POZNAN UNIVERSITY OF TECHNOLOGY

EUROPEAN CREDIT TRANSFER AND ACCUMULATION SYSTEM (ECTS)

COURSE DESCRIPTION CARD - SYLLABUS

Course name

Modeling and analysis of financial processes [N2IZarz1-ZZiPP>MiAPF]

Course

Field of study
Engineering Management

Year/Semester
2/3

Area of study (specialization)
Enterprise Resource and Process Management

Profile of study
general academic

Level of study
second-cycle

Course offered in
Polish

Form of study
part-time

Requirements
compulsory

Number of hours

Lecture
4

Laboratory classes
0

Other
0

Tutorials
8

Projects/seminars
0

Number of credit points

1,00

Coordinators

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Lecturers

Prerequisites

KNOWLEDGE: The student knows the basic concepts of finance and the financial market. Has general knowledge about the functioning of the economy, its management and existing financial market. Student is familiar with the structures of the money and capital market. SKILLS: The student has the skills to perceive, associate and interpret phenomena occurring in the economy. Has the ability to perform calculations in the field of mathematical analysis. SOCIAL COMPETENCES: The student is able to form independent assessments in the field of socio- economic policy, as well as argue his position and defend his opinions. Should show willingness to cooperate in a team and effectively search for information in Libraries and on the Internet.

Course objective

The student understand the basic mechanisms of the functioning of the financial system in the national economy and their impact on financial decisions taken by individual business entities. Developing students' skills in selecting various financial market instruments in the area of obtaining an effective source of financing. Ability to carry out an analysis of financial precessions taking place in the enterprise and on its basis make the selection of an adequate model - the source of financing - to the needs and perspectives of the enterprise.

Course-related learning outcomes

Knowledge:
The student describes advanced methods and tools for modeling and decision-making processes in a financial context [P7S_WG_02].
The student identifies the impact of organizational structures on financial processes in companies [P7S_WG_05].
The student characterizes financial relationships in organizations and their impact on financial decisions [P7S_WG_06].
The student explains the application of management science in the context of financial processes [P7S_WG_08].

Skills:
The student analyzes and interprets the causes and course of financial processes [P7S_UW_01].
The student forecasts and models complex financial processes using advanced management methods [P7S_UW_02].
The student develops innovative solutions to financial problems [P7S_UW_04].
The student formulates hypotheses about financial processes in enterprises and analyzes them [P7S_UW_07].

Social competences:
The student integrates interdisciplinary knowledge to effectively manage financial processes [P7S_KK_01].
The student identifies and evaluates cause and effect relationships in the implementation of financial strategies [P7S_KK_02].
The student plans and manages financial ventures in a business context [P7S_KO_03].

Methods for verifying learning outcomes and assessment criteria

Learning outcomes presented above are verified as follows:

LECTURE: formative assessments obtainable for: activity in discussions conducted during the lectures (concerning current issues and summing up the individual lectures or previously assigned material (e.g. books, films, articles)) giving the possibility to assess the Student's understanding of the issues discussed; written assignments given during the semester (e.g. essay), written exam (e.g. eKursy test or traditional exam). Summative assessment: the arithmetic mean of the formative grades with the rounding conditions given and placed on the eKursy platform - it is not possible to obtain the pass mark without writing an exam with a positive mark (min. 60% of the points).
TUTORIALS: Formative assessment: current activity during classes and participation in the discussion; tickets with min. 10 questions; written works based on given books, articles or movies; preparation of a financial report or a market comparison on a given topic and its presentation during the classes; cas-study assignments; Excel assignments uploaded to eKursy; final test. Summative assessment: arithmetic mean of all summative assessments, with rounding conditions as specified and published on the eKursy platform - it is not possible to obtain the pass mark without passing the test (min. 60% of the points).

Programme content

The programme content includes knowledge of financial products for effective modelling of the source of capital, including anticipation of the possible consequences of decisions on the selection of a financial portfolio spread over time (multivariate modelling) and modelling of business scenarios of financial processes taking into account risk capital, as well as selection of classical and alternative sources of financing (including modelling with the use of VBA functions).

