

Study Programme Description for the Field of Study: Management first-cycle studies in English

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Basic information on the field of study and the study programme

Organisational unit responsible for the field of study	Faculty of Management
Field of study	Management
Level	First-cycle studies
Education profile	Practical profile
Type of study	full-time studies
Academic discipline(s) to which the field of study is assigned	Management and Quality Studies – 82 % (leading discipline) Economics and Finance – 18 %
Academic year	2026/2027
Number of semesters	6
Language of instruction	English
Professional title awarded to graduates	Bachelor's degree
To complete the programme and obtain a degree, students are required to receive a passing grade for their diploma thesis and successfully pass the diploma examination	

Number of contact hours and ECTS credits for individual study pathways

Specialisation: Aviation Management	full-time
Total number of contact hours	2 546
Physical education hours	60
Vocational apprenticeship hours	960
ECTS credits:	
Total number of ECTS credits required to complete the degree	181
ECTS credits obtained through courses involving direct participation of academic staff or other instructors	96 (53 %)
ECTS credits obtained through courses in the humanities or social sciences	5
ECTS credits awarded for practical skills-oriented courses	102 (56 %)
ECTS credits obtained through elective courses	67 (37 %)

Specialisation: Business Management	full-time
Total number of contact hours	2 527
Physical education hours	60
Vocational apprenticeship hours	960
ECTS credits:	
Total number of ECTS credits required to complete the degree	181
ECTS credits obtained through courses involving direct participation of academic staff or other instructors	96 (53 %)
ECTS credits obtained through courses in the humanities or social sciences	5
ECTS credits awarded for practical skills-oriented courses	102 (56 %)
ECTS credits obtained through elective courses	67 (37 %)

Specialisation: Digital Finance and Strategy	full-time
Total number of contact hours	2 540
Physical education hours	60
Vocational apprenticeship hours	960
ECTS credits:	
Total number of ECTS credits required to complete the degree	181
ECTS credits obtained through courses involving direct participation of academic staff or other instructors	96 (53 %)
ECTS credits obtained through courses in the humanities or social sciences	5
ECTS credits awarded for practical skills-oriented courses	98 (54 %)
ECTS credits obtained through elective courses	67 (37 %)

Educational concept and learning objectives

The educational concept for the Management first-cycle studies is directly linked to the University's mission and strategy – approved by a resolution of the WSliz Senate—regarding:

1. Educating students to meet the needs of the information society and the knowledge-based economy, equipping them to create new economic, social, and cultural value.
2. Fostering the aptitudes required to live in a society undergoing constant transformation, enabling students to maintain openness to change, innovativeness, and intellectual mobility throughout their professional lives.
3. Creating conditions for the development and dissemination of innovative and entrepreneurial attitudes.
4. Conducting research activities and fostering staff development.
5. Undertaking initiatives to advance the region's economic and civilizational progress.

Closely linked to the University's mission is a strategy outlining three key priorities:

1. Delivering an educational process that ensures graduates possess high-level competencies.
2. Developing scientific research through the effective utilization of the academic community's potential and research infrastructure.

3. Expanding cooperation with the socio-economic environment.

The educational concept for the Management first-cycle programme specifically addresses a key objective of the University: delivering an educational process that ensures graduates possess high-level competencies. The extensive use of active teaching methods (such as decision-making games, case studies, and situational exercises) within the curriculum makes the educational process more practical and fosters the development of students' competencies and creativity. It also positively impacts the professional development of academic staff, encouraging an innovative mindset. Furthermore, a significant portion of classes – particularly specialization courses – is conducted by business practitioners. The specializations offered align with current labor market needs and the University's educational goals, namely delivering specialized knowledge to students and equipping them with the skills necessary to function effectively in a professional environment.

The general educational objectives of the Management first-cycle degree programme focus on:

- 1) imparting knowledge in the field of social science (specifically the discipline of management and quality studies) regarding: the operating conditions and principles of entities constituting the economic system (with particular emphasis on business enterprises), the relationships between economic entities, and the specifics of decision-making under various types of constraints;
- 2) imparting detailed knowledge regarding decision-making related to various functional areas of an organization and specific areas of its operations, including: financial management, quality management, project management, marketing management, strategic management, and the use of IT solutions in the management process; human resource management;
- 3) developing the ability to apply analytical techniques and tools that support decision-making under conditions of limited information, particularly through the use of standard quantitative and qualitative methods employed in the disciplines of management and quality studies as well as economics and finance;
- 4) developing the ability to oversee the proper conduct of processes within various types of organizations, based on an understanding of the interdependencies between the different elements of their structure;
- 5) fostering entrepreneurial attitudes among students, focused on the ability to identify market opportunities and implement their own business projects;
- 6) preparing graduates for practical professional activity and the performance of specialized tasks in various roles within enterprises, entities, institutions, and organizations related to their field of study;
- 7) cultivating attitudes of responsibility, openness, a willingness to collaborate, and an innovative approach to problem-solving, as well as an understanding of the need for continuous professional development.

Achieving the aforementioned goals is made possible through close cooperation with internal and external stakeholders who influence the curriculum (particularly regarding the subject matter of specialization courses) and, consequently, help shape the desired graduate profile.

An analysis of the alignment between intended learning outcomes and labor market needs is conducted based on:

- 1) Employer feedback regarding the study programme concept. The University operates a WSiIZ Convention tasked with, among other things, evaluating the alignment of the adopted educational strategy with labor market requirements and facilitating contact between vice-deans and employer "programme councils" (advisory bodies comprising 3-5 individuals). Cooperation between the dean and the "programme council" involves an annual review of the study programme's content, with particular emphasis on the extent to which learning outcomes meet labor market needs.
- 2) Reports on labor market needs, including:
 - a) a report based on an analysis of job offers submitted to the University's Career Office, focusing on candidate requirements,
 - b) a report defining the candidate profile based on the Career Office's database of job seekers,
 - c) publicly available labor market reports.

Key external stakeholders include, first and foremost, employees of companies and institutions involved in aviation management. Their feedback and requests regarding specific topics or entire courses served as the basis for developing – and subsequently modifying – the package of specialization courses. A similar approach applies to the Business Management specialty, where the content of individual courses is regularly reviewed

by the representatives of international companies operating in the region. As a result of ongoing collaboration, course curricula are being improved, including through the introduction of new course topics (e.g., Quality Management, Negotiations in Business).

Digital Finance and Strategy is a new specialization in the 2026/27 offer. The concept behind its creation was based on observations of trends and predictions regarding their future development. The concept of this specialization aligns with one of the aspects of sustainable development, as digital finance is a tool that can accelerate and facilitate the achievement of sustainable development goals. The goal of the specialization is to shape and support a more inclusive, transparent, and environmentally friendly approach to financing and investing.

The key learning outcomes for the first-cycle degree programme align with the educational concept and the programme profile, as well as with current trends in professional and business activity and the labor market. They also address the needs of the socio-economic environment. These outcomes include, for instance, skills in: formulating and solving problems and carrying out tasks for professional activities in the field of management (K_U01); forecasting the effects of decisions taken at the organizational level and predict the impact of processes in the environment and inside the organization (K_U03); resolving problems occurring at the stage of project implementation in a selected area of activity (K_U06); applying principles of financial management and accounting (K_U07); drawing up a strategy for an organisation and its functional units based on an analysis of the environment and internal resources (K_U10); and demonstrating entrepreneurial thinking and action readiness (K_K05). These learning outcomes ensure graduates possess high-level competencies and foster the development of students' skills and creativity, while also making the educational process more practical.

Management as a field of study is highly interdisciplinary, integrating knowledge from various scientific disciplines. The majority of learning outcomes in the first-cycle programme fall within the scope of management and quality sciences (82%; the leading discipline). However, given that management is a broad field linked to other disciplines, the curriculum also incorporates learning outcomes related to economics and finance (18%).

Graduate profile

Achieving the intended learning outcomes – aligned with the educational concept and objectives – produces Management graduates equipped with tangible knowledge and practical skills. They are prepared for employment in business organizations and economic administration at the operational level, capable of leading teams, projects, and operations across various industries (including aviation), and ready to implement innovative solutions or launch their own independent business ventures.

