

<b>Study program:</b> Special Education and Rehabilitation, module of Visual Impairments			
<b>Type and level of studies:</b> Basic Academic Studies			
<b>Title of the subject:</b> Approaches in Teaching Mathematics to Children with Visual Impairments			
<b>Lecturer:</b> Ksenija M. Stanimirov			
<b>Course status:</b> Obligatory			
<b>ECTS:</b> 5			
<b>Prerequisites:</b> Passed exam Methods of Teaching Braille			
<b>Aim:</b> The aim of the course is for the students to become familiar with the application of methodical approaches for learning mathematics of children with visual impairments and multiply disabled visually impaired children, to learn Braille mathematical symbols and to perform basic arithmetic operations on the abacus.			
<b>Outcomes:</b> After the course completion, students will be able to choose the most appropriate approach to plan activities related to the learning of mathematics of children with visual impairment and multiply disabled visually impaired children; students will master and apply Braille mathematical symbols and will master the basic arithmetic operations on the abacus.			
<b>Content</b> <i>Lectures:</i> Course contents include methodical approaches in initial teaching mathematics: contextual approach, teaching mathematics based on problem solving, cooperative approach, game-based learning, and active learning of mathematics. Studying the concept of a set, of number, fractions, equations and inequalities, geometric contents, measurements and measuring units in children with visual impairments. Getting familiar with mental operations used in mathematics (analysis, synthesis, abstraction, generalization, concretization, specialization, comparing). Mathematical concept. Factors that contribute to the learning of mathematics of children with visual impairment. Difficulties in learning mathematics in children with visual impairments and ways of overcoming them. <i>Practical work:</i> Presenting models for teaching mathematics to children with visual impairment and to multiply disabled visually impaired children. Learning Braille mathematical symbols. Principles of working with the abacus and the way this aid can be used in working with children with visual impairment.			
<b>Literature</b> 1. Dejić, M., Egerić, M. (2006). <i>Metodika nastave matematike</i> . Učiteljski fakultet u Jagodini, str. 25-43, 328-336. ISBN 86-7604-020-6. 2. Jablan, B. (2016). <i>Dete sa oštećenjem vida u školi</i> . Beograd: Univerzitet u Beogradu – Fakultet za specijalnu edukaciju i rehabilitaciju, str. 181-248. ISBN 978-86-6203-078-8. 3. Mani, M. N. G., Plernchaivanich, A. (2005). <i>Mathematics Made Easy For Children with Visual Impairment</i> . ICEVI, pp. 20-50. ISBN 1-930526-02-4. 4. Strategies for teaching mathematics to students with visual impairments and additional disabilities (2000). In: M. C. Holbrook, A. J. Koenig (Eds.) <i>Foundations of Education: Instructional strategies for teaching children and youths with visual impairments, Volume 2</i> , (pp 394-396). American Foundation for the Blind, ISBN 0-89128-339-0. 5. Csocsán, E., Klingenberg, O., Koskinen, K. L., Sjöstedt, S. (2002). <i>Maths "seen" with Other Eyes: A Blind Child in the Classroom; Teacher's Guide in Mathematics</i> . Esbo: Schildts, pp 55-71. ISBN: 951-50-1300-3. 6. Sharma, M. C. (2001). <i>Matematika bez suza</i> . Ostvarenje, str. 43-84, 148-174, 178-230. ISBN: 953-6827-05-0.			
<b>Number of active classes per week:</b>	<b>Lecture: 2</b>		<b>Practical work: 1</b>
<b>Teaching methods:</b> Lectures followed by slide show presentations, practical teaching (using the abacus, writing math tasks in Braille), and micro teaching (practicing performing certain parts of the teaching class).			
<b>Evaluation of knowledge (maximum score 100)</b>			
<b>Pre obligations</b>	<b>Score</b>	<b>Final exam</b>	<b>Score</b>
activities during the lectures	15	written exam	50
practical teaching	15	oral exam	/
seminars	20		