

Module Descriptions

A **module** is a self-contained **learning unit** within a higher education program that includes thematically related courses and is assigned a **fixed number of credits**. It follows specific **learning objectives**, includes an **assessment component**, and contributes to achieving the qualifications of a degree program. In some countries, “modules” are also named “courses”.

Please provide a module description for each module. In addition to the compulsory and elective modules, this also includes credited internships and the final thesis.


Please summarize all module descriptions in one document (Module Handbook) and create a table of contents so that the modules can be found easily.

Module designation	Educational Research Methods
Semester(s) in which the module is taught	1st Semester
Person responsible for the module	Prof. Dr. Hari Sutrisno, M.Si
Language	<i>Indonesian</i>
Relation to curriculum	<i>Compulsory / elective / specialisation</i>
Teaching methods	Lecture, Discussion, Demonstration, Experimentation, Independent Study, Project Work, Fieldwork
Workload (incl. contact hours, self-study hours)	Contact hours: 3 x 50 minutes per week Independent study and assignments: Estimated 3–4 hours/week Total ECTS equivalent: 2 credits (approx. 85–90 hours total workload)
Credit points	3 credits (SKS)
Required and recommended prerequisites for joining the module	None

Module objectives/intended learning outcomes	<ol style="list-style-type: none">1. Show concern for the problems surrounding chemistry education and appreciate people's thoughts and discovery related to chemistry education research2. Analyze the basic concepts of educational research, examine the characteristics and samples of descriptive, experimental, quasi-experimental, pre-experimental, correlational, comparative, development, survey, and action research comprehensively3. Collaborate effectively to construct and confirm understanding of contemporary studies in chemistry education4. Develop logical, critical, and systematic thinking to construct ideas and arguments upon the chemistry education research methodology and communicate those ideas well.
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Content	<p>Educational Research Method is a compulsory subject for graduate students of Chemistry Education study program that provides basic knowledge to design and carry out research as well as to report the results of educational research. Students are expected to develop social sensitivity to educational problems and appreciate other thoughts and findings. Students understand the types of educational research approaches and design. Through this course, students learn the basic concepts of educational research, starting from formulating, identifying, analyzing problems; recognizing types of variables and hypotheses, understanding various sampling techniques, developing instruments and techniques of data analysis on educational research. In addition, students also study research approaches (descriptive research, experimental research, quasi-experimental research, pre-experimental research, correlational study, comparative research, research and development, survey, phenomenology and action research) comprehensively and common features of the problem, variables, sampling techniques, instruments and data analysis techniques. The course provides students with the research samples published in reputable national and international journals.</p> <p>The topics covered in this course:</p> <ol style="list-style-type: none"> 1. Basic concepts of educational research 2. Variables, hypotheses and sampling techniques 3. Research instruments and data analysis techniques for educational research 4. Types of educational research 5. Descriptive research 6. Pre-experimental research 7. Quasi-experimental research 8. Research experiments 9. Correlational study 10. Comparative research 11. Survey 12. Research and Development 13. Classroom action research (CAR) 14. Phenomenology research 15. Research methodology of chemical education research in the journal
Examination forms	Midterm Test, Final Exam, Assignments, Project-Based Learning and Presentations, Case Studies

Study and examination requirements	<p>Attitude assessment is carried out at each meeting by observation and/or self-assessment techniques using the assumption that basically every student has a good attitude. The student is marked very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not taken into account in the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude</p> <p>Minimum attendance: 75% of lectures and full participation in fieldwork</p> <p>Evaluation Components:</p> <table data-bbox="638 660 1356 1131"> <thead> <tr> <th>Assessment Type</th><th>Weight (%)</th></tr> </thead> <tbody> <tr> <td>Attendance</td><td>5</td></tr> <tr> <td>Assignments</td><td>10</td></tr> <tr> <td>Midterm Exam</td><td>15</td></tr> <tr> <td>Final Exam</td><td>20</td></tr> <tr> <td>Case Studies</td><td>15</td></tr> <tr> <td>Team-based Projects</td><td>35</td></tr> <tr> <td>Total</td><td>100</td></tr> </tbody> </table>	Assessment Type	Weight (%)	Attendance	5	Assignments	10	Midterm Exam	15	Final Exam	20	Case Studies	15	Team-based Projects	35	Total	100
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Reading list	<ol style="list-style-type: none"> 1. Hari Sutrisno. 2024. Structural Equation Modellinh: Aplikasi dalam Pendidikan Kimia. UNY Press 2. Borg, W.R. & Gall, M.D. 1983. Educational Research An Introduction Fourth edition. Boston: Allyn and Bacon. 3. Creswell, J.D. 2008. Educational Research. New Jersey: Pearson Prentice Hall. 4. Gall, M.D., Gall, J.P. & Borg, W.R. 2003. Educational Research An Introduction. Seventh Edition. Boston: Allyn and Bacon 5. Sagor, R. 2010. Action Research for Teacher Candidates. Maryland: Rowman & Littlefield Education. 6. Wilkinson, D. & Birmingham, P. 2003. Using Research Instruments. New York: Routledge Falmer. 																

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