The practical educational profile of the Management programme enables students to develop managerial, business, and digital competencies directly relevant to the professional and economic fields associated with the discipline. During their studies, students acquire skills that allow them to, among other things: solve organizational management problems; make operational and strategic decisions; take the necessary steps to launch an independent business; organize and plan activities at both organizational and regional levels; and utilize information and communication technologies (ICT) to generate solutions and to forecast and model organizational processes.

Graduates of the Aviation Management specialization possess the knowledge, skills, and competencies required for roles in the aviation industry, such as: airline network manager (for specific route networks); operations manager at airports or aircraft charter companies; airline sales staff; airline or airport control staff; and strategy or market development specialist (for airlines or airports).

Graduates of the Business Management specialization possess the knowledge, skills, and competencies required for employment in enterprises engaged in international operations, subsidiaries of transnational corporations, and various organizations linked to international business. They may also establish and run their own businesses in the international market.

Graduates of the Digital Finance and Strategy specialization have employment opportunities across various sectors related to finance, technology, and business strategy. Potential employers include banks and financial

institutions, fintech companies, consulting firms, insurance companies, and corporations or enterprises utilizing digital finance.

These objectives are achieved through close cooperation with internal and external stakeholders who influence the curriculum – particularly the specialization's course offerings – and, consequently, help shape the desired graduate profile.

Rules and organization of vocational apprenticeships

Students are required to complete a vocational apprenticeship in accordance with the requirements and number of hours specified in the study programme for a given field, level and profile of studies. The rules governing the organisation and completion of vocational apprenticeships are specified in the Regulations for Student Vocational Apprenticeships constituting an attachment to the Rector's Order .

The organisational unit of the University supporting the organisation of vocational apprenticeships is the Vocational Apprenticeship Office, headed by the University Coordinator for Vocational Apprenticeships. Students are assigned to vocational apprenticeships by the coordinator responsible for vocational apprenticeships within a given field of study, hereinafter referred to as the "Coordinator" (such a person must hold qualifications in the relevant field of study or have at least three years of experience as an academic teacher in the given field of study). Students may independently find a place to complete their vocational apprenticeship or use the database of employers cooperating with the University, maintained by the Vocational Apprenticeship Office and the Careers Service.

A student wishing to commence a vocational apprenticeship receives a Vocational Apprenticeship Record Sheet from the Coordinator, which is submitted to the employer together with the apprenticeship card. The employer confirms whether the nature, scope of activity and workplace equipment will enable the student to achieve the intended learning outcomes. The decision regarding the possibility of completing the vocational apprenticeship at a given workplace is made by the Coordinator. The student completes the vocational apprenticeship on the basis of a tripartite agreement concluded between the University, the employer and the student.

The vocational apprenticeship takes place during the summer break or during the academic year, provided that it does not prevent the student from attending classes. During the vocational apprenticeship, the Coordinator conducts visits at workplaces in order to verify the proper course of the apprenticeship. Student attendance during the vocational apprenticeship is obligatory. No more than five days of justified absence during a given stage of the vocational apprenticeship are permitted. The apprenticeship may be extended by the duration of the justified absence. Absence during the apprenticeship is justified by the Coordinator.

During the apprenticeship, the student keeps a Vocational Apprenticeship Logbook. The apprenticeship is completed and assessed by the Coordinator based on the Vocational Apprenticeship Logbook and the Evaluation Sheet, in which the workplace supervisor evaluates the extent to which the student has achieved the learning outcomes during the apprenticeship.

The Regulations for Vocational Apprenticeships specify the cases and conditions under which the University may, upon the student's request, recognise activities performed by the student as part of employment, traineeship or voluntary work as equivalent to the vocational apprenticeship (provided that these activities enabled the achievement of the learning outcomes specified in the study programme for vocational apprenticeships).

Within the field of study Management, students may complete vocational apprenticeships at business entities (enterprises across various industries, banks, investment funds, leasing companies, brokerage firms, and insurance companies, as well as government and local government institutions; or, for the Aviation Management specialization, at companies in the aviation sector).

Vocational Apprenticeship, part 1

No.	Description of Learning Outcomes	Reference to learning outcomes for the programme
Upon completing the internship, the student, in terms of SKILLS		
P_U01	can manage time, in particular by setting objectives and carrying out	K_U11

	activities in accordance with a schedule	
P_U02	can use a computer, application software and an operating system safely, and work online	K_U14
P_U03	can communicate and work in a team, and in particular demonstrates the ability to cooperate constructively with others	K_U16
Upon completing the internship, the student, in terms of SOCIAL COMPETENCES		
P_K01	is ready to identify and resolve dilemmas arising from the practice of the profession	K_K04

Vocational Apprenticeship, part 2

No.	Description of Learning Outcomes	Reference to learning outcomes for the programme
Upon completing the internship, the student, in terms of SKILLS		
P_U01	can solve problems occurring at the stage of project implementation in a selected area of activity	K_U06
P_U02	understands the need for lifelong learning and the development of professional competences	K_U15
P_U03	can communicate and work in a team, and in particular demonstrates the ability to cooperate constructively with others	K_U16
Upon completing the internship, the student, in terms of SOCIAL COMPETENCES		
P_K01	is ready to identify and resolve dilemmas arising from the practice of the profession	K_K04

Methods of verifying and assessing the learning outcomes achieved throughout the programme of study

The University's system for verifying and assessing the extent to which students have achieved the learning outcomes consists of:

- ongoing verification and assessment of the learning outcomes achieved by students during assessments and examinations in individual courses undertaken during the semester,
- ongoing verification and assessment of the student's learning outcomes during vocational apprenticeships,
- final verification and assessment of the student's learning outcomes during the preparation of their dissertation and during the final examination.

The choice of methods for verifying and assessing learning outcomes is determined by the nature of the learning outcomes intended to be achieved within a given course. The aim of the various forms of teaching delivered as part of a course is for the student to achieve specified learning outcomes in knowledge, skills, and social competencies. Depending on the nature (category) of the learning outcome being assessed, the following methods, amongst others, are used during the ongoing assessment and evaluation of the student's learning outcomes:

- 'knowledge' category – written assessment methods (tests comprising closed or open-ended questions), oral assessment methods based on open-ended questions,
- 'skills' category – workshops (including laboratory work) based on carrying out practical tasks or problem-solving (problem-based learning), the project method, the case study method, educational simulation games, the observation method,
- 'social competencies' category – the project-based method, educational simulation games.

When preparing tools for assessing learning outcomes, academic staff and other course leaders draw on the provisions of the course outlines (which include, amongst other things, information on the course objectives, course-specific learning outcomes, course content, assessment methods and criteria for evaluating the degree

to which individual learning outcomes have been achieved) and on the guidelines set out in the Rector's Regulation *on the Preparation of Evaluation Tools for the Learning Outcomes*.

The key method used during the ongoing monitoring and assessment of students' learning outcomes whilst undertaking vocational apprenticeships is observation in real-life settings, which involves analysing students' performance as they carry out tasks arising from the learning outcomes. The outcome of the task is assessed in terms of its quality and the correctness of the procedure used to solve or complete it.

The final verification and assessment of the student's learning outcomes takes place during the preparation of the student's dissertation and during the final examination. Given the practical nature of the education profile, students are required to undertake practical dissertations in line with their field of study and chosen specialisation. The aim of the dissertation is to solve a practical problem (for first-cycle studies) or a research problem based on applied research methodology (for second-cycle studies). The assessment criteria for the dissertation relate to its substantive content and editorial quality. Both these aspects are defined by the learning outcomes set out in the course outline for *the Diploma Seminar*. A detailed elaboration of the rules can be found in the Rector's regulation *on Diploma Theses and Diploma Examinations*, which is updated annually. The thesis supervisor and the examiner assess the thesis independently of one another. The assessment covers, amongst other things, the relevance of the content to the thesis title, mastery of thesis-writing techniques and stylistic and linguistic correctness, an original approach to the problem or topic, and the selection and use of sources. To ensure the practical nature of theses, selected assessment criteria are treated as 'critical'; that is, if a negative mark is awarded for any of these aspects of the thesis, the review (assessment) cannot be positive – these are: the assessment of the practical character of the thesis and the substantive assessment of its content.

The second stage of the final assessment is the oral thesis examination, which comprises the student's presentation of their thesis, a discussion of a selected topic related to the thesis, and the student's response to a problem-based question aligned with the field of study's learning outcomes.

