003). Business Intelligence Roadmap: The Complete Project Lifecycle for Decision- Support Applications. Addison-Wesley Professional.

## **CUSTOMER DATA DRIVEN MARKETING**

### **Course Description**

The Customers Data driven marketing program goes into the strategic understanding of how marketing paradigms change from classical one-way communication to real time personalized communication that leverages data collected and processed using – Martech – artificial intelligence, predictive analytics and marketing automation tools.

Effective Marketers need to be strategic about how they use massive amounts of data and information available to them. This means not only knowing how to reveal consumer behavior, but also how to identify trends and patterns to more effectively reach your target audience.

Beside strategic aspects, during the course we would look at many best practices from companies like: Google, Facebook (Meta), Netflix, UBER, IBM, Coca Cola, Zeta Global, Amazon etc.

Students are required to watch all VIDEO lectures, understand and learn principles presented. Each student needs to submit individual exam in line with SSBM rules

### **Course Learning Outcomes**

At the end of this course, students will:

- Understand and learn how to Explain the key ideas behind customer experience, customer focus, role of data and various data types and the basics of data privacy, big data

- Asses and evaluate the business by using data properly
- Learn the basic principles of data analytics and its measures and dimensions and technology digital enablers.
- Create value from data
- Use critical thinking to enhance and improve our business, services and products

### Overview of student workload

Learning activities	Number of Hours	ECTS Allocation
• Lectures – video	5	0.2
• Lectures – reading part	40	1.6
• Preparations for the lectures	30	1.2
• Reading part (literature and pre-reading links)	60	2.4
• Learning for final assignment + time for solving	40	1.6

### Course materials and textbooks

David L. Rogers (2016): The Digital Transformation Playbook

Marco Hassler: **From data driven to people-based marketing.**

Geoffrey G. Parker, Marschall W. Van Alstyne, Sangeet Paul Choudary (2017): Platform revolution

Alexander Borek, Nadine Prill (2020): Driving Digital Transformation through data and AI.

## PROJECT MANAGEMENT

### Course Description

The course introduces students to the basic concepts of project management. Effective management of projects ensures that they are completed on time, within budget and are of high quality. The aim of the course is to familiarize students with techniques needed to achieve these three goals. Basic topics and segments of project management that students will address in this course are: quality of an effective project manager, typical responsibilities of the project manager and project selection, preparation of the detailed work schedule and budget, creating a project team, management, quality control of the project; risk management and more.



## Course objectives

During the course variety of teaching methods will be used: from basic explanations of terms and concepts, exercises, working on case studies, individual work in finding the application of the presented knowledge and group/team work on the project. Beyond mere description of theoretical lectures, the emphasis will be on practical work, where students will plan and manage a project.

## Course Learning Outcomes

1.	Students will acquire the ability to apply the acquired knowledge in new and unfamiliar circumstances, using understanding of the principles of project management.	Students will study the literature (books) in the fields of project management, which will help them to gain the necessary knowledge to solve tasks, tests, exercises and case studies. Students will prepare a seminar in which they will demonstrate theoretical knowledge and application to selected cases from practice.
2.	Students will communicate effectively in a manner appropriate to leadership roles.	Students will write a project plan, and tasks will be dealt with in groups. Students will orally present their group and individual work.
3.	Students will gain the ability to use new technologies.	Students will use information technology in order to develop project documentation. The same technology will be used in the preparation of student papers.

## Overview of student workload

Learning activities	Number of Hours	ECTS Allocation
• Lectures – Video material	6,5	0.2
• Readings – literature, reading assignment and literature	70	2.8
• Video tutorials	2	0.1
• Individual study	45	1.8
• Learning for final assignment + time for solving	50	2.0

## Course materials and textbooks

Main literature:

Harold Kerzner (2000): Applied Project Management. USA: John Wiley & Sons  
<http://www.projectmanagement.com/>

Additional literature

Keith Goffin, Rick Mitchell. Innovation Management (2009) - Strategy and implementation using the Pentathlon Framework, Palgrave Macmillan, 2010. Also available in German language (FinanzBuch Verlag).

Mark Dogson, Davig Gann, Ammon Salter (2008). The Management of Technological Innovation, Oxford University Press

Paul Trott (2009). Innovation Management and new Product Development, Prentice Hall, 2008.

Klaus Kerth, Heiko Asum, Volker Stich, Die besten Strategietools in der Praxis, Carl Hanser Verlag,

Paul Williams (2009). The Innovation Manager's Desk Reference, Lulu.

# BIG DATA AND DATA SCIENCE

## Course Description

The main problem in today's business world is the management and use of new forms of huge amounts of data. Big Data, Big Data Analytics as well as Data Science in general are very topical in terms of business value, human resources and skills management. Managers should know what resources are required to gain a competitive advantage with information derived from Big Data analytics. There is also a shortage of data science experts and it is important to focus on producing a workforce with the appropriate skills.

## Course objectives

This course will introduce many aspects of the Big Data era and the importance of data science, as well as many practical methods with examples.

