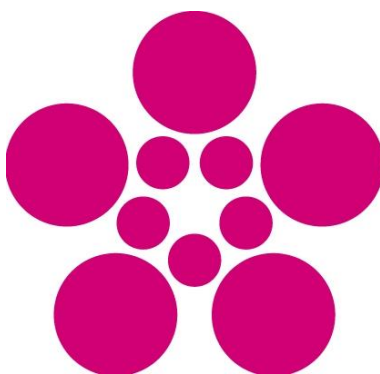


UNIVERSITY OF SOUTH BOHEMIA IN ČESKÉ BUDĚJOVICE

Faculty of Economics



State Final Examinations

Study Program: System Engineering and Informatics

Study Field: **Economic informatics**

Bachelor's degree (English version)

Academic Year

2022/2023

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Important Dates

Deadline for pre-exams and exams	13 th May 2023
Enrolment for state final examinations	till 28 February 2023
Submission of Bachelor's thesis	14 th April 2023
Preparations for state final exams	15 th – 19 th May 2023
State final examinations – Spring term	22 nd May – 2 nd June 2023
State final examinations – Autumn term	September 2023

Submission of Bachelor's Thesis

- Bachelor's thesis must be handed to the supervisor and uploaded electronically into the IS STAG no later than on 14th April 2023;
- Bachelor's degree students upload the resume of their thesis into IS STAG as surname_BT_resume.pdf file no later than on 14th April 2023.

For the thesis's defence, students prepare a presentation including:

- thesis topic and objectives,
- hypotheses (if there are any),
- methodology,
- important findings – conclusions and recommendations.

Excerpt from the Study and Examination Regulations of the University of South Bohemia in České Budějovice

Article 27

Final State Examination

(1) Completion of studies in due form in Bachelor's, Master's and Consecutive Master's degree programme is governed by Sections 45 and 46 of the Act. The conditions for holding a final state examination are regulated by section 53 of the Act. Part of the final state examination in Bachelor's degree programme is usually a defence of a Bachelor's Thesis. Part of the final state examination in Master's and Consecutive Master's degree programs is a defence of a respective Graduation Thesis.

(2) A student may sit the last part of the final state examination if they have obtained course credits in the courses defined in their degree programme equal to at least sixty times the number of years of the standard period of studies and have completed and submitted their Thesis if so required by the degree programme.

(3) If the final state examination is further divided into several parts in addition to the defence of the Thesis, the relevant part of the final state examination may be sat by the student only if they have obtained the number of credits corresponding to the relevant part of the studies in the courses defined in their degree programme and duly fulfilled all relevant obligations arising from their degree programme.

(4) A student may take a defence of a Bachelor's or Master's Thesis if this Thesis has been duly submitted and published in accordance with Section 47b, paragraph 2 of the Act.

(5) A student who has fulfilled all the conditions for sitting the last part of the final state examination in the given academic year must pass it in the following academic year at the latest and within the maximum period of studies set out in Article 7 paragraph 2. Failure to meet these conditions will result in a termination of studies for non-compliance with the obligations stipulated by the degree programme pursuant to Section 56, paragraph 1, letter b of the Act. In extenuating circumstances, the Dean may, at the student's request, extend the deadline for passing the final state examination.

(6) By attending the final state examination, the student declares that they deem themselves fit to pass. Should the student withdraw from the final state examination after it has commenced or seriously violate the rules of the examination or not attend the final state examination on the day they have registered for without a due excuse, the outcome is "fail" (4). Student performance assessment in other cases will be issued by a Board of Examiners. (7) The final state examination and its parts are graded as follows: "excellent" (1), "very good" (2), "good" (3) and "fail" (4).

(8) The final state examination is graded "excellent" (1), if the arithmetic average of the grades for the individual parts is lower than 1.5 and at the same time none of the grades were worse than "very good". (2) The final state examination is classified as "very good" (2) if the arithmetic average of the grades for the individual parts is less than 2.5 while two of its parts at most have been graded as "Good" (3) and none of them have been graded as "Fail" (4). The final state examination is graded as a "good" (3) if the arithmetic average of the grades of the individual parts is over or equal to 2,5 and

none of the parts have been graded as "Fail" (4). If any one part of the final state examination is graded as "fail" (4), the overall result of the final state examination is "fail" (4).

(9) The final state examination or a part thereof, provided that it is divided into parts, may be resat once the conditions set out in paragraph 5 are met.

(10) The Internal Regulations of the Faculty will determine the content, form, conditions and organizational issues concerning the final state examinations, including assigning, management, submitting, assessment and defence of Theses in such a way as to ensure the desired level of assessment of studies and Theses. The Internal Regulations of the Faculty will also specify the qualification requirements for the Theses Supervisors and the maximum number of Theses overseen by one person.

