

Environmental Science Research Path



**MASTER PROGRAM OF ENVIRONMENTAL SCIENCE
SCHOOL OF POSTGRADUATE STUDIES
DIPONEGORO UNIVERSITY**

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1 Title, affiliation and language

Curriculum guide applicable to all Master of Environment (MES) Programs

1.1 Title

Master Program in Environmental Science leading to Master in Environment (MES)

1.2 Affiliate

This program is affiliated with PEPSILI (Association of All Indonesian Environmental Science Study Programs)

1.3 Language

The languages in the learning process of the Environmental Science Masters Program are Indonesian and English.

2 Academic Profile

2.1 Objective

The educational objective of the Environmental Science Masters Program is to produce graduates who have the following abilities:

1. Able to demonstrate knowledge of environmental science to the public;
2. Able to conduct research for the development of environmental science;
3. Able to be professional in applying knowledge and methods of controlling environmental damage, both in work and in business development.

2.2 General program profile

The Master Program in Environmental Science by Research has four Research Themes, namely:

1. ENVIRONMENTAL PLANNING

Produce graduates who are able to analyze environmental conditions, propose alternative environmental policies and conduct environmental implementation studies and evaluations

2. ENVIRONMENTAL ENGINEERING

Produce graduates who are able to solve environmental problems with a technical engineering approach

3. ENVIRONMENTAL MANAGEMENT

Produce graduates who are able to solve problems of environmental pollution/damage with a management approach

4. DISASTER MANAGEMENT

Produce graduates who are able to analyze Disaster Mitigation and adaptation.

2.3 General structure of the program

The Master Program in Environment by Research is set at 42 credits or the equivalent of 118 ECTS (European Credit Transfer And Accumulation System).

The MES program in Environmental Science consists of the following elements:

- Specialization: 42 credits or equivalent to 120 ECTS, including thesis

2.4 Career opportunities

The MES program in Environmental Science qualifies students to become professionals in business, management and research functions and/or fields such as:

- Research function in academic institutions
- Research and communications in industry working with developing more environmentally friendly products, better waste management, and more sustainable production processes
- National and international advisory, consulting and project management in environmental science, with a solid foundation in environmental pollution, effects and impacts, and solutions for environmental, ecosystem and human health protection.
- The clean technology industry and related sectors develop new solutions and methodologies for

- clean technologies and remediation technologies to clean air, soil and water.
- Government officials
- Policy development, implementation and administration related to nature, environment and related technologies in the public sector (ministries and municipalities) and in private stakeholder organizations, including NGOs.

3 Competency Profile Description

Students pursuing the MES Program acquire the competencies listed below. Students will also gain other qualifications through other study activities.

3.1 General competency profile

Graduates holding an MES degree in Environmental Science have acquired the following competencies regardless of the chosen specialization, i.e. General Graduate Learning Outcomes include:

1. Able to formulate environmental management theory;
2. Able to formulate and carry out scientific research to solve environmental problems;
3. Able to formulate rules, methods and thoughts on environmental management to improve the quality of life, and save them in the form of theses, national and international journals or in the form of reputable seminar proceedings.

No	Description	Scope		
		Attitude	Knowledge	Skills
1	Able to formulate environmental management theory	√	√	√
2	Able to formulate and carry out scientific research to solve environmental problems	√	√	√
3	Able to formulate rules, methods and thoughts on environmental management to improve the quality of life, and save them in the form of theses, national and international journals or in the form of proceedings of reputable seminars	√	√	√

3.2 Special Competency Profile

Specific competency profile, graduates who hold an MES degree in Environmental Science with specialization of Research is described as follows:

3.2.1. Environmental Planning Research Theme

Able to formulate methods and carry out environmental condition analysis, propose alternative environmental policies and conduct environmental implementation studies and evaluations

No	Description	Scope		
		Attitude	Knowledge	Skills
1	Able to formulate methods and carry out environmental condition analysis, propose alternative environmental policies and conduct environmental implementation studies and evaluations	√	√	√

3.2.2. Environmental Engineering Research Theme

Able to formulate methods and carry out analysis of solving environmental problems with a technical engineering approach

No	Description	Scope		
		Attitude	Knowledge	Skills
1	Able to formulate methods and carry out analysis of solving environmental problems with a technical engineering approach	√	√	√

3.2.3. Environmental Management Research Theme

Able to formulate methods and carry out analysis of solving problems of pollution/environmental damage with a management approach.