The primary methods of documenting students' learning outcomes at various stages of the educational process are: examination and assessment papers, completed projects, work placement logs, and dissertations. To safeguard this documentation, course lecturers are required to submit students' stage-based work to the University's designated organisational units, where it is retained for 2 years. Documentation related to vocational apprenticeships is retained by the Vocational Apprenticeship Office, whilst dissertations are stored in the University's IT system.

Course catalogue

This chapter contains information on the courses included in the study programme for the field of study in Management, first-cycle studies, together with the learning outcomes assigned to them (see Attachment: Matrix of Learning Outcomes) and the course content ensuring the achievement of these outcomes. In accordance with Interpretative Opinion No. 10/2022 of the Presidium of the Polish Accreditation Committee of 9 June 2022, this fulfils the requirement specified in § 3(1)(3) of the Regulation of the Minister of Science and Higher Education of 27 September 2018 on studies, which states that: "The study programme shall specify (...) courses or groups of courses, regardless of the form in which they are delivered, together with the assignment of learning outcomes and course content ensuring the achievement of those outcomes."

All-University Courses

English for Specific Purposes

Prerequisites (derived from the sequence of subjects):

- Language level – B1+ according to European Framework of Reference for Languages

Course content:

- Developing vocabulary resources in accordance with the textbook applicable to the level, taking into account the vocabulary of the area of study.
- Grammatical structures in accordance with the textbook applicable to the level.

- Practice reading comprehension in accordance with the textbook applicable to the level, taking into account topics from the area of study.
- Practice listening comprehension in accordance with the textbook applicable to the level.
- Developing the ability to prepare oral statements (e.g., presentations) in accordance with the textbook applicable to the given level, taking into account topics from the area of study.
- Developing the ability to prepare written statements in accordance with the textbook applicable at the given level, taking into account the subject

Contemporary European Culture

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Europe's cultural heritage and contemporary European identity
- European integration as a cultural project
- Globalisation and its impact on European culture
- Migration and cultural transformations in Europe
- Religion and secularisation in contemporary Europe
- Cultures of memory in Europe after 1945
- Digital media and transformations in cultural communication
- National identity versus European identity
- Youth culture and new social movements in Europe
- Contemporary art as a reflection of social and cultural change

Digital Safety and Awareness

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Information culture and disinformation in the age of algorithms:
 - Basic concepts: information culture, information literacy, infodemic.
 - Post-truth: causes, manifestations, consequences for public debate and civil society.
 - Fake news: origins, dissemination mechanisms, the attention economy.
 - GenAI-assisted disinformation — deepfakes, synthetic content, LLM-based "content farms"; how to distinguish generated content from authentic content.
- Data privacy and security in the digital world:
 - Digital footprint, personal data vs. behavioral data.
 - The business model of digital platforms (so-called surveillance capitalism), profiling and content personalization.
 - Legal foundations: GDPR, user rights, informed consent.
 - Practical security principles: passwords, multi-factor authentication, privacy settings, phishing and social engineering risks.
 - Data in the context of GenAI tools — what happens to data entered into chatbots, risks of confidential information leaks.
- Digital hygiene and psychological wellbeing:
 - What is digital hygiene — principles, boundaries, digital detox.
Smartphones, social media and mental health: addictive mechanisms (infinite scroll, variable reinforcement).
Cyberstress, FOMO, the "always on" attitude, digital burnout.
 - Impact on sleep, concentration, social relationships and self-image (social comparison).
Practical strategies: digital wellbeing, notification management, mindful use.

- GenAI: opportunities, risks, and responsible use:
 - How generative models work — non-technical fundamentals, hallucinations, limitations.
 - Risks: erosion of critical thinking, overreliance on AI, bias in training data, impact on education and work.
 - Ethical aspects: copyright, transparency, accountability for AI-generated content.
 - Principles of responsible and healthy GenAI use — when AI helps, when it harms.

Personal Business Model

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- *Self-reflection – analysis of personal resources*: Finding your WHY and discovering key elements of professional identity through an analysis of interests, personality, skills and values. Identifying personal preferences regarding the work environment. Defining professional identity on the basis of identified preferences and personal resources. Work based on Module 1 in the Booklet and tests available on the Competence Development Platform.
- *Prototyping a selected job position – analysis of job advertisements*: Introduction to the concept of the Personal Business Model and the Job Business Model Canvas (JBMC). Working with the JBMC in the context of a selected job position. Using job advertisements as a source of data for the JBMC. Work based on Module 2 in the Booklet and job offers for the selected position.
- *Prototyping a selected job position – analysis of information from career portals and AI tools*: Working with AI tools (e.g. ChatGPT) and descriptions on career portals (including onetonline.org, MyNextMove and Mapa Karier) to refine and supplement information about the characteristics of the selected position. Identifying typical duties, required personal resources and the work environment. Completing the missing elements of the Job Business Model Canvas. Work based on Module 3 in the Booklet.
- *Analysis of gaps in personal resources*: Comparing personal resources with the requirements of the selected position. Identifying gaps in the skills, knowledge and traits necessary to work in the desired profession. Analysing the fit between the student's preferences and the work environment. Developing ideas for growth and a plan for closing competency gaps. Work based on Module 4 in the Booklet.
- *Elevator pitch*: Preparing a self-presentation (elevator pitch) and delivering it to the group. Formulating a personal value proposition in the context of the selected profession. Linking personal resources to the employer's needs. Delivering an oral presentation. Work based on Module 5 in the Booklet.
- *Creating a Development and Individualised Educational Pathway Plan*: As part of the project, each student develops a plan for the development and individualisation of their educational pathway, based on the results of work completed in the Booklet and the completed Job Business Model Canvas (JBMC). The project includes a summary of the analysis of gaps in personal resources and the identification of key areas for development. The student identifies the most important courses in the study programme and selects a specialisation that best matches their interests and career goals. The project is supplemented by a selection of additional development resources, including online training, educational materials, books, events and activities that enable the student to test the selected career path in practice. The project is individualised and aims to support informed career planning based on the student's resources, labour market needs and personal aspirations.

Information Technology

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Computer system architecture and the characteristics of its individual components. Operating systems, utility software and application software. Computer networks and network services. Online safety issues. Use of the main components of an operating system.

- Organisation of data storage on mass-storage devices; working with files; creating directories; naming, copying and moving files and directories. Searching for files and directories. File compression and decompression.
- Using a web browser and searching for information on the Internet. Using email applications.
- Working with text documents and saving them in different file formats. Selecting appropriate options to improve the speed and efficiency of work.
- Creating and editing text documents and applying various formatting options to enhance a document.
- Using advanced word-processing tools, such as document templates and the automatic generation of tables of contents and lists of objects.
- Working with spreadsheets and saving them in different file formats. Selecting appropriate options to improve the speed and efficiency of work.
- Creating and editing spreadsheet content. Formatting data. Applying predefined mathematical and logical formulas and creating custom formulas.
- Selecting, creating and modifying charts. Configuring documents for printing. Reviewing and correcting content.
- Creating multimedia presentations using different presentation modes and applying various slide layouts and designs.
- Entering, formatting and editing text in presentations; inserting and editing images, drawings and other objects.
- Creating and formatting charts from data; applying object animations and slide transitions; and reviewing and correcting presentation content before final distribution.

Protection of Intellectual Property

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- The origins and concepts of intangible assets, intellectual property and industrial property, and mechanisms for their protection under domestic and international law.
- The subject matter of copyright: works and their types. Copyright holders.
- Moral and economic rights in copyright.
- Plagiarism: its definition, nature and types, and the associated legal liability.
- Claims arising from copyright infringement.
- Industrial property assets: their types and protection under domestic and international law.
- Issues concerning the operation of artificial intelligence in the context of intellectual property law.