(11) A written record is made about the final state examination. The awarded grade shall also be recorded in IS STAG.

(12) A final state examination can be reviewed only as far as the procedure is concerned, not the content or adequacy of the student's performance assessment. Grading of the examination is based on the assessment of the student which is the responsibility of the Board of Examiners and is not course to further review.

(13) Defences of Theses are governed by these rules:

a) the same Thesis cannot be submitted for assessment in the final state examination representing a Bachelor's Thesis as well as a Graduation Thesis for the award of Bachelor's and Master's academic titles;

b) in case of concurrent or further studies, one Thesis may not be submitted for examination in the final state examination in two or more different courses of studies.

Article 28

Graduating in Bachelor's, Master's and Follow – up Master's Degree Programme

(1) A student has completed their degree programme if they have achieved at least the number of credits equal to 60 times the number of years of the standard period of studies in the composition prescribed by the degree programme, and have completed and duly submitted a Thesis, if required by the degree programme, and successfully passed the final state examination.

(2) The overall assessment of studies reflects the student's performance throughout their studies and is graded as follows: "graduated with honours", "graduated" or "failed". To be awarded "graduated with honours", the student's weighted study average must be up to 1.50 for the whole period of studies, and they must be graded "excellent" at the final state examination. The student is graded as "failed" when they have repeatedly not managed to pass the final state examination within the deadlines set out Article 7, paragraph 2 and Article 27, paragraph 5.

(3) Students graduating in Bachelor's, Master's or Consecutive Master's degree programme are awarded an academic degree and issued certificates of completion of studies in due form in accordance with Section 45, 46, 47 and 55 and 57 of the Act.

Excerpt from Dean's Measure No. 124/2017

On Studies in Bachelor's and Follow-up Master's Program Conducted in Czech Language

Section V.

Final State Exam and University Graduation Theses

Article 18

Final State Exam

- (1) The studies in bachelor's and master's study programs at FE USB ends with a final state exam. The day of graduation is the day when the last part of the exam is completed successfully.
- (2) The status and course of the Final State Exam (FSE) are governed in particular by Section 45 to 47, Section 53 and Section 55 of the Act and Article 27 of the Study and Examination Code (SEC).
- (3) A student is obliged to register for the state final exam on the date specified in the [Schedule](#) of the academic year. Applications for the FSE, the deadlines and instructions for submitting the University Graduation Theses (UGT) are published in the form of the Dean's Notices well in advance on the faculty's website in the section Study – [Information for Final Year Students](#), as well as the range of FSE subject by fields and specializations for the given academic year. Forms for signing up for FSE are available in the section [Study Regulations and Forms](#).
- (4) The FSE consists of a UGT defense and oral exams in the subjects determined by the study program for the respective study program, or its field of study. The UGT defense and each FSE subject are graded; the final grading of the UGT defense based on the assessment of the thesis supervisor, the opponent and the course of the defense and the oral examination in the individual FSE subjects is determined by the examination committee.
- (5) When retaking the FSE in due to an undefended UGT, a student defends a revised UGT, newly assessed by the supervisor and the opponent. If a student fails the oral exam in any FSE subject, they retake only this FSE oral exam.
- (6) The FSE, or a part of it (the UGT defense or the oral exam on the FSE subject or multiple FSE subjects), can be repeated once in the event of failing, if the conditions specified in Article 27, Clause 2 of the SEC are met, but no sooner than in 3 months after an unsuccessful first FSE date.
- (7) The date, time and organizational arrangements of the FSE is published for individual students no later than 5 days before the FSE date in the form of the Dean's Notice on the faculty's website in the section Study – [Information for Final Year Students](#). The FSE time indicated in the schedule is indicative, students should arrive at least 1 hour in advance.
- (8) For the defense of UGT and FSE from the prescribed subjects of a study plan, approx. 60 minutes are allocated for a bachelor's program student, approx. 45-60 minutes for a master's program student, depending on the number of FSE subjects prescribed by the study plan.
- (9) The course of the FSE is public by law. The chairperson of the examination committee is in charge of the FSE's regularity, especially for compliance with the rules set out below, as well as for equal conditions for individual students, and for proper reporting.

