



UNIVERSITAS
INDONESIA

Yudha Pratista Sadika

FMIPA

Student Handbook

Master Program

Faculty of Mathematics and Natural Sciences
Universitas Indonesia

2024
EDITION

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FOREWORD

Praise and gratitude to the Almighty for His blessings and guidance, allowing the compilation of the Student Handbook of Master Program of the Faculty of Mathematics and Natural Sciences, Universitas Indonesia (FMIPA UI). This Student Handbook is prepared as a reference for new students and prospective students to understand the important aspects of FMIPA UI.

FMIPA UI, established on December 21, 1960, has grown into one of the leading centers for education, research, and development of science in Indonesia. As a faculty with a long-standing tradition of producing high-quality graduates, FMIPA UI remains committed to providing excellent education that is relevant to the advancement of science and the needs of society.

FMIPA UI consists of various departments, each with its strengths and unique contributions to the field of natural sciences. We provide facilities that support the learning and research activities of students, including classrooms, laboratories, and academic services.

This book serves as the academic guide for Master Program students, which includes a brief history of the establishment of FMIPA UI, an overview of supporting units, the faculty and department profiles, as well as the academic systems and regulations. The regulations and rules are based on the Rector's Decree and Curriculum Decree for each Study Program. We hope that this guidebook will provide a clear and comprehensive overview of various aspects of campus life and assist students in navigating their academic journey at FMIPA UI. Welcome, and may all students make the most of the opportunities to grow and achieve success.

We would like to express our deepest gratitude to all those who have contributed to the preparation of this academic guidebook. Thanks to the lecturers, academic staff, and administrative personnel who provided valuable information and insights. We also appreciate the hard work of the editorial team who dedicated themselves to ensuring that this book is well-prepared and serves as a useful guide for all students.

Depok, 6 December 2024

Dean


The seal of Universitas Indonesia FMIPA is a circular emblem. It features a central five-pointed star (pentagon) with a stylized flame or torch-like shape inside. The words "UNIVERSITAS INDONESIA" are written in a circle around the top, and "FMIPA" is written at the bottom.

Prof. Dede Djuhana, Ph.D.

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CHAPTER 1

Faculty and Departments Profile

A decorative teal geometric shape consisting of a horizontal bar at the bottom and a diagonal line extending upwards and to the right, forming a large, stylized 'L' or step-like shape.

1.1 Brief History of FMIPA UI

The history of FMIPA UI can not be separated from great historical establishment of the Universitas Indonesia. At the beginning of Universitas Indonesia establishment, FMIPA known as the Faculty of Exact and Natural Sciences (FIPIA), based in Bandung. In line with the development of UI are concentrated in the nation's capital, faculty are released into one of the faculty which is managed by the Institute of Technology Bandung (ITB), which opened in 1959.

Furthermore, the Universitas Indonesia planned FIPIA establishment based in Jakarta. It is also based on the plan of the Ministry of Education, Culture and when it is asked for advice from several experts at the Universitas Indonesia.

The first step taken by the committee FIPIA formation after the meeting is to call several experts of exact and natural sciences who teaches at the Faculty of Agriculture and Faculty of Veterinary Medicine, Universitas Indonesia in Bogor, and in FIPIA ITB. The experts include Drs. S.A. Manus (Geology, UI-Bogor); Dra. Sri Sabani Soemartono (Botany, UI-Bogor); Dr. S. Somadikarta (Zoology, UI-Bogor); Prof. Dr. Ir. Soemantri Brodjonegoro (Chemistry ITB); Prof. Dr. Ping Ong Hok (Physics, ITB); Drs. Isjrin Noerdin (Chemistry, ITB); Drs. E. Noerhadi (Botany, ITB); and Mahargo Suprpto, Mag. Scient. (Zoology, ITB). The experts are willing to help and contribute to be the teaching staff as well as his/her thoughts on FIPIA to be established at the Universitas Indonesia, Jakarta.

On December 21, 1960, the Minister of Education, Culture issued Decree No. 108 049/U.U. dated on the establishment of Faculty of Exact and Natural Sciences at the Universitas Indonesia, Jakarta. Prof. dr. G.A. Siwabessy later appointed as the first Dean FIPIA-UI.

The first academic year of FIPIA UI was 1961/1962 based on a Dean's Decree No. 06/D/UP/61 dated June 29, 1961. This letter was signed in Jakarta by Prof. dr. G.A. Siwabessy and by Prof. Dr. Soedjono D. Poesponegoro which then assign the first batch student admissions committee. The committee consists of four persons, namely Drs. Lauw Soan Keng, Dr. S. Somadikarta, B. Sudarsono, M.Sc., and Erman Natadidjaja, B.Sc. Furthermore FIPIA-UI in Jakarta started academic activities in the academic year 1961/1962 with the opening of 4 (four) majors, namely: the Department of Mathematics, Department of Physics, Department of Chemistry, and Department of Biology.

The number of students enrolled at that time was 52, 4 students from the Department of Mathematics, 6 students from the Department of Physics, Department of Chemistry 28 students, and 14 students of the Department of Biology. Each department is led by a Head of Department. At that time the head of the Department of Mathematics is Ir. F.J. Inkiriwang, Head of the Department of Physics is Budi Sudarsono, M.Sc, Head of the Department of Chemistry are Drs. Soan Lau Keng, and Head of the Department of Biology is Dr. S. Somadikarta.

Academic activities in FIPIA-UI in the early establishment run by 24 non-permanent teaching staff and assisted by 10 administrative staff. The whole academic activities except the Department of Biology, centered at the Eijkman Institute (Ministry of Health) at Jln. Diponegoro 69. While the Department of Biology academic activities held in Bogor together with the Faculty of Agriculture and Faculty of Veterinary Medicine, Universitas Indonesia. Starting September 1, 1963, the Faculty of Agriculture and Faculty of Veterinary Medicine, Universitas Indonesia has become Bogor Agricultural University, but Department of Biology lectures held in Bogor, and then the Office of the Department of Biology FIPIA UI which was originally located along the Zoology Section office moved to the UI Faculty Bogor Zoological Museum, Jl. Ir. H. Juanda No. 3. In the academic year 1968, the Department of Biology no longer accept students on the first level, while the completion of study for older students was funded by the framework of cooperation between IPB and UI with the National Institute of Biology LIPI (now the Research Center for Biology LIPI) Bogor. After the Department of Biology FIPIA UI moved to Jakarta in 1975, three years later in the academic year 1978 Department of Biology ready again to accept new students and academic activities was held at UI Salemba 4, Jakarta.

In 1965, FIPIA-UI opens new department, the Department of Pharmacy. Two years later in 1967, the Department of Geography UNPAD, which the academic activities run in the Directorate of Army Topographic in Jalan Dr. Wahidin Jakarta, turned into the Department of Geography FIPIA UI. Thus in 1967 FIPIA-UI already has six department, namely the Department of Mathematics, Department of Physics, Department of Chemistry, Department of Biology, Department of Pharmacy and Department of Geography. Teaching and learning activities which previously disperse around Jakarta (Jl. Diponegoro 69, Salemba 4, and Jl. Dr. Wahidin), and in Bogor, in 1975 all the department moved in the UI campus Salemba Jakarta. In 1982 Faculty of Exact and Natural Sciences (FIPIA) then became Faculty of Mathematics and Natural Sciences (FMIPA) based on Government Regulation No.27 of 1981, dated August 14, 1981 (State Decree No.41). Regulation is then reinforced by Presidential Decree 44 of 1982, dated September 7, 1982 on the organizational structure of the Universitas Indonesia. Along with the construction of the new campus of Universitas Indonesia, in July 1987 FMIPA UI moved to its present location in Depok, West Java.

1.2 Vision and Mission

Vision

Making FMIPA UI a superior center for knowledge and innovation in the fields of science and mathematics, capable of competing internationally and contributing to Indonesia's development.

Mission

1. Becoming a motor for increasing the quality and quantity of Tridharma activities in higher education that are innovative, high quality and beneficial to society;
2. Creating an academic environment that is collaborative, synergistic, transparent and accountable;
3. Improve/strengthen the academic atmosphere; and
4. Making FMIPA UI a center for the best talent in the fields of mathematics and science that has competitiveness and is able to contribute to sustainable development.

1.3 General Objectives

FMIPA UI has the following general objectives:

1. To improve academic quality in order to produce excellent education and graduates through innovative teaching methods and curriculum development;
2. To build an efficient, accountable, and integrated governance system;
3. To implement consistent academic quality assurance and governance by conducting periodic academic audits;
4. To enhance the quality and quantity of research and innovation through scientific publications and innovative works to support sustainable development;
5. To become a key networking/reference point for science faculties at the national and regional levels to build the institution's reputation;
6. To improve human resource quality through recruitment, education, and training for faculty members and educational staff; and
7. To increase financial capacity through the implementation of educational programs, research, innovation, community service, and asset management to strengthen operational costs and investment.

1.4 Core Values of Universitas Indonesia

In realizing its vision and mission, FMIPA UI, as part of the Universitas Indonesia, upholds the following values of ethics and behavior:

- | | |
|-------------------------------------|---|
| 1. Kejujuran (Honesty) | 6. Kebersamaan (Togetherness) |
| 2. Keadilan (Just and Fair) | 7. Keterbukaan (Transparency) |
| 3. Keterpercayaan (Trustworthiness) | 8. Kebebasan Akademik (Academic Freedom) |
| 4. Kemartabatan (Dignity) | 9. Kepatuhan pada aturan (Compliance to Laws) |
| 5. Tanggung Jawab (Accountability) | |

1.5 Organizational Structure

The organizational structure of FMIPA UI is based on the Dean's Decree of the Faculty of Mathematics and Natural Sciences, Universitas Indonesia, Number: 167/SK/F3.D/UI/2022, concerning the Organizational Structure of the Faculty of Mathematics and Natural Sciences, Universitas Indonesia 2022-2025. The organizational structure of FMIPA UI provides a clear division of responsibilities, as well as the framework used to achieve the faculty's objectives.

Faculty Leaders	
Dean	: Prof. Dede Djuhana, Ph.D.
Vice Dean for Academic, Research, and Student Affairs	: Prof. Dr.rer.nat. Budiawan
Vice Dean for Resources, Venture, and General Administration	: Prof. Dr. Tito Latif Indra, S.Si., M.Si.
Head of Academic Quality Assurance Unit	: Dr. Denny R. Silaban
Manager for Academic Affairs	: Rika Tri Yunarti, S.Si., M.Eng., Ph.D.
Manager for Student Affairs	: Dr. Dewi Susiloningtyas, M.Si.
Manager for Research and Community Services	: Dr. Dipo Aldila, S.Si., M.Si.
Manager for Partnership, Venture & Alumni	: Dr. Lukmanda Evan Lubis, M.Si., F.Med.
Manager for General Affairs	: Mohammad Hidayat, S.Sos.
Manager of Human Resources	: Fakhrrur Rizqi, S.Sos.
Head of Secretariat	: Erning Setiyono, M.Si.

Council of Professor	
Chairman of the Council of Professors (Professor of Chemistry)	: Prof. Dr. Sumi Hudiyono. PWS
Secretariat of the Council of Professors (Professor in the Field of Electro-Chemical Photo Sciences)	: Prof. Dr. Jarnuzi Gunlazuardi
Professor of Biological Sciences	: Prof. Dr. Soekarja Somadikarta
Professor of Chemistry	: Prof. Drs. Ridla Bakri, M.Phil., Ph.D
Professor of Biological Sciences	: Prof. Dr. Drs. Wibowo Mangunwardoyo, M.Sc
Professor of Chemistry	: Prof. Dr. Usman Sumo Friend Tambunan, M.Sc
Professor of Physical Sciences	: Prof. Dr. Terry Mart
Professor of Physical Sciences	: Prof. Dr. A. Harsono, M.Sc.
Professor of Physical Sciences	: Prof. Dr. Drs. Anto Sulaksono, M.Si
Professor of Biological Sciences	: Prof. Dr. Jatna Supriatna M.Sc
Professor of Physical Sciences	: Prof. Dr. Rer.nat. Rosari Saleh
Professor of Chemistry	: Prof. Dr. Yoki Yulizar, S.Si., M.Sc.
Professor of Chemistry	: Prof. Dr. Ivandini T. Anggraningrum, S.Si.,M.Si.

