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| Study program | | Level of studies | | Third cycle | | |
| | | Title of the study program | | Science and mathematics education | | |
| COURSE | | | | | | |
| Course title | | Educational Planning and Curriculum Development in Physics Education | | | | |
| Course ID | Semester | Course status | | ECTS credits | Contact hours | |
| PED673 | II | Elective | | 10 | 60 | |
| Lecturers | Lecturer in charge | Prof. dr. Vanes Mešić | | | | |
| | Other lecturers | - | | | | |
| Course aims | Acquiring knowledge about taxonomies and models of competence for the field of science education. Acquiring knowledge and skills needed for development of physics curricula. Developing understanding about the complex relationships between educational goals, competence models, educational standards and educational testing. | | | | | |
| CONTENT | | | | | | |
| # | Teaching units | Contact hours | | | | |
| | | L | E/S | C | | |
| | <p>Planning of instruction. The process of developing instructional objectives. Classifications of instructional objectives. General taxonomies of instructional objectives. Taxonomies of instructional objectives for the domain of science education.</p> <p>The concept of competence. The structure of physics competence. Models of physics competence.</p> <p>Educational standards. Analysis of standards of physics achievement in B&H.</p> <p>Connecting educational goals, models of competences, educational standards and educational testing.</p> <p>The concept of curriculum. How nature and structure of physics knowledge affects development of the physics curriculum? Curriculum as a product and as a process.</p> <p>Development, evaluation and improvement of the curriculum. Educational standards and curriculum.</p> | 30 | 30 | | | |
| LITERATURE | | ASSESSMENT OF LEARNING | | | | |
| <ol style="list-style-type: none"> Kircher, E., Girwidz, R., Haeussler, P. (2009). <i>Physikdidaktik: Theorie und Praxis</i>. Berlin: Springer. Anderson, L.W., Krathwohl, D.R. (2001). <i>Revised Bloom's Taxonomy: A Taxonomy for Learning, Teaching and Assessing</i>. New York: Longman. Marzano, R., Kendall, J.S. (2007). <i>New Taxonomy of Educational Objectives</i>. Thousand Oaks: Corwin Press. Klopfer, L.E. (1970). <i>Student Behaviour and Science Content Categories and Subcategories for a Science Program</i>. Pittsburgh: University of Pittsburgh. Klieme et al. (2007). <i>Zur Entwicklung nationaler Bildungsstandards – Expertise</i>. Berlin: BMBF. SAA (2007). <i>Standardi postignuća: Fizika, Hemija i Biologija-VIII razred</i>. Sarajevo: Agencija za standarde i ocjenjivanje u obrazovanju za Federaciju BiH i RS. Kelly, A.V. (2004). <i>The Curriculum: Theory and Practice</i>. Thousand Oaks: SAGE. | | Assessment method | Points | Threshold | | |
| | | 1. | Partial exams | 1 X 20 | 11 | |
| | | 2. | Seminar papers | 2 X 20 | 22 | |
| | | 3 | Final exam | 40 | 22 | |
| | | 4. | | | | |
| | | Total | 100 | 55 | | |