- (10) A registered student who does not attend the FSE without a proper excuse is, in accordance with Article 27, Article 6 of the SEC, graded 'failed'. At the same time, the committee chairperson will mark in a report that the student did not take part. Article 7, Clause 2 applies *mutatis mutandis* to the possibility of an excuse. In such a case, an excuse is addressed to the Dean, who also decides on its justification. If the Dean decides on the justification of the excuse, the student is looked at as if they had not been registered. In this event, the Dean will ensure that it is noted in the report that the student was subsequently excused, including the name and signature of the person who made the entry, as well as the date when this happened. The excused student has another option only after registering for the FSE in accordance with Clause 3 for the next date.
- (11) If a student takes the FSE, in accordance with Article 27, Clause 6 of the SEC, they are considered that there are no relevant reasons preventing them from taking part in it. After starting the FSE, the student can no longer obtain an excuse or subsequent annulment of the result, not even for health reasons. With their signature on an attendance sheet, the student confirms that they have been informed of this fact and that there are no objective or subjective obstacles that would make it impossible to take the FSE.
- (12) During the FSE, the student strictly follows the instructions of the chairperson and the other committee members. Unless otherwise specified or expressly permitted by the chairperson, during the oral examination of individual subjects of the FSE, it is inadmissible to:
- a) use any written notes (the exception is the preparation in the course of the FSE of the bachelor's degree in accordance with Clause 13 and prepared answers to the questions of the supervisor and opponent of the UGT) and printed materials, including dictionaries and handbooks;
 - b) use any electronic devices, including mobile phones and other communication devices, portable PCs of all types. The exception is the use of a PC by persons with specific needs who requested it in advance as part of the application for adapting the FSE due to their handicap;
 - c) communicate with the other FSE participants.
- (13) In the case of FSE as part of a bachelor's study program, the course of defense of a bachelor's thesis and the FSE is determined by the following procedure:
- a) A student is brought into the examination room and introduced to the committee by the registrar.
 - b) The committee will ask the student questions from the individual FSE subjects and leave 15 minutes for preparation.
 - c) After the preparation, the student approaches the committee to defend the bachelor's thesis (15 minutes).
 - d) After the defense of the bachelor's thesis, the examination in the individual FSE subjects follows, when the student answers the prepared questions (25 minutes).
 - e) The final phase of the FSE is the evaluation of the student's performance by the committee (non-public part) and the student is informed about their results (5 minutes).
- (14) In the case of FSE as part of a follow-up master's study program, the course of defense of a diploma thesis and the FSE is determined by the following procedure:
- a) A student is brought into the examination room and introduced to the committee by the registrar.
 - b) The student defends their thesis (without preparation – 15 minutes).
 - c) This is followed by the examination in the individual FSE subjects (without preparation – 20-30 minutes).
 - d) The final phase of the FSE is the evaluation of the student's performance by the committee (non-public part) and the student is informed about their results (5 minutes).
- (15) If a student has objections to the initiation or course of the FSE, it is necessary for them to raise them immediately after the FSE has been completed with the examination committee appointed for the FSE. The chairperson of the examination committee or a member authorized by them records the objections in a report and presents them to the student for signing. By

signing the student confirms that the content of the entry corresponds to the objections they have made. The chairperson of the examination committee or a member authorized by them records the committee's comments on the objections under the signed objections, in particular the relevant circumstances of the contested facts. If there is a lack of space, a separate sheet can be inserted in the report, which must be referred to in the report. The student's later objections will not be taken into account. The Dean will review the objections within 14 days of receiving the report containing them; before that, the Dean can ask the committee chairperson or the student to supplement the information. If the Dean comes to the conclusion that the contested facts had or could have influenced the result of the FSE, the Dean will decide on its annulment, or on the annulment a part of the FSE, and about enrolling the student for the next announced date corresponding to the content of the FSE, or part of the FSE that was annulled. Otherwise, or in the remaining part, the Dean will decide on the confirmation of the FSE result, even if the student objects for health or similar reasons (cf. Clause 11). The Dean's decision is final.

State Examination Topics

State Examination Subjects

- Economic Informatics
- Management and Marketing
- Informatics
- Corporate Finance

STATE FINAL EXAMINATION TOPICS – BACHELOR'S DEGREE

Study Field: ECONOMICS INFORMATICS

COMPULSORY SUBJECTS

Subject SFE: Economic informatics (KMI/BZECI)

(KMI/ADIS1 Analysis and Design of IS 1, KMI/OBIS1 Business Information Systems 1, KMI – ANIS2/ADIS2 Analysis and Design of IS 2)