Professor of Geophysical Sciences	: Prof. Dr. rer. Nat. Abdul Haris
Professor of Physical Sciences	: Prof. Dr. Azwar Manaf, M.Met.
Professor of Physical Sciences	: Prof. Dr. techn. Djoko Triyono, M.Si.
Professor in Computational Mathematics	: Prof. Alhadi B., S.Si., M.Kom., Ph.D.
Professor of Statistics	: Prof. Dr. Dra. Titin Siswantining, D.E.A
Professor of Materials Science	: Prof. Dr. Vivi Fauzia, S.Si., M.Si.
Professor of Biological Sciences	: Prof. Dr. Drs. Abinawanto, M.Si.
Professor in the Field of Chemical Toxicology and Hazardous Chemicals	: Prof. Dr. Rer. Nat. Budiawan
Professor of Remote Sensing and Environmental Sciences	: Prof. Dr. Muhammad Dimyati, M.Sc.
Professor in the Field of Polymer Physical Chemistry	: Prof. Dr. Dra. Helmiyati, M.Si.
Professor in the field of Ecophysiology of Marine Biota	: Prof. Dr. Dra. Noverita Dian Takarina, M.Sc.
Professor of Graph Theory and Combinatorics	: Prof. Dra. Kiki Ariyanti Sugeng, M.Si., Ph.D.
Professor of Integrative Cellular and Molecular Biology	: Prof. Anom Bowolaksono, Ph.D.
Professor in the Field of Systematics and Utilization of Microalgae	: Prof. Dr. Dra. Nining Betawati Prihantini, M.Sc.
Professor of Inorganic Network Materials Science	: Prof. Yuni Krisyuningsih, S.Si., M.Sc., Ph.D.
Professor of Materials Science	: Prof. Dede Djuhana, M.Si., Ph.D.
Professor in the Field of Systematics and Prospects of Microorganism	: Prof. Dra. Wellyzar Sjamsuridzal, M.Sc., Ph.D.
Professor in the Field of Animal Conservation Science	: Prof. Dr. Luthfiralda Sjahfirdi, M.Biomed,

Faculty Academic Senate (SAF)

Dean	: Prof. Dede Djuhana, Ph.D.
Head of Academic Senate	: Prof. Dra. Wellyzar Sjamsuridzal, M.Sc.Ph.D.
Secretariat of Academic Senate	: Adi Wibowo, S.Si., M.Si., Ph.D.
- Department of Mathematics	
Head	: Prof. Alhadi Bustamam, S.Si., M.Kom., Ph.D.
Members	: Prof. Kiki Ariyanti, M.Si., Ph.D.
	: Dr. Drs. Suryadi, M.T.

- **Department of Physics**
 - Head : Dr. Djati Handoko, S.Si., M.Si.
 - Members : Muhammad Aziz Majidi, S.Si., M.Si., Ph.D.
: Dr.rer.nat. Imam Fachruddin, M.Si.
- **Departments of Chemistry**
 - Head : Asep Saefumillah, S.Si., M.Si., Ph.D.
 - Members : Bayu Ardiansah, S.Si., M.Si., D.Sc.
: Iman Abdullah, S.Si., M.Si., Ph.D.
- **Departments of Biology**
 - Head : Prof. Anom Bowolaksono, Ph.D.
 - Members : Dra. Andi Salamah, M.Agr., Ph.D.
: Dr.rer.nat. Mufti Petala Patria, M.Sc.
- **Departments of Geography**
 - Head : Prof. Dr. Drs. Supriatna, M.T.
 - Members : Dr. Triarko Nurlambang, M.A.
: Adi Wibowo, M.Si., Ph.D.
- **Members of the University Academic Senate**
 - Vice Professor Lecturers : Prof. Dr. Muhammad Dimyati, M.Sc.
: Prof. Yuni Krisyuningsih, S.Si., M.Si., Ph.D.
 - Vice Non-Professor Lecturers : Prof. Dra. Wellyzar Sjamsuridzal, M.Sc., Ph.D.
: Prof. Dra. Ariadne L. Juwono, M.Eng., Ph.D.

Departments

The following are list of Head of Department:

- Mathematics : Prof. Alhadi B., S.Si., M.Kom., Ph.D.
- Physics : Dr. Djati Handoko, S.Si., M.Si.
- Chemistry : Asep Saefumillah, S.Si., M.Si., Ph.D.
- Biology : Prof. Anom Bowolaksono, Ph.D.
- Geography : Prof. Dr. Drs. Supriatna, M.T.

Undergraduate Study Program

The following are list of Head of Study Program

- Undergraduate Program in Mathematics : Dr. Hengki Tasman
- Undergraduate Program in Statistics : Dr. Dra. Yekti Widyaningsih, M.Si.
- Undergraduate Program in Actuarial Science : Dr. Suci Fratama Sari, M.Si.
- Undergraduate Program in Physics : Anawati, Ph.D
- Undergraduate Program in Chemistry : Muhammad Ridwan, M.Eng., Ph.D.
- Undergraduate Program in Biology : Astari Dwiranti, M.Eng., Ph.D.
- Undergraduate Program in Geography : Dr. Iqbal Putut Ash Shidiq, S.Si., M.Sc.
- Undergraduate Program in Geology : Reza Syahputra, Ph.D.
- Undergraduate Program in Geophysics : Dr. Eng. Supriyanto

Graduate Study Program

The following are list of Head of Study Program

Master Program in Mathematics	: Prof. Dr. rer. nat. Hendri Murfi, S.Si., M.Kom.
Master and Doctoral Program in Physics	: Adhi Harmoko Saputro, S.Si., M.Kom., Ph.D.
Master and Doctoral Program in Materials Science	: Dr. Budhy Kurniawan R., M.Si.
Master and Doctoral Program in Chemistry	: Aminah, M.Sc., Ph.D.
Master and Doctoral Program in Biology	: Dr. Dra. Dian Hendrayanti, M.Sc.
Master Program in Geography	: Dr. Hafid Setiadi, M.T.
Master Program in Marine Science	: Dr.rer.nat. Yasman
Master Program in Medical Physics	: Prof. Supriyanto Ardjo Pawiro, M.Si., Ph.D.

FACULTY LEADERS



Prof. Dede Djuhana, Ph.D.
Dean FMIPA UI



Prof. Dr.rer.nat Budiawan
Dean for Academic, Research, and Student
Affairs



Prof. Dr. Tito Latif Indra, S.Si., M.Si.
Vice Dean for Resources, Venture, and General
Administration



Dr. Denny R. Silaban, M.Kom.
Head of Academic Quality
Assurance Unit



Dr. Dewi Susiloningtyas, M.Si.
Manager of Student Affairs



Rika Tri Yunarti, S.Si., M.Eng., Ph.D.
Manager of Education Affairs



**Dr. Dipo Aldila, S.Si.,
M.Si.**

Manager of Research and
Community Service



**Dr. Lukmanda Evan
Lubis, M.Si., F.Med.**

Manager of Cooperation,
Venture, and Alumni



**Mohammad Hidayat,
S.Sos.**

Manager of General and
Facilities



Fakhrur Rizqi, S.Sos.
Manager of Human Resources



Erning Setiyono, M.Si.
Head of Secretariat

DEPARTMENTS LEADERS

Department of Mathematics



**Prof. Alhadi B., S.Si.,
M.Kom., Ph.D.**
Head of Department of
Mathematics



Dr. Hengki Tasman
Head of Study Program of
Undergraduate of
Mathematics



**Dr. Dra. Yekti
Widyaningsih, M.Si.**
Head of Study Program of
Undergraduate of Statistics



**Dr. Suci Fratama Sari,
M.Si.**
Head of Study Program of
Undergraduate of Actuarial
Science



**Prof. Dr. rer. nat.
Hendri Murfi, S.Si.,
M.Kom.**
Head of Study Program of
Master of Mathematics

Departments of Physics



**Dr. Djati Handoko, S.Si.,
M.Si.**
Head of Department of Physics



Anawati, M.Sc., Ph.D.
Head of Study Program of
Undergraduate of Physics



**Adhi Harmoko Saputro, S.Si.,
M.Kom., Ph.D.**
Head of Study Program of Master
and Doctoral of Physics Sciences



**Prof. Supriyanto Ardjo
Pawiro, M.Si., Ph.D.**
Head of Study Program of
Master of Medical Physics



**Dr. Budhy Kurniawan
R., M.Si.**
Head of Study Program of
Master and Doctoral of
Materials Science

Department of Chemistry



**Asep Saefumillah, S.Si.,
M.Si., Ph.D.**

Head of Department of
Chemistry



**Muhammad Ridwan,
M.Eng., Ph.D.**

Head of Study Program of
Undergraduate of Chemistry



Aminah, M.Sc., Ph.D.

Head of Study Program of
Master and Doctoral of
Chemistry

Department of Biology



**Prof. Anom Bowolaksono,
Ph.D.**

Head of Department of Biology



**Astari Dwiranti,
M.Eng., Ph.D.**

Head of Study Program of
Undergraduate of Biology



**Dr. Dra. Dian
Hendrayanti, M.Sc.**

Head of Study Program of
Master and Doctoral of Biology



Dr. rer.nat. Yasman

Head of Study Program of
Master of Marine Science

Department of Geography



**Prof. Dr. Drs. Supriatna,
M.T.**
Head of Department of
Geography



**Dr. Iqbal Putut Ash
Shidiq, S.Si., M.Sc.**
Head of Study Program of
Undergraduate of Geography



Dr. Hafid Setiadi, M.T.
Head of Study Program of
Master of Geography

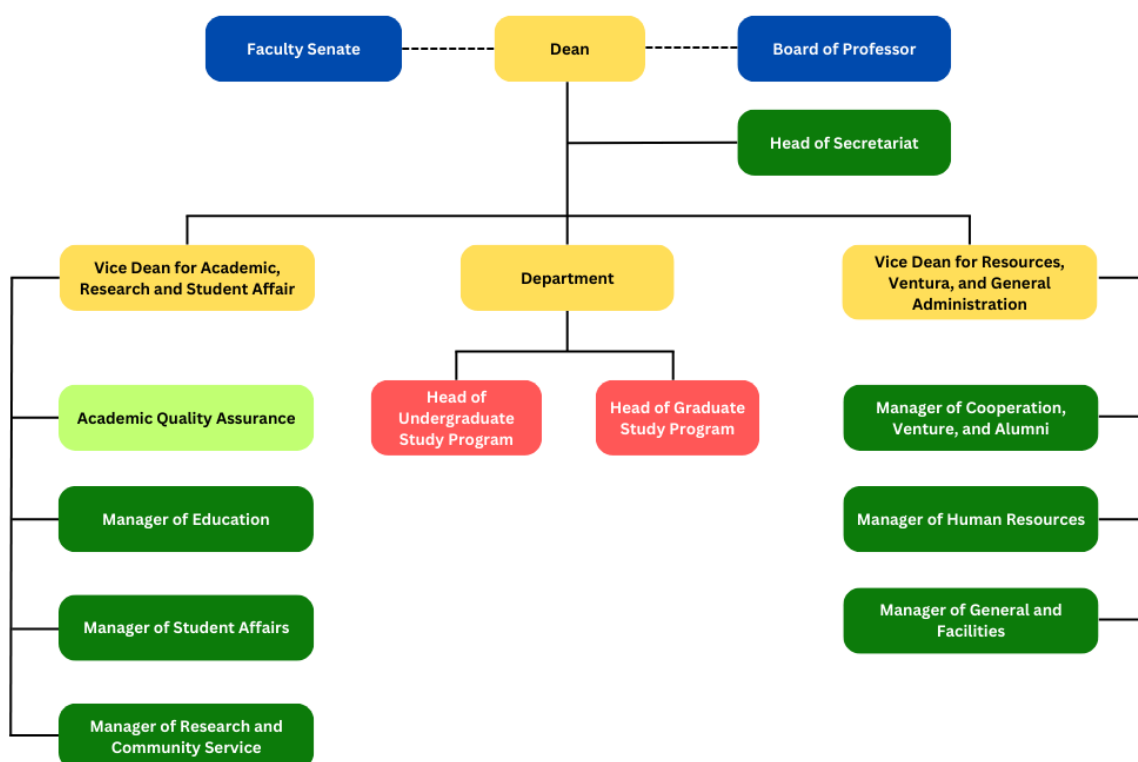
Study Program of Geosciences



Dr. Eng. Supriyanto
Head of Study Program of Undergraduate
of Geophysics



Reza Syahputra, Ph.D.
Head of Study Program of
Undergraduate of Geology



Organizational Structure of FMIPA UI

1.6 Study Program

FMIPA UI currently manages 5 departments and 21 study programs:

Program	Department of Mathematics	Department of Physics	Department of Chemistry	Department of Biology	Department of Geography	Study Program of Geosciences
Undergraduate	- Mathematics - Statistics - Actuarial Sciences	Physics	Chemistry	Biology	Geography	- Geology - Geophysics
Master	Mathematics	- Physics Science - Material Science - Medical Physics	Chemistry	- Biology - Marine Science	Geography	
Doctoral		- Physics Science - Material Science	Chemistry	Biology		

1.7 Accreditation

a. National Accreditation

The National Board of Accreditation for Higher Education (BAN-PT) and Indonesian Accreditation Agency for Higher Education in Natural and Formal Sciences (LAMSAMA) have awarded the following accreditation level for all study programs in the Faculty of Mathematics and Natural Sciences:

Study Program	Accreditation Year	Accreditation Level	Accreditation Board
Undergraduate Program			
Mathematics	2023	Unggul (Excellent)	LAMSAMA
Statistics	2022	Unggul (Excellent)	LAMSAMA
Actuarial Science	2023	Unggul (Excellent)	LAMSAMA
Physics	2023	Unggul (Excellent)	LAMSAMA
Chemistry	2020	Unggul (Excellent)	BAN-PT
Biology	2023	Unggul (Excellent)	LAMSAMA
Geography	2023	Unggul (Excellent)	LAMSAMA
Geophysics	2022	Baik Sekali (Very Good)	LAMSAMA
Geology	2022	Baik Sekali (Very Good)	LAMSAMA
Master Program			
Mathematics	2022	Unggul (Excellent)	LAMSAMA
Physics	2019	A	BAN-PT
Materials Science	2022	Unggul (Excellent)	BAN-PT
Chemistry	2023	Unggul (Excellent)	LAMSAMA
Biology	2020	A	BAN-PT
Marine Science	2022	Unggul (Excellent)	LAMSAMA
Geography	2023	Unggul (Excellent)	BAN-PT
Medical Physics	2022	Baik (Good)	LAMSAMA
Doctoral Program			
Physics	2021	Baik (Good)	BAN-PT
Materials Science	2024	Unggul (Excellent)	BAN-PT
Chemistry	2020	Unggul (Excellent)	BAN-PT
Biology	2023	Unggul (Excellent)	LAMSAMA

b. International Accreditation

- **AUN-QA**

AUN-QA (ASEAN University Network - Quality Assurance) is an institution that assesses the academic quality of a study program. The purpose of this assessment is to improve the quality of the study program being assessed. As an effort to improve quality, 4

undergraduate study programs at FMIPA UI have participated in AUN-QA accreditation, with the following results:

Study Program	Accreditation Year	Verdict
Undergraduate Program of Chemistry	2012	More than adequate
Undergraduate Program of Mathematics	2018	More than adequate
Undergraduate Program of Physics	2018	More than adequate
Undergraduate Program of Biology	2018	More than adequate

- **RSC**

RSC (The Royal Society of Chemistry) is the world's leading chemistry society, aiming to advance excellence in the chemical sciences. Through accreditation, the RSC promotes good practices in chemistry education at universities, and ensure that future chemical scientists are knowledgeable and competent. The results of the RSC accreditation of the Department of Chemistry, FMIPA UI are as follows:

Study Program	Validity Period	Verdict
Undergraduate Program of Chemistry	2018 – 2023	Partially accredited
Master Program of Chemistry	2022 – 2027	Fully accredited

- **ASIIN**

Akkreditierungsagentur für Studiengänge der Ingenieurwissenschaften, der Informatik, der Naturwissenschaften und der Mathematik (ASIIN) is an international accreditation institution originating from Germany. There are 4 FMIPA UI Undergraduate Study Programs that are ASIIN accredited.

Study Program	Accreditation Year
Undergraduate Program of Mathematics	2022
Undergraduate Program of Physics	2022
Undergraduate Program of Biology	2022
Undergraduate Program of Geography	2022

1.8 Department Profile

Established in 1960 with 4 department, currently FMIPA UI Manages 5 departments:
Mathematics, Physics, Chemistry, Biology, and Geography.

Department of Mathematics

The Department of Mathematics was established in 1961, alongside the Departments of Physics, Chemistry, and Biology. Currently, the Department of Mathematics occupies a 4-story building in the FMIPA UI Depok Campus. Since 2017, the Department of Mathematics has had four study programs: the Bachelor's Program in Mathematics, Statistics, Actuarial Science, and the Master's Program in Mathematics.

In carrying out its duties, the Department of Mathematics at UI is led by a Head of Department. Currently, the Department of Mathematics has four study programs: the Bachelor's Program in Mathematics, the Bachelor's Program in Statistics, and the Master's Program in Mathematics. The Bachelor's Program in Actuarial Science was established in 2017 and began accepting new students in 2018. Each study program is led by a Program Coordinator.

Vision

To become a leading institution in the field of mathematics and its applications, capable of playing a role at the global level.

Mission

1. To implement the Tri Dharma activities to produce outstanding graduates from the Department of Mathematics, FMIPA UI, who are competitive at the global level;
2. To develop an academic atmosphere and research culture for the advancement of mathematics and its applications, leading to innovations and solutions that contribute to national development; and
3. To provide contributions and take an active role in the development of mathematics and its applications at the global level.

Academic staffs of Department of Mathematics

No	Name	Expertise
1	Prof. Alhadi Bustamam, Ph.D	Bioinformatics
2	Al Haji Akbar Bachtiar, S.Si., M.Sc., Ph.D.	
3	Arman Haqqi Anna Zili, M.Si.	Mathematics Computation
4	Bevina Desjwiandra Handari, Ph.D	Mathematics Computation
5	Dr. Debi Oktia Haryeni, S.Si., M.Si.	
6	Dr. Denny Riama Silaban, M. Kom.	Computer Science

7	Dr. Dian Lestari, DEA	Applied Mathematics
8	Dr. Dipo Aldila	Biomathematics
9	Fida Fathiyah Addini, M.Si.	
10	Fevi Novkaniza, M.Si.	Statistics
11	Gatot Fatwanto Hertono, Ph.D	Mathematics Computation
12	Gianinna Ardanewari, S.Si., M.Si.	
13	Dr. Helen Burhan, M.Si	Mathematics
14	Herolistra Baskoroputro, S.Si., M.Si., Ph.D.	
15	Prof. Dr.rer.nat. Hendri Murfi, M.Kom.	Mathematics Computation
16	Dr. Hengki Tasman	Applied Mathematics
17	Dra. Ida Fitriani, M.Si.	Statistics
18	Prof. Dr. Kiki Ariyanti Sugeng	Combinatoric
19	Kurnia Susvitasari, S.Si., M.Sc., Ph.D.	
20	Maulana Malik, M.Si.	Statistics
21	Mila Novita, M.Si.	Actuarial Science
22	Muhammad Imran, S.Si., M.Sc.	
23	Dr. Nahlia Rakhmawati, M.Si.	
24	Dra. Nora Hariadi, M.Si.	Mathematics
25	Nurma Ayu Wigati S. Subroto, S.Kom., M.Kom	
26	Putri Zahra Kamalia, S.Si., M.Si., Ph.D.	
27	Rahmat Al Kafi, S.Si., M.Si.	
28	Dr. Rahmi Rusin, M.Sc. Tech.	Applied Mathematics
29	Dr. Sarini Abdullah, M.Stat.	Statistics
30	Sindy Devila, M.Si	Actuarial Science
31	Siti Aminah, M.Si.	Computer Science
32	Siti Nurrohmah, M.Si.	Statistics
33	Suci Fratama Sari, M.Si.	Actuarial Science
34	Dr. Suryadi MT, M.T.	Informatics
35	Prof. Dr. Titin Siswantining, DEA	Statistics
36	Dr. Dra, Yekti Widyaningsih, M.Si.	Statistics
37	Dr. Yudia Satria, M.T.	Informatics
38	Prof. Dr. Zuherman Rustam, DEA	Mathematics Computation

Department of Physics

The Department of Physics, FMIPA Universitas Indonesia, has a long history and tradition in education and research since its establishment through the Decree of the Minister of Education and Culture of the Republic of Indonesia No. 108.094 dated December 21, 1960. As of 2021, the Department of Physics has opened 6 (six) study programs: the Bachelor's Program in Physics, the Master's Program in Physics, the Master's Program in Materials Science, the Master's Program in Medical Physics, the Doctoral Program in Physics, and the Doctoral Program in Materials Science. In addition to occupying a 4-story building within the FMIPA UI Depok Campus, the Department of Physics also conducts lectures at the UI Salemba Campus.

Vision

To become a leading institution in the field of physics and its applications, capable of playing a role at the global level.

Mission

1. To conduct research activities that contribute to the development of physics and its applications at the global level;
2. To carry out physics education and its applications to produce graduates who are competitive globally; and
3. To carry out community service activities through educational outreach, dissemination, and the utilization of the results of physics research and its applications.

Currently, the Department of Physics offers six study programs, as can be seen on the website <https://physics.ui.ac.id>.

The six study programs are:

1. Undergraduate Program in Physics
2. Master Program in Physics
3. Master Program in Materials Science
4. Master Program in Medical Science
5. Doctoral Program in Physics
6. Doctoral Program in Materials Sciences

Academic staffs of Department of Physics

No	Name	Expertise
1	Prof. Dr. Anto Sulaksono	Nuclear Physics
2	Prof. Dr.rer.nat. Rosari Saleh	Material Physics
3	Prof. Dr. Terry Mart	Theoretical Nuclear and Particle

		Physics
4	Prof. Dr. Azwar Manaf	Material Physics
5	Dr. Adam Badra Cahya, B.Sc., M.Sc.	Theoretical Physics
6	Adhi Harmoko Saputro, S.Si., M.Kom., Ph.D.	Computer Science
7	Dr.rer.nat. Agus Salam, S.Si., M.Si.	Nuclear Physics
8	Dr. Akbar Azzi, S.Si., M.Si.	Medical Physics
9	Anawati, S.Si., M.Sc., Ph.D	Material Physics
10	Dr.Eng. Anjar Taufik Hidayat, M.Sc.	
11	Dr. Ar Rohim, S.Si., M.Sc.	
12	Prof. Dr. Ariadne Lakshmidevi	Material Physics
13	Dr. Drs. Arief Sudarmaji, M.T.	Material Physics
14	Dr. Budhy Kurniawan, M.Si.	Condensed Matter Physics
15	Prof. Dr. Dede Djuhana	Material Physics
16	Dr. sc. hum. Deni Hardiansyah	Medical Physics
17	Dr. Djati Handoko, S.Si., M.Si., CertDA.	Instrumentation Physics
18	Prof. Dr. techn. Djoko Triyono	Condensed Matter Physics
19	Dr. Dwi Seno Kuncoro Sihono, S.Si., M.Si.	Medical Physics and Biophysics
20	Efta Yudiarsah, M.Si., Ph.D	Condensed Matter Physics
21	Ferry Anggoro Ardy Nugroho, M.Sc., Ph.D.	
22	Handika Satrio Ramadhan, Ph.D	Theoretical Nuclear and Particle Physics
23	Dr. Imam Fachruddin, S.Si., M.Si.	Nuclear Physics
24	Isom Mudzakir, S.Si., M.Si.	Instrumentation Physics
25	Januar Widakdo, S.Si., M.Si., Ph.D. CertDA.	
26	Kristina Tri Wigati, S.Si., M.Si.	Medical Physics
27	Dr. Lukmanda Evan Lubis, M.Si., F.Med.	Medical Physics
28	Dr.rer.nat Martarizal	Instrumentation Physics
29	Drs. Mohammad Syamsu Rosid, M.T. Ph.D.	
30	Muhammad Aziz Majidi, S.Si., M.Si., Ph.D	Material Physics

31	Nisa Nashrah, Ph.D.	
32	Dr. Nur Ika Puji Ayu, S.T.	
33	Dr. Prawito Prajitno	Instrumentation Physics
34	Dr. Santoso Soekirno	Instrumentation Physics
35	Dr. Seno Aji, S.Si., M.Sc.	Instrumentation Physics
36	Prof. Supriyanto Ardjo Pawiro, Ph.D	Medical Physics
37	Surya Darma, M.Si.	Instrumentation Physics
38	Syahril Siregar, S.Si., M.Sc., Ph.D.	
39	Prof. Dr. Vivi Fauzia	Material Physics
40	Dr. Eng. Yunus Daud, Dipl.Geotherm. Tech. M.Sc.	Geophysics

Departement of Chemistry

The Department of Chemistry was established in 1960 (with the Decree of the Minister of Education, Teaching, and Culture of the Republic of Indonesia, No. 108094/UU dated December 21, 1960). The admission of new students took place in September 1960 under the Faculty of Mathematics and Natural Sciences - Universitas Indonesia (FIPIA-UI). The Department of Chemistry launched the Master's Program in Chemistry (S2) in 1993 (Decree of the Directorate General of Higher Education, Ministry of Education and Culture of the Republic of Indonesia No. 577/DIKTI/KEP/1993) and the Doctoral Program in Chemistry (S3) in 2001 (Decree of the Director General of Higher Education, Ministry of National Education of the Republic of Indonesia No. 77/DIKTI/KEP/2001).

