SOFIA UNIVERSITY ST KLIMENT OHRIDSKI
FACULTY OF ECONOMICS AND BUSINESS ADMINISTRATION

STATE EXAM SYLLABUS

Bachelor’s Program of Accounting, Finance and Digital Applications

The State Exam Syllabus has been approved by Record No 4/21.02.2023 of the Faculty Council of the Faculty of Economics and Business Administration and shall come into force for the class of 2022/2023 and all subsequent classes.

PART ONE FINANCE

1. TIME VALUE OF MONEY AND FINANCIAL MARKETS

1.1. Valuation of single cash flows – future value (simple and compound interest) and present value – definition and formulas. Annual percentage rate, compounding effect and effective annual rate.

1.2. Valuation of multiple cash flows – future and present value (definition and formulas). Annuities and perpetuities (ordinary and due). Growing ordinary annuity and perpetuity (definition and formulas). Application of time value of money concepts to the valuation of securities.

1.3. Financial markets – function and types (primary and secondary markets; auction and dealer/OTC markets). Principal-agent conflict (definition and types of costs).

1.4. Initial public offering and private placement of securities – definition, advantages, and disadvantages. Investment intermediaries (brokers and dealers). Investment banking.

2. SOURCES OF FINANCE: LONG-TERM FINANCING

2.1. Debt (short-term and long-term) and equity securities – definition, types, issuers, and rights granted to their holders.

2.2. Bond Valuation – required rate of return and intrinsic (fundamental) value. Yields (coupon rate, current yield, yield to maturity). “Clean” (Quote) and “dirty” (Invoice) bond price. Bond price reporting on financial markets.

2.3. Stock Valuation – discounted dividend model (special cases), Price Multiples valuation models, discounted cash flow model, Total payout model (features of the models, calculation formula, advantages, and disadvantages).

2.4. Cost of capital. Weighted average cost of capital (WACC) and weighted average flotation costs – definition, formula, components of WACC and methods of their estimation. Definition of floatation costs.

3. INTRODUCTION TO FINANCIAL STATEMENTS ANALYSIS

3.1. Financial statements (balance sheet, income statement, statement of cash flows) – definition and structure. Standardized Financial Statements: Common-Size Statements, Common–Base Year Financial Statements, and Combined Common-Size and Base Year Analysis.

3.2. Free cash flow analysis: operating cash flow, net capital expenditures, change in net working capital, cash flow from assets, cash flow to creditors, cash flow to shareholders (essence of indicators and method of calculation). Differences between accounting and financial science.

3.3. Financial ratios – definition, types, and formulas (Short-Term Solvency, or Liquidity, Measures, Long-Term Solvency Measures, Asset Management, or Turnover, Measures, Profitability Measures and Market Value Measures). Dupont Identity – definition and interpretation of the three components of return on equity. Financial Planning: The Percentage of Sales Approach, External Financing and Growth, The Internal Growth Rate, The Sustainable Growth Rate, Determinants of Growth.

3.4. Operating and cash cycle – definition, components, method of calculation and influencing factors. Short-term borrowing – unsecured loans (committed and noncommitted lines of credit, compensating balance), accounts receivable financing (factoring), trade loans, secured loans and commercial papers.

4. RISK AND RETURNS ON INVESTMENT DECISIONS

4.1. Nature of risk. Types of risk indicators – standard deviation and variance (formulas for handling historical and projected data). Types of total risk, specific risk, and systematic risk (examples and measurement indicators). Beta coefficient. Asset portfolio. Diversification and portfolio risk.

4.2. Efficient markets hypothesis – nature and forms. Normal distribution of historical returns – nature, characteristics, and z-statistics.

4.3. Capital asset pricing model – nature, formula, risk-free rate of return, market portfolio, security market line, arbitrage opportunities (undervalued and overvalued assets).

4.4. Capital budgeting. Capital budgeting methods – net present value, internal rate of return, payback period, profitability index, average accounting return (nature, method of calculation, advantages, and disadvantages). Project Cash Flows: Relevant Cash Flows, The Stand-Alone Principle, Incremental Cash Flows (Sunk Costs, Opportunity Costs, Side Effects, Net Working Capital, Financing Costs). Pro Forma Financial Statements and Project Cash Flows. Forecasting Risk. Scenario, Sensitivity and Simulation Analyses. Break Even Analysis. Operating Cash Flow, Sales Volume, and Break-Even. Operating Leverage. Capital rationing.

5. CAPITAL STRUCTURE AND DIVIDEND POLICY

5.1. Miller and Modigliani's capital structure theory (tax and no tax case: Proposition I on the value of a company and Proposition II on the cost of capital – nature, formulas, and graphical representation).

5.2. Direct and indirect bankruptcy costs. Theories of capital structure – static theory (nature and graphical representation) and pecking order theory.

5.3. Dividend policy. Forms of dividends. Process of cash dividend payment (chronology). Reality factors favouring low and high dividends. Information content of dividends. Clientele effect.

5.4. Stock Repurchases as an alternative to cash dividends – nature and modalities. Stock dividend, stock splits and reverse stock splits (nature and impact on the company).

6. INTERNATIONAL MONETARY SYSTEM

6.1. History of the International Monetary System – the Gold Standard; Interwar Years and World War II (1914–1944); Bretton Woods system of exchange rates.

6.2. Fixed versus Flexible Exchange Rates.

6.3. Taxonomy of Exchange Rate Regimes – arrangement with no separate legal tender; currency board arrangement; pegged exchange rates within horizontal bands; crawling peg; floating; free floating.

7. BALANCE OF PAYMENTS (BOP)

7.1. Fundamentals of BOP Accounting.

7.2. Accounts of the Balance of Payments – Current account; Capital account; Financial account; Net errors and omissions; Reserve assets and related items.

7.3. BOP Impacts on Key Macroeconomic Rates – exchange rates, interest rates, and inflation rates.

7.4. Trade Balances and Exchange Rates.

8. FOREIGN EXCHANGE MARKET

8.1. Foreign Exchange Market – overview, structure, and market participants.

8.2. Types of Foreign Exchange Transactions – spot, forward and swap transactions.

8.3. Currency quotation - direct and indirect; cross courses; „Bid-ask" spread.

9. INTERNATIONAL PARITY CONDITIONS

9.1. Purchasing Power Parity and the Law of One Price.

9.2. The Fisher Effect.

9.3. Interest Rate Parity.

10. FOREIGN CURRENCY DERIVATIVES: FUTURES AND OPTIONS

10.1. The Basics of Foreign Currency Futures. Mechanics of Trading in Futures Markets – clearinghouse; margin account and marking to market; cash versus actual delivery.

10.2. Foreign Currency Options – call and put options. Payoff values. American and European Options.

10.3. Option Valuation. Currency Options Pricing Factors. Binomial Option Pricing. Black-Scholes Option Valuation. The Greek letters – Delta, Theta, Lambda, Rho and Phi.

10.4. Alternative Investments. Mechanisms of hedge fund functioning. Real Estate. Commodities. Private Equity.

10.5. Definition and factors influencing the value of the option. Option markets and market valuation of the option. Types of options.

11. CAPITAL MARKETS

11.1. Introduction to capital market.

11.2. Evolution and growth.

11.3. Capital markets instruments.

11.4. Capital markets participants.

11.5. Regulation of capital markets.

12. PRIMARY MARKET

12.1. Introduction in primary market.

12.2. Methods of new issue.

12.3. Listing and underwriting.

12.4. IPO – characteristics and process.

13. STOCK EXCHANGE

13.1. Characteristics and principles.

13.2. Function on stock exchange.

13.3. Stock exchange traders.

13.4. Regulation of stock markets.

14. DERIVATIVES

14.1. Definitions and types.

14.2. Characteristics of options, futures, forwards, swaps, warrants.

14.3. Trading with derivatives.

14.4. Methods of valuation.

15. RISK MANAGEMENT

15.1. Characteristics and principles.

15.2. Valuation of different types of risk.
15.3. Risk and returns.
15.4. Risk and portfolio management.

References

Basic

1. Jonathan Berk & Peter DeMarzo, Corporate Finance, Pearson Global Edition, 4th Edition, 2016 or any new edition
2. David K. Eitman, Arthur I. Stonehill and Michael H. Moffett, Multinational Business Finance, Pearson Global Edition, 2019 (15th ed.)

Additional

3. Richard Brealey. and Stewart Myers, "Principles of Corporate Finance", McGraw-Hill, 2016 or or any newest edition.
4. Ross, S., Westerfield, R. and J. Jaffe, B. Jordan "Corporate Finance", Twelfth Edition Irwin, 2018.
5. Siddhartha Dastidar, Capital Markets, and Investments: Essential Insights and Concepts for Professionals, 1st Edition, Reading Lights Publication, 2017
6. Scott B. Smart; Lawrence J. Gitman; Michael D. Joehnk, „Fundamentals of Investing", Thirteenth Edition, 2017, Pearson Education, Inc.

PART TWO ACCOUNTING

I. FINANCIAL ACCOUNTING

1. INTRODUCTION TO ACCOUNTING

1.1. Types of business entity. The objective of financial statements. The main financial statements. Users of financial information and their information needs.
1.2. The regulation of accounting. The UK GAAP. The International Financial Reporting Standards (IFRS).
1.3. Capital and revenue expenditure. Capital and revenue income.
1.4. Qualitative characteristics of useful accounting information - fundamental and enhancing qualitative characteristics.
1.5. Accounting concepts and conventions.

2. THE ACCOUNTING EQUATION

2.1. Assets and liabilities. Definitions. Types of assets and liabilities. The business as a separate entity.
2.2. The accounting equation. Profit and loss, income, and expenses. Drawings.
2.3. Credit transactions. Creditors and debtors. Accounts payable and accounts receivable.
2.4. The statement of financial position and the statement of profit or loss. Structure and content.

3. RECORDING FINANCIAL TRANSACTIONS

3.1. Source documents for recording financial transactions. Sales and purchases systems. Invoices, credit notes. Value added tax (VAT).

3.2. Recording bank transactions. Electronic banking. Cash at bank account.

3.3. Petty cash book. The imprest system of managing petty cash.

3.4. The payroll. The payroll as source document.

4. LEDGER ACCOUNTING AND DOUBLE ENTRY

4.1. The nominal ledger. The format of a ledger account. The receivables and payables ledgers.

4.2. Double entry bookkeeping. The double entry for cash transactions, credit transactions and petty cash. Journal entries.

4.3. Accounting for discounts – trade discounts and early settlement discounts.

4.4. Accounting for VAT. Output and input tax. Registered and non-registered traders. VAT return. Irrecoverable VAT. VAT and discounts.

4.5. The initial trial balance. Balancing off ledger accounts. Using the trial balance to prepare financial statements.

5. ERRORS AND CORRECTIONS TO ACCOUNTING RECORDS AND FINANCIAL STATEMENTS

5.1. Reconciling to external documents. Bank and supplier statement reconciliations.

5.2. Types of errors in accounting – transposition errors, errors of omission, errors of principle, errors of commission and compensating errors.

5.3. Correcting errors. Suspense accounts. Adjustment of profits for errors.

5.4. Adjusting the initial trial balance for errors.

6. COST OF SALES AND INVENTORIES

6.1. Cost of sales. Delivery costs. Using mark-up/margin percentages to establish cost.

6.2. Accounting for opening and closing inventories. Ledger accounting for inventories. Adjusting the initial trial balance.

6.3. Counting inventories. Determining the cost of inventory. Valuing the total cost of items left in inventory – “first in, first out” method (FIFO), “last in, first out” method (LIFO) and “average cost” method (AVCO). Inventory valuations and profit.

6.4. Writing off and writing down of inventories. Inventory drawings.

7. IRRECOVERABLE DEBTS AND ALLOWANCE FOR RECEIVABLES

7.1. Irrecoverable debts. Writing off irrecoverable debts. Dishonoured payments.

7.2. Allowance for receivables.

7.3. Accounting for irrecoverable debts and allowance for receivables.

7.4. Adjusting the trial balance for irrecoverable debts and allowances for receivables.

8. ACCRUALS AND PREPAYMENTS

8.1. The principle behind accruals and prepayments.

8.2. Accruals (accrued expenses) and prepayments (prepaid expenses). Accounting for accruals and prepayments. Reversing accruals and prepayments in new period.

8.3. The accrual principle and income. Deferred income and accrued income.

8.4. Accruals, prepayments, advances and arrears and the trial balance.

9. NON-CURRENT ASSETS AND DEPRECIATION

9.1. Property, Plant and Equipment (PPE). Cost of PPE. Subsequent expenditure. Useful life. Residual value.

9.2. The objective of depreciation. Calculating depreciation. Methods of depreciation - the straight line and the reducing balance methods. Changes in the depreciation method, useful life or residual value. Accounting for depreciation of PPE.

9.3. Impairment of assets. Calculating and accounting for an impairment loss. Indications of impairment.

9.4. Non-current asset disposals. Calculating the profit or loss on disposal. Accounting for non-current asset disposals.

9.5. Intangible non-current assets. Goodwill. Accounting for goodwill arising on acquisition. Development costs.

10. COMPANY FINANCIAL STATEMENTS

10.1. Share capital and shareholders. Equity shares and preference shares. Issued and called-up share capital. Irredeemable and redeemable preference shares. Retained earnings and other reserves. Dividends. Rights issues and bonus issues of shares.

10.2. Non-current liabilities. Accounting for non-current liabilities.

10.3. Provisions. Accounting for provisions.

10.4. Tax. Accounting for tax.

10.5. Revenue. IFRS 15 *Revenue from Contracts with Customers*.

II. MANAGEMENT ACCOUNTING

1. BASIC PRINCIPLES OF COSTING

1.1. Concepts of cost. Basic classification of costs.

1.2. Classification, particular for inventory valuation and profit measurement.

1.3. Classification, specific for planning and decision-making.

1.4. Classification, particular for control.

2. CALCULATING UNIT COSTS (PART I)

2.1. Distinguish between direct costs and indirect costs.

2.2. Calculate the prime cost of a cost unit.

2.3. Inventory valuation methods.

2.4. Firs in, first out method.

2.5. Last in, first out method.
2.6. Weighted average method.

3. CALCULATING UNIT COSTS (PART II)
3.1. Calculating unit costs using traditional absorption costing.
3.2. Calculating unit costs using activity based costing.
3.3. Target price and target cost.
3.4. The concept of life cycle costing.
3.5. The features and benefits of a just-in-time system.

4. MARGINAL COSTING AND ABSORPTION COSTING
4.1. Marginal cost and marginal costing.
4.2. Compare and contrast of marginal costing and absorption costing.
4.3. Calculate and present net profit under marginal costing and absorption costing.
4.4. Reconcile the profits and losses from marginal and absorption costing.

5. COST VOLUME PROFIT ANALYSIS AND LIMITING FACTOR ANALYSIS
5.1. Break-even analysis and importance of contribution.
5.2. Calculation of break-even point, margin of safety and target profit.
5.3. Break-even chart preparation and interpretation.
5.4. Limiting factor analysis.

References:
Basic
1. The Institute of Chartered Accountants in England and Wales, *Accounting*, Workbook.
2. The Institute of Chartered Accountants in England and Wales, *Accounting*, Question bank.
3. The Institute of Chartered Accountants in England and Wales, *Management Information*, Workbook.
4. The Institute of Chartered Accountants in England and Wales, Management *Information*, Question bank.

Additional
5. Garrison, R., E. Noreen, Managerial Accounting for Managers, McGraw- Hill, 4 e, 2017
6. Hilton,R., D. Platt. Managerial Accounting: Creating Value in a Dynamic Business Environment. McGraw- Hill, 11 e., 2017
7. Horngren, Ch., S. M. Datar, M. Rajan, Cost Accounting: A Managerial Emphasis, Prentice Hall, 15 e., 2015

INSTRUCTIONS FOR PREPARATION AND CONDUCT OF THE STATE EXAM

- Students who have successfully passed all the required semester exams in the Bachelor's Program of Accounting, Finance and Digital Applications are entitled to take a state exam.
- Preparing for the state exam takes a relatively long period of time, during which students should prepare independently, and if necessary consult with the lecturers of the respective disciplines. For their preparation, students should use the recommended bibliography at the end of each part of the syllabus, lecture notes, presentations and other additional materials that were available to them during the respective lecture course and afterwards.
- There are two state exam sessions: one in July and one in September. The student who intends to attend the respective session submits a written request to the Inspector of Student Affairs – Bachelor's Degree of the Faculty of Economics and Business Administration.
- Students are obliged to arrive at the designated hall for the state exam no later than 15 minutes before the beginning of the exam. The right to take a state exam for each student is verified by a student book, a valid ID card and the examination protocol. Students are required to bring their student book to the state exam.
- During the exam, students will not access personal items, including but not limited to mobile phones, electronic devices, or study materials. Personal belongings that are not necessary for taking the state exam are placed in a designated area of the hall as decided by the invigilators.
- The state exam is three hours (180 minutes) long in total and is conducted through the Electronic Learning System of Sofia University St. Kliment Ohridski (e-learn). Each part (Finance and Accounting) consists of 30 questions or a total of 60 questions.
- There is no mandatory break in the middle of the exam (i.e. students must take the entire state exam in one sitting). Candidates are allowed unscheduled breaks (i.e. use the WC); however, the testing time is not paused during these breaks.
- The grading scale for students' state exam performance is as follows:

Points	Grade	Description
0 - 29	Fail 2	Considerable further work is required
30 – 34	Satisfactory 3	Fair but with significant shortcomings
35 – 44	Good 4	Generally sound work with notable errors
45 – 54	Very good 5	Above the average standard but with some errors
55 – 60	Excellent 6	Outstanding performance

- State exam misconduct and rules violations: if a student engages in any misconduct during the exam, invigilators may investigate their conduct which may lead to the cancelation of their exam.

Misconduct includes, but is not limited to:

- ➢ Cheating or attempting to cheat, including looking at another candidate's monitor or desk, including their exam questions, answers, or written work and concealing or attempting to conceal exam-related information or materials; receiving assistance on the exam or providing assistance to another candidate; accessing, possessing, or using information, including study materials, during the exam or while on unscheduled breaks;

- Communicating with fellow candidates or other persons during the exam;
- Accessing, possessing or using prohibited items including unapproved calculators, mobile phones, listening devices, cameras, headsets, wearable technology such as fitness tracking devices, smart watches, or any other remote communication or photograph device, cigarettes or e-cigarettes, during the exam or on unscheduled breaks, etc.

- The grades from state exams are final and not subject to appeal or review. Students have the right to understand the reasons for the grade received from members of the Committee of examiners, who are required to be present when announcing the results of the state exam.

2023