Bachelor study program: Engineering and Informatics

Study specialization: Economic informatics

1. BUSINESS INFORMATION SYSTEMS - BASIC TERMS, connections between the terms information and control system, components of the information system, requirements for the information system, efficiency of expenditures in the IS.
2. IS LIFE CYCLE, possibilities of IS acquisition, phase of implementation (creation and deployment) of IS, structure of costs to IS, task-centric and value-centric approach to IS development.
3. IS ARCHITECTURE, what is the content of global and partial architecture, IS classification according to the control level: TPS, MIS, EIS, description of individual types of IS and their purpose, the term "transaction system".
4. IS DEVELOPMENT, history of SW development, differences of SW development compared to other fields, SW development methodologies - classic, agile.
5. ERP SYSTEMS, what activities it provides, advantages and disadvantages, stages of ERP development, the concept of implementation, major manufacturers of ERP systems, modules, CRM systems and their functions and applications, business intelligence - business intelligence tools.
6. MES PRODUCTION MANAGEMENT SYSTEMS, comparison of MES and ERP, goal and purpose of MES systems, production management systems SŘV - batch production, product identification, industrial interfaces.
7. SYSTEM INTEGRATION, definition, conditions of successful system integration, effects of system integration and its risks, components of system integration, system integrator, four SI concepts, ITIL standards.

8. REENGINEERING AND PROCESS MANAGEMENT, process, levels of reengineering, assumptions of successful reengineering, principles of reengineering, project, process management, types of business processes.
9. OUTSOURCING AND SAAS, Types of outsourcing in IS / IT, variants of IT outsourcing from the point of view of asset ownership, examples, reasons for outsourcing, benefits, hidden expenses, Software as a Service (SaaS).
10. SYSTEM THEORY AND METHODOLOGY (system approach, system, system attributes, system types, static and dynamic system concepts, process, process types, feedback, system analysis and synthesis, engineering, software engineering, model, model types, model requirements, system methodology, technique, method, methodology).
11. SPECIAL METHODS OF SYSTEM ANALYSIS (types of approaches in information systems design: source (data) × functional - top-down × bottom-up - structured × object-oriented - rigorous × agile, basic elements of information systems models, conceptual, logical and physical model information system, standardization in the design of information systems).
12. OBJECT METHODOLOGIES (object-oriented approach, object, basic principles of objectivity, UML, UML diagrams, use of UML diagrams in information system development, tools for working with UML diagrams).
13. STRUCTURED METHODOLOGIES (structured approach, entity-relational model, ERA diagrams, the most common graphical expressions of ERA models, entity properties, attribute properties, relationship properties, model normalization, normal forms, data flow diagrams, context diagrams, CASE tools).
14. GENERAL METHODS OF SYSTEM ANALYSIS (graphs, flowcharts, business process models, workflow, workflow management, workflow diagrams, Gantt charts, network diagrams, time analysis of deterministic projects, CPM method).
15. INFORMATION SYSTEM PROJECT AND ITS MANAGEMENT (project, three-imperative project management, project triangle, project stages, control points, project documentation, types of information systems projects, information system project life cycle and its stages, types of information systems development life cycles, alternatives and trends in information systems development, project management software support).

16. E-BUSINESS, business models and concepts, e-commerce infrastructure, how the HTTP protocol works, network model TCP / IP, marketing in commerce, analytical tools in e-commerce, portals.
17. DATABASE SYSTEMS - characteristics, history of databases, architecture of database system, database systems - comparison and trends, examples of some database systems.
18. DATABASE DESIGN, DATABASE MODELS, CONCEPTUAL SCHEME - basic principles, ER conceptual model - entity, relation, attributes, example.
19. RELATION MODEL, relational model, relational scheme, relation (table), row, column, attribute, domain, superkey, key, primary key, candidate key, foreign key.
20. DATABASE LANGUAGES. SQL language, basic commands, database normalization. The first, second, third, Boyce-Codd normal form and the connections between them.
21. TRANSACTIONS, multi-user access control, transaction states, transaction log, transaction scenario, competitive access control techniques - data locking.

Literature:

- Laudon, K. C., & Laudon, J. P. (2020). *Management information systems: managing the digital firm*. 16. Hoboken: Pearson Education.
- Domdouzis, K., Lake, P., & Crowther, P. (2021). *Concise Guide To Databases: A Practical Introduction*. 2. New York: Springer.
- Weske, M. (2012). *Business Process Management: Concepts, Languages, Architectures*. 2. Berlin: Springer.
- Gentle, M. (2007). *IT SUCCESS! Towards a New Model for Information Technology*. Chichester: Wiley.
- Stair, R., & Reynolds, G. (2017). *Principles of Information Systems*. Boston: Cengage Learning.
- Magal, S. R., & Word, J. (2009). *Essentials of Business Processes and Information Systems*. 1. Boston: John Wiley & Sons6.
- Seidl, M., Scholz, M., Huemer, Ch., & Kappel, G. (2015). *UML @ Classroom: An Introduction to Object-Oriented Modeling*. 1. Berlin: Springer.