Vision

To become a center of excellence in chemistry education and research, capable of contributing to the development of science and technology at the national and international levels.

Mission

1. To produce graduates who are competitive at the national and international levels and able to adapt to changes and developments in science and technology;
2. To develop high-quality study programs that play a role in advancing the field of Chemistry and its applications; and
3. To contribute to solving chemical problems in society, particularly in urban areas.

Academic staffs of Department of Chemistry

No	Name	Expertise
1	Prof. Dr. Sumi Hudiyono PWS	Biochemistry
2	Prof. drs. Ridla Bakri, M.Phil., Ph.D	Inorganic Chemistry
3	Prof. Dr. Ivandini T. Anggraningrum	Electrochemistry
4	Prof. Dr. Yoki Yulizar	Physics Chemistry
5	Prof. Dr. Helmiyati	Physics Chemistry
6	Prof. Dr. Jarnuzi Gunlazuardi	Analytic and Environmental Chemistry
7	Prof. Dr. Yuni Krisyuningsih	Inorganic Chemistry
8	Prof. Dr.rer.nat. Budiawan	Toxicology Chemistry
9	Dr.rer.nat. Agustino Zulys	Inorganic Chemistry
10	Aminah, M.Sc., Ph.D.	Inorganic Chemistry
11	Asep Saefumilah, S.Si., M.Si., Ph.D.	Analytic Chemistry
12	Dr. Bayu Ardiansah, S.Si., M.Si.	Organic Chemistry
13	Dewangga Oky Bagus Apriandanu, M.Si., Ph.D.	
14	Dita Arifa Nurani, S.Si., M.Sc. M.Si.	Analytic Chemistry
15	Dyah Utami Cahyaning Rahayu, S.Si.,M.Si.	Organic Chemistry
16	Iman Abdullah, S.Si., M.Si., Ph.D.	Material Science
17	Dr. Isnaini Rahmawati, S.Si., M.Si.	
18	Muhammad Ridwan, S.Si., M.Si., Ph.D.	Organic Chemistry
19	Munawar Khalil, S.Si., M.Eng.Sc., Ph.D.	Advanced Nanomaterials
20	Dr. rer.nat. Noverra M. Nizzardo, S.Si., M.Sc.	Organic Chemistry
21	Rika Tri Yunarti, M.Eng., Ph.D	Inorganic Chemistry
22	Samira Husen Alamudi, S.Si., Ph.D.	
23	Dra. Sri Handayani, M.Biomed.	Biochemistry
24	Tuti Wukirsari, M.Agr., Ph.D	Organic Chemistry
25	Dr. Yulia Mariana Tesa Ayudia Putri, S.Si., M.Si.	
26	Zico Alaia Akbar Junior, S.Si., M.Sc., Ph.D.	

Department of Biology

The Department of Biology, FMIPA UI, will be 64 years old in 2024. It is one of the five departments within the Faculty of Mathematics and Natural Sciences (FMIPA) at Universitas Indonesia. As of 2024, the Department of Biology has built a conducive academic atmosphere, supported by very adequate facilities and infrastructure. The department is supported by faculty members with expertise in the fields of zoology, botany, and microbiology, and conducts research in five research groups: WILD (Wild and Sustainable Landscape), MSP (Microbial Systematics and Prospecting), CEEB (Community Ecology and Environmental Biology), CeMBioS (Cellular and Molecular Mechanisms in Biological Systems), and MeCE (Metabolomics and Chemical Ecology). These research groups provide learning and research experiences that meet the graduate profiles of Undergraduate, Master, and Doctoral students in Biology.

Vision

As a center of excellence for biodiversity conservation education and research that supports the development of human resources that are able to play a role and compete at the national and international levels.

Mission

playing an active role in developing Biology, especially in the scope of biodiversity conservation through the implementation of sustainable education, research, and community service development in accordance with advances in science and technology.

The Department of Biology currently manages 4 study programs, as can be seen on the website <https://biologi.ui.ac.id>. The four study programs are:

1. Undergraduate Program of Biology
2. Master Program of Biology
3. Doctoral Program of Biology
4. Master Program of Marine Science

Academic staffs of Department of Biology

No	Name	Expertise
1	Prof. Dr. Jatna Supriatna, M.Sc.	Conservation Biology
2	Prof. Anom Bowolaksono, M.Sc., Ph.D	Reproductive and Developmental Biotechnology
3	Prof. Dr. Abinawanto, M.Si.	Reproductive Biology and Genetics
4	Prof. Dr. Noverita Dian Takarina, M.Sc.	Marine Biology
5	Prof. Dr. Dra. Nining Betawati	Phycology/ Algology

	Prihantini, M.Sc	
6	Prof. Dra. Wellyzar Sjamsuridzal, M.Sc., Ph.D	Mycology
7	Prof. Dr. Luthfiralda Sjahfirdi, M. Biomed.	Reproductive behavior and Physiology
8	Dr. Ade Irma Elvira, S.P., M.Sc.	
9	Afiatry Putrika, M.Si.	Plant Taxonomy and Ecology
10	Andi Eko Maryanto, M.Si.	Conservation Genetics
11	Dr. Dra. Andi Salamah	Plant Molecular Mechanism
12	Astari Dwiranti, M.Eng. Ph.D	Molecular and Cellular Biology
13	Dr. Dian Hendrayanti, M.Sc.	Systematic and Ecology of Microalgae
14	Dimas Hario Pradana, M.Si	Ornithology
15	Drs. Erwin Nurdin, M.Si	Ecology
16	Fadhillah, S.Si., M.Agr., Ph.D	Reproductive Physiology
17	Dr. Fitriarningsih, S.Si., M.Eng.	Bacterial diversity, systematic, and prospecting
18	Drs. Iman Santoso, M. Phil	Applied Microbiology
19	Dr. Mazytha Kinanti Rachmania, S.Si., M.Si.	
20	Dr. Mega Atria, M.Si.	Plant Taxonomy
21	Dr.rer.nat. Mufti Petala Patria, M.Sc.	Marine Ecology
22	Niarsi Merry Hemelda, M.Si.	Plant – Microbe Interaction
23	Dr. Nova Anita, S.Si., M. Biomed	Reproductive Physiology
24	Dr. Dra. Noviar Andayani, M.Sc.	Conservation Genetics
25	Dr. Oriza Savitri Ariantie, S.Pt., M.Si.	
26	Dr. Dra. Ratna Yuniati, M.Si.	Plant Ecophysiology
27	Dr. Retno Lestari, S.Si., M.Si.	Plant Molecular Genetics
28	Dr. Riani Widiarti, S.Si., M.Si.	Marine Biology
29	Saifudin, S.Si., M.Si.	Plant Development
30	Dra. Sitaresmi, M.Sc.	Environmental Microbiology
31	Tety Maryenti, M.Sc., Ph.D.	
32	Dr. Upi Chairun Nisa, S.Si., M.Agr.Sc.	Biology of Reproduction
33	Dr. Windri Handayani, S.Si., M.Si.	Plant Compound Biorospecting
34	Dr.rer.nat. Yasman, M.Sc.	Metabolomics and chemical ecology

Department of Geography

Judging from its history, the establishment of the Geography Department of FMIPA UI in the 1950s was pioneered by the Indonesian Army, in this case General Gatot Subroto, which was motivated by the desire to provide experts in map making and analysis for military purposes. Therefore, it is not surprising that since its inauguration on November 27, 1959, all lecture activities were held at the Geography Institute Building of the Indonesian Army Topography Service (Jantop) located on Jl. Dr. Wahidin No. 11, Gunung Sahari, Central Jakarta before being moved to the UI Salemba Campus in 1976. At that time, the study programs opened were only intended for undergraduate education. The number of students who registered in the first batch was more than 100 people. At that time, the Geography Department was under the management of the Faculty of Exact and Natural Sciences, Padjajaran University (FIPIA-Unpad) in Bandung. It was only in 1966 that the management of the Geography Department was transferred to the Faculty of Mathematics and Natural Sciences, University of Indonesia (FMIPA - UI) based on the Decree of the Director General of Higher Education, Ministry of Education and Culture Number 79 dated October 8, 1966.

Vision

As a Center of Excellence in Geography that is recognized nationally and is able to play an active role at the global level.

Mission

1. organizing higher education activities in geography based on competence and research;
2. organizing research activities for the development of applied science and research;
3. organizing community service activities to improve the standard and quality of life of the Indonesian people and humanity; and
4. organizing the best service activities in the fields of education, research and community service.

The Department of Geography has two study programs:

1. Undergraduate Program of Geography
2. Master Program of Geography

Academic staffs of Department of Geography

No	Name	Expertise
1	Prof. Dr. Muhammad Dimiyati	Agronomy Geography
2	Prof. Dr. Tito Latief Indra, SSi, M.Si.	Hydrogeology
3	Prof. Dr. Supriatna, M.T.	Remote Sensing

4	Adi Wibowo, S.Si., M.Si., Ph.D	Geographic Information System
5	Andry Rustanto, S.Si., M.Sc.	Physical Geography
6	Dra. Astrid Damayanti, M.Si.	Physical Geography
7	Dr. Dewi Susiloningtyas, S.Si., M.Si.	Regional Asian Geography
8	Dr.rer.nat. Eko Kusratmoko, M.S.	Hydrogeography
9	Dr. Hafid Setiadi, S.Si., M.T.	Urban Geography
10	Dr. Hayuning Anggrahita, S.Si., M.S.M	Human Geography
11	Dr. M. Iqbal Putut Asshidiq, S.Si., M.Sc.	Geographic Information System
12	Jarot Mulyo Semedi, S.Si., M.Sc.	Geographic Information System
13	Kuswantoro, S.Si., M.Sc	Hydrogeography
14	Dr. Mangapul P. Tambunan, S.Si., M.Si.	Geomorphology
15	Dr.Eng. Masita Dwi Mandini Manessa, S.Si., M.Si., M.Eng	
16	Nurokhmah Rizqyhandari, S.Si., M.Si.	Human Geography
17	Pranda Mulya Garniwa, S.Si., M.Si., Ph.D.	
18	Revi Hernina, M.Sc.	Physical Geography
19	Riza Putera Syamsuddin, M.Si.	
20	Dr. Rokhmatuloh, M.Eng.	Remote Sensing
21	Satria Indratmoko, M.Sc.	
22	Dr. Taqyuddin, M.Hum	Cultural Geography
23	Dr. Tjong Giok Pin, S.Si., M.Si	Remote Sensing
24	Dr. Triarko Nurlambang, M.A.	Economy Geography
25	Dra. Widyawati, MSP	Human Geography
26	Nurul Sri Rahatiningtyas, M.Si	Physical Geography
27	Dra. Ratna Saraswati, MS	Physical Geography

Department of Geoscience

The Chancellor of the University of Indonesia received a mandate from the Director General of Higher Education through the Letter of the Acting Director General of Higher Education No. 358/E.E2/DT/2014 to organize 2 (two) S1 Study Programs directly related to earth sciences, namely the Study Program of Geophysics and the Study Program of Geology. In 2015, both study programs were temporarily placed under the Faculty of Mathematics and Natural Sciences (FMIPA). In the long-term plan, these two programs will become part of a new department at FMIPA UI, namely

the Department of Geosciences. The government has mandated that both study programs meet the need for human resources capable of managing natural resources in a sustainable and environmentally friendly manner, mitigating the potential for natural disasters whose frequency is continuously increasing, and developing geotourism potential as a means of preserving the uniqueness and diversity of geological phenomena in Indonesia. The demand from society and industry for geology and geophysics graduates has been quite high. The development of exploration for conventional energy sources (such as oil, gas, and coal), non-conventional energy sources (such as CBM and shale gas), as well as renewable energy (such as geothermal) has driven the industry's high demand for earth science graduates like geologists and geophysicists.

