

American University - Central Asia Department of Economics

MAT333 «Math Modeling in Economics »

Instructor: Kydyraliev Syrgak, Professor, room 415, #915000 ext426

Office hours: by appointment only

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Text:

1. W.Sharp, G.Alexander, D.Bailey. *Investment*
2. С. К. Кыдыралиев. *Финансовые и инвестиционные расчеты*. Бишкек, АУЦА. 2007.
3. Л. Крушвиц *Финансирование и инвестиции*. Питер 2000.
4. Moshe Ben-Horim. *Essentials of Corporate Finance* Allyn and Bacon, Inc/ 1987
5. S.K. Kydyraliev, ... *Intro to Corporate Finance and Investments*. Bishkek, AUCA. 2012

SCHEDULE OF TOPICS

Topics	Reference
1.1 Simple Interest, Simple Discount. T-bills.	[1] Ch.5, [2] §1, [5] §1.1
1.2 Compound Interest. Effective Interest Rate.	[1] Ch.5, [2] §2-3, [5] §1.2
1.3 Annuity. Future Value.	[5] §1.3, [1] Ch.18, [2] §4
1.4 Annuity Present Value. Amortization.	[5] §1.4, [2] §5
1.5 Evaluation of the Share.	[5] §1.5, §1.6 [2] §4,
Quiz №1	
2.1 Linear Difference Equations of the 1-st kind.	[2] §7-8, [5] §2.1
2.2 Leasing. Capital Expenditure.	[2] §9, [5] §2.2
2.3 Bonds. Mortgages	[2] §10-11, [5] §2.3
2.4 Methods of investment projects evaluation	[2] Ch.3, [5] §1.7, [5] §2.5
Quiz №2	
3.1 Risk and Return of Stocks and Portfolios	[5] §3.1
3.3 Model CAPM.	[1] Ch.3, [5] §3.2
3.4 Influence of inflation	[5] §2.6
Final Test	

Course Requirements and their weight in the final grade are:

- Quiz №1 – 25; Quiz №2 – 25; Final test – 40; Activity and microquizes – 10.

Tests rewriting is prohibited.

If a student misses a quiz due to valid (from the instructor's point of view) reasons, the maximum amount of points he/she can get on final test will be 60. If the reason for missing a lesson is invalid, the student's final test will be evaluated out of 40 points.

A student, who missed the final test due to valid (from the instructor's point of view) reasons, may be given an opportunity to write it at the time specified by the chair, but the maximum amount of points he/she can get will be 35 points. If a quiz is missed due to invalid reasons, a student will earn no points for it.

In case of missing 2 quizzes or quiz and final test, irrespective of the reason, a student will not be attested.

For every missing lesson a student loses 1 point.

A student's independent work will be included into the midterm and final tests. The instructor establishes the way the student's knowledge will be tested.

Grading Scale:

A	A-	B+	B	B-	C+	C	C-	D	F
100-90	85<	80<	75<	70<	65<	60<	55<	45<	< 45

In Class and Exams Requirements:

- No cell phones (turn them off during the classes).
- You are not allowed to leave the room during the exam.
- Be sure to bring your own calculator, pens, pencils, and eraser for the exam. You won't be able to use your classmate's one.