Subject SFE: Management and Marketing (KRE/BZMME)

(KOD – ZMA/KZMA Marketing, KRE – MANZ/QMANZ – Management, KEN – EP1/QEP1 – Business Economics)

Bachelor study programme B6209

Field of study: Economic Informatics

1. MANAGEMENT PRINCIPLES

Definitions of a manager, and management. Relations of management to other sciences. Levels of management. Managerial roles, skills, qualities. Managerial functions. Historical development of management. 7S Framework.

2. PLANNING

Contents of planning, parts of planning, importance of planning, setting goals and priorities, conflicts between goals, measures of goals, resources. Types of objectives, formulation of objectives, management by objectives, characteristics of well established objectives. Content of plans, breakdown of plans, SMART principle. Time management.

3. STRATEGIC MANAGEMENT

Concept of strategic management, strategy, integrated model of strategic management process, vision. Mission, goals, strategy of an organization. Analysis of internal (financial analysis, analysis of results in different functional areas) and external environment of an organization (STEP analysis, Porter's model), interest group analysis, SWOT analysis, SWOT matrix, strategy typology, benchmarking, strategy formulation, strategy evaluation and selection, strategy implementation and control.

4. ORGANIZING

Concept of organizing, elements of organizing, flat and steep organizational structure, line-staff structure, functional structure, divisional structure, hybrid structure, matrix structure, development tendencies in organizational architecture. Delegation of authority, specialization, span of control. Organisational structure, responsibility, authority, centralisation, decentralisation, factors influencing the choice of organisational structure.

5. LEADERSHIP AND HUMAN RESOURCE MANAGEMENT

Concept of leadership, power, leadership theories based on personal qualities and behaviour, managerial grid theory, situational theory (contingency theory, path-goal theory). Concept of leadership, leader. Team leadership. The importance of human resources, the process of human resource management. Concept of human resource management, personnel activities (planning, recruitment, selection, evaluation, reward, training).

6. MOTIVATION

Concept of motivation, motivational process, content-oriented theories of motivation (Maslow's hierarchy of needs, Herzberg's two-factor theory), process-oriented theories (Incentive Theory). Theories of X and Y.

7. DECISION MAKING

Concept of decision-making, content and procedures of decision-making, well and poorly structured problems, decision-making process, parts of decision-making, decision-making under risks and uncertainties, attitude of a decision-maker towards risk. Decision matrices and trees. The principle of optimization and satisfaction.

8. MANAGERIAL COMMUNICATION

Concept of communication, meaning of communication, processes and parts of communication, downward, upward, horizontal and diagonal communication, interpersonal communication. Barriers to effective communication, overcoming barriers. Verbal and non-verbal communication, advantages and disadvantages of oral and written communication, electronic communication, meetings. Presenting.

9. CORPORATE CULTURE

Concept of corporate culture, levels of corporate culture, parts of corporate culture, contemporary concept of corporate culture, typology of corporate culture according to significant determinant, diagnosis of corporate culture, changes of corporate culture, tools and principles of change.

10. CONTROL

The concept of control, system of control processes, phases of control, evaluation criteria of control, function and object of control, subject of control, time dimension of control, audit, controlling, internal control system. Types of control.

11. BUSINESS DEFINITION

Enterprises and its goal. Trades. Classification of legal entities.

12. THE PROCEDURE FOR FOUNDING A BUSINESS

Basic criteria for choosing appropriate legal form of business.

Legal forms of business (Businessman alone, Business corporations). Business plan. Financial budget.

13. STRUCTURE OF BALANCE SHEET

Balance sheet. Fixed assets (Tangible and Intangible assets), methods of depreciation of fixed assets, book depreciations and tax write-offs; Current assets.

Capital structure; Equity, Debt capital, Optimal capital structure. Net working capital.

14. REVENUES, COSTS, PROFIT

Profit/Loss account. Revenues. Costs. Profit and loss and its distribution EAT, EBT, EBIT.

Cost functions, Fixed costs, Variable costs. Costing. The Break-Even Point. Profit maximization.

Cash flow.

16. SUPPLY

Balance-sheet equation, material consumption calculations, The economic order quantity (EOQ), Stock limit.

17. PRODUCTION

Production function – general basis of production economics.

Optimal input combinations. Production capacity.

18. EVALUATION OF INVESTMENT EFFECTIVENESS

Concept, types and financing of investments. Methods of investment evaluation; static and dynamic methods.

19. FIRM'S PERFORMANCE

Tools and sources for evaluating the firm's performance. Profitability ratios (ROE, ROA, ROS).