Course topics

1. Introduction to financial modelling - a reminder of the basics of economics, finance and corporate finance
2. The role and importance of financial process analysis in a business model - sources of finance and criteria for capital allocation in a company
3. Legal identity of the company as a determinant: sourcing of funding and business development
4 Effective technical analysis signals in the financial modelling process
5. Business aspects of financial modelling processes - risk capital and the selection of classic and alternative sources of finance

6 Financial modelling vs. sensitivity analysis with variable data
7. Construction of schedules of repayment of financial obligations

Teaching methods

I. FEEDING: 1. Informative lecture 2. Problem lecture 3. Conversational lecture 4. Talking 5. Lecture, reading
II. SEARCHING FOR: 1. Case study 2. Brainstorming 3. Discussion - round table 4. Discussion - pyramid 5. Discussion - seminar 6. Discussion - paper
III. TUTORIAL - PRACTICAL: 1. Auditorium exercises 2. Demonstration method 3. Project method 4. Workshop method
IV. EXPOSING: 1. Demonstration (movie, presentation)

Bibliography

Basic:
1. Małecka, J. (2018). Alternative Sources of Financing for SMEs in Poland in the Light of Empirical Research. Proceedings, Volume 2, EFERIC 2018. The 2nd Entrepreneurship and Family Enterprise Research International Conference. https://doi.org/10.3390/proceedings2241521 https://www.mdpi.com/2504-3900/2/24
2. Małecka, J. (2017). Alternative Securities Markets as Financing Sources for SMEs - Selected Aspects of AIM and NC. Contemporary Issues in Business, Management and Education 2017, 1-9 http://doi.org/10.3846/cbme.2017.072
3. Kupor, S. (2019). Secrets of Sand Hill Road: Venture Capital-and How to Get It . Ebury Press.
4. Romans, A. (2015). The Entrepreneurial Bible To Venture Capital: Inside Secrets from the Leaders in the Startup Game. Mcgraw-Hill Education Europe. X 1.

Additional:
1. Małecka, J. (2023). Financial motivational factors supporting the optimisation process. Journal of Intercultural Management Vol. 15 (3) 2023. DOI: 10.2478/joim-2023-0012.
2. Małecka, J. (2016). Alternative Securities Markets in Poland and the United Kingdom. Problemy Zarządzania vol.14, nr 4(63),t.1,pp:11-24. http://dx.doi.org/10.7172/1644-9584.63.1 WOS: 000400572200001
3. Małecka, J. (2015). Giełda Papierów Wartościowych w Warszawie jako potencjalne źródło finansowania małych i średnich przedsiębiorstw. ZN NR 848 Ekonomiczne Problemy Usług nr 116. P.496-507. Szczecin: Wydawnictwo Uniwersytetu Szczecińskiego. http://www.wzieu.pl/zn/848/ZN_848.pdf
4. Doman, M. Doman , R. (2009). Modelowanie zmienności i ryzyka. Metody ekonometrii finansowej. Wolters Kulwer
5. Bieniasz A., Czerwińska-Kayzer D. (2004): Venture capital - źródło kapitału dla przedsiębiorstwa. W: Zarządzanie finansami. Finansowanie przedsiębiorstw w Unii Europejskiej. Red. D. Zarzecki. T. 1. Uniwersytet Szczeciński, Szczecin: 21-31.
6. Wolak-Tuzimek A. (2004): Alternatywne źródła finansowania działalności przedsiębiorstw. W: Zarządzanie finansami. Finansowanie przedsiębiorstw w Unii Europejskiej. Red. D. Zarzecki. T. 1. Uniwersytet Szczeciński, Szczecin: 163-173.
7. Okręglicka M. (2004): Aspekty prawne, organizacyjne i ekonomiczne leasingu. Difin, Warszawa
8. Tamowicz P., Rot P. (2002): Fundusze venture capital w Polsce - informator. Polska Agencja Rozwoju Przedsiębiorczości, Warszawa
9. Europejski Etyczny Kodeks Franchisingu. (1990). Europejska Federacja Franchisingu. http://www.franchising.info.pl.

Breakdown of average student's workload

	Hours	ECTS
Total workload	25	1,00
Classes requiring direct contact with the teacher	12	0,50
Student's own work (literature studies, preparation for laboratory classes/ tutorials, preparation for tests/exam, project preparation)	13	0,50