Study program	Level of studies	Third cycle
	Title of the study program	Science and mathematics education

COURSE

Course title	**Assessment of Students' Learning Outcomes in Physics**

Course ID	Semester	Course status	ECTS credits	Contact hours
PED672	II	Elective	10	60

Lecturers	Lecturer in charge	Prof. dr. Vanes Mešić
	Other lecturers	-
Course aims	Developing the ability for assessing students' achievement in physics which is compatible with the nature and structure of physics knowledge. Acquiring knowledge about pedagogical potential and technical aspects of large-scale assessments of student achievement in science. Develop an understanding of the role of internal and external assessment in the process of quality assurance of physics education.	

CONTENT

#	Teaching units	Contact hours		
		L	E/S	C
	Fundamental principles of assessing students' learning outcomes in physics. Assessing preconceptions. Summative assessment in physics instruction. Assessing students' scientific skills. Standardized testing Formative assessment in physics instruction Grading in physics instruction Utilizing assessment findings for purposes of improving the quality of instruction Large-scale assessment of student achievement Features of most important, international large-scale assessments of student achievement in science Technical aspect of conducting large-scale assessments of student achievement in science How findings from large-scale assessments affect educational policies?	30	30	

LITERATURE

1. Liu, X. (2010). Essentials of Science Classroom assessment. Thousand Ouks: SAGE.
2. McMahon,M., Simmons, P., Sommers, R., De Baets, D., & Crawley, F. (2006). Assessment in Science: practical experiences and educational research. Arlington: NSTA.
3. Greaney, V., & Kellaghan, T. (2008). Assessing National Achievement Levels in education. Washington: The World Bank.
4. Von Davier, M., Gonzalez, E., Kirsch, I., & Yamamoto, K. (2013). The Role of International Large-Scale Assessments: Perspectives from Technology, Economy, and Educational Research. Dordrecht: Springer.
5. Tindal, G., & Haladyna, T.M. (2002). Large-Scale assessment programs for all students: validity, technical adequacy, and implementation. Mahwah, NJ: Lawrence Erlbaum Associates.

ASSESSMENT OF LEARNING

	Assessment method	Points	Threshold
1.	Partial exams	1 X 20	11
2.	Seminar papers	1 X 40	22
3	Final exam	40	22
4.			
	Total	100	55