

**DESCRIPTION OF MODULE (SCHEDULE)**

<b>MODULE</b>	<b>Assessing Science for Understanding – a constructivist approach</b>
<i>Volume of module (credit, hours)</i>	2 credits 30 contact hours (direct teaching); 30 hours of individual work
<i>The brief description of the module</i>	Assessment and learning are so closely related that if the outcomes are not assessed, students and teachers likely will redefine their expectations for learning science only to the outcomes that are assessed. Rather than checking whether students have memorized certain items of information, assessment need to probe for students' understanding, reasoning, and utilization of knowledge. The module is focused on the questions: what is classroom assessment and which classroom assessment techniques are effective in science education and what are the main principles of authentic assessment.
<i>Competencies to be achieved</i>	<ol style="list-style-type: none"> <li>1. Competency to assess students' learning and progresses in science education;</li> <li>2. Competency to use effective and adequate classroom assessment techniques;</li> <li>3. Competency to assess learners' prior knowledge, understanding, skills, attitudes, values and self-awareness;</li> <li>4. Competency to assess own science teaching and to make change and improvement in the quality of science education.</li> </ol>
<i>Goals of studies</i>	<ul style="list-style-type: none"> <li>• To understand purpose of classroom assessment;</li> <li>• To characterize the classroom assessment;</li> <li>• To plan and implement classroom assessment projects;</li> <li>• To choose the right technique of assessment;</li> <li>• To realize wider choice of assessment techniques.</li> </ul>
<i>Content of module (topics)</i>	<ol style="list-style-type: none"> <li>1. Purpose and characteristic of classroom assessment.</li> <li>2. A constructivist approach in classroom assessment.</li> <li>3. Planning and implementing classroom assessment projects.</li> <li>4. Techniques for assessing knowledge and skills (background knowledge probe, focused listing, misconception/preconception check, minute paper, one-sentence summary, journals, concept maps, portfolios, etc.);</li> <li>5. Technics for assessing learner attitudes, values and self-awareness (classroom pools, self-confidence surveys, interest checklist, self-assessment);</li> <li>6. Assessing learner reactions to instructions (electronic mail feedback, group feedback, reading rating sheets...).</li> </ol>
<i>Strategies of teaching / training</i>	Discussion, group work, cooperative learning, team work, microteaching, presentation, independent work, individual work.

<p><i>Distribution of hours of the module</i></p>	<ol style="list-style-type: none"> <li>1. Theoretical works – 10 hours (seminar)</li> <li>2. Practical works – 20 hours (laboratory experience)</li> <li>3. Individual project work – 20 hours</li> <li>4. Self-studies – 10 hours</li> </ol> <p style="text-align: center;">Total: 60 hours</p>
<p><i>Final evaluation criteria</i></p>	<ol style="list-style-type: none"> <li>1. Quality of presentation</li> <li>2. Quality of Assessment Project</li> <li>3. Quality of microteching presentation</li> <li>4. Ability to work in team</li> </ol>
<p><i>Strategies and technics of evaluation of achievements</i></p>	<ol style="list-style-type: none"> <li>1. Presentation - 20%;</li> <li>2. Assessment Project - 50%;</li> <li>3. Microteching presentation – 20%;</li> <li>4. Team work – 10%.</li> </ol>
<p><i>References (main sources)</i></p>	<ol style="list-style-type: none"> <li>1. Thomas, A., Angelo, K., Cross, P. <i>Classroom Assessment Techniques</i>. San Francisco: Jossey-Bass, 1993.</li> <li>2. Mintzes, J. J. <i>Assessing Science Understanding. A Human Constructivist View</i>. San Diego: Academic Press, 2000.</li> </ol>