Debt ratios. Liquidity ratios, Activity ratios.

20. THE ESSENCE OF MARKETING

The reason for the emergence of marketing and its importance to the organization and society. Basic terminology, orientation of companies on the market. Definition of marketing. Relationship of marketing to production. The process of marketing. Characteristics of the "4Cs" and the tools of marketing - "4P" - "8P".

21. MARKETING ENVIRONMENT

Marketing environment breakdown (macro, micro; external, internal). Influences, factors, subjects, elements and tools, reason, meaning and methods of their analysis. Perfect and imperfect competitive environment. Identification of competitors, market and industry concepts of competition, estimation of competitor response, competitive strategies, identification of competitors' weaknesses and strengths. Competition analysis - Porter's model of five competitive forces in an industry.

22. CONSUMER AND INTERMEDIARY MARKETS

Characteristics of consumer and intermediary markets (traders, carriers, etc.). Demand forecasting. Types of customers. Model of the final consumer's buying behaviour - external (marketing and other stimuli) and internal stimuli (characteristics and decision-making process of the consumer) and buying situations. Market characteristics of organizations - industrial customers and intermediaries, influences and factors, their purchasing decision-making process. Types of industrial customers and intermediary customers.

23. MARKET SEGMENTATION

Reasons for market segmentation. Broad markets, potential markets, existing markets, target markets. Types and procedures of market segmentation, importance of market segmentation for the organisation/enterprise. Characteristics of target segments, aspects of segmentation variables and their importance, stages of segmentation. Evaluation and selection of market segments.

24. MARKETING RESEARCH AND MARKETING INFORMATION SYSTEM

The relationship between marketing and marketing research. Marketing research process (planning, implementation and evaluation phases). Typology and categories of marketing research. Working with the target group, sampling, data sources, methods of primary and secondary data collection. Basic concepts. Internal information system. Marketing intelligence system. Marketing research system. Marketing decision support system. Their characteristics, rules of creation, meaning and use.

25. PRODUCT

Concept, nature, characteristics and features of the product. Brand. Classification - classification, product policy, levels, dimensions and layers of the product. Product life cycle. Strategies at different stages of the product life cycle. Business evaluation of the product. Innovation and new products.

26. PRODUCT'S PRICE

Pricing policy objectives. Characteristics of the concept. Solving the price issue - price formation, key factors, price determination procedure, the importance of calculating the turning point. Price adaptability - differential pricing, price advantages and discounts, sales-enhancing pricing, geographical considerations. Price changes and reactions to these changes.

27. PRODUCT'S DISTRIBUTION (PLACE)

Distribution routes and their layout - strategies, forms, levels, subdivisions, functions, layout. Distribution units and their organisation - warehouses, sales units, types, forms, organisation - types of business process (retail, wholesale).

28. PRODUCT'S PROMOTING, STIMULATING (PROMOTION)

Instruments of stimulation, promotion, of the product. Advertising - origin, meaning, function, carriers (means and intermediaries), form, strategy, effectiveness. Public relations - forms, tools, objectives, position and importance for the enterprise/organization. Sales promotion - breakdown, types, forms, tools, their importance use and effectiveness. Importance and use of forms of personal selling. Direct marketing.

29. MARKETING MANAGEMENT PROCESS

Methods of organizing marketing activities and characteristics of marketing to other departments in the company/organization. Strategic building of marketing orientation of the whole company. Marketing mission, objectives, opportunities, strategies, marketing plans. Marketing implementation. Control of marketing activities. Marketing audit.

Literature:

Burns, A. C., Veeck, A., & Bush, R. F. (2017). *Marketing research (8th ed., global ed.)*. Harlow: Pearson Education Limited.

Chernev, A., & Kotler, P. (2014). *Strategic Marketing Management, 8th Edition*. Cerebellum Press.

Kotler, P., & Armstrong, G. (2014). *Principles of marketing (15th ed)*. Upper Saddle, N.J: Pearson.

Malhotra, N. K., Nunan, D., & Birks, D. F. (2017). *Marketing research: An applied approach (5th ed.)*. Harlow: Pearson Education Limited.

Recommended sources:

Hague, P., Harrison, M., Cupman, J., & Truman, O. (2016). *Market research in practice: An introduction to gaining greater market insight (3rd ed.)*. Kogan Page.

McDaniel, C., & Gates, R. H. (2015). *Marketing research (10th ed.)*. Hoboken, NJ: Wiley.

