Diponegoro University
Faculty of Science and Mathematics
Undergraduate Program Of Chemistry

Module designation	**Research Project 1: Chemical Experimentation (TR1)**
Semester(s) in which the module is taught	7
Person responsible for the module	All chemistry lecturers
Language	Indonesian
Relation to curriculum	Compulsory/~~elective~~/~~specialisation~~
Teaching methods	Project
Workload (incl. contact hours, self-study hours)	Activities in the laboratory: 16 weeks x 3 credits/week x 170 minutes/credit
Credit points	3
Required and recommended prerequisites for joining the module	pass all compulsory courses semester 1-6, 110 SKS (perak 2017, paragraph 21)

Module objectives/intended learning outcomes	S9 Demonstrates an attitude of being responsible for work in his field of expertise independently. KU1 Able to apply logical, critical, systematic, and innovative thinking in the context of the development or implementation of science and technology KU2 Able to demonstrate independent, quality, and measurable performance. KU4 Able to compile a scientific description of the study results in the form of a thesis or final project report and upload it on the university website. KU5 Able to make decisions regularly in the context of solving problems in their area of expertise, based on the results of analysis of information and data KU6 Able to maintain and develop a network with supervisors, colleagues, colleagues both inside and outside the institution KU9 Able to document, store, secure, and retrieve data to ensure validity and prevent plagiarism KK1 Able to produce the correct conclusions based on the results of the interpretation of the chemical analysis that has been carried out. KK2 Able to solve science and technology problems in general and straightforward chemical fields such as identification, analysis, isolation, transformation, and synthesis of micro-molecules through the application of knowledge of structure, properties, kinetics, and energetics of molecules and chemical systems, with analysis and synthesis methods on specific chemical fields, as well as the application of relevant technologies. KK3 Able to analyse several alternative solutions in chemical analysis and surrounding studies and present analysis conclusions for making the right decisions. PP2 Mastering complete operational knowledge about functions, how to operate research supporting chemical instruments, as well as data analysis in line with research objectives and hypotheses
Content	- Identification and Preparation of Research Proposals/Outlines and Presentations - Data Collection and Analysis - Progress reports - Writing and Communication Techniques
Exams and assessment formats	Assessment is conducted in presentation format. The grading for TR I globally encompasses outline (15%), experimentation (65%), Progress reports (15 %), and report (5%).
Study and examination requirements	1. Compiling at least 110 sks 2. Finishing project report 1 3. Institutional TOEFL score of 400

Reading list	1. Chemistry Department Research Task Guide 2018 2. Minister of Research, Technology and Higher Education Regulation on Higher Education 3. Permendiknas no. 8 year 2012 concerning KKNI

Description:

Research Project I (TR I) is a course that provides skills through a scientific approach based on the concepts and principles of chemistry. Through this approach, students will be able to identify problems, develop research plans, carry out research, observation, processing and analysis, as well as communicating research results through research assignments reports 1 and oral presentation.