



SYLLABUS “FINANCE, MONEY CIRCULATION AND TAXATION”

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Department responsible for the course or equivalent: Institute of Management in Economic, Ecological and Social Systems; Department of Engineering Economics

Semester when the course unit is delivered: 6th

Level of course unit: Bachelor level

ECTS credits: 5

ADMISSION REQUIREMENTS

Applicants are expected to have completed the following courses:

- for mastering the discipline, universal knowledge, abilities and skills in the field of communication in a foreign language, formed at the previous level of education, are sufficient.

COURSE OBJECTIVES (AIMS)

- to provide future specialists with theoretical and practical knowledge in the field of finance, money circulation and taxation.
- to explain the basic terms of the modern finance;
- to explain the basic principles of money circulation and taxation;
- to gain skills of applying these tools and concepts to the world's leading economies analysis and discovering how we can "read" from a country's economic data important financial information about the risks and opportunities of doing business in these countries, even making our personal investment decisions.

COURSE CONTENTS

Session 1. Perfect Capital Markets. Problems Caused by Private Information

- The set of assumptions and the framework of our discussion. We will discuss perfect capital markets and see how the deviations from this idealized model that are observed in our real life result in the demand for financial intermediation and for the services of financial institutions.



- We will discuss the fundamental problems caused by the existence of private information (moral hazard и adverse selection) and the damage they lead to. Based on the most simplistic models you will be able to delve deeper into the core of these problems and to evaluate their potential scale. You will learn what role the moral hazard plays in insurance, and how the adverse selection and moral hazard problems reduce the efficiency of lending.

Session 2. Principles of Corporate Finance – A Tale of Value

- Net Present Value. How to Calculate NPV. The game plan for our study of value. Then we analyze the key assumptions for the general valuation model. We focus on the understanding of the sources of value and the fundamental ideas of investor's choice, the opportunity cost of capital, risk and return. We discuss the importance of time and expectations in determining value.
- Then we discuss the present value approach to studying the projects' value and choice. We present the general PV formula and introduce the key concept of net present value (NPV) as a criterion of the choice of good investment projects. Then we study some most widely used shortcuts and apply the formulas to find the NPV's of certain projects that play a special role in valuation. We end up with the general NPV formula and discuss the challenges in using it.
- Applications of NPV. Valuing Bonds and Stocks. Use NPV to study riskless debt. Of special attention will be the challenges in valuing even riskless bonds. We discuss bond parameters and the special role of yield to maturity. Then we demonstrate how the NPV approach helps determine spot and forward interest rates.
- Core concepts in valuing equity. We introduce the idea of the common stock value as a function of its cash disbursements. Then we present some formulas that are used to value common stock on the basis of NPV. We focus on growth as a major contributor to the stock value. We analyze growth drivers and the mechanism of growth. On an example we reveal the influence of investments on the stock value. Finally, we pose some questions with respect to NPV approach.

Session 3. Making the Choice of Good Investment Projects. NPV and Other Criteria. Why Is NPV Better

- The discussion of criteria of choosing investment projects. Beside NPV, the internal rate of return (IRR) and other approaches are introduced. We show



why the NPV criterion is the best and why the application of others may lead to wrong investment decisions.

- Focus on the main ideas to be taken into account while setting up cash flow patterns and making the choice of project on the basis of NPV. We mention some special issues – relevant costs, depreciation, inflation. We present the concept of equivalent annual cost (EAC) as a method of comparing projects of different length. Then we study the application of EAC in greater detail in a case.

Session 4. Risk and Return – From Basics to Reality

- Risk and return. We present a stochastic mathematical model of risk and apply it to find the returns and standard deviations of portfolios of assets. We discuss diversification and the role of special portfolios – the riskless portfolio and the market portfolio – in approaching asset risk. We demonstrate how any asset contributes to the market risk and introduce the β coefficient.
- The capital asset pricing model (CAPM) and study how it is used on examples. We discuss the application of the company cost of capital (CCC) rule to choosing investment projects. Then we use CAPM to determine the cost of capital – first, for an equity-financed company and then in the general case with debt and equity. We present the weighted average cost of capital (WACC) formula and discuss it. Finally, on an example we study the steps in applying CAPM.

Session 5. Monetary system

- Picture of the monetary system as the essential infrastructure of a decentralized market economy. The second lecture, "The Natural Hierarchy of Money", is a kind of high-level overview of the entire course, so don't expect to fully understand it until you look back after completing the rest of the course. Essential orientation for what comes after. Lectures notes for these and subsequent lectures may be found in the very first segment of this module.

Session 6. Balance sheet approach

- Introducing a key analytical tool, the balance sheet approach to monetary economics, that we will be using repeatedly throughout the course. As inspiration, first I provide a concrete example of how the approach works by "translating" the Allyn Young reading into the balance sheet language. I follow that with a more systematic introduction to this essential tool.



during the lecture. At the end of each session, questions are presented for discussion.

Educational technologies used in the study of the discipline include the use of e-learning and distance learning technologies, including for the implementation of contact work with students. In particular, Microsoft Teams is planned to be used to create a remote workspace for collaboration and real-time communication, meetings, messaging, files and applications. For the form of offline interaction, e-mail, group chats on VK are used.

