Identification	**Subject**	MATH 223, Mathematics for elementary teachers-1, 6 ECTS
	Department	Mathematics
	Program	Undergraduate
	Term	Spring, 2024
	Instructor	Aida Asgarova
	E-mail:	aidaasgarova@gmail.com
	Phone:	(055) -612-05-50
	Classroom/hours	Tuesday: 14:10-15:40, 15:50-17:20
Prerequisites	None	
Language	English	
Compulsory/Elective	Required	
Required textbooks and course materials	***Core Textbooks:*** 1. California Go Math!, Grade 5, Juli K. Dixon, Matthew R. Larson, Edward B. Burger, Martha E. Sandoval-Martinez, Steven J. Leinwand, 2015 by Houghton Mifflin Harcourt Publishing Company 2. International Mathematics for Middle year 4, Alan McSeveny, Rob Conway, Steve Wilkes, Michael Smith 2009 3. Complete math for Cambridge IGCSE, David Rayner, Ian Bettison, Mathew Taylor 2018	
Course outline	Topics include: 1) Sets (Venn diagrams) 2) Natural Numbers (divisibility rules, GCF and LCM) 3) Operations with Fractions 4) Operations with decimals 5) Angles, parallel lines 6) Customary units of measurements 7) Ratio and Proportion 8) Triangles (Area. Triangle inequality) 9) Right triangles (Pythagoras theorem) 10) Circle (Area and circumference) 11) Equations with single variables 12) Quadrilaterals and their areas 13) Three-dimensional figures 14) Volume of 3D shapes 15) Statistics (Mean, median and mode)	
Course objectives	*The concepts of* Sets (Venn diagrams), Natural Numbers (divisibility rules, GCF and LCM), Operations with Fractions, Operations with decimals, Angles, parallel lines, Customary units of measurements, Ratio and Proportion, Triangles (Area. Triangle inequality), Right triangles (Pythagoras theorem), Circle (Area and circumference), Equations with single variables, Quadrilaterals and their areas, Three-dimensional figures, Volume of 3D shapes, Statistics (Mean, median and mode).	
Learning outcomes	By the end of the course the students should be able: • To do operations with fractions • To solve some simple and hard problems in geometry • To simplify hard expressions • To solve some problems in statistics	
Teaching methods	**Lecture**	x
	Group discussion	x
	Experiential exercise	x
	Course paper	x

	Others		
Evaluation	**Methods**	**Date/deadlines**	**Percentage (%)**
	Midterm Exam		30
	Class Participation		5
	Quizzes		20 (3 quizzes)
	Activity		5
	Final Exam		40
	Total		100

Policy

- **Preparation for class**

The structure of this course makes your individual study and preparation outside the class extremely important. The lecture material will focus on the major points introduced in the text. Reading the assigned chapters and having some familiarity with them before class will greatly assist your understanding of the lecture. After the lecture, you should study your notes and work relevant problems and cases from the end of the chapter and sample exam questions.
Throughout the semester we will also have a large number of review sessions. These review sessions will take place during the regularly scheduled class periods.

- **Quizzes and examinations**

Quizzes may be given unannounced throughout the term. There will be no make-up quizzes.

- **Withdrawal (pass/fail)**

This course strictly follows grading policy of the School of Engineering and Applied Science. Thus, a student is normally expected to achieve a mark of at least 60% to pass. In case of failure, he/she will be required to repeat the course the following term or year.

- **Cheating/plagiarism**

Cheating or other plagiarism during the Quizzes, Mid-term and Final Examinations will lead to paper cancellation. In this case, the student will automatically get zero (0), without any considerations.

- **Professional behavior guidelines**

The students shall behave in the way to create favorable academic and professional environment during the class hours. Unauthorized discussions and unethical behavior are strictly prohibited.

- **Ethic**

Use of any electronic devices is prohibited in the classroom. All devices should be turned off before entering class. This is a university policy and violators will be reprimanded accordingly!
Students should not arrive in late to class!

Tentative Schedule

Week	**Date/Day (tentative)**	**Topics**	**Textbook/ Assignments**
1	13.02.24 13.02.24	• Sets (Venn diagrams) • Operations on sets	**[2] 280-288**
2	20.02.24	• Natural Numbers (divisibility rules, GCF and LCM)	**[1] ch.1, 2**

	20.02.24	• Problem solving	
3	27.02.24 27.03.24	• Operations with Fractions • Problem solving	**[1] 250-299**
4	05.03.24 05.03.24	• Operations with decimals • Problem solving	**[1] 107-147**
5	12.03.24 12.03.24	• Angles, parallel lines • Problem solving	**Quiz (6 pts)** **[2] 294-299**
6	19.03.24 19.03.24	• Customary units of measurements • Problem solving	**[1] 425-457**
7	26.03.24 26.03.24	• Ratio and Proportion • Problem solving	**[2] 104-107**
8	02.04.24 02.04.24	• Triangles (Area. Triangle inequality) • Problem solving	**[1] 175-178**
9	09.04.24 09.04.24	• **Midterm Exam** • Right triangles (Pythagoras theorem)	**[2]108-117, 158-165**
10	16.04.24 16.04.24	• Circle (Area and circumference) • Problem solving	**Quiz (7 pts)** **[2]67-76,115-134**
11	23.04.24 23.04.24	• Equations with single variables • Problem solving	**[1] 244-261**
12	30.04.24 30.04.24	• Quadrilaterals and their areas • Problem solving	**[2] 473-476**
13	07.05.24 07.05.24	• Three-dimensional figures • Problem solving	**Quiz (7 pts)** **[1] 477-480**
14	14.05.24 14.05.24	• Volume of 3D shapes • Problem solving	**[2] 232-262**
15	21.05.24 21.05.24	• Statistics (Mean, median and mode) • Problem solving	**[1] 468-482**
	TBA	**Final Exam**	

This syllabus is a guide for the course and any modifications to it will be announced in advance.