

Study Programme: Elementary Teacher
Course Unit Title: Interesting Mathematics
Course Unit Code: U-4-2-4-4
Name of Lecturer(s): Márta Takács, Zita Diana
Type and Level of Studies: Undergraduate Studies (BA)
Course Status (compulsory/elective): Elective
Semester (winter/summer): Winter
Language of instruction: Hungarian
Mode of course unit delivery (face-to-face/distance learning): Face-to-face learning
Number of ECTS Allocated: 2
Prerequisites: Exam in Mathematics I and Mathematics II passed.
Course Aims: Teaching mathematics expanded by interesting historical facts in order to familiarize children with the practical sides of mathematics. Introducing interesting riddles and issues from the history of mathematics, basic logical principles, that lead to solutions, getting to know the practical side of mathematics and make it less abstract for children.
Learning Outcomes: Students able to select and implement specific mathematical tasks with children in lower classes, based on basic logical reasoning.
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Interesting historical facts related to mathematics. Tasks and riddles from the Greek and Roman era, Asian attractions. Renaissance era. Paradoxes. Logical rules of thinking. A selection of interesting mathematical riddles. Teaching children how to solve a riddle. Magical squares.</p> <p><i>Practice</i></p> <p>Seminar paper on a paradox.</p>
<p>Required Reading:</p> <p><i>Compulsory:</i></p> <p>Kosztolányi, József – Mike, János – Vincze, István (1992): <i>Érdekes matematikai feladatok</i>. Szeged: Mozaik Oktatási Stúdió.</p> <p><i>Optional:</i></p> <p>Baillif, Jean-Claude (1989): <i>Logikai sziporkák</i>. Budapest: Gondolat.</p> <p>Isidorovič, Jakov (1979): <i>Zanimljiva matematika</i>, Zagreb: Nakladni zavod Hrvatske.</p> <p><i>Matematikai érdekségek</i> (1969): Budapest: Gondolat.</p> <p>Mosonyi, Kálmán (1977): <i>Matematikai játékok. Általános iskolai szakköri füzet</i> sorozat, Budapest: Tankönyvkiadó.</p>

Перелеман (1996): *Час занимљиве математике*, Норма 3, Учитељски факултет, Сомбор, стр. 55 - 63.

**Weekly Contact Hours: 2
(30)**

Lectures:1 (15)

Practical work: 1 (15)

Teaching Methods:

Lecture, practice on a computer, discussion, consultation.

Knowledge Assessment (maximum of 100 points): 100

Pre-exam obligations	points	Final exam	points
Active class participation	10	written exam	30
Practical work	10	oral exam	20
Preliminary exam(s)			
Seminar(s)	30		

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.