

Management (for students starting in 2024 or later)

1. The essence of mathematical statistics, the errors of sampling and inference, the steps of statistical processing

- Interpretation of descriptive statistical indicators, properties of statistical indicators, main representation methods
- Estimation theory, properties of estimation, interval estimation
- The general course of hypothesis tests, statistical tests and their hypotheses, conditions for their application
- Basics of correlation and regression calculations, basic assumptions of the model, interpretation and testing of indicators and regression coefficients

2. Management theories and methods, their application and criticism

- What managerial skills and good and bad examples of their application do you know?
- Describe the organizational culture types according to Handy and Quinn. How do organizational structures and culture types fit together?
- Present the learned motivational theories and introduce application examples (theories of Maslow, Herzberg, McClelland, Vroom, Adams, Locke, and Skinner)
- Describe the learned leadership styles and give examples of when it is recommended to use a given leadership style (theories of Lewin, Tannenbaum-Schmidt, Ohio State University, Blake-Mouton, and Hersey-Blanchard)

3. Segmentation, targeting and positioning and STP strategy

- Describe the process and main characteristics of segmentation and list the segmentation criteria.
- Describe the STP strategy, its process and present the dimensions of positioning in detail through examples
- Using examples, explain the five positioning strategies.
- Define the perceptual map and explain its application using an example of your choice

4. Ensuring quality in organizational operations

- The main features of the current ISO 9000 family of standards
- Characteristics of Six Sigma and Lean Six Sigma approaches
- Organizational self-evaluation

5. Process management

- Methods and tools for recording and monitoring processes (advantages, disadvantages)
- Failure analysis methods (advantages, disadvantages)
- Process improvement models: similarities, differences, criticisms

6. Management of customer demand and their satisfaction

- Methods of forecasting customer demand and their application issues
- Evaluation of demand forecast errors and their consequences for operation
- Examination of the capacity to satisfy customer needs and its modification possibilities

7. Inventory and supply management

- Types of inventory problems and the costs of the processes associated with them
- Management dilemmas and models of inventory control
- Tasks and solutions of material requirements planning

Environmental management

1. The place and role of the environmental audit and performance assessment within the company regulatory processes

- Briefly showcase the methods of environmental performance assessment.
- Justify the reason behind the usage of eco-mapping, outline the praxis of its application.
- Evaluate the role of environmental factors and effects in the environmental protection acts of companies. Showcase the applicability of the method through practical examples.
- The role of auditing in the operations of an environmental management (environment-centred management, environmental protection related management and authentication) system.

2. The environmental review

- The definition, content, and role of preliminary environmental screening (review) in system construction.
- The goal, content and role of environmental review and performance assessment in Hungarian legal practice.
- Definition and content of the SWOT analysis, the applicability in relation to determining the position of environmental protection within the company.
- The recommendations of the International Chamber of Commerce (ICC) and the European Bank for Reconstruction and Development (EBRD) regarding the environmental review (audit) process and the content of the report created based on the review.

3. The practice of auditing in the operations of an environmental management (environment-centred management, environmental protection related management and authentication) system.

- Tasks, content, and steps of the first party audit (according to the PDCA cycle).
- Tasks, content, and steps of the second party audit (according to the PDCA cycle).
- Tasks, content, and steps of the third-party audit (according to the PDCA cycle).
- Showcase the authentication process of an environmental management and authentication system based on EMAS.

4. Environmental performance assessment: the indicator method

- Showcase the role and importance of environmental indicators as part of establishing environmental decisions.
- Organize (group) the applicable indicators.
- Showcase the applicability of the method through a practical example (based on the logic of the PDCA cycle).
- Create an applicable indicator-set based on the practical example shown before.

5. Fundamentals of sustainable resource management

- The taxonomy of depletable resources. Fundamental problems in depletable resource management.
- Substituting depletable resources with renewables: the two-period model of depletable resource allocation, the extended model of depletable resource allocation, soft and hard transitions.
- The role of longer time horizons in resource management, discount rates and their implications on decision making.
- Economic problems with pollution reduction and mitigation, the divergence of private and public costs of pollution, marginal costs of pollution control.

6. Foundations of sustainable business models

- The concept of business modelling and its use in different types of organisations
- Business model vs. corporate strategy: differences and connections

- The components of business models
 - Characteristics and requirements of sustainable business models
7. The practice of business modelling
- Challenges of defining business models
 - Methods to design and renew business models
 - Identification of relevant challenges in the field of sustainability
8. The environmental components of business models
- The identification and evaluation of the environmental components of business models
 - Positive and negative environmental impacts of innovative business models
 - Potentials of business models to tackle environmental issues; good practices
9. The social components of business models
- The identification and evaluation of the social components of business models
 - Positive and negative social impacts of innovative business models
- Potentials of business models to tackle social issues; good practices