

COURSE TITLE		ASSESSMENT IN EDUCATION				
Code	PMM 809	Year of study	Graduate program, 2 nd year			
Lecturer(s)	Željka Zorić, lecturer	ECTS credits	3			
Assistants		Teaching structure (hours per semester)	L	S	E	F
			0	30	0	0
Course status	Obligatory and elected course	e-learning %				
COURSE DESCRIPTION						
Course objectives	<ul style="list-style-type: none"> • Enable students to systematically and effectively evaluate pupils in math education • Enable students for the evaluation of their own performance • Enable students to objectively and critically interpret results obtained through various models of evaluation of pupils' achievements in maths 					
Course prerequisites for enrolment and competency requirements	No prerequisites for the course.					
Expected learning outcomes on course level (4-10 learning outcomes)	<p>After completing the course, the students should be able to do the following:</p> <ul style="list-style-type: none"> • Set clear mathematics learning goals in accordance with the official curriculum and taxonomy standards • Distinguish between the types of assessment in education • Define objective criteria of assessment and evaluation of learning outcomes • Apply various corresponding approaches and methods of learning results assessment and explain the reasoning behind • Independently design and assess written and oral tests in accordance with the criteria set in advance • Document pupil's participation and contribution in various learning activities of math related contents • Provide concrete and effective feedback to pupils and parents on pupil's performance, progress and achieved success • Assess the learning results by assessment of results of pupils' performance • Analyse results obtained by assessment in order to increase the quality of learning and teaching 					
Detailed course content according to teaching hours	<ol style="list-style-type: none"> 1. Objectives of math education and outcomes of math learning. Math concepts and processes. Knowledge taxonomies. Designing of measurable math learning outcomes. 2. Assessment of pupils' and teachers' performance (internal, external, diagnostic, formative and summative, criteria-based, teacher self-assessment) 3. Assessment as a part of the learning and teaching processes (assessment as learning, assessment for learning and assessment of learning) 4. Methods of monitoring and assessment of pupils' performance in math. Measurement of the level of achievement of set objectives and results. 5. Criteria-based assessment 					

	<p>6. Methods of monitoring and assessment of pupils' performance in math. Note taking. Self-assessment and peer assessment</p> <p>7. Designing a math task in order to measure the set learning outcomes. Types of math tasks.</p> <p>8. Designing of written and oral tests in order to measure the set learning outcomes. Standardised test. External assessment</p> <p>9. Formative and summative assessment. Evaluation. Feedback provided to pupils and parents.</p>					
Types of teaching methods	<input type="checkbox"/> lectures <input checked="" type="checkbox"/> seminars and workshops <input type="checkbox"/> practical work <input type="checkbox"/> full <i>online</i> learning <input type="checkbox"/> mixed e-learning <input type="checkbox"/> field work		<input checked="" type="checkbox"/> individual tasks <input type="checkbox"/> multimedia <input type="checkbox"/> laboratory <input checked="" type="checkbox"/> mentor related work <input type="checkbox"/> (fill in)			
Student obligations	Students are obliged to attend the class, to actively participate in all types of educational programs, to submit and present their seminar papers and to pass the final evaluation.					
Monitoring students practice (<i>enter ECTS credits for each activity so that total ECTS credits correspond to subject scores</i>)	Attendance	0.8	Research		Praxis	
	Experiments		Paper		(fill in)	
	Essays		Report	1.4	(fill in)	
	Preliminary exam		Oral exam	0.8	(fill in)	
	Written exam		Project		(fill in)	
Evaluation and assessment of student performance in the course and on the final exam	<p>Students attending the course regularly (over 90% of the class), who received a positive evaluation for writing and presenting of their seminar paper are entitled to a signature.</p> <p>Students entitled to a signature are evaluated based on the grades on the seminar paper (65%) and the final exam (35%).</p> <p>Seminar paper Seminar paper comprises the actual written work and the presentation. It accounts for 65% of the total grade.</p> <p>Final exam Final exam can be administered either in writing or orally, during the regular exam periods. All students getting the passing grade on the seminar paper are allowed to take the final exam. The final exam is considered as passed if a student earns one of the passing grades.</p>					
Obligatory literature (available in the library or through other media)	Title			Number of copies in the library	Availability through other media	
	C.R.Tobey, P. D. Keeley, Mathematics Formative assessment: 75 practical strategies for linking assessment, instruction and learning, Corwin Pr Inc, 2011.					
	E. Depka, Designing assessment for mathematics					

	N.E.Gronlund, Assessment of student achievement		
	J.H. McMillan, Classroom assessment: principles and practice for effective instruction		
	W. J. Popham, Classroom assessment: What teachers need to know		
Additional literature	<p>M. Niss, Investigations into assessment in mathematics education: an ICMI Study, 2nd reprint, Springer, 2010</p> <p>Miller-Linn-Gronlund, Measurement and assessment in teaching, 10th edition, Pearson Education Inc, 2009</p> <p>J. Dodge, 25 quick formative assessments for differentiated classroom, Scholastic Inc, 2009</p> <p>Driscoll-Wood, Developing outcomes based assessment for learner-centered education, Stylus Publishing, 2007.</p> <p>W. J. Popham, Transformative assessment, ASCD, 2008.</p> <p>C. Walker, E. Schmidt, Smart tests, Pembroke Publishers Limited, 2004</p>		
Quality monitoring methods that enable the achievement of course objectives	<p>In the final week of this course an anonymous survey will take place in order for students to evaluate the quality of the class. At the end of each semester an analysis of students' success at the test (trial) teaching lessons in the relevant semester.</p>		
Other (in the opinion of the proposer)			