

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

Financial management

1. Money

- The functions of money
- The quantity theory of money
- Factors affecting the demand for money.
- The concept of exogenous and endogenous money supply

2. Monetary policy

- The goals and objectives of monetary policy – exchange rate stability, price stability, economic growth and bank sector liquidity
- The traditional (conventional) monetary policy instruments
- The non-traditional (unconventional) monetary policy instruments

3. Public finances

- The main revenues and expenditures of the general government (economic, functional and accounting classifications)
- The notion, origin and consequences of budget deficit and public debt
- The Stability and Growth Pact, the excessive deficit procedure and other fiscal rules

4. Bretton Woods, crises

- What were the main characteristics of the international monetary system of Bretton Woods?
- What made it reasonable to give up the gold-exchange system?
- What were the major economic policy consequences of the oil crises of the 1970s?
- What were the main causes and consequences of the 2007-2009 global financial crisis?

5. Financial markets, stock exchanges, securities, orders

- The financial intermediary system (and its functions), main channels, markets
- Characterization of securities markets, stock exchanges, IPO
- Securities, share types, stock market indices
- Main order types, basic stock market concepts (e.g. short, margin, stop-loss, market capitalization, etc.)
- Stock market frauds and scams

6. CAPM and other factor models

- Risk and return (definition, calculations, etc.)
- Efficient Market Hypothesis (origins, strength, etc.)
- Markowitz model, CAPM assumptions, beta, CAPM-model
- Other factor models, French-Fama 3 and 5 factors, etc.

7. Fundamental analysis

- Macroeconomic and industry analysis (macro, business cycles, sector rotation, etc.)
- Equity Valuation Models (Comparables, P/E problems, CAPE, DDM, Gordon, Reinvestment, PVGO, Free Cash Flow Valuation Approaches)
- Financial Statement Analysis (Key financial Ratios, EVA, Ratio analysis, DuPont system, etc.)

8. Portfolio management and performance evaluation

- The Margin of Safety, Kelly Criterion, Stop-loss rules, tools of stock selection
- The principal strategies
- Portfolio management as an activity (players, processes, indices-benchmarks, active vs. passive management, etc.)
- Performance evaluation (goals, content, process, attribution, etc.)

- Measurement of portfolio risk (standard deviation, tracking error, Sharpe, Treynor, Jensen, Information ratio, etc.)