OPTIONAL SUBJECT (1 subject is chosen)

Subject SFE: Informatics (KMI/BZIFA)

(KMI/ODBS1 – Database systems 1, KMI/OPS – Information and communication networks, KMI/OOOP – Object oriented programming)

Bachelor study program Engineering and Informatics

Study specialization: Economic informatics

1. OBJECT-ORIENTED PROGRAMMING - BASIC TERMS (variable, operators, expressions, data types, object type, wrapping and unpacking).
2. PRINCIPLES OF THE OBJECT DESIGN OF THE PROGRAM - objects, abstraction, encapsulation, composition, delegation, inheritance, polymorphism.
3. INHERITANCE - class, object, class instance, method, interface, delegate, constructor, destructor, accessibility.
4. POLYMORPHISM - types of methods, overloading of methods, overlap of methods, indicator this, operator as.
5. FIELDS, COLLECTIONS, ENUMERATIONS OF COLLECTIONS - browsing of elements in the collection, indexers, enumerators, iterators.
6. GENERICITY, GENERIC TYPES - generic classes, instantiating generic classes, generic methods.
7. MEMORY AND RESOURCE MANAGEMENT, ERROR MANAGEMENT - memory cleaning, destructor creation, using command, exceptions.
8. COMPUTER NETWORKS - computer network architecture, ISO OSI model, TCP/IP architecture
9. CHARACTERISTICS OF INDIVIDUAL LAYERS OF TCP/IP MODEL - line layer, switching, MAC address, network routing layer, IP address.
10. APPLICATION LAYER PROTOCOLS - DNS system and hierarchy, SMTP protocols, http.
11. SECURITY OF INFORMATION SYSTEMS, IS security management system according to ISO 27001, IS security means, network security, security on the Internet.
12. OPERATING SYSTEMS - OS functions, OS implementation, multi-user and multi-tasking OS.
13. MEMORY ALLOCATION METHODS - paging, virtual memory, process synchronization, deadlock.

14. FILES AND FILE SYSTEMS - files and directories, file systems.
15. WEB APPLICATIONS - working with HTML, page elements and HTML language, cascading style sheets (CSS).
16. PROGRAMMING ON THE CLIENT AND SERVER SIDE - javascript, basic features of the language, usage.

Literature:

- Farrel, J. (2016). *Microsoft Visual C# 2015: an introduction to object-oriented programming*. Sixth edition. Boston, MA: Cengage Learning.
- Troelsen, A. (2010). *Pro C# 2010 and the .NET 4 Platform*. 5. ed. New York: Apress, 2010.
- Bettany, A., & Warren, A. (2018). *Exam ref 70-698 installing and configuring Windows 10*. Second edition. Upper Saddle River, NJ: Pearson Education.
- Silberchatz, A., Gavlin, P. B., & Gagne, G. (2014). 2014. ISBN 9781118804926.
- Flanagan, D. (2020). *JavaScript: The Definitive Guide*, 7th Edition. Sebastopol, CA (USA): O'Reilly.
- Kyrnin, J., & Meloni, J. C. (2019). *Sams teach yourself HTML, CSS, and JavaScript all in one*. Third edition. Upper Saddle River, NJ: Pearson.
- Kabelova, A., & Dostalek, L. (2007). *Understanding TCP/IP: A clear and comprehensive guide to TCP/IP protocols*. 1. Boston: Packt.

Subject SFE: Corporate finance (KUF/BZF EK)

(KUF – FUCN/KFUCN – Financial accounting, KUF – CP/KCP – Securities, KUF – FINP/QFINP – Corporate finance)

Bachelor study program Engineering and Informatics

Study specialization: Economic informatics

Financial Accounting

1. Introduction to accounting as an information system: basic concepts and starting points.
2. Long-term assets (tangible, intangible, financial): content definition, breakdown, valuation, expression of the risk of impairment, and accounting. Securities.
3. Accounting of relations: content definition and breakdown of receivables and liabilities, their valuation, and accounting. Exchange rate differences. Adjustments and write-offs of receivables. Accounting with employees, institutions, and partners. The tax system of the Czech Republic and its accounting relationship - taxes and subsidies.
4. Inventory: content definition, classification, valuation, and accounting. Inventory recording methods.
5. Owner's equity and liabilities: content definition and its structure. Basic capital and its creation. Possibilities of increasing and decreasing the share capital. Creation and withdrawal of funds. Provisions - accounting and tax perspective. Bank credits and loans.
6. Expenses, revenues, and economic results: categories, classification, and accounting. Calculating system. Accrual of expenses and revenues. Transformation of the gross economic result into the tax base and the resulting income tax. Use of the economic result for individual forms of business companies: capital and personal companies.
7. Closing of accounting books and financial statements: objectives and characteristics of financial statements and their informative ability. Financial statements in Czech accounting - balance sheet, profit/loss statement, notice, statement of cash flows, statement of changes in equity.

