	UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES DOCTORAL PROGRAM IN CHEMISTRY	COURSE CODE: 140130-UND202511030

Module designation	Research Proposal Seminar
Semester(s) in which the module is taught	1
Lecturers	Promotor and co-promotor
Medium of instruction	Bahasa Indonesia
Relation to curriculum	Compulsory Course
Teaching methods	Project-centered learning; student-centered learning
Workload	Discussion: 80 hours Laboratory orientation: 200 hours Seminar preparation: 20 hours Independent Study: 275 hours Total workload : 675 hours
Credit points	9 (9-0) 9 credit = 9 x 3 ECTS = 27 ECTS
Required and recommended prerequisites for joining the module	-
Module objectives/intended learning outcomes	**LO1:** Students are able to formulate original research issues, design research questions, and develop research objectives based on a critical and systematic review of recent literature. **LO2:** Students are able to design research methodologies and interdisciplinary research roadmaps that are logical, impactful, and aligned with scientific principles as well as academic ethics. **LO3:** Students are able to communicate research proposals scientifically in academic forums and defend them in an argumentative, logical, and ethical manner..
Contents	1. Orientation, research seminar objectives, ethics, and scientific integrity 2. Literature review and identification of research gaps 3. Formulation of research problems, objectives, and scientific hypotheses 4. Research methodology design (experimental strategies, instruments, variables) 5. Preparation of research roadmap and long-term research stages 6. Simulation of data processing and interpretation of preliminary data (if available) 7. Comprehensive revision in preparation for the seminar 8. Initial seminar preparation 9. Seminar preparation

	10. Seminar preparation and presentation practice 11. Research Proposal Seminar: Presentation 12. Proposal revision based on seminar feedback
Examination forms	Project and assignment
Study and examination requirements	Final score is evaluated based on project (80%) and individual assignment (20%)
Reading lists	1. Recent journals related to the PhD research