

## Module Descriptions

<b>Module designation</b>	<b>Innovative Learning</b>
Semester(s) in which the module is taught	4 <sup>th</sup> /Second Year
Person responsible for the module	Prof. Dr. Utiya Azizah, M.Pd.
Language	Bahasa Indonesia (Regular Class) Bahasa Inggris (Internasional Class)
Relation to curriculum	Compulsory course
Teaching methods	Project-Based Learning 3 workhours per week (3 x 170 minutes per weak)
Workload (incl. contact hours, self-study hours)	1 CU for a bachelor's degree equals 170 minutes (50 minutes face-to-face, 60 minutes structured, 60 minutes independent learning) per week × 14 weeks, excluding mid and end-term exams. = 39.67 work hours per semester = 1.587 ECTS.
Credit points	3 Credits Units (CU) = (4.77 ECTS)
Required and recommended prerequisites for joining the module	Basic understanding of learning theories and microteaching concepts.
Module objectives/intended learning outcomes	<p>Upon successful completion of this module, students are expected to:</p> <ol style="list-style-type: none"> <li>1. Explain the concepts and principles of various innovative learning models (cooperative learning, problem-based learning, inquiry–discovery, contextual, and project-based learning) and their implications in chemistry education.</li> <li>2. Demonstrate professional, creative, collaborative, and open-minded attitudes toward innovation in designing and implementing chemistry learning.</li> <li>3. Design chemistry learning tools (lesson plans, media, and assessments) aligned with the characteristics of innovative learning models and the needs of 21st-century learners.</li> <li>4. Implement innovative learning models through peer teaching using ICT-based media and conduct critical reflection and evaluation of teaching practices.</li> </ol>
Content	<p>This module discusses the concepts, characteristics, and implementation of innovative learning models, including:</p> <ol style="list-style-type: none"> <li>1. Cooperative Learning</li> <li>2. Problem-Based Learning (PBL)</li> <li>3. Inquiry–Discovery Learning</li> <li>4. Project-Based Learning (PjBL)</li> </ol> <p>Students analyze theoretical foundations, evaluate existing learning tools, design learning materials and media, and implement them through peer teaching sessions. Activities are designed to foster collaboration, creativity, and reflective practices aligned with 21st-century learning needs.</p>

Examination forms	Essay and Oral Presentation
Study and examination requirements	<p>Assessment is based on continuous evaluation through:</p> <ol style="list-style-type: none"> <li>1. Class participation and discussion (12%)</li> <li>2. Project/Product-based assessment (66.5%)</li> <li>3. Portfolio evaluation (1.5%)</li> <li>4. Performance/practical peer teaching (20%)</li> </ol> <p>Forms: project reports, peer teaching demonstration, reflective journals, and portfolio documentation.</p>
Reading list	<ol style="list-style-type: none"> <li>1. National Research Council. (2001). <i>Inquiry and the National Science Education Standards: A Guide for Teaching and Learning</i>. Washington, D.C.: National Academy Press.</li> <li>2. Arends, R. I. (2004). <i>Guide to Field Experiences and Portfolio Development: to accompany Learning to Teach</i>. McGraw-Hill.</li> <li>3. Ibrahim, M., Rachmadiarti, F., &amp; Ismono. (2005). <i>Pembelajaran Kooperatif</i>. Surabaya: Pusat Sains dan Matematika Sekolah.</li> <li>4. Arends, R. I. (2007). <i>Learning to Teach</i> (6th Ed.). New York: McGraw-Hill.</li> <li>5. Ibrahim, M. (2012). <i>Pembelajaran Berdasarkan Masalah</i> (Edisi II). Surabaya: University Press.</li> <li>6. Dwiningsih, K., Sukarmin, &amp; Azizah, U. (2017). <i>Inovasi Pembelajaran 2</i>. Surabaya: University Press.</li> <li>7. Dwiningsih, K., et al. (2022). <i>Panduan Penyusunan Perangkat Perkuliahan Microteaching Kimia</i>. Surabaya: University Press.</li> </ol>