- **Undergraduate Program in Geophysics**

Vision

To become an outstanding Bachelor's Program in Geophysics in the field of earth sciences, capable of contributing to the development of Indonesian society and gaining a reputation at the Southeast Asian level

Mission

1. Carrying out quality Tridharma activities in the field of geophysics and relevant to national and global challenges.
2. Producing high-quality Geophysics graduates who are integrated, moral, socially sensitive, and capable of competing at the national and global levels;
3. Organizing the management of the Undergraduate Geophysics Study Program that is oriented towards quality and accountability to support the vision of FMIPA and the vision of the Universitas Indonesia.

- **Undergraduate Program in Geology**

Vision

Becoming a superior Geology Study Program and being able to play a role at the Southeast Asian level to advance earth science and sustainable development

Mission

1. Carrying out the Tridharma of Higher Education activities to produce graduates of the Geology Undergraduate Study Program as future leaders who are professional, intelligent, moral, have social sensitivity and are superior in competing globally.
2. Developing an active learning atmosphere and current research in the field of geology to produce innovations and solutions that are beneficial to society and support national development and resilience
3. Providing contributions and active roles in the development of science and innovation in the field of geology.

Academic staffs of Study Program of Geosciences (Geophysics and Geology)

No	Name	Expertise
1	Prof. Dr.rer.nat. Abdul Haris	Seismic
2	Prof. Dr. Bambang Soegijono, M.Si.	
3	Agus Riyanto, M.Si.	Seismic
4	Anne Meylani Magdalena Sirait, S.Si., M.Si., Ph.D	
5	Asri Oktavioni Indraswari, M.T.	Petroleum Geoscience
6	Ayunda Aulia Valencia, S.T., M.T.	
7	Dyah Nindita Sahdarani, M.Energy	Geothermal Energy Technology
8	Felix Mulia Hasudungan Sihombing, S.T., MMinRes	
9	Iskandarsyah, S.Si., M.Si.	
10	Dr. Muhammad Bisri Mustofa, S.Pd., M.Si.	
11	Octria Adi Prasodjo, M.T.	Reservoir Geoscience Engineering
12	Dr. Reza Syahputra, ST, M.Si.	Reservoir Geophysics
13	Rezky Aditiyo, M.T.	Petrophysics
14	Dr. Eng. Supriyanto, S.Si., M.Sc.	Geophysics
15	Dr. Twin Hosea Widodo Kristyanto, M.T.	Geoenviromental

CHAPTER 2

Facilities and Campus Life



2.1 Facilities

FMIPA UI has 13 buildings that stand on $\pm$ 11 ha of land. There are six department buildings, an integrated lecture building, one basic laboratory building, two integrated laboratories: the basic science laboratory and multi-discipline integrated laboratory, student facilities, and the faculty main administrative building.

A. Study Room

The main lecture building consists of 4 floors; the ground floor has one large lecture hall Prof. Dr. Soemantri Brodjonegoro and the remaining 2, 3 and 4th floors have 17 classrooms. All classrooms are equipped with CCTV and tools that support teaching and learning processes such as air conditioner, LCD TV, sound system, and LCD projectors. In addition to the main lecture hall, there are also some lecture rooms spread across five departments. The main lecture building is also accessible for handicapped persons.

B. Laboratories

FMIPA UI provides a range of research laboratories equipped with resources to support student research and innovation across various disciplines. These laboratories are designed to facilitate hands-on learning, experiments, and collaborative research projects. The labs are equipped with advanced instruments and tools to help students deepen their knowledge, develop practical skills, and contribute to cutting-edge research in their respective fields.

C. Hall and Meeting Room

Lecture halls are equipped with advanced audiovisual systems to accommodate large classes and events, while meeting rooms provide a more intimate setting for seminars, workshops, and faculty or student meetings. Additionally, multipurpose rooms offer flexible spaces for group work, discussions, and other collaborative activities. These facilities are designed to be accessible, equipped with modern technology, and comfortable to foster a productive and inclusive academic environment for students, faculty, and staff. The hall and meeting in FMIPA UI such as Prof. Dr. Soemantri Brodjonegoro Hall, Prof. Dr. G.A Siwabessy Hall, Multidisciplinary Research Lab Hall, Dean's Meeting Room, and Meeting Room of Multidisciplinary Research Lab.

D. Other facilities

The campus also has other supporting facilities such as a Mosque, Cafeteria, and convenience store, vehicle parking areas, sports facilities, restaurants, Bank Syariah Mandiri (BSM) and Automatic Teller Machine

(ATM). Academic services for students are provided at the Faculty Administrative Centre (PAF).

2.2 Faculty Administrative Center (PAF)

Academic administrative services for all academic programs in FMIPA UI are managed by PAF. The services provided for students include academic records, change of grades from lecturers, academic transcripts, registration, absence of leave, enrollments and letter of reference letter. The working hour is at 08.00 to 16.00 from Monday to Friday, at the ground level in Main Building. There are several applications that helpful for student services that provide in several unit of FMIPA UI, as follows:

A. SIPA

SIPA (Sistem Informasi Persuratan Akademik) is an online academic service platform designed to streamline and simplify administrative processes at the FMIPA UI from Education Work Unit. Through SIPA, students can easily manage various academic-related tasks, such as submitting requests for transcripts, letters of recommendation, apply the requirements for taking Diploma and Transcript, and other official documents, as well as tracking the status of their applications. This system helps ensure efficient communication between students and academic administration, providing a convenient and accessible way to handle academic correspondence and documentation in a secure, digital format. SIPA aims to improve the overall student experience by reducing paperwork and processing time.

SIPA Link: <https://sipa.sci.ui.ac.id>

B. SAINTIS

SAINTIS (Sistem Administrasi Kemahasiswaan) is the integrated student activity administration system that simplifies and streamlines various academic and administrative from Student Affairs Work Unit. Through SAINTIS, students can easily access to submission of student activities file and provide the submission status.

SAINTIS Link: <https://sci.ui.ac.id/id/saintis/>

C. SIPRAS

SIPRAS (Sistem Informasi Peminjaman Ruang dan Fasilitas) is an online platform that allows students to easily reserve and manage the use of university spaces and facilities for academic or extracurricular activities. Through SIPRAS, students can book classrooms, meeting rooms, seminar halls, and other campus facilities for study groups, events, workshops, and meetings. The system provides a user-friendly interface to check availability, submit requests, and track booking statuses, ensuring a streamlined and efficient process for

accessing university resources. SIPRAS helps optimize facility usage and supports students in organizing and managing their academic and campus-related activities with greater ease and convenience.

SIPRAS Link: <https://sipras.sci.ui.ac.id>

D. IT Services

FMIPA UI provides services to support students throughout their academic journey. New students can register for a Single Sign-On (SSO) account, which provides access to various university applications and services with a single secure login. Through IT Services, students can also register for Office 365, allowing them to use Microsoft Office applications, cloud storage, and collaborative tools for academic activities. Additionally, students can apply for an FMIPA UI email account. For online learning and meetings, students can also log in to the Zoom service to participate in virtual classes, seminars, and group discussions.

IT Services Link: <https://sci.ui.ac.id/layanan-it-support/>

2.3 Central Library of Universitas Indonesia

For the library and other information resources, there is central library at UI campus, The Central Library of University of Indonesia, called The Crystal of Knowledge consists of 8 floors, but the library only occupies the first four floors. The remaining floors (5th-8th) consist of meeting rooms and an auditorium with a building area of 33,000 m². The new building was first used in 2011 and is one of the largest libraries in Asia.

The library is located at a walkable distance from the train stations. The operational hours of the UI library is from Monday to Friday (08.30 –19.00) (for internet room and cubicles from 08.30 - 21.00 WIB) and Saturday to Sunday (09.00-16.00). Every month, the librarian actively informs students and staff about the subscribed e-journals through e-mail. All UI students are automatically registered as members of the UI Library. However, students still need to activate the UI Library account (username and password) to gain access to digital collections in <http://lib.ui.ac.id>. Activation is done in IT Service Counter at 1st Level Library Lounge.

The UI Library staff are incorporated into three sections (divisions): Public Administration and Facilities, Library Services, Knowledge Management Section. Visitors can also take advantage of both physical and virtual facilities by utilizing e-services through the UI Library website (lib.ui.ac.id) and e-mail. For computer facilities, there are 70 PCs in the Internet space, 72 PCs for the staff, 10 PCs for interns, printing and receiving of theses, 35 OPAC PCs, one PC for the presence and activities of two PCs for registration.

The information system in the library is based on electronic information technology, i.e., there is a digital library or an online information system. With

this system, visitors to the library or its website can conduct electronic searches and download directly all available collections, such as books, magazines, non-books, electronic journals, electronic books, and some creations, which are produced by all civitas academica of the Universitas Indonesia. Some references related to science and technology can also be accessed online.

2.4 Computer Sciences and Network

Universitas Indonesia has an Internet connection with a bandwidth of 5.8 Gbps that serves the Depok and Salemba campuses. Each user is allocated 5 Mbps of Internet bandwidth. The inter-building connection within the MIPA (Faculty of Mathematics and Natural Sciences) has a bandwidth capacity of 1 Gbps, while the connection between FMIPA and the UI Data Center has a capacity of 10 Gbps. In terms of infrastructure, the university is equipped with distribution switches, attendance servers, fiber-optic networks (FO), LAN, and Wi-Fi networks. All members of the academic community (students, faculty, and staff) have unlimited free access to the internet and are provided with unique usernames (SSO Login) by the Directorate of Systems and Information Technology (DSTI). Additionally, the university has developed several information systems to support academic and administrative activities, as well as facilitate university management. These systems are likely integrated with the university's IT infrastructure, helping streamline processes such as student registration, grading, course management, and internal communications.

Users who experience issues with the use of these facilities can report or request assistance from the DSTI UI through the following services:

Email	: support@ui.ac.id
Website	: https://dsti.ui.ac.id
Working Hours	: Monday – Friday, 08.00 – 16.00 WIB
Address	: UI Campus Depok 2nd Floor, Old Library Building (Next to the ITTC building) UI Campus Salemba 1st Floor, IASTH Building (Above BNI Bank)

2.5 Student Welfare

1. Universitas Indonesia Mosque

- Ukhuwah Islamiyah (UI) Mosque Depok located in the UI Depok Campus. Established on 28 January 1987.
- Arif Rahman Hakim (ARH) Mosque Salemba is located at the UI Salemba Campus. It was established on November 10, 1967.