Academic Writing Skills

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Stages of problem solving (spotting problems, analyzing initial conditions, generating solution ideas, verifying concepts)
- Stages of writing a thesis (development of a substantive plan, critical analysis of source materials, structure of the text, importance of the paragraph, argumentation, discussion)
- Formal aspects of writing the thesis (formatting of the text, figures and tables, preparation of footnotes, list of bibliography in accordance with the Instructions for writing the thesis in force at the university)

Health and Safety while Studying

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Selected legal regulations concerning occupational health and safety, including the rights and responsibilities of students and university staff.
- Ergonomic guidelines for setting up a safe study workstation with a computer and other equipment. Psychological guidance on learning and organising work (the Pareto principle in learning, the primacy and recency effects, study breaks, the forgetting curve, the role of repetition, daily intellectual rhythms, conditions for effective mental work, and overcoming memory blocks). Applying effective mental work techniques, including mnemonic techniques. Opportunities and risks associated with remote education.
- Hazards arising from dangerous, harmful and burdensome factors present in work and learning processes, and methods of protection against them. The nature and types of cybersecurity and mental health risks (the model of psychological well-being).
- Procedures to follow in the event of accidents and emergencies (including fires and equipment failures), as well as the principles of providing first aid in the event of an accident.

Civilization Challenges

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Industrial civilisation as a civilisation of waste: a brief historical overview and the current situation
- Climate change and the decline in biodiversity on Earth and their anthropogenic causes
- Working with and emulating the environment as the basis for the well-being of our species
- Systemic transformation towards a low-carbon economy: strategies for reducing greenhouse gas emissions in the context of climate policy and sustainable development
- Food security and the transformation of the food production system: from monocultures to sustainable supply chains
- The circular economy as a response to the waste crisis: implementation models, digital technologies and social attitudes
- A new socio-economic architecture: how to transform the organisation of society and the economy to enhance resilience, prosperity and social justice
- Artificial intelligence (AI), social media and new technologies in health and illness
- Behavioural patterns and premature mortality; the social environment and health
- Twenty-first-century epidemics: hypertension, cancer, obesity and infectious diseases
- Mental health
- What can be done to maintain good health: is health promotion sufficient?
- Food: its functions, types and health value, and nutrition-related diseases
- Principles of healthy eating, sources of food-related health risks, and types of diets used to prevent selected lifestyle diseases

Physical Education

Part 1

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Athletics. General fitness exercises, warm-up, running, jumping and throwing. Rules.
- Volleyball. Receiving and passing the ball using the overhead pass and forearm pass; serving and serve reception. Tactics: basic court positioning when serving, covering the block by the middle-back defender, covering one's own attack, practice games and regular play. Rules of the game.
- Volleyball. Receiving and passing the ball using the overhead pass and forearm pass; serving and serve reception. Tactics: basic court positioning when serving, covering the block by the middle-back defender, covering one's own attack, practice games and regular play. Rules of the game.

- Football. Receiving the ball while stationary and while running; striking the ball with the inside of the foot and the instep; heading and dribbling. Tactics: set plays, including free kicks, corner kicks and penalty kicks; simplified games and regular play. Rules of the game.
- Basketball. Passing, catching, set shots, jump shots, lay-ups and dribbling. Tactics: man-to-man defence, structured offence, simplified games and regular play. Rules of the game.
- Movement classes to music: aerobics, step aerobics, callanetics, exercises with equipment and stretching.
- Specialist strength training in the gym.
- Nordic walking, walk-run training and cross-country running – techniques.
- Tennis, table tennis and badminton. Techniques and rules of the game.

Part 2

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Athletics. General fitness exercises, warm-up, running, jumping and throwing. Rules.
- Volleyball. Receiving and passing the ball using the overhead pass and forearm pass; serving and serve reception. Tactics: basic court positioning when serving, covering the block by the middle-back defender, covering one's own attack, practice games and regular play. Rules of the game.
- Football. Receiving the ball while stationary and while running; striking the ball with the inside of the foot and the instep; heading and dribbling. Tactics: set plays, including free kicks, corner kicks and penalty kicks; simplified games and regular play. Rules of the game.
- Basketball. Passing, catching, set shots, jump shots, lay-ups and dribbling. Tactics: man-to-man defence, structured offence, simplified games and regular play. Rules of the game.
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- Specialist strength training in the gym.
- Nordic walking, walk-run training and cross-country running – techniques.
- Tennis, table tennis and badminton. Techniques and rules of the game.

Basic Courses

Mathematics

Part 1

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Solving systems of equations
- Matrices. Algebra of matrices
- The determinant
- Inverse matrix
- Vectors. Linear independence of vectors
- Various methods of solving systems of equations
- Gauss algorithm and its applications
- Linear transformations and their matrices
- Application of linear algebra methods in management

Part 2

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Properties of functions and operations on functions. Overview of elementary functions

- Limit of a function and continuity of a function
- Derivatives of a function and its interpretation. Differentiability of functions
- Basic derivatives and methods of their calculation. Applications of the derivative
- Elements of the study of the variation of functions
- The indeterminate integral, the definite integral and its applications
- Applications of differential and integral calculus in various sciences
- Sketching the curve steps to plot the graph of a function
- Basic indeterminate integrals and methods of calculating them
- Newton-Leibniz theory and calculation of the area between given curves

Statistical Methods in Management

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Subject, functions and tasks of statistics. Types of statistical research
- Analysis of structure on the basis of classical and positional parameters
- Analysis of interdependence of mass phenomena
- Analysis of the dynamics of phenomena - trends and their types, index methods
- Verification of statistical hypotheses

Operational Research

Prerequisites (derived from the sequence of subjects):

- Mathematics Part 1
- Statistical Methods in Management
- Information Technology

Course content:

- Introduction to operational research. History. Practical application of the subject
- Linear Programming - mathematical model (production problem and mixture problem).
- GLP - graphical representation
- Sensitivity analysis
- Transport algorithm, scheduling
- Non-linear programming - mathematical model
- Techniques used in project management: network diagrams in the CPM model
- Exercises in linear programming
- Exercises in sensitivity report analysis and graphical representation of results
- Exercises in nonlinear programming
- Exercises in CPM network construction

Microeconomics

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- The concept and subject of economics. Microeconomics and macroeconomics. Positive and normative economics. Categories and laws of economics. The place of economics in the system of sciences. Subject and methodological links of economics with other disciplines of sciences. Research methods and tools in economics. Economic models.
- Economic choice. Opportunity cost. Production possibility curve. Determinants of production opportunities. Shapes of the production possibility curve. Using the production possibility curve to analyze the situation of a firm and the economy as a whole.

- Concept and functions of markets. Classification of markets. Demand and determinants of demand. Demand and the quantity demanded. A shift in the demand curve and movement along the demand curve. Supply and determinants of supply. Supply and the quantity supplied. A shift in the supply curve and movement along the supply curve. Equilibrium price. Minimum price versus maximum price.
- Price, income and mixed elasticity of demand and supply. Point and arc elasticity of demand. Determinants of demand elasticity. Interpretation of demand elasticity results.
- The consumer as an economic agent. The goal of consumer activity. Consumer tastes and preferences. Total and marginal utility. The consumer's indifference curve and its features. Law of decreasing marginal rate of substitution. The budget constraint line. The consumer's optimum point. Substitution and do-good effects in consumer theory.
- Theory of production. Factors of production. Total output, average output, and marginal output. Classification of production costs. Costs by type. Fixed and variable costs. Total, average, and marginal costs. Analysis of costs in the long run. Economies and diseconomies of scale.
- Market structures. Importance of competition in the economy. Perfect competition. Full monopoly. Monopolistic competition. Oligopoly. Modern forms of monopoly.
- Concept of total, average and marginal profit of an enterprise. Curves of total, average, and marginal revenue for a firm under conditions of perfect competition, monopolistic competition, oligopoly, and monopoly. The concepts of total, average, and marginal profit. Ordinary and extraordinary profit. The concept of total, average and marginal profit.
- Equilibrium of the enterprise under different market structures. Conditions for firm equilibrium. Equilibrium of a firm in perfect competition. Equilibrium of a firm in a monopoly. Equilibrium of a firm in monopolistic competition. Equilibrium of a firm in an oligopoly.

Fundamentals of Macroeconomics

Prerequisites (derived from the sequence of subjects):

- Microeconomics

Course content:

- Introduction. Disputes among economists. Major macroeconomic developments of the last century. Measurement of economic change. National accounts. Decomposition of GDP. Basic macroeconomic identities.
- Economic growth and development. Theory versus empirics of economic growth. Statistical data versus economic theory. Decomposition of economic time series. Business cycle and potential output.
- Global demand and the fundamentals of short-run macroeconomics. Equilibrium in the market of goods and services in the short term. Multiplier mechanism. Fiscal policy. Empirical references - the business cycle.
- Money and the banking system. Tasks of the central bank. Interest rates and transmission of monetary policy. IS-LM model.
- Labor market. Measuring the labor market situation. Flows versus resources in the labor market. Unemployment and labor force participation. Basic labor market model and causes of unemployment. Beveridge curve; frictions and matching in the labor market.
- AD-AS model. Global supply in the short and long run. Short-term rigidities. Economic growth in the long run.
- Inflation. Measures of prices. Causes of inflation. The Phillips curve. The impact of expectations on the economy.

