

Module Descriptions

Module designation	Data literacy
Semester(s) in which the module is taught	5 th 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"> 1. Develop logical, critical, systematic, and creative thinking in performing specific work in their field of expertise and in accordance with the relevant field's work competency standards. 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, possessing an environmentally conscious edu-ecopreneurship spirit. 3. Able to design, implement, and evaluate learning, and develop chemistry learning media by utilizing Information and Communication Technology. 4. Master the basics of scientific methods, design and conduct research, compile scientific reports, and communicate them both orally and in writing using information and communication technology in the field of education.
Content	<ol style="list-style-type: none"> 1. Requirements for developing learning indicators 2. Rules for developing learning objectives in the ABCD format. 3. Learning objectives as a component of learning planning. 4. Syllabus 5. Lesson Plan 6. Assessment
Examination forms	-
Study and examination requirements	Project and Presentation

Reading list	<ol style="list-style-type: none"><li data-bbox="651 183 1428 250">1. Bargagliotti and Franklin. 2021. Statistics and Data Science for Teachers.<li data-bbox="651 250 1428 318">2. Qiao, C. et al. (2024). Understanding science data literacy: a conceptual framework.<li data-bbox="651 318 1428 385">3. Ghodoosi, B. (2023). A systematic literature review of data literacy education.<li data-bbox="651 385 1428 470">4. Lee, J. et al. (2024). Dimensions of teachers' data literacy: A systematic review.
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