2. Campus Bus

To serve the transportation needs of students within the campus, Universitas Indonesia provides campus buses, also known as "Bis Kuning" (Yellow Buses). These buses operate on the following routes during their operating hours:

Monday – Friday : 06.54 – 21.30 WIB

Saturday : 06.50 – 16.10 WIB

The Yellow Bus (Bus Kuning) operates on two different routes:

Blue	UI Dormitory, Menwa, UI Station, Faculty of Psychology, Faculty of Social and Political Sciences, Faculty of Humanities, Faculty of Economics and Business, Faculty of Engineering, Vocational Studies, Pusgiwa (Student Activity Center), Faculty of Mathematics and Natural Sciences, Faculty of Nursing, Faculty of Public Health, Health Sciences Cluster, Balairung/Pondok Cina Station, UI Mosque, Faculty of Law
Red	UI Dormitory, Menwa, UI Station, Faculty of Law, Balairung/Pondok Cina Station, Health Sciences Cluster, Faculty of Public Health, Faculty of Nursing, Faculty of Mathematics and Natural Sciences, SOR (Sport Facilities)/PNJ (Politeknik Negeri Jakarta), Vocational Studies, Faculty of Engineering, Faculty of Economics and Business, Faculty of Humanities, Faculty of Social and Political Sciences, and Faculty of Psychology

Bikun Tracker Link: <https://bikun.ui.ac.id>

3. Health Facilities

Universitas Indonesia has 2 (two) the health facilities that can be used by students and other academic staff are as follows:

a. UI Hospital

UI Hospital is one of the health facilities available for students to check their health. It was officially opened in 2019 with a Green Hospital concept, focusing on environmental friendliness and patient safety. UI Hospital is also open to the general public for health check-ups.

b. UI Makara Satellite Clinic

The UI Makara Satellite Clinic is specifically a health service center for students and the general public. It is located within the Universitas Indonesia campus areas in Depok and Salemba. Several services are available at the clinic:

	Specialty Clinic	Day	Working Hours
UI Makara Satellite	General	Monday – Thursday	08.00 – 18.00 WIB
		Friday	09.00 – 18.00 WIB

Clinic, Depok		Friday	08.00 – 12.00 WIB
	Dentistry	Monday – Thursday	08.00 – 16.00 WIB
		Friday	09.00 – 16.00 WIB
	Counseling	Monday – Thursday	08.00 – 18.00 WIB
		Friday	08.00 – 18.00 WIB
	Maternal and Child Health	Tuesday & Thursday	08.00 – 12.00 WIB
UI Makara Satellite Clinic, Salemba	General	Monday, Wednesday, & Friday	09.00 – 15.00 WIB

4. Sports Facilities

Universitas Indonesia and FMIPA provide several sports facilities that can be used by students and other academic staff as follows as:

a. UI Stadium

Stadium UI is one of the facilities provided to all members of the University of Indonesia academic community. The UI Stadium includes a Soccer Field and Running Track, and is available for extracurricular activities that foster student potential and achievement. With synthetic grass for the football field and rubber for the athletic track, the stadium provides a safer environment for practice and competition. This is intended to promote a positive, competitive spirit as well as sportsmanship among students.

b. Felfest UI

Another sports facility is Felfest UI, or the Felicity Festival UI, which offers sports amenities such as a swimming pool, a golf driving range, and archery. Additionally, Felfest provides meeting points, lakeside gathering areas, and both indoor and outdoor spaces that can be used for events such as weddings. These facilities are also available to the public.

c. SOR UI

SOR UI is a sports facility used by students for extracurricular activities. It consists of futsal, basketball, and volleyball courts. SOR UI is also equipped with supporting facilities such as toilets, showers, changing rooms, a prayer room, and stairs and ramps for accessibility, supporting students with disabilities.

d. Gymnasium UI

The Gymnasium UI is an indoor sports facility that includes volleyball and badminton courts. It is often used for inter-faculty volleyball and badminton competitions within the university

e. FMIPA UI Field

The FMIPA UI Field is a sports facility located within the Faculty of Mathematics and Natural Sciences (FMIPA). It is commonly used for basketball, futsal, and other sports activities, serving as a venue for various student sports events

5. UI Dormitory

Universitas Indonesia Dormitory (Asrama UI) is a residential facility provided by the University of Indonesia to support the housing needs of its students. The dormitory aims to provide a comfortable, safe, and conducive environment for studying, while also encouraging interaction and integration among students from diverse backgrounds.

UI Dormitory is located within the UI Depok campus, specifically in the Kukusan area, near the Kukusan Teknik Gate (Kutek). This strategic location provides easy access to various faculties and other campus facilities

6. Student Guidance and Counseling (BKM) UI

The Student Affairs Unit of FMIPA UI provides a platform for students to consult and resolve various issues, whether academic, family-related, or personal. For students who require BKM (Student Counseling and Guidance) services, they can contact the designated BKM counselor. This psychological assistance is offered in the form of counseling and guidance to help students navigate their challenges effectively.

2.6 Student Organizations

The Student Organizations at FMIPA UI serve as platforms for students to develop their potential outside of academic activities. These organizations are designed to support the formation of character, leadership skills, teamwork, and creativity through various activities that involve social, intellectual, and talent aspects. The following are the student organizations within FMIPA UI:

1. Students Executive Body (BEM) FMIPA UI

The student executive organization at the faculty level, responsible for implementing work programs and activities aimed at supporting students' self-development, advocacy, community service, and facilitating the needs of FMIPA UI students. BEM also acts as a liaison between students and the faculty or university administration.

2. Students Representative Body (BPM) FMIPA UI

The student legislative body at FMIPA UI, which functions as a supervisory entity for the performance of BEM and other student organizations. BPM is

responsible for creating regulations, providing recommendations, and channeling students' aspirations to the relevant authorities.

3. Department Student Association (HMD) FMIPA UI

Department-based student organizations that focus on the development of students' interests, talents, and skills in specific fields. These organizations offer activities such as seminars, training, competitions, and social events. FMIPA UI has six Student Association.

- a. Student Association of Department of Mathematics FMIPA UI
- b. Student Association of Department of Physics FMIPA UI
- c. Student Association of Department of Chemistry FMIPA UI
- d. Student Association of Department of Biology FMIPA UI
- e. Student Association of Department of Geography FMIPA UI
- f. Student Association of Department of Geosciences FMIPA UI

2.7 Applied Science Institute (LST)

Superior human resources are a necessity that must be had to support current development activities. The University of Indonesia, as a university, certainly has a very significant role in creating superior human resources, namely as a producer of change agents who are able to design, encourage and pioneer change.

In order to support the University of Indonesia in achieving its vision and mission, the Faculty of Mathematics and Natural Sciences established the LST (Applied Science Institute). This institution focuses on consulting, training, laboratory testing and certification services to support industrial and development activities with increasingly complex challenges.

2.8 Rules of Campus Life

a. Rules of Conduct

All of FMIPA UI members should behave as follows:

1. Comply with the applicable regulations in FMIPA UI in particular, and legislation in general;
2. Honest in the process of education, research, write a paper, and in performing other actions concerning the name of the university;
3. Polite in dress and behave;
4. Disciplined and be ethical in every activity; and
5. Maintain the integrity of the university and himself.

All of FMIPA UI members is not allowed to do things as follows:

1. Abusing the name, emblem, and all forms of FMIPA UI attributes;
2. Faking or abusing a letter or document FMIPA;
3. Inhibit or interfere with the ongoing activities of FMIPA UI;

4. Entering, tried to enter or use and transfer illegally rooms, buildings and other facilities owned or under the supervision of FMIPA UI;
5. Refusing to leave or hand back room, building or other facilities owned or under the supervision of FMIPA UI used illegally;
6. Littering or damaging rooms, buildings, and other facilities owned or under the supervision of FMIPA UI;
7. Beatings, torture, suppression, defamation, and causes damage to the other party;
8. Cause or attempt to cause disorder and division in the campus FMIPA UI; and
9. Using the means and funds owned by or under the supervision of FMIPA UI irresponsibly.

b. Sanctions

Violation of the above rules, which is done by every member of FMIPA UI may be subject to one or more of the following administrative sanctions:

1. Strikes and/or warnings oral/written;
2. The obligation to replace all damage and or loss thereof;
3. The ban follows the academic activities and the activities of FMIPA UI (suspension); and
4. May be dismissed or expelled by FMIPA UI.

c. Provisions of Sanctions

1. The sanction given by the Rector to a person, after hearing the considerations of Offence Settlement Committee (P3T2);
2. Dean/Head of Institution/Director was authorized by the Rector to provide initial action/temporary, in the form of suspensions, fines, warnings written/verbal for its member who violate while the final decision of the Rector apply;

d. Implementation of Rules Campus Life

- Rights and Duties of FMIPA UI members

1. FMIPA UI member has the right to life that is safe, orderly and peaceful in shades of academic life on campus;
2. Residents FMIPA UI obliged to realize, maintain and preserve the atmosphere is safe, orderly and peaceful in shades academic campus environment;
3. Residents FMIPA UI shall comply with the rules / regulations applicable in campus and or regulatory/statutory provisions in general

- **Behavior Patterns**

1. Residents of FMIPA UI must be honest and responsible in the implementation of academic activities or associated with learning or other academic activities;
2. Citizens of FMIPA UI should behave and speak good words with attention and uphold the norms/ethics/etiquette based customs Indonesian life, in association with one another;
3. Residents of FMIPA UI should dress modestly according to the circumstances and purposes at the time or in the event he is being attended/participated.
4. Residents of FMIPA UI should be able to discipline themselves in accordance with the norms in force, in all aspects of life both inside and outside the campus
5. Residents of FMIPA UI prohibited from conducting activities that directly/indirectly may result in misuse of the name, emblem and any attributes of the university;
6. Residents of FMIPA UI prohibited littering or damaging the room, building or other facility under the supervision/control/ownership university;
7. Residents of FMIPA UI prohibited master, use/exploit and/or transfer the room, building or other facility under the supervision / control/ownership university;
8. Residents of FMIPA UI forbidden refused to leave or hand back room, building or other facility under the supervision/control/ ownership university;
9. Residents are prohibited from FMIPA UI beatings, torture, physical and psychological pressure to the UI Department of Mathematics fellow citizens or others, defamation of a person/institution, noise and/or troublemakers as well as things that may cause harm to others;
10. Cause or attempt to cause disorder and disunity unity FMIPA UI fellow citizens;
11. Using the facilities, infrastructure and/or funds belonging to or under the management and supervision of the university is not responsible.

- **Provisions of Sanctions**

FMIPA UI member who proved to have violated rules of campus life, imposed against sentenced as a sanction for such actions;

- a. The Rector in time 14 (fourteen) days after receiving the P3T2 report, then study and consider the recommendations proposed and further provides sanctions: slight, moderate or severe, according to the level of violations that has been done;
 - Slight sanction: Reprimand or written warning;

- Moderate sanction: (i) Compulsory replace / damage losses resulting from his actions, (ii) disallowance to follow academic or other universities activities;
- Severe sanction: revoked his capacity as a citizen of FMIPA UI;
- b. Dean/director/Chairman of the institution while waiting for the Rector authorized to act early/temporary form of verbal warning/written, suspension or fines, for citizen of FMIPA UI in organizational units are reasonably suspected to have violated rules of campus life.

e. Non-academic Discipline

FMIPA UI seeks to provide a supportive learning environment active in the process of learning and research, and free from coercion and discrimination. FMIPA UI desire to interaction based on honesty and integrity among students and academic staff. The problems of clan, pedigree, skin color, sex, age, social status, religion or race be expected will not to have varieties of academic interaction view each person the same degree, dignity, and dignity. Violence in any form could not be justified. The principle realized by students set various rights and obligations, where the behavior and treatments that are not in accordance with that principle specified in detail.

- **Student's Rights and Responsibilities:**

1. Students could be participated in formulating and apply the wisdom of the faculty of academic problems that affect , non-academic , and student organizations
2. Freedom of discussion and expressing opinions could be guaranteed if each members of the academic faculty to respect and guarantee the freedom of others in discussions and express opinions.
3. Demonstrations in accordance with applicable law permitted on the condition does not interfere with the rights of others and does not interfere with the function of the faculty.
4. Consistency and fairness are guaranteed as far as that can be investigated by FMIPA UI.
5. Confidentiality of data is guaranteed student.
6. FMIPA UI has a commitment to ensure safe conditions in the teaching-learning process.
7. Access to facilities on faculty by the provisions of the faculty that aims to protect the safety and interests of students.

- **Discipline Violations and Enforcement Procedures**

1. Students are not allowed in any way interfere with the activity or service of the faculty, which including the teaching, research, learning, administration, meetings, and public services.

2. Students are not allowed to harass and / or threaten anyone in any form, or even create conditions that threat the health, safety, and welfare of others and himself.
3. Students are not allowed to enter or stay in the room and / or facilities in faculty/department without formal authority.

CHAPTER 3

Academic System and Regulation

The academic system and academic regulations refer to the Rector's Decree No. 2 of 2024 concerning the Implementation of the Master Program.

3.1. The Objective of Education

The Master Program aims to:

- a. Develop students into intellectuals, cultured scientists, able to enter and/or create jobs, and develop themselves into professionals; and
- b. Able to practice and develop science and/or technology through scientific reasoning and research.

Master Programs is organized produce graduates with Graduate Learning Outcomes in accordance with Level 8 (eight) in the Indonesian National Qualification Framework (KKNI) as follows:

- a. able to develop knowledge, technology and/or art in their scientific field or professional practice through research to produce innovative, original and tested work;
- b. able to solve problems in science, technology, and/or art in their scientific field through an interdisciplinary, multidisciplinary, or transdisciplinary approach; and
- c. able to manage research and development that is beneficial to science and the welfare of humanity, as well as gain national and international recognition.