Law

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- The Role of Law in Society and the Economy. Principles of Law. Human Rights and Fundamental Freedoms

- The Structure of the Legal System. International Law and European Union Law. Public Law and Private Law. Sources of Law (Types and Hierarchy)
- Civil Law: Sources of Law. Characteristics of Civil Law Relationships. Principles of Contract Law. Principles of Civil Liability
- Administrative Law: Sources of Law. Characteristics of Administrative Legal Relationships. Administrative Decisions
- Criminal Law: Sources of Law. Principles of Criminal Law and Liability. Criminal sanctions
- Legal Framework for Conducting Business Activities (Legal Forms of Business, Rights and Obligations of Entrepreneurs)
- Contracts in Business Transactions
- Legal Framework for new technologies: Regulation of Digital Markets and Digital Services, Cybersecurity, and Artificial Intelligence (AI) Regulation

Fundamentals of Management

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- The essence and importance of the management process, the place of management science in the system of sciences
- The organization and its subsystems, the environment of the organization
- The process of managerial decision-making
- Planning, organizing, motivating (leading), controlling
- Case study related to identifying the relationship of the organization with its environment. SWOT analysis
- Case study - managerial decision-making process
- Case study - goal formulation and planning activities in the organization.
- Case study - necessary changes in organizational structure of the company
- Case study - monitoring, measuring and analyzing data and corrective actions
- Management process by function
- Characteristics of a manager. Levels of management and managerial roles
- Leadership in the organization

Fundamentals of Finance

Prerequisites (derived from the sequence of subjects):

- Microeconomics

Course content:

- Finance and the classification of financial phenomena (Classification of basic financial categories, including revenue, income, expense, tax, and debt categories).
- Interest Calculations (Percentage, interest rate, and basis points. Limits of interest rate fluctuations. General categories of interest rates. Simple interest and compound interest).
- Time value of money (Future value of money. Present value of money. Annuities. Future value of a series of periodic payments. Present value of a series of periodic payments).
- Structure of financial statements (Basic structure of the balance sheet. Income statement and approaches to its structure. Cash flow statement and its informational value).
- Introduction to methods for evaluating the profitability of investment projects (Methods of investment efficiency calculation. Simple methods and discounting methods for evaluating investment projects).
- Rate of return, risk, and liquidity in the capital market (Types of financial instruments. Rate of return on investment. Investment risk and its categories. Investment liquidity).

Entrepreneurship in Practice

Prerequisites (derived from the sequence of subjects):

- Microeconomics

Course content:

- Introduction to Entrepreneurship (What is entrepreneurship? Characteristics of entrepreneurial firms, The impact of entrepreneurship and entrepreneurial firms on economies and societies, The entrepreneurial process).
- Developing Successful Business Ideas (Feasibility analysis, Developing an effective business model, Preparing a business plan).
- Transitioning from an idea to an entrepreneurial company (Types of start-up companies, Establishing appropriate ethical and legal foundations, Assessing the financial potential and profitability of a new venture).
- Securing financing or funds for business operations (personal funds, debt financing, equity, creative sources).
- Management and development of a business (Industry and competition analysis, Importance of intellectual property, Preparing for and assessing challenges related to company growth, Business development strategies).

Accounting

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- The nature of accounting, the accounting system, and its functions. Accounting principles, techniques, and methods. Chart of accounts.
- Classification of assets and liabilities; company assets and sources of financing.
- Accounting cycle: documentation, journal, general ledger, trial balance, posting of balance sheet and income statement transactions, closing balance sheet.
- Measurement of financial results. Disclosure requirements for financial statements.
- Documentation and records of cash transactions,
- Documentation and records of inventory transactions. Methods of valuing current assets,
- Documentation and records of accounts receivable and accounts payable.
- Documentation and records of fixed assets. Depreciation of fixed assets.
- Equity and allocation of net income.

Major-Related and Specialty Courses

Strategic Management

Prerequisites (derived from the sequence of subjects):

- Fundamentals of Management
- Microeconomics
- Fundamentals of Macroeconomics

Course content:

- The role and importance of corporate strategy in a changing environment
- Principles of formulating the company's vision and mission
- Review of selected methods of strategic analysis
- Principles and process of formulating the strategic objectives of the company
- Monitoring and improvement of the company's strategy
- Models of strategy based on competition and cooperation with other companies
- Analysis of macro environment and competitive environment of the company - case study
- Analysis of the product (business) portfolio - case study
- Analysis of strategic potential - case study

- Principles of formulating strategic objectives and ways to achieve them - practical exercises

Organisational Behaviour

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Interpersonal relations in the process of managing organizations and their importance in shaping individual, group and organizational human behavior
- Leadership in the process of managing organizations and human individual, group and organizational behavior
- Organizational culture and human individual, group and organizational behavior
- Interpersonal communication and teamwork and human individual, group and organizational behavior
- Individual and social interpersonal problem solving and human individual, group and organizational behavior

Quality Management

Prerequisites (derived from the sequence of subjects):

- Fundamentals of management

Course content:

- Practical interpretation of the TQM philosophy and ISO 9001 with examples
- Methods techniques and tools of quality management in the organization
- Review of commonly used norms and standards of quality management
- Methodology of mapping processes and creating procedures in QMS

Public Finance Management

Prerequisites (derived from the sequence of subjects):

- Microeconomics
- Fundamentals of Macroeconomics
- Fundamentals of Management
- Fundamentals of Finance

Course content:

- The Concept and Scope of Public Finance
- Economic Efficiency in the Public Sector
- The Role of Public Finance in a Market Economy
- The National Budget, Budget Deficit, and Public Debt
- Fundamentals of Tax Theory

Data Analytics in Business

Prerequisites (derived from the sequence of subjects):

- Information Technology

Course content:

- Introduction to business analytics - case study analysis
- Basics of tabular data processing. Searching, filtering, sorting, proving simple calculations using table and database functions
- Designing data models and creating queries, basics of using PowerQuery Editor
- Data analysis using pivot tables. Conducting calculations on sets of records
- Conditional analysis. Data tables, scenarios and Search for result.
- Data visualization. Selecting the form of visualization for the purpose of presentation. Best practices in visualization

- Basics of creating dashboards, introduction to business intelligence analysis

Economics of Enterprise Organization

Prerequisites (derived from the sequence of subjects):

- Microeconomics
- Fundamentals of Finance
- Fundamentals of Management

Course content:

- Introduction to the economics of enterprise organization. Basic analytical concepts
- Organizations, their types and forms of organizational coordination
- Economics of transaction costs
- Management of contractual relations
- Vertical integration and effective enterprise size
- Enterprise boundaries and costs of administration
- Credible commitments. Unilateral and bilateral applications
- Alternative ownership regimes and corporate labor organization
- Organizational forms of corporations. Corporate governance and instruments of corporate governance
- Natural monopolies. Dilemmas of antitrust policy

Corporate Finance

Prerequisites (derived from the sequence of subjects):

- Microeconomics
- Fundamentals of Finance

Course content:

- Investing: economics of investments, evaluation of their profitability, role of cost of capital
- Financing: sources of capital, optimization of capital structure, policy of payments to owners
- Working capital: inventories, short-term receivables and payables, short-term investments
- Enterprise value: enterprise value as a key financial variable, architecture of an enterprise value management system
- Evaluation of investment projects
- Optimization of capital structure, management of cost of capital
- Management of net working capital
- Enterprise valuation methods

Business Communication

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Communication process
- Verbal and non-verbal communication, intercultural communication
- Written business communication
- Effective team communication
- The art of preparing presentations

Financial Markets

Prerequisites (derived from the sequence of subjects):

- Microeconomics

Course content:

- Introduction to financial market issues

- Foreign exchange market vs. other markets
- Fundamental analysis
- Basic assumptions of technical analysis. Formations in technical analysis
- Hedging
- Practical aspects of investing. Using the MetaTrader platform to implement your own investment strategy

