

### Module Descriptions

Module designation	Innovative Thinking
Semester(s) in which the module is taught	5 <sup>th</sup> semester/Third Year
Person responsible for the module	-
Language	Bahasa Indonesia (Regular Class) Bahasa Inggris (Internasional Class)
Relation to curriculum	Elective course
Teaching methods	Project-Based Learning 4 workhours per week (4 x 170 minutes per week)
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	4 Credit Units (CU) = 6.34 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> <li>1. Develop logical, critical, systematic, and creative thinking in performing specific work within their field of expertise and in accordance with the relevant field's work competency standards.</li> <li>2. Able to make decisions based on data/information in order to complete tasks under their responsibility and evaluate performance, both individually and in groups, and possess an environmentally conscious edu-ecopreneurship spirit.</li> <li>3. Able to design, implement, and evaluate learning, and develop chemistry learning media by utilizing Information and Communication Technology.</li> <li>4. Master the basics of scientific methods, design and conduct research, compile scientific reports, and communicate them both orally and in writing, utilizing information and communication technology in education.</li> </ol>
Content	<ol style="list-style-type: none"> <li>1. Introduction to Creativity and Innovation</li> <li>2. Creative Thinking Methods</li> <li>3. Ideation and Validation Process</li> <li>4. Innovation Culture and Ecosystem</li> <li>5. Applications and Case Studies Related to Innovative Thinking</li> <li>6. Innovation Practice and Reflection</li> </ol>
Examination forms	-
Study and examination requirements	Project and Presentation

Reading list	<ol style="list-style-type: none"><li>1. Tarumingkeng, R.C., 2023. Kreativitas dan Inovasi.</li><li>2. Suci, dkk. 2025. Kreativitas dan Inovasi. Askara Sastra.</li><li>3. Oressman, A., 2019. Design Thinking: A Guide to Problem Solving to Everyone</li><li>4. Lantana D.A. &amp; Fauziah. 2025. Design Thinking dan Inovasi: Strategi Kreatif dalam Pemecahan Masalah.</li><li>5. Ningrum, H.F., dkk. 2022. Pemikiran Kritis dan Inovatif.</li><li>6. Najatbekovna, K.D. 2021. Develop Innovative Thinking Skills Based on a Creative Approach.</li><li>7. Yusuf, 2029. Metode Braistorming Tertulis: Teknik Curah Pendapat Dengan Memaksimalkan Keterlibatan Semua Peserta Dalam Pengambilan Keputusan. Adiwidya. Vol. 3, No. 2, November 2019</li><li>8. Sumber lain artikel dari webb</li></ol>
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