## Course Learning Outcomes

	Learning objectives	Learning outcomes
1	To understand the context, role and implications of Big data.	Explain the characteristics and context of Big Data era and its implications on all industries and living

2	To discuss various data types and methods of analyze them	Discuss data types and the main analytical challenges today
3	To provide knowledge about potential of exploiting Big data	Identify possible areas and fields where Big data and Big data analysis has major influence
4	To develop some specific knowledge and skills in Big data management and Big data strategy creation	Explain a set of key functions, roles and competences in organizations to benefit from Big Data.
5	To provide knowledge how to gain competitive advantage using Big data analytics	Discuss importance of a Big Data strategy for capturing the value of massive quantities of data
	To gain knowledge and skills related to various analytics methods	Explain the design of contemporary Big Data architectures and discuss their benefits.
	To understand and create a machine learning model	Explain fundamental Big Data algorithms and processing techniques
		Apply the appropriate techniques to discover valuable information from Big data.
		Understand the main machine learning methods in relation to Big Data and apply it on given dataset

### Overview of student workload

Learning activities	Number of Hours	ECTS Allocation
• Lectures – PowerPoint	5	0.2
• Lectures – Video material	15	0.6
• Lectures – Reading part	20	0.8
• Preparations for the lectures	10	0.4
• Individual study for additional activities (presentations, seminars, projects, debating, reporting etc.)	50	2
• Learning for final assignment + time for solving	50	2

### Course materials and textbooks

Main literature:

1. Bernard Marr, Data strategy - how to profit from a world of big data, analytics and artificial intelligence, Kogan Page; 2nd edition (2022)
2. Big Data in Practice: How 45 Successful Companies Used Big Data Analytics to Deliver Extraordinary Results, Wiley, 2016

Additional literature:

1. Peter Bruce and Andrew Bruce , Practical Statistics for Data Scientists, O'Reilly Media,2017

SSBM web platform

Presentations, seminars and additional materials for class participation

Web

<https://bernardmarr.com/> <https://journalofbigdata.springeropen.com/>  
<https://www.analyticsvidhya.com/> <https://www.guru99.com/what-is-big-data.html> <https://towardsdatascience.com/> <https://hadoop.apache.org/>

Handbook for Business Leaders, Topbot

## **DATA VISUALIZATION AND STORYTELLING WITH DATA**

### **Course Description**

This course will cover the fundamentals of effective data-driven storytelling. Students will learn how to detect and articulate the stories behind data sets and communicate data findings in visual, oral, and written contexts for various audiences and publics. Students will become familiar with associated tools.

Students are required to follow online lectures and case studies and be prepared by reading the given reading materials. Students are expected to actively watch all online lectures and case studies.

We are always open for questions, discussions and suggestions of our students through especially e-mail communication or if necessary by telephone.

### **Course objectives**

This course teaches students the skills necessary to be effective Data Storytellers. They will learn how to locate and download datasets, extract insights from that data and present their findings in a variety of different formats. Students will learn how to “connect the dots” in a dataset through visual data analysis and find the narrative thread that both explains what’s going on and engages their audience in a story about the data. Moreover, students will learn how to tell data stories in different ways for different audiences and stakeholders.

## Course Learning Outcomes

By the end of this course, students will be able to:

- Detect and understand the stories within datasets and extract insights from that data.
- Effectively present data visually to enhance audience comprehension of findings and insights.
- Apply data visualization best practices to their work, including choosing the right chart type for the situation and avoiding visualization techniques that can mislead an audience.
- Act as a data-driven visual storyteller for optimal presentation of trends, patterns and insights
- Effectively communicate insights about data in various formats, including oral presentations, written reports and interactive visualizations
- Prepare professional business reports and make effective client presentations of their work
- Explain the importance of communication skills and competencies for individuals who serve as data analysts

## Overview of student workload

Learning activities	Number of Hours	ECTS Allocation
Lectures – videos	3	0.1
Lectures – reading part	30	1.2
Preparations for the lectures	20	0.9
Reading part (literature and pre- reading links)	50	2.0
Learning for final assignment + time for solving	25	1.0

## Course materials and textbooks

Main literature:

1. Storytelling with Data: A Data Visualization Guide for Business Professionals by Cole Nussbaumer Knaflic
2. J. C. Van Horne, J. M. Wachowicz, Jr. Fundamentals of Corporate finance (Prentice Hall),.
3. J. Berk, P. DeMarzo : Corporate finance. Pearson Education.

Additional literature:

1. Asquith, P., & Weiss, L. A. Lessons in corporate finance: A case studies approach to financial tools, financial policies, and valuation. John Wiley & Sons.
2. Wahlen, J., Baginski, S., & Bradshaw, M. Financial reporting, financial statement analysis and valuation. Nelson Education.
3. Corporate finance Raymond Am. Brooks, pearson
4. Corporate finance Sheridan Titman, Arthur aj. Keown and John d. Martin, Pearson

SSBM web platform

Presentations, seminars and additional materials for class participation (case studies, excel cases etc)

## **STRATEGIC MANAGEMENT**

### **Course Description**

This course includes a study of strategic planning including mission statement development, analysis of the external environment and internal organizational factors, development of strategic alternatives, selection of appropriate alternatives, implementation of strategies, and competitive strategies and dynamics. Special emphases are given to the integration and coordination of the functional areas within the enterprise.