Marketing

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Introduction to marketing, basic marketing concepts and principles
- Analysis of the marketing environment
- Consumers and their behavior in the market
- Corporate marketing strategy
- Marketing mix

Human Resources Management

Prerequisites (derived from the sequence of subjects):

- Fundamentals of Management
- Intercultural Communication

Course content:

- The importance of an organization's human resources. Responsibilities and roles of a leader/manager. Antecedents of a manager.
- The process of leading a team. Recruitment, motivation and employee evaluation process.
- Modern human resources management system. Company HR policy
- The nature and importance of human resources planning. Workforce optimization. Recruitment and selection of employees.
- Employee motivation, compensation systems and concepts.
- Employee improvement and development. Employee evaluation.
- Mistakes made by Polish managers/leaders. The Ford Report. Why companies die young. The longevity gene
- Human resource management in an international and multicultural context

Sustainable Transport Development

Prerequisites (derived from the sequence of subjects):

- Law
- Logistics in International Turnover

Course content:

- Environmental policy in the European Union and Poland
- Emissions reduction policy
- Corporate Social Responsibility (CSR): Focus on sustainable development
- Sustainable development in social, economic, and environmental terms (ESG)
- Environmental threats posed by transportation
- Introduction to sustainable aviation development, its history, and key players in the air transport market
- Sustainable aviation fuels
- Sources and methods of aviation financing to support sustainable development
- Alliances as an effective form of international business: A more sustainable future

Logistics in International Turnover

Prerequisites (derived from the sequence of subjects):

- Macroeconomics
- Fundamentals of Management
- Statistical Methods in Management
- Operational Research

Course content:

- Basic principles of logistics
- Management models in logistics
- Optimization of supply chain, warehousing, and production processes – tools and methods
- Distribution in logistics – instruments and processes
- Analysis of the company's environment profile and potential
- Selection of markets and products
- Logistics in business contracts – principles, regulations, and practice

Crisis Management

Prerequisites (derived from the sequence of subjects):

- Strategic Management
- Aviation Law/ International Law

Course content:

- Introduction to Crisis Management
- Introduction to Crisis Management
- Types and Sources of Crises
- Risk Analysis and Hazard Identification
- Laws and Regulations in Crisis Management
- International Aspects of Crisis Management
- The human factor in crisis management
- The critical importance of communication in crisis management

Diploma Seminar

Part 1

Prerequisites (derived from the sequence of subjects):

- Academic writing skills

Course content:

- Developing a substantive plan for the diploma thesis, which includes: analysis of the initial situation (current state, shortcomings, target state), formulation of the problem, definition of the goal and scope of activities, determination of the requirements that the solution must meet, characterization of the solution concept, characteristics procedures for implementing the solution concept (stages, methods used, tools, techniques, etc.), preparation of a list of literature with footnotes.
- Developing a schedule of activities

Part 2

Prerequisites (derived from the sequence of subjects):

- Diploma Seminar Part 1

Course content:

- Documenting the activities carried out in the form of a diploma thesis consisting of the following parts: Introduction, including the purpose, scope and structure of the work; The main part of the work, divided into chapters (or subchapters), adapted to the specificity and subject of the problem (issue) being solved, consisting of a theoretical and practical part; End; Literature; Summary; Attachments.

Specialisation: Aviation Management

Introduction to Aviation Management and Policy

Prerequisites (derived from the sequence of subjects):

- Mathematics
- Fundamentals of Macroeconomics

Course content:

- Civil aviation as an essential element of the functioning of the global economy and analysis of the behavior of various types of passengers
- Identification of the main institutions and organizations operating in the air transport market
- Production factors influencing the results achieved by airlines - types of aircraft, their technical diversification and assumptions for optimal fleet utilization
- The airport as a basic element of aviation infrastructure - technical analysis of individual components of terminals and runway systems
- Ground handling
- Airlines business models and airline alliances
- Elements of planning and expanding the airline connection network
- Profit management in airlines
- Analysis of the optimal fleet structure for an airline - a case study
- Marketing analysis of an airline and airport – case study
- Construction of an optimal connection network for given data on the volume of demand on the considered routes - a case study
- Profit management in an airline

Aviation Law

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- The global legal framework for civil aviation (the Chicago Convention and its annexes)
- International agreements in civil aviation
- Civil aviation security
- The legal framework governing the operations of air carriers in the EU
- Legal protection of competition among air carriers
- Regulations governing the operation of airports
- Legal framework for ground handling service providers
- Regulations governing air navigation and air traffic control
- Legal protection of airline passengers
- Air carriers' liability for personal injury and damaged/lost baggage

Airline Network Management

Prerequisites (derived from the sequence of subjects):

- Microeconomics
- Introduction to Aviation Management and Policy

Course content:

- The strategic planning process in airlines
- Air traffic structure
- Demand structure on the airline market
- Fleet planning process

- The impact of passenger behavior on the operation of airlines
- Types of connection networks
- Planning of flight operations at the central airport
- Case study – airline network management, example of the European market
- Case study - airline network management, example of the American market
- Case study – airline network management, example of the Asian market
- Case study – airline network management, example of the African market
- Gravity model
- Analysis of gaps in flight schedules

Airport Management

Prerequisites (derived from the sequence of subjects):

- Introduction to Aviation Management and Policy
- Logistics in International Turnover

Course content:

- Infrastructure and operations of the airport public area
- Airport airside infrastructure and operations
- Airport services
- Cargo airport infrastructure and operations

Airline Sales and Profit Management

Prerequisites (derived from the sequence of subjects):

- Operational research
- Fundamentals of macroeconomics
- Microeconomics
- Fundamentals of management

Course content:

- Introduction to airline sales and profit management
- Airlines' demand for passengers
- Pricing system in airlines
- Classifying reservations
- Inventory control
- Spoilage Management
- Manage group bookings
- Strategies to improve profits
- Forecasting passenger demand
- Calculation of costs incurred by the airline
- Linear and integer programming in the number line industry
- Seat allocation and inventory control
- Overbooking

Air Operations Management and Ground Handling

Prerequisites (derived from the sequence of subjects):

- Introduction to Aviation Management and Policy

Course of content:

- The global air navigation system
- Legal, financial, and technical aspects of air traffic control operations
- The impact of technological advancements on air traffic control
- Safety in aviation operations

- Risk management in aviation operations
- Contract structures for ground handling services
- Competitive analysis of the ground handling market in Europe
- Optimization of equipment and human resources utilization
- Case study – restructuring of a ground handling company
- Business plan for a ground handling company

Decision Game - Airline Management

Prerequisites (derived from the sequence of subjects):

- Information Technology
- Microeconomics
- Fundamentals of Management
- Introduction to Aviation Management and Policy

Course of content:

- Introduction to the game environment and familiarization with its rules
- Analysis of the airline's internal and external environment
- Assignment of students to particular groups
- Defining the name and mission of the company. Selection of social priorities and strategic assumptions.
- Simulation of the impact of potential decisions on the company's situation and selection of a decision variant
- Iterative analysis of the impact of students' decisions on the results of managed enterprises and correction of actions in subsequent decision-making periods resulting from fluctuations in the market situation and new decision-making opportunities

Safety Management

Prerequisites (derived from the sequence of subjects):

- Strategic Management
- Organizational Behavior
- Quality Management
- Aviation Law

Course content:

- Aviation safety yesterday, today and tomorrow
- Threat and safety management principles (five steps for dealing with threats)
- Risk matrix as a business management tool
- Security policy and Just Culture policy
- Organization of safety management
- Identification, management and review of safety factors (SPIs)
- Safety management system procedures
- Safety promotion in the airline industry

Aviation Workshop 1

Prerequisites (derived from the sequence of subjects):

- Microeconomics
- Introduction to Aviation Management and Policy

Course content:

- Methods of implementing and organizing work on research projects
- Identification of the business model of the selected airport
- Identification of the ownership structure and organizational structure of the airport
- Analysis of the impact of economic phenomena on the airport

- Methods of determining the airport pressure zone
- Assessment of the level of competition between airports
- Methods of analyzing socio-economic data and their significance for the airport market
- The essence of the development of the air network for airports

Aviation Workshop 2

Prerequisites (derived from the sequence of subjects):