The Master Program is organized to produce graduates with Learning Outcomes in accordance with the Graduate Profile of each Study Program, as approved by the Faculty Academic Senate.

3.2. Implementation of the Master Program

1. The faculty organizes the Master Program in the form of a Study Program, the implementation of which must:
 - a. Has an operating permit;
 - b. Has valid accreditation;
 - c. Has an academic quality assurance system, and
 - d. Has a minimum number of permanent lectures and qualification in accordance with regulations.
2. The opening of new master-level study program must follow the requirements and procedures applicable at UI.
3. The implementation of Master Program can be carried out through the pathway of:
 - a. Taught, and
 - b. Research.
4. The implementation of Master Program uses Indonesian as the main language of instruction.

5. The Master Program can be pursued through international mobility programs, Double Degree or Dual Degree programs, or Joint Degree programs, in accordance with the applicable regulations.
6. The Master Program is organized to educate graduates with a Bachelor's level or equivalent.
7. The Master Program through the Taught pathway and the Master Program through the Research pathway must use the same curriculum and produce graduates with the same Learning Outcomes.
8. UI organizes an Accelerated Program (Fast Track) for the following levels:
 - a. Bachelor's to Master; and
 - b. Master's to Doctoral.
9. The Master Program is attended by students registered in the Academic Registration in a semester.
10. The Master Program may be conducted in the form of Distance Learning (PJJ) in accordance with the applicable regulations.
11. The Master Program is not allowed to be conducted through distance learning methods.
12. The implementation of the Master Program is based on the semester system specified in the Academic Calendar each year.
13. The establishment, closure, merging, and renaming of study programs within the Master Program are carried out in accordance with the applicable regulations.

3.3. Student Intake Policy

The selection process for admission of prospective Master Program students is organized by the unit responsible for student admissions. Universitas Indonesia has a centralized student intake policy which covers all study programmes at the university. Basically, the admission of new students to the Master Program is through the SIMAK UI (Seleksi Masuk Universitas Indonesia) exam which is carried out by Universitas Indonesia.

The requirements for admission through the research pathway are as follows:

- a. Have research experience demonstrated by being one of the authors of at scientific articles published nationally/internationally, with the applicant being the first author in at least one of those articles.
- b. Passes an research proposal interview conducted after the SIMAK UI exam.
- c. For those who do not meet requirements a – b, it is recommended to follow the Taught Pathway.

3.4. Semester Credit Unit (SKS)

Faculty of MIPA UI is started to applied the education with Semester Credit Unit (SKS) since the academic year 1984/1985 with regard Law No. 2 of 1989 on National Education System, Government Regulation No. 60 of 1999 on Higher

Education and the Minister Decree no. 232/U/2000 about Guidelines for Higher Education Curriculum Development and Student Learning Outcomes Assessment no.045/U/2002 about Higher Education Core Curriculum.

Academic activities in FMIPA Universitas Indonesia are held in a variety of ways such as lectures, assignments, practical work, seminars, lab, and research for thesis/dissertation writing. All educational activities that must be undertaken by each student to earn a degree are contained within the academic loads and measured in units of semester credit (SKS). Semester Credit Unit which is henceforth shortened to SKS is a measurement of recognition for the learning experience obtained by students in one semester.

One credit in the forms of lecture, response and tutorial learning, consists of:

- a. 45 (forty-five) hours per Semester; and
- b. held in 16 (sixteen) weeks.

3.5. Grade Point

Grade point (Indonesian acronym: IP) is a measurement of the academic performance of a student, which is the weighted average of the scores obtained by the student. Grade point is calculated every end of the semester by multiplying the number of course grade point value by weighting the value of each course, divided by the total credit value of the courses taken. Grade Point is used to determine the maximum academic load that the student may take in the upcoming semesters.

3.6. Administrative and Academic Registration

1. Students must complete both Administrative Registration and Academic Registration.
2. Applicants who have been declared successful in the selection process must complete the Administrative Registration and Academic Registration for the relevant semester according to the schedule set by UI.
3. Applicants who have been declared successful may postpone their enrollment as Master Program students according to the criteria and requirements set, for a maximum period of 1 (one) year.
4. Postponement of studies as referred to in statement (3) can only be carried out with written approval from the leadership of the UI unit responsible for educational affairs, before the registration period ends.
5. Administrative Registration is done by paying tuition fees through the payment methods specified by UI.
6. Academic Registration is done by filling out the Study Plan (Indonesian acronym: IRS).
7. Administrative and Academic Registrations are done according to the scheduled that has been regulated by the Academic Calendar of the Universitas Indonesia.

8. Study Plan is cancelled if the tuition fee has not been paid until the end of payment period.
9. Students who are allowed to pay through installments, but have not completed the payment until the end of semester, cannot perform academic registration in the subsequent semester.
10. Students can perform academic registration after the education arrears has been paid.

3.7. Academic Calendar

1. Academic Calendar is a guideline that has to be obeyed by the Faculty, Study Program, and the Academic Civitates of the Universitas Indonesia implementing the Tri Dharma (Three Pillars) of Higher Institutions.
2. Academic Calendar as referred to in (1) is issued 1 (once) in a year with the Rector Decree, and includes at least:
 - a. The Registration period, selection examination, announcement of selection results, registration (administrative and academic) for new students;
 - b. Schedule of the initial activities for new students;
 - c. Schedule for administrative and academic registrations for old students;
 - d. Schedule of the courses;
 - e. Period of examination and announcement of examination results;
 - f. Due date of graduate determination and graduation day registration;
 - g. Schedule of Semester Internal Evaluation (Indonesian acronym: EVISEM) and Yearly Internal Evaluation (Indonesian acronym: EVITAH).

3.8. Course Schedule

1. At the beginning of each semester, the Faculty/ School and Study Program decides the schedule of the courses to implement a curriculum.
2. The schedule of the courses as referred to in (1) above covers:
 - a. Name of courses and classes;
 - b. Type of class;
 - c. Coordinator of each course and the person-in-charge of each class;
 - d. Days and Hours of the Courses;
 - e. Course venues/rooms;
 - f. Lecturers; and
 - g. Medium of Instructions.
3. A course can be taught in several classes.
4. Courses with a Special Course status held by the Study Program have their own schedules regulated separately.
5. The information for Special Course activities must include at least:
 - a. type of guidance;
 - b. supervisor; and

c. title.

3.9. Student's Academic Status

1. In each semester, a student may have certain academic status, namely:
 - a. Active, which means the status of student is active when they have completed both Administrative Registration and Academic Registration, and are actively participating in academic activities;
 - b. Empty, which means the status of student has not carried out Administrative Registration and/or Academic Registration as determined by the Rector;
 - c. Inactive, which means the status of student has carried out Administrative Registration without Academic Registration.
 - d. Academic Leave, which means the status of student does not do any academic activity for 1 (one) or 2 (two) Semesters at with the approval of the Dean due to the student's request;
 - e. Studying Outside the University, which means the status of student who carries out academic activities outside the university is acknowledged by the Universitas Indonesia;
 - f. Overseas, which means the status of student who carries out academic activities abroad is acknowledged by the Universitas Indonesia;
 - g. Sanction, which means the status of student is not permitted to participate any academic activity for 1 (one) or several semesters as determined by the Rector;
 - h. Graduated; which means the status of student has fulfilled all the academic and administrative requirements to be promoted as a Doctor; or
 - i. Withdrawn; which means the status of student who does not continue their studies due to being declared as having discontinued studies, resigned, or passed away as determined by the Rector.
2. Academic Status of Sanction as referred to in statement (1) letter (g) will not be counted as a component in the Evaluation of Learning Outcomes, but it will still be considered as part of the student's study period.
3. Students participating in academic activities outside of UI may be classified as having status of Overseas status or Studying Outside the University, depending on the specific program and arrangements recognized by UI.
4. The academic status of sanction referred to in statement (1) letter (g) is imposed due to violations of UI's code of ethics, based on recommendations from the committee responsible for resolving the code of ethics violations.

3.10. Academic Advisor

Every student has an Academic Advisors (Indonesian acronym PA) who is designated/assigned by the Study Program. An Academic Advisor for a student

of the Master Program is a permanent lecturer and with Doctoral degree. The duties of the Academic Advisor include:

- a. Guiding students in preparing their study plans and providing consideration for selecting course to be taken;
- b. Providing consideration to students regarding the number of credits that can be taken;
- c. Approving the student's IRS in the academic information system; and
- d. Providing assistance, guidance, and advice to students for the smooth progress of their studies.

If the Academic Advisor is unable to fulfill his/her duties, the Head of Study Program will temporarily take over his/her responsibilities as Academic Advisor. The approval of IRS will be carried out by the Vice Dean responsible for academic affairs. The implementation of Academic Advisor's is one of the components in the lecturer's performance evaluation.

a. Purpose Academic Guidance

1. Facilitate the delivery of education for students
2. Assist students in:
 - Understand the characteristics of the education system
 - Understanding the educational administration
 - Implement the learning process well
3. Develop good study habits so that a process of self-reliance in learning activities

b. Requirements Academic Advisors

Academic Advisors (PA) is a permanent teaching staff has the duty and authority to provide academic guidance to students during their study group. An Academic Advisor is expected to:

1. Understanding well the procedure of providing education based on a curriculum that applies.
2. Understanding the rules and regulations that have been determined to accelerate the implementation of education.
3. Provide scheduled time for consultation with students being mentored

c. Implementation Guidance Academic

- Before semester

1. Students fill out the Study Plan (IRS) according to the curriculum applicable for them. The number of credits (*sks*) that is allowed to be taken is adjusted to the GP of the last semester a student is active, excluding Short Semester.
2. The maximum number of credits (*sks*) that a Master's program

student can take in each semester is 24 (twenty-four) credits, provided that their GPA (IPS) in the previous semester is between 3,50 – 4,00.

3. In special case where a student is on the verge of dropping-out, the Vice Dean based on the proposal by the Person-in-charge/Head of Study Program can consider to allow the student to take sks more than the maximum number allowed as regulated in (3).
4. The maximum number of credits (SKS) that can be taken during the Interim Semester is 9 (nine) credits.
5. IRS cannot be approved by the Academic Advisor if students:
 - Taking a course that has the same schedule as another course;
 - Taking a course that has prerequisites students have not met;
 - Taking more credits than allowed;
 - Taking a course that has enrollees more than the available capacity.
6. When IRS is rejected, students are obligated to revise and submit it again for approval.
7. IRS that cannot be approved by the Academic Advisor is sent to the Vice Dean to be determined further.
8. The Vice Dean can approve a problematic IRS, unless the problems are related to inter-Faculty courses.
9. To settle the problems related to (9), the Faculty can coordinate with the host Faculty to add more capacity to the respective courses.
10. The names of students will not be recorded in a course's attendance list if the IRS is not yet approved.
11. Students whose names are not in a course's attendance list are not allowed to attend the course, take the examination, and other activities in the respective course.
12. When an IRS still has problems, students can still attend classes but they are required to settle all problems by the end of IRS revision period (add and drop) at the latest.
13. If the students as mentioned in (12) still carry out activities in the course without settling their IRS problems, then the score they obtain cannot be recorded to their academic histories. Academic Advisor cannot approve IRS troubled students.

- **During the semester**

Provide consultation to students if a spot of trouble, and if it is deemed necessary to continue the case to be able to obtain guidance and counselling services. Problem often encountered students are:

1. Adjustment in learning activities.
2. Social relations are troubled, either by parents, relatives, boarding houses landlady, friends, faculty, staff, or the milieu.

3. Health, both physical and spiritual (mental).
4. Economics, for example, the inability to pay tuition in full, the inability to buy/copy textbook required, etc.

- **End of semester**

1. Academic Advisor can monitor the progress of student achievement of learning outcomes on-line guidance through SIAK NG.
2. Academic Advisor helps Head of the Study Program in evaluating the success of a student's study guidance as stated in the academic regulations.
3. In this period is expected to Academic Advisor gives special attention to students who are exposed to evaluation or almost/have crossed the line of study.
4. Academic Advisor check all the requirements that must be met before students submit final decision.
5. Academic Advisor then approve the academic transcript and a student petition to take Final Exam.