Corporate finance

1. Time value of money: simple and compound interest, annuity, the present value of a perpetuity.
2. Asset structure and capital structure of the company, Miller-Modigliani theory.
3. Financial planning: long-term and short-term financial plan.
4. Cash flow: calculation methods, statement, use.
5. Inventory: characteristics and types of inventory, management methods, EOQ optimization model, valuation methods.
6. Receivables: characteristics, means of securing, payment instruments, payment methods, collection of receivables.

7. Cash resources: cash management models, short-term financial plan.
8. Sources of short-term financing: business loans, short-term bank loans, and bills of exchange.
9. Internal sources of long-term financing: profit (characteristics, dividend policy), depreciation (features, depreciation methods).
10. External sources of long-term financing: shares, long-term bank loans, bonds, venture capital, leasing, long-term business loans, foreign funding, and other long-term non-bank sources.
11. Investment evaluation: identification of capital income and expenditure. Monetary, cost, and profit methods of investment evaluation.
12. Risk analysis: measurement and classification of risk, protection against threats, the relationship between risk and profitability, calculation of the required interest rate, capital asset valuation model, valuation of shares and securities, and application of risk in investment decision-making.
13. Financial analysis. Financial ratios analysis: profitability, activities, liquidity, indebtedness, and market position analysis. Ratio indicators based on cash flow. Analysis of indicator systems: DuPont analysis. Bankruptcy prediction models. EVA, MVA, Economic, and Market Added Value.

Securities:

1. Securities: characteristic and classification of securities (according to embodied law, issuer, yield, marketability), legal regulation of securities in the Czech Republic.
2. Bonds: legal regulation of bonds, classification of bonds, special types of bonds, issuance of bonds, bond yield, coupon, advantages and disadvantages of bonds from the point of view of the issuer and owner
3. Bond price, yield and risk: valuation of bonds, accrued interest, bond yield, yield curve theories, risks associated with bonds, interest rate risk - duration, convexity, immunization
4. Bills of exchange: requisites of a bill of exchange, legal regulation, types of bill of exchange, participants in a bill of exchange, maturity of a bill of exchange, transfers of bill of exchange rights and obligations, fulfilment of bill of exchange
5. Shares: types of shares, legal regulation of shares, rights associated with different types of shares, advantages and disadvantages from the point of view of the issuer and the owner, other equity securities
6. Stock price, return and risk, valuation of shares, return and risk of a share
7. Portfolio theory: concept of portfolio diversification, portfolio return, measuring portfolio risk
8. Financial derivatives: principle of term contracts, characteristics and classification of financial derivatives, advantages and disadvantages of financial derivatives
9. Forward: characteristics of the contract, position in the contract, classification according to the underlying asset, settlement of the contract, comparison with futures contracts

10. Futures: characteristics of the contract, position in the contract, contracts standardization, trading and settlement of futures, comparison with forwards contracts
11. Option: characteristics of the contract, position in the contract, types of options, valuation of option - intrinsic and time value of option
12. Swaps: characteristics of the contract, classification of swaps, settlement of swaps

Literature:

- ACCA. (2015). *ACCA F3 Complete Text*. Financial Accounting. Great Britain: Kaplan.
- Brealey, R., Myers, S., & Allen, F. (2008) *Principles of corporate finance*. 9th ed., intern. ed. New York: McGraw-Hill.
- Brigham, E., & Ehrhard, F. (2020). *Corporate finance: a focused approach*. 7th edition. Boston, MA: Cengage.
- Copeland, T., Weston F., & Shasri, K. (2014). *Financial theory and corporate policy*. Fourth edition, *Pearson new international edition*. Harlow: Pearson.
- Fabozzi, F. J. (2015). *Capital markets: institutions, instruments, and risk management* (5th ed.). The MIT Press.
- Hull, J. (2012). *Options, futures, and other derivatives* (8th ed.). Pearson Education.
- Steiner, B. (2012). *Mastering financial calculations: a step-by step guide to the mathematics of financial market instruments* (3rd ed.). Pearson Education.
- Vejsadová, M., Vlčková, M., & Svoboda, J. (2016). *Principles of Accounting*. České Budějovice: Ekonomická fakulta, Jihočeská univerzita v Českých Budějovicích.
- Vernimmen, P., Quiry, P., & Dallochio, M. (2014). *Corporate finance: theory and practice*. Fourth edition. Chichester: John Wiley.
- Vlachý, J. (2018). *Corporate finance*. Praha: Leges, Teoretik.