No	Description	Scope		
		Attitude	Knowledge	Skills
1	Able to formulate methods and carry out analysis of solving problems of pollution/environmental damage with a management approach.	√	√	√

3.3.4. Disaster Management Research Theme

Able to formulate methods, carry out rapid assessments, carry out analysis for solving problems of pollution/environmental damage as a result of disaster events with management and/or technical approaches

No	Description	Scope		
		Attitude	Knowledge	Skills
1	Able to formulate methods, carry out rapid assessments, carry out analysis of solving problems of pollution/environmental damage as a result of disaster events with management and/or technical approaches	√	√	√

4. General Terms of Entry Terms

The general requirements for applicants for Master of Environmental Sciences are as follows:

1. Bachelor Degree Graduates and Diploma IV
2. Minimum GPA of 2.75 from an accredited university (except Master of Notary and Linguistics which requires a 3.0 GPA)
3. Diplomas and transcripts
4. Academic recommendation from 2 people (may be supervisor S1, D4/direct supervisor with minimum qualification of S2) (Filling out online)
5. Statement of ability to complete the study (format has been provided)
6. Certificate of guarantee for payment of study fees (stamped 10000) (format has been provided)
7. Permission letter from work agency (for those who are already working) (format has been provided)
8. Projection/Overview of the Thesis research to be taken
9. Hold research experience with formal institution (**compulsory requirement**)
10. Hold specific work after graduation, in cash a guaranty for continuing in Doctoral of Environmental Science program (**compulsory requirement**)

4.1 Provisions of Special Terms

Applicants for the Master of Environmental Science by Research program are graduates from various fields of science / have worked in fields related to the environment. With special conditions: have a research background as evidenced by publications and/or have a track record of research – work related to policy development or environmental management or engineering.

4. Program structure

Determination of the elements of courses and theses is the main part of the Master of Environmental Science program in accordance with the Decree of the Chancellor of the University of Diponegoro Number: 2426/UN7.P/HK/2020 concerning the Determination of the Curriculum of the Masters Program at Diponegoro University in 2020

5.1 Environmental Science Program by Research

The specialization is set at 42 credits or 118 ECTS and consists of the following:

- Elements of compulsory subjects, 36 credits or 88 ECTS.
- Thesis, 6 credits or 30 ECTS

The elements of compulsory subjects consist of the following:

New Code	Courses (Mandatory)	credits	ECTS
	Semester I		
P-CIL-8-101	Philosophy of Science and Research Methodology	3	6
P-CIL-8-131	Proposal Research I	3	6
P-CIL-8-132	Proposal Research II	3	6
P-CIL-8-133	Research I	5	12
TOTAL CREDITS OF SEMESTER I		14	30
New Code	Courses (Mandatory)	credits	ECTS
	Semester II		
P-CIL-8-234	Research II	6	13
P-CIL-8-235	Research Publications	7	17
NUMBER OF SEMESTER II CREDITS		13	30
New Code	Courses (Mandatory)	credits	ECTS
	Semester III		
P-CIL-8-336	Research Evaluation I	3	6
P-CIL-8-337	Research Evaluation II	3	6
P-CIL-8-338	Research Seminar	3	16
NUMBER OF SEMESTER III CREDITS		9	28
New Code	Courses (Mandatory)	credits	ECTS
	Semester IV		
P-CIL-8-401	Thesis	6	30
TOTAL CREDITS SEMESTER IV		6	30
TOTAL		42	118