3.11. Filling Out the Study Plan (IRS)

1. Academic registration is done by filling out the Study Plan (Indonesia acronym: IRS) through the academic information system according to the applicable curriculum for the student.
2. The number of credits (SKS) that can be taken is adjusted based on the Semester GP of (Indonesia acronym: IPS) in the student's last semester with active academic status, excluding the inter-semester period.
3. In the case of a curriculum organized in a package system, the number of credits that can be taken in each semester is based on the package listed in the curriculum.
4. The maximum number of credits (sks) that a student can take in each semester consists of:

The Semester Grade Point Average (IPS) of the previous semester	The maximum number of credits (sks) that can be taken.
< 2,50	15
2,50 – 3,00	18
3,00 – 3,50	21
3,50 – 4,00	24

5. In cases where a student is at risk of Dropped Out Criteria, the Vice Dean responsible for academic affairs may consider allowing the student to take a maximum of 24 (twenty-four) credits based on the proposal of the Study Program Coordinator.

6. The maximum number of credits that can be taken during the Intermediate Semester is 9 (nine) credits.
7. The IRS is filled out by the student and approved by the academic advisor.

3.12. Academic Status of Empty

1. Students who do not carry out the Administrative Registration and Academic Registration will receive the academic status of empty for the current semester, and their study period will be counted.
2. Academic status of the student with empty as referred to in paragraph (1) are not required to pay tuition fees.
3. Academic status of the student who have empty for 2 (two) consecutive semesters will automatically be given the status of withdrawn from the university.
4. Academic status of the student with empty but wishing to regain to active may carry out Administrative Registration and Academic Registration with the following mechanisms and requirements:
 - a. still meeting the academic requirements;
 - b. obtaining approval from the Faculty/School and a recommendation from the head of the unit at the UI level responsible for academic affairs;
 - c. submitting a request for payment permission to the head of the UI unit responsible for financial affairs and being subject to a late registration fee, as stipulated in the Rector's Regulation on Tuition Fees at Universitas Indonesia;
 - d. paying tuition fees; and
 - e. reporting to the vice dean/vice director of the school responsible for academic affairs to carry out Academic Registration.
5. Requests for changes in academic status as referred to in (1) must be submitted no later than 8 (eight) weeks from the start of the semester.

3.13. Study Load and Study Period

A. Study Load

1. The Study Load of the Master Programs at least 54 (fifty four) sks.
2. The study load for compulsory or elective courses in the study program can be obtained through Credit Transfer and/or Credit Earning mechanisms.
3. The study load for the Final Assignment is 16 (sixteen) credits, as follows:
4. The calculation of Study Load in block, module, or other forms of systems can be determined according to the needs in achieving the Learning Outcomes as per the National Standards for Higher Education (SN Dikti).
5. The fulfillment of the learning load in the learning process, as expressed in credits, is carried out in the form of lectures, recitations, tutorials, seminars, practical sessions, practice, studio work, research, design, development,

- Final Projects, student exchanges, internships, entrepreneurship, community service, and/or other forms of learning activities.
6. The forms of learning as referred to in statement (1) are carried out through the following activities:
 - a. guided learning;
 - b. structured assignments; and/or
 - c. independent learning.
 7. The form of learning through guided learning as referred to in statement (2) letter (a) is conducted in the following face-to-face formats:
 - a. offline;
 - b. online;
 - c. blended; and/or
 - d. hybrid.

B. Study Period

1. The duration of the Master Program curriculum is designed to last for 3 (three) until 4 (four) semesters.
2. The maximum study period for Master students is 8 (eight) semesters.
3. The study period as referred to in statement (2) is calculated for all academic statuses prior to graduation or withdrawal.
4. Study programs conducted in collaboration with foreign universities, the study load and curriculum period may be structured differently from the provisions in Rector's Regulation.

3.14. Curriculum

1. The Master Program curriculum is designed to achieve the Graduate Learning Outcomes in accordance with the National Standards for Higher Education (SN Dikti).
2. The Master Program curriculum must implement Outcome-Based Education (OBE).
3. The overall Graduate Learning Outcomes are achieved through courses and learning activities that keep pace with developments in knowledge and support graduates' success in their professional fields.
4. The academic curriculum in the Master Program must implement research-based learning in all types of learning activities.
5. Curriculum changes are made after the curriculum implementation period, based on the results of curriculum evaluations.
6. The Master Program requires students to:
 - a. take the Compulsory Courses of the Study Program;
 - b. prepare the Final Assignment; and
 - c. publish the results of the Final Assignment.

7. The Final Assignment referred to in statement (1) letter (b) is a Compulsory Course within the Study Program.
8. The Master Program through the Taught pathway requires students to:
 - a. Complete a number of structured courses listed in the Program Curriculum, with a minimum credit weight of 36 (thirty-six) credits, consisting of;
 1. Compulsory courses in the study program, comprising at least 30 (thirty) percent; and
 2. Elective courses, comprising up to 70 (seventy) percent, which are specialized courses.
 - b. Participate in scheduled in-depth study of the subject matter;
 - c. Complete a Final Project with a credit weight of 16 (sixteen) credits; and
 - d. Disseminate the results of the Final Project through seminars, publications, and/or patents, with a credit weight of 2 (two) credits, as determined by each Study Program.
9. The Master Program through the Research pathway requires students to:
 - a. conduct a Literature Review, particularly in reputable scientific journals related to the main research, with a weighting of 10 (ten) credits;
 - b. take the Research Proposal Exam with a weighting of 8 (eight) credits;
 - c. take the Research Results Exam I with a weighting of 10 (ten) credits;
 - d. present 1 (one) paper related to the results of their research as the main author with the Final Project supervisor at a minimum international scientific conference and published in the International Standard Book Number (ISBN) conference proceedings with a weight of 10 (ten) credits; and
 - e. submit the results of the Final Project through seminars, publications, and/or patents, with a credit weight of 2 (two) credits, as determined by each Study Program.
10. The Master Program through the Taught pathway and the Master Program through the Research pathway can be pursued through an international mobility program with the following conditions:
 - a. Students take a minimum of 50% (fifty percent) of the courses from the Study Program, including the Final Assignment;
 - b. Students take courses and earn credits from their participation in the International Mobility Program at one or more foreign universities recognized by UI, using the Credit Transfer scheme and credit equivalency;
 - c. The Final Assignment Exam or an equivalent form is conducted by UI, and the credits associated with this exam are awarded by UI;
 - d. Students must pay tuition fees to UI according to the regulations during their participation in the International Mobility Program;

- e. Students may receive an academic degree at the Master level from the partner foreign university if applicable, and the related costs will not be covered by UI; and
 - f. Any costs incurred by the students due to their participation in the International Mobility Program abroad will not be covered by UI.
11. The Double Degree, Dual Degree, or Joint Degree programs must use a curriculum that is at least 50% (fifty percent) the same as the Master Program curriculum and must produce graduates with the same Learning Outcomes.

3.15. Final Assignment

- 1. Students in the Master Program are required to complete a Final Assignment in the form of a scientific paper.
- 2. The Final Assignment with Special Course can be taken after completing all Compulsory Courses.
- 3. The scientific work referred to in statement (1) may include a thesis, prototype, project, or other similar forms of final assignments.
- 4. The assessment of the Final Assignment is carried out by an examination team appointed by the Dean.
- 5. The examination team referred to in paragraph (4) consists of:
 - a. Examiners; and
 - b. Final Assignment Supervisor.

3.16. Final Assignment Supervisor

- 1. The preparation of the Final Project is carried out under the guidance and evaluation of a Final Assignment Supervisor.
- 2. If necessary, the number of Final Project supervisors for 1 (one) Student is at most 3 (three) people.
- 3. Final Project Supervisor consists of:
 - a. Main supervisor; and
 - b. Second supervisor.
- 4. Requirements for the Main Supervisor:
 - a. Permanent Lecturer at UI;
 - b. Holds at least a Doctoral degree; and
 - c. has expertise in a field relevant to the topic of the Final Assignment.
- 5. Requirements for the Second supervisor:
 - a. Permanent or non-permanent lecturer at UI, or an expert from another institution; and
 - b. has expertise in a field relevant to the topic of the Final Project.
- 6. The person in charge of the organizer / head of the Study Program assigns a Final Project supervisor to assist a student based on the expertise and workload of the lecturer concerned.
- 7. The assignment of the Final Project supervisor is determined by the Dean.

8. The assignment of experts from other institutions as referred to in statement (5) letter a is determined by the Dean
9. To ensure the quality of supervision, the workload of the lecturer as the Promoter in structured research for the form of the Final Assignment will be determined by considering the ratio of students to lecturers, as outlined in the Final Assignment Guidelines approved by the Rector.
10. Promoter can only accept new students for guidance if they meet the requirements and evaluation criteria set by the Faculty and have received approval from the UI unit responsible for academic affairs.
11. The person in charge of organizing/Head of the Study Program is responsible for periodically monitoring the supervision process.
12. If the supervision process is not proceeding effectively and systematically, the person in charge of organizing /Head of the Study Program may propose the replacement of the Final Assignment Supervisor.
13. Supervision must take place at UI or online in a structured manner, at least 6 (six) times 1 (one) semester, and should be recorded in the academic information system.

3.17. Learning Process

1. Assessment of the learning process refers to the activities aimed at evaluating the planning and implementation of the learning process, with the goal of improving the learning process.
2. Assessment of the learning process as stated in (1) is conducted by the lecturer(s) and/or the team of lecturers responsible for the course, in coordination with the unit managing the study program.
3. The entire learning process is improved and continuously enhanced by the study program based on evaluations of the following aspects:
 - a. learning activities in each cohort;
 - b. number of active students in each cohort;
 - c. Curriculum Study Period;
 - d. Student study completion period; and
 - e. the employability rate of graduates in the world of work.

3.18. Matriculation

1. A Study Program may organize Matriculation according to needs.
2. Matriculation activities aim is to align the students' abilities with the minimum competencies required to pursue a Master Program at UI.
3. In certain cases, prospective Master Program students are required to attend the Matriculation based on the consideration of the Promoter or the Head of the Study Program and the Faculty level.

4. The obligation to attend the Matriculation as referred to stated in (3) must be communicated to prospective students upon the announcement of the selection results.
5. Prospective students who attending the Matriculation must complete the Administrative Registration in accordance with the UI Academic Calendar.
6. Matriculation for the Master Program is conducted under the following conditions:
 - a. The courses offered for Matriculation are determined by each Study Program based on the curriculum of the lower education level;
 - b. The maximum credit load for Matriculation is 12 (twelve) credits; and
 - c. The credits earned from Matriculation are not counted toward the credit requirements of the Master Program curriculum.
7. If the required Matriculation courses are not all offered in 1 (one) semester, the Matriculation may be taken in two (2) semesters.
8. Students must pass all the Matriculation courses within a maximum of two (2) semesters with a minimum grade of C to continue their studies in the Master Program.
9. The students who do not pass Matriculation, they are not allowed to continue in the subsequent educational program.
10. The amount of the Matriculation activities fee is determined by the Dean.
11. Further provisions regarding the implementation of matriculation are determined by the Dean.

3.19. Evaluation of Learning Outcomes

1. Evaluation of learning process is carried out periodically according to the curriculum.
2. Evaluation of learning process for each course is done every semester.
3. Evaluation of Learning Outcomes must be carried out in accordance with the regulations at both the UI level and the Faculty level.
4. The form and assessment criteria for the Evaluation of Learning Outcomes are outlined in the Course Teaching Design Book (Indonesia acronym: BRP) for each course.
5. Any form of cheating by students during the Evaluation of Learning Outcomes process will be subject to sanctions as per the applicable regulations.
6. Evaluation of Learning Outcomes for students participating in academic programs at partner foreign universities will follow the regulations in place at the partner institutions.
7. Further provisions regarding the mechanism for Credit Transfer (Credit Transfer) and grade conversion during study at partner foreign universities, as referred to in point (6), are regulated in the guidelines approved by the Rector.
8. Evaluation of Learning Outcomes for a course is carried out by a Lecturer or a team of Lecturer to monitor the process and progress of student learning.

9. Evaluation of Learning Outcomes is conducted based on the principles of being valid, reliable, transparent, accountable, fair, objective, and educational.
10. Evaluation of Learning Outcomes is carried out with reference to assessment standards that set the minimum criteria for evaluating student learning outcomes to ensure they meet