


MODULE HANDBOOK

	UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME	COURSE CODE: D10D-50608
Module designation	Ecotoxicology	
Semester in which the module is taught	5	
Person (s) responsible for the module	<ol style="list-style-type: none"> 1. Prof. Sunardi, Ph.D 2. Dr. rer. nat. Tri Dewi K. Pribadi 3. Dr. Keukeu Kaniawati Rosada 	
Medium of instruction	Indonesian	
Relation to curriculum	Elective course	
Teaching methods	Lectures, discussions, cooperative learning, and inquiry learning, project based learning	
Workload	<p>Total workload : 5440 minutes = 90.67 hours</p> <p>Lectures, discussions, : 2 x 50 minutes x 16 weeks = 1600 minutes = 26.67 hours cooperative learning, and inquiry learning</p> <p>Exercises : 2 x 60 minutes x 16 weeks = 1920 minutes = 32 hours</p> <p>Self-study : 2 x 60 minutes x 16 weeks = 1920 minutes = 32 hours</p>	
Credit points	2,00 (3,62 ECTS)	
Required and recommended prerequisites for joining the module	<ul style="list-style-type: none"> - Basic Biology - Animal Physiology - Aquatic Ecology 	
Module objectives/intended learning outcomes	<ol style="list-style-type: none"> 1. Students are able to classify types of pollutants based on their toxicological properties. 2. Students are able to map the transport pathways of pollutants in ecosystems. 3. Students are able to develop early warning systems. 4. Students are able to compare the effectiveness of bioremediation agents. 5. Students are able to visualize ecotoxicological risk data. 6. Students are able to mediate conflicts of interest related to pollution. 	
Contents	<ol style="list-style-type: none"> 1. Basic concepts, scope, and historical development of ecotoxicology. 2. Pathways of exposure, distribution, transformation, and bioaccumulation of toxic substances in the environment. 3. Types and sources of toxicants. 4. Types of pollutants and their impacts on organisms and ecosystems. 5. Evaluation of toxicity data (acute and subacute) to assess toxicant risk. 	
Examination forms	Quiz, midterm exam, assignment, and final exam	

Study and examination requirements	The minimum attendance in lectures is 80%. Final grades are evaluated based on quiz (10%), midterm exam (15%), assignment (10%), final exam (15%), project and participation (50%)
Reading lists	<ol style="list-style-type: none"> 1. Elliott, J.E, C.A. Bishop, and C.A. Morrissey. 2011. Wildlife Ecotoxicology. Springer. England. 2. Gagne, F. 2014. Biochemical Ecotoxicology. Elsevier. England. 3. Walker, C. 2014. Ecotoxicology: Effects of Pollutants on the Natural Environment. CRC Press. England. 4. Walker, C.H., R.M. Sibly, S.P. Hopkin, and D.B. Peakall. 2012. CRC Press. England. 5. Pei, D. S., Hamid, N., Sultan, M., Yoganandham, S. T. (2023). Reservoir Ecotoxicology. Springer Cham. 6. Malafaia, G. (2025). Aquatic Ecotoxicology of Legacy Pollutans and Emerging Contaminants in Animal and Plants.