- Microeconomics
- Introduction to Aviation Management and Policy
- Mathematics

Course content:

- Introduction, sample simulations and simulator concepts
- Processes occurring during departures and their analysis
- Processes occurring during arrivals and their analysis
- Economic analysis of an airport terminal
- Advanced topics regarding the simulator and application extension

Aviation Workshop 3

Prerequisites (derived from the sequence of subjects):

- Microeconomics
- Introduction to Aviation Management and Policy
- Mathematics
- Operational Research
- Aviation Workshop 2

Course content:

- Characteristics of the case study
- Advanced terminal design concepts
- Processes related to departure, their design and analysis
- Processes related to arrival, their design and analysis
- Overall assessment of the effectiveness of the designed terminal
- General assessment of the economic effectiveness of the prepared project

Aviation Workshop 4

Prerequisites (derived from the sequence of subjects):

- Microeconomics
- Aviation Law

Course content:

- Global Aviation Partnership
- Case study - Qantas and Emirates – an example of a global partnership
- Benefit sharing model
- Non-parallel access: Europe, Asia, Africa
- Aviation market scanning
- PESTLE analysis
- Porter's 5 Forces Analysis
- SWOT analysis

Specialty courses: Business Management

International Law

Prerequisites (derived from the sequence of subjects):

- None

Course content:

- Introductory issues of public international law. International community.
- International subjectivity. Sources of public international law
- The law of treaties.
- The place of international law in the national legal order.
- Settlement of international disputes. International arbitration.
- Legal status of international organizations.
- Sources of private international law. Conflict rules in private international law
- The essence of international trade regulation. Agreements in international trade
- Foreign trade control mechanisms
- International Monetary Fund and World Bank
- General Agreement on Tariffs and Trade and the World Trade Organization
- Regional trade structure (with particular attention to the European Union and NAFTA)

Ethics in International Business Environment

Prerequisites (derived from the sequence of subjects):

- Business communication
- Organizational Behavior

Course content:

- Ethics area of interest. Morality, ethics and business. Ethics as an element of organizational culture.
- Ethics at work - employee, manager, head of the company. Formation of ethical attitudes in enterprises. Cultural differences and ethical management in an international environment.
- Controversies over the scope of corporate responsibility. R. E. Freeman's stakeholder concept versus M. Friedman's stakeholder concept.
- Business and ecology. Hans Jonas' principle of ecological responsibility
- Marketing and ethics

Project Management

Prerequisites (derived from the sequence of subjects):

- Information Technology

Course content:

- Basic terminology of project management (ZP): project, project management, program, portfolio, ZP areas, ZP triangle, defining project success
- Project manager (manager) - role and required competencies
- Popular ZP methodologies (methodologies): PMI, IPMA, PRINCE2, Agile, Scrum. Competency certification systems for project managers
- Project life cycle. Defining phases and milestones. Basic documents used in ZP
- Initiation phase: defining the project objective, stakeholder analysis, project business case.
- Planning phase: project organizational structure, roles in the structure, project structure vs. organization structure
- Planning phase: project planning logic - scope, time, resources, cost, risk
- Implementation phase: day-to-day project management, project monitoring, project team management, vendor management
- Closing phase: formal closing of the project and acceptance of project products

International Team Building

Prerequisites (derived from the sequence of subjects):

- Human Resource Management
- Ethics in International Business Environment
- Intercultural Communication
- Organizational Behaviour

Course content:

- Effective time management
- Verbal, non-verbal communication in an international team
- Intercultural communication
- Roles in an intercultural team
- Team building - building an effective team

International Labour Market

Prerequisites (derived from the sequence of subjects):

- Fundamentals of Macroeconomics

Course content:

- Facts and trends in labor markets. Labor market vs. other sectors of the economy. Measures of the labor market situation.
- Theoretical basis of labor market analyses. Demand for labor vs. supply of labor.
- Unemployment and job search. Matching models and mismatching indices of employers' and job seekers' demands. Active and passive labor market policies.
- Human capital. Formal, non-formal and informal education and the labor market.
- Analysis and forecast of the situation on the international labor market
- Freedom of movement of people in the EU. Gender equality in the European labor market
- The Polish labor market in comparison with other markets of member states

E-Business and Electronic Services

Prerequisites (derived from the sequence of subjects):

- Information Technology

Course content:

- Characterization of basic concepts related to the field of e-business. Presentation of the components of an Internet venture and the scenario of its implementation.
- Classification of e-business ideas. E-businesses based on efficiency, product and niche.
- Defining the target group of customers. Online customer behavior.
- Planning the offer architecture and value proposition.
- Revenue generation model - valuation market mechanisms and revenue source models.
- Value network of an online venture.
- Prototyping digital products.
- Developing a vision for the solution.
- Developing a business model for a digital product.
- Creation of a digital product prototype.

Negotiations in Business

Prerequisites (derived from the sequence of subjects):

- Intercultural Communication
- Organizational Behavior
- International Law

Course content:

- Human attitudes in negotiations
- Persuasion in negotiations
- Objectivity, separating the problem from the people, determining the true purpose of the negotiation, and seeking creative solutions as key elements in reaching agreement in negotiation situations
- Working on creating a message that promotes proper communication in negotiations
- Preparing negotiation strategies

Decision Game - Enterprise Management

Prerequisites (derived from the sequence of subjects):

- Information Technology
- Microeconomics

Course content:

- Formal and legal aspects of doing business
- Analysis of the external and internal environment of the enterprise
- Division of students into management teams and distribution of competencies
- Determination of the name and mission of the enterprise. Selection of social priorities and strategic assumptions
- Simulation of the impact of potential decisions on the situation of the enterprise and selection of a decision option.
- Iterative analysis of the impact of students' decisions on the performance of managed enterprises and adjustment of activities in subsequent decision-making periods resulting from fluctuations in the market situation and new decision-making opportunities
- Presentation of enterprise performance and its evaluation

Group Project 1

Prerequisites (derived from the sequence of subjects):

- International Marketing
- Fundamentals of Management
- Microeconomics

Course content:

- Basic information about business plan
- Types of business plans
- Methods of collecting information for a business plan
- Project team
- Strategic plan of the venture
- Technical plan
- Market analysis
- Financial analysis and ways of financing the enterprise
- Business plan management

Group Project 2

Prerequisites (derived from the sequence of subjects):

- International Marketing
- Fundamentals of Management
- Microeconomics
- Group project 1

Course content:

- Fundamentals of strategic planning

- Strategic planning and long-term planning
- Strategic thinking and management
- Strategic plan and its development
- Tools used for strategic planning
- Preparation of the strategic plan
- SWOT/TOWS matrix
- MacMillan matrix

Specialty courses: Digital Finance and Strategy

Digital Finance and Financial Transformation

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Digital finance and the transformation of financial services. Introduction to digital finance, financial transformation, FinTech, BigTech and the changing role of traditional financial institutions.
- Digitalisation of core financial services. Digital transformation of banking, payments, lending, insurance, investment services and wealth management.
- Platforms, APIs and open banking. Platform-based finance, open banking, embedded finance, API ecosystems and data-driven financial intermediation.
- Digital financial inclusion and customer experience. Digital identity, mobile finance, access to financial services, customer-centric financial products and financial inclusion.
- Regulation, supervision and risks in digital finance. Regulatory challenges, consumer protection, operational risk, cybersecurity, data governance and financial stability.
- Case studies of financial transformation. Analysis of selected cases of successful and failed digital transformation in financial institutions.

Blockchain and Decentralised Finance

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Blockchain fundamentals. Distributed ledger technology, decentralisation, cryptographic foundations, wallets, transactions and consensus mechanisms.
- Smart contracts and tokenization. Smart contracts, programmable assets, tokenisation, digital ownership and basic token standards.
- Cryptoassets and market structure. Cryptocurrencies, stablecoins, crypto exchanges, market participants and basic economic mechanisms of crypto markets.
- Decentralised finance applications. Decentralised exchanges, automated market makers, DeFi lending, liquidity pools, staking and synthetic assets.
- Risks and governance in DeFi. Smart contract risk, liquidity risk, oracle risk, bridge risk, governance risk, cyber risk and regulatory uncertainty.
- Blockchain use cases in finance. Applications in payments, trade finance, capital markets, asset tokenisation and selected case studies.