Also, you will learn how organizations create, capture, and maintain value, and how it is fundamental for sustainable competitive advantage. You will be able to better understand value creation and capture and learn the tools to analyze both competition and cooperation from a variety of perspectives, including the industry level (e.g., five forces analysis), and the firm level (e.g., business models and strategic positioning).

- Understand how managers coordinate different functional areas, resources, and systems inside a company and align them with the external environment to enhance overall performance
- Knowledge of strategic management tools and frameworks, and apply them to real business contexts Process diverse business and industry information to diagnose strategic issues, evaluate strategic alternatives, and formulate a coherent and actionable strategic plan
- How to think like a CEO, entrepreneur, or general manager.

### **Course objectives**

Business strategy skills course has the learning objective : Initiative skills. After the course students will be able to improve their initiative skills when doing global business.

## Course Learning Outcomes

The purpose of the course is to give students an appreciation of:

- Understand the nature of competition and industries at an advanced level.
- Understand how external forces such as social, political/legal, economic, and technological, influence strategic decision-making and firm performance.
- Understand the sophisticated relationships among the functional areas of an organization (marketing, human resources, production, finance, and accounting) and how effective strategic planning requires a concerted effort among all functional areas.
- Understand strategy research, including extensive use of the internet as a research tool.
- Apply the strategic management model to the analysis of an ongoing enterprise, including industry, environmental, and firm assessments; firm, business, and functional strategic assessments; development and evaluation of strategic alternatives; and strategic implementation and control.

## Overview of student workload

Learning activities	Number of Hours	ECTS Allocation
• Video material	6,5	0.3
• Practical part (knowledge tests, discussion questions)	3	0.1
• Lectures – Reading part	30	1.2
• Preparations for the lectures	40	1.6
• Readings (literature)	30	1.2
• Learning for final assignment + time for solving	40	1.6

## Course materials and textbooks

Main literature:

Clifford S. (2011). Where Wal-Mart failed, Aldi succeeds. Retrieved from <https://www.nytimes.com/2011/03/30/business/30aldi.html>

FedEx SWOT analysis (2020). Retrieved from <https://bstrategyhub.com/fedex-swot-analysis/>

Galunic C., Hermreck I. (2012). How to help employees "get" strategy. Retrieved from <https://hbr.org/2012/12/how-to-help-employees-get-strategy>

Leavy B. (2013). Updating a classic formula for strategic success: focus, alignment, repeatability, and leadership. *Strategy & Leadership* 41, 1, 18-28.

Perrott B. E. (2011). Strategic issue management as change catalyst. *Strategy & Leadership* 39, 5, 20-29. Porter M. E. (2008). The five competitive forces that shape strategy.

Retrieved from <https://hbr.org/2008/01/the-five-competitive-forces-that-shape-strategy>

Sheppard B., Zarubina D., Jenkins A. (2020). Adapting to a new world. Retrieved from <https://www.strategy-business.com/article/Adapting-to-a-new-world>

Sloan J. (2017). *Learning to think strategically*. (3d ed.). New York : Routledge.

Subramanian S., Rao, A. (2019). How to build disruptive strategic flywheels.

Retrieved from <https://www.strategy-business.com/article/How-to-build-disruptive-strategic-flywheels>

SSBM portal

Presentations, seminars and additional materials for class participation (case studies, excel cases etc)

## **CLOUD COMPUTING**

### **Course Description**

This course gives students an overview of the field of Cloud Computing and its enabling technologies. The course will introduce this domain and cover the topics of cloud infrastructures, virtualization, software defined networks and storage, cloud storage, and programming models

### **Course objectives**

At the end of this course, students will:

- Learn the fundamental ideas behind Cloud Computing, the evolution of the paradigm, its applicability benefits, as well as current and future challenges
- Learn the basic ideas and principles in data center design; cloud management techniques and cloud software deployment considerations

### **Course Learning Outcomes**

The goals of this course is to provide to students a solid overview of the field of Cloud Computing, and an in- depth study into its enabling technologies and main building blocks.

### **Overview of student workload**

Learning activities	Number of Hours	ECTS Allocation
Lectures – Video material	5	0.2



Lectures – Reading part	10	0.4
Preparations for the lectures	30	1.2
<ul style="list-style-type: none"> <li>• Individual study for additional activities (presentations, seminars, projects, debating, reporting etc.)</li> </ul>	30	1.2
<ul style="list-style-type: none"> <li>• Learning for final assignment</li> </ul> + time for solving	50	2.0

### **Course materials and textbooks**

1. Cloud computing a practical approach - Anthony T.Velte , Toby J. Velte Robert Elsenpeter, TATA McGraw- Hill , New Delhi – 2010
2. Cloud Computing: Web-Based Applications That Change the Way You Work and Collaborate Online - Michael Miller - Que 2008