



COURSE DESCRIPTION CARD - SYLLABUS

Course name

Financial Data Analysis in the Enterprise [S1DSwB1>ADFwP]

Course

Field of study

Data Science in Business

Year/Semester

2/4

Area of study (specialization)

–

Profile of study

general academic

Level of study

first-cycle

Course offered in

Polish

Form of study

full-time

Requirements

elective

Number of hours

Lecture

15

Laboratory classes

0

Other

0

Tutorials

15

Projects/seminars

0

Number of credit points

2,00

Coordinators

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Lecturers

Prerequisites

Students are expected to have analytical thinking skills and the ability to interpret numerical data in a business context. Basic knowledge of data handling and openness to learning new financial concepts will be beneficial. Logical reasoning and the ability to apply analytical methods in business decision-making are also important.

Course objective

The aim of this course is to equip students with the skills to analyze and interpret financial data in an enterprise. Students will learn key financial concepts, the structure of corporate finance, and the fundamentals of financial reporting. The course covers liquidity, profitability, debt, operational efficiency, and market value analysis using financial indicators. Additionally, students will explore cost optimization, break-even analysis, business valuation methods, and investment decision-making using NPV, IRR, and payback period techniques. The course prepares students to apply financial analysis in strategic business decision-making.

Course-related learning outcomes

Knowledge:

Identifies basic financial concepts and elements of financial statements, including the balance sheet, income statement, and cash flow statement, in the context of analyzing the economic situation of a company [DSB1_W01].

Explains financial analysis methods, including the evaluation of liquidity, profitability, debt, and operational efficiency, and their application in optimizing business decisions [DSB1_W03].

Characterizes financial risk management models and methodologies for assessing the value of companies and investment projects [DSB1_W04].

Analyzes basic legal and economic models used in assessing the financial situation of companies and making investment decisions [DSB1_W09].

Skills:

Selects and critically analyzes financial data of a company, evaluating its reliability and usefulness for making managerial decisions [DSB1_U01].

Designs and conducts financial analyses, using economic indicators and methods for assessing investment efficiency, such as NPV and IRR [DSB1_U03].

Formulates specifications for financial problems, selects appropriate analytical methods, and interprets results in the context of optimizing business processes [DSB1_U05].

Collaborates in interdisciplinary project teams, integrating knowledge from financial analysis and management to make rational business decisions [DSB1_U14].

Social competences:

Critically analyzes their own knowledge and interpretation of financial data, assessing the reliability of sources and the appropriateness of the analytical methods used [DSB1_K01].

Engages in initiatives promoting the use of financial analysis in business management and takes educational actions regarding the responsible use of financial tools [DSB1_K03].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

Lecture:

There will be two tests, each graded in the form of points-50 points per test. The final grade is determined by the sum of points from both tests. The first test takes place midway through the course, while the second is at the end. The passing threshold is a total of 50 points from both tests.

Tutorials:

A test will be conducted, graded in the form of a maximum of 50 points. The remaining 50 points will be awarded for preparing an analysis of the financial performance of a selected publicly traded company. The final grade is determined by the sum of points from both assessments. The passing threshold is 50 points.

Programme content

The course covers fundamental financial concepts and methods for analyzing a company's economic situation. Students will learn about the structure of financial statements and the principles of their interpretation. Key indicators for assessing liquidity, profitability, debt, and operational efficiency will be discussed. The course also introduces methods for break-even analysis, cost optimization, and the evaluation of enterprise and investment project value, including tools such as NPV, IRR, and financial benchmarking.

Course topics

Fundamental financial concepts and corporate finance structure

Financial statements - balance sheet, income statement, cash flow statement

Accounting principles and their significance in financial data analysis

Liquidity analysis - liquidity ratios

Profitability analysis - profitability ratios and margins

Debt analysis - capital structure and financial risk

Operational efficiency analysis - cash conversion cycle, asset turnover

Market value analysis - stock market indicators and company valuation

Break-even analysis and cost optimization

Business and investment project valuation methods

Investment decisions - NPV, IRR, and payback period methods

Teaching methods

Lectures: Problem-based lecture, case study presentation

Tutorials: Problem-solving tasks, case study analysis, group work

Bibliography

Basic:

Nowak, E. (2017). Analiza sprawozdań finansowych, PWE

Gabrusewicz, W. (2014). Analiza finansowa przedsiębiorstwa, PWE

Additional:

Czekaj, J., Dresler, Z. (2017). Zarządzanie finansami przedsiębiorstwa, PWN

Breakdown of average student's workload

	Hours	ECTS
Total workload	50	2,00
Classes requiring direct contact with the teacher	30	1,00
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	20	1,00