Financial Data Analytics

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Financial data and analytical workflow. Types of financial data, data sources, analytical objectives and the logic of data-driven financial decision-making.
- Data import, cleaning and preparation. Importing, cleaning, transforming and structuring market, accounting and transactional data.
- Exploratory financial data analysis. Descriptive statistics, missing data, outliers, data visualization and initial financial interpretation.
- Returns, risk and financial time series. Level and logarithmic returns, volatility, cumulative returns, risk measures and stylized facts of financial data.
- Regression models in financial analytics. Linear regression, interpretation of coefficients, diagnostics and financial applications.
- Financial modelling. Goodness of fit and basic validation procedures. Forecasting in finance.
- Data visualization and communication of results: Effective visualization of financial data, reporting and communicating analytical findings.

AI and Machine Learning in Finance

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Introduction to AI and machine learning in finance. AI, machine learning, supervised and unsupervised learning, financial use cases and model development workflow.
- Data preparation and feature engineering. Data quality, scaling, transformations, feature construction and train-test splitting in financial datasets.
- Regression models for financial prediction. Linear models, regularisation, tree-based models and evaluation of regression performance.
- AI models in finance. From decision trees to random forests – applied financial case in a programming environment.
- Machine learning for financial time series. Forecasting, lagged features, model validation and limitations of prediction in financial markets.
- Natural language processing in finance. Stylized facts on using textual data, sentiment analysis, financial news, reports, social media and alternative data – case studies.
- AI in financial services: credit scoring, fraud detection, algorithmic trading, insurance and customer analytics – case studies.
- Ethics vs. model risk. Interpretability, bias, fairness, model validation, governance and regulatory challenges.

Risk Management in Digital Finance

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Risk management in digital finance. Overview of financial and non-financial risks in digitally transformed financial services.
- Traditional financial risks in a digital environment. Credit risk, market risk, liquidity risk and operational risk in digital financial intermediation.
- Technology and ICT risk. ICT infrastructure, cloud services, outsourcing, third-party risk and digital operational resilience.
- Cybersecurity and cyber resilience. Cyber threats, digital fraud, authentication, identity risk and incident response.
- Risk in platform-based finance. FinTech, BigTech, open banking, embedded finance and platform dependency risk.

- AI and model risk. Automated decision-making, algorithmic bias, explainability, model validation and governance.
- Cryptoasset and DeFi risk. Smart contract risk, liquidity risk, governance risk, stablecoin risk and contagion mechanisms.
- Risk measurement tools. Value-at-Risk, Expected Shortfall, stress testing, scenario analysis and risk indicators.
- Regulation and supervision of digital finance. Regulatory approaches to digital finance, operational resilience, consumer protection and financial stability.
- Governance, compliance and internal controls. Risk governance, control frameworks, compliance systems and risk reporting.

International Digital Finance and Trade

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Introduction to international digital finance and digital trade. Core concepts, global trends and the relationship between digital finance, trade and international business.
- Digitalisation of international payments. Cross-border payments, remittances, settlement systems, payment platforms and efficiency challenges.
- Central bank digital currencies in cross-border finance. CBDCs, experiments and implications for international finance.
- FinTech and BigTech in global financial intermediation. International expansion of digital financial platforms, competition, cooperation and regulatory concerns.
- Distributed ledger (DLT) applications in trade finance, supply-chain transparency, tokenisation and smart contracts.
- Digital supply-chain finance. Platform-based supply-chain finance, working capital optimisation and digital risk mitigation.
- Data flows and digital trade integration. From SWIFT to Bitcoin – data governance and digital trade barriers.
- Digital trade agreements and global regulation. E-commerce provisions, digital economy agreements, WTO discussions and regional regulatory approaches.
- Compliance in international digital finance: Sanctions, digital identity and regulatory reporting in cross-border digital finance.
- Digital finance in emerging markets: Financial inclusion, mobile money, digital infrastructure and development implications.
- Risks in international digital finance and trade. Cybersecurity, operational risk, legal risk, political risk and systemic implications.

Sustainable Finance and ESG in Digital Strategy

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Introduction to sustainable finance and ESG. ESG criteria, sustainable finance, responsible investment and the role of finance in sustainability transition.
- ESG in financial decision-making. ESG integration in investment, lending, corporate finance and strategic decision-making.
- Sustainable financial instruments. Green bonds, sustainability-linked bonds, ESG funds, impact investing and transition finance.

- Climate risk and financial risk management. Physical risk, transition risk, climate scenarios and integration of climate risk into financial decisions.
- ESG reporting and disclosure. ESG standards, sustainability reporting, ratings, data availability and comparability issues.
- Digital technologies for ESG. Data analytics, AI, blockchain, ESG platforms and digital tools supporting sustainability measurement.
- Greenwashing and ESG measurement problems. Measurement challenges, data quality, rating divergence and credibility of ESG claims.
- Sustainable IT and digital sustainability. Environmental impact of digital infrastructure, green IT, circular economy and sustainable procurement.
- ESG in digital corporate strategy. Integration of ESG into digital transformation, business models, innovation and governance.

Supply Chain Finance

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Introduction to supply chain finance. Role of supply chain finance in corporate finance, trade finance and working capital management.
- Physical, informational and financial flows in supply chains. Linkages between operational flows, cash flows, risk and financial performance.
- Working capital in supply chains. Receivables, payables, inventories, cash conversion cycle and working capital optimisation.
- Trade cycle analysis and funding gaps. Identification of financing needs across the trade cycle and supply-chain participants.
- Traditional trade finance instruments. Letters of credit, documentary collections, guarantees and their role in risk mitigation.
- Core supply-chain finance techniques. Payables finance, receivables finance, inventory finance and distributor finance.
- Risk management in supply chain finance. Credit risk, supplier risk, buyer risk, operational risk and legal risk.
- Digital platforms in supply chain finance. Multi-bank platforms, fintech solutions and implementation challenges.
- Supply-chain resilience and sustainability. ESG, sustainable supply chains, supplier relationships and financial resilience.
- Implementation of SCF programmes. Client needs analysis, solution design, onboarding, pricing, governance and performance measurement.

Strategic Finance and Value Creation

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Introduction to strategic finance. Role of finance in strategy, value creation and long-term organisational development.
- Value drivers and financial performance. Profitability, growth, risk, cost of capital, cash flows and value-based management.
- Shareholder value and stakeholder value. Value creation from shareholder, stakeholder and sustainability perspectives.

- Capital structure and financing strategy. Debt, equity, hybrid financing, cost of capital and strategic financing choices.
- Investment appraisal and capital budgeting. Discounted cash flow, NPV, IRR, risk-adjusted decisions and strategic investment analysis.
- Corporate valuation. Valuation methods, financial modelling, multiples and interpretation of valuation results.
- Mergers, acquisitions and restructuring. Strategic rationale, valuation, synergies, integration and restructuring decisions.
- Strategic financial planning and forecasting. Scenario analysis, stress testing, forecasting and financial roadmaps.

Team Project

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Introduction to project-based work in digital finance and strategy. Project objectives, expected outputs, teamwork rules and assessment criteria.
- Problem definition and project design. Identification of a business, financial or strategic problem; formulation of project objectives and scope.
- Team roles, workflow and project planning. Team coordination, task allocation, milestones, deliverables and risk management.
- Research and evidence gathering. Desk research, market analysis, benchmarking, data collection and diagnosis of the selected problem.
- Design thinking and solution development. Problem-solving methods, customer or stakeholder perspective, idea generation and concept development.
- Financial feasibility. Value proposition, implementation challenges, risks and expected impact.
- Project report and presentation preparation. Executive summary, structure of final report, visual communication and presentation design.

Digital Corporate Strategy

Prerequisites (resulting from the sequence of courses):

- None

Course content:

- Digital disruption and digital corporate strategy. Impact of digital technologies on industries, markets, business models and competitive advantage.
- Strategic analysis in the digital economy. PESTEL, Five Forces, SWOT, dynamic capabilities and digital readiness assessment.
- Digital business models and platform strategy. Platform ecosystems, network effects, two-sided markets, data-driven value creation and digital customer relationships.
- Digital transformation of the organization. Digital culture, organisational capabilities, leadership, change management and implementation roadmaps.
- AI, data and responsible digital strategy. Strategic use of data and AI, ethical implications, governance, performance measurement and case studies of digital transformation.

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