The wide use of the online courses “Principles of Corporate Finance – A Tale of Value”, “Economics of Money and Banking” of Coursera is suggested.

Comprehensive development of student discipline involves:

- students’ involvement in problem-based presentation;
- students self-guided reading of the further literature;
- written essay;
- oral survey and testing.

ASSESSMENT METHODS AND CRITERIA

Criteria for evaluation:

Oral survey

During classes, a student can receive a maximum of 20 points for oral answers. To do this, he needs to answer at least 4 times per module. The maximum number of points for the answer in one lesson is "5".

- “5 points” if the student has demonstrated a deep study of the theoretical material of the lesson, actively participated in the discussion, answered questions fully, provided additional facts and examples, and defended his point of view.
- “4 points” mark is given to the student if he has demonstrated a good study of the theoretical material of the lesson, participated in the discussion, answered questions, and defended his point of view.
- “3 points” is given to the student if he demonstrated an average elaboration of the theoretical material of the lesson, but did not participate in the discussion, did not answer all the questions.
- “2 points” is given to the student if he demonstrated a mediocre study of the theoretical material of the lesson, but did not participate in the discussion, poorly answered questions.



- “1 point” is given to the student if he demonstrated a poor study of the theoretical material of the lesson, but did not participate in the discussion, could not answer the questions..

Essay

- a score from 8 to 10 points is given to the student if all the requirements for writing and defending the essay are met. The problem is identified and its relevance is justified, a brief analysis of various points of view on the problem under consideration is made and its own position is logically stated, conclusions are drawn, the topic is fully disclosed, the volume is maintained, the requirements for external design are met, the correct answers to additional questions are given;
- a score from 5 to 7 points is given to the student if the basic requirements for the essay and its protection are met, but there are flaws. In particular, there are inaccuracies in the presentation of the material; there is no logical sequence in judgments; the volume of the abstract is not sustained; there are design flaws; incomplete answers were given to additional questions during the defense.
- a score of 3 to 4 points is given to the student if there are significant deviations from the requirements for abstracting. In particular: the topic is only partially covered; factual errors were made in the content of the abstract or in answering additional questions; no output during protection.
- a score of 1 to 2 points is given to the student, if the topic of the abstract is not disclosed, a significant misunderstanding of the problem is revealed. / The abstract is not presented by the student (0 points).

Test

- Each question in the test is rated at 1 (one) point.
- The number of questions in the test is 20, the maximum number of points a student can get for a written test is 20.
- If the student has correctly selected and indicated all the answers in the test (if there are several options in the question) or has chosen the only correct option (if the question has the only correct answer), then the student receives one point for this question.
- If the student has correctly selected and indicated not all the correct answers in the test (if there are several options in the question), but did not indicate unnecessary incorrect options, then the student receives half a point for this question.



- If the student chose and indicated the wrong answers in the test (if there are several options in the answer) or indicated the wrong option if the question has the only correct answer, or this question was left unanswered, then the student gets zero points for this question.

COURSE LITERATURE (RECOMMENDED OR REQUIRED)

1. Ершов, Д.Е. Глобальная экономика: международная торговая политика=Global Economics. International Trade Policy: учебное пособие / Д.Е. Ершов, Д.В. Сучков; Минобрнауки России, Федеральное государственное бюджетное учреждение высшего профессионального образования «Нижегородский государственный архитектурно-строительный университет», Международный факультет экономики, права и менеджмента International institute of economics и др. – Нижний Новгород: ННГАСУ, 2012. – Ч. 2. – 55 с.: схем., табл. – Режим доступа: по подписке. – URL: <http://biblioclub.ru/index.php?page=book&id=427249> (дата обращения: 19.03.2020). – схем., табл. – Текст: электронный. (in Eng.)
2. Назарова, Н.Б. An English Course in Practical Taxation: учебно-практическое пособие / Н.Б. Назарова, Е.В. Коробова. – Москва: Евразийский открытый институт, 2011. – 160 с. – Режим доступа: по подписке. – URL: <http://biblioclub.ru/index.php?page=book&id=90385> (дата обращения: 19.03.2020). – ISBN 978-5-374-00471-7. – Текст: электронный. (in Eng.)
3. Першина, Е.Ю. Финансовая экономика: английский язык для магистров / Е.Ю. Першина. – 3-е изд., стер. – Москва: Флинта, 2017. – 90 с. – Режим доступа: по подписке. – URL: <http://biblioclub.ru/index.php?page=book&id=115113> (дата обращения: 19.03.2020). – Библиогр.: с. 74. – ISBN 978-5-9765-1382-2. – Текст: электронный. (in Eng.)
4. Татьянченко, Н.П. Английский язык в бухгалтерском учете и финансах компаний=English in accounting and company finance: практикум : [16+] / Н.П. Татьянченко. – Москва: Владос, 2015. – 70 с.: ил. – (Практикум для вузов). – Режим доступа: по подписке. – URL: <http://biblioclub.ru/index.php?page=book&id=429782> (дата обращения: 20.03.2020). – Библиогр. в кн. – ISBN 978-5-691-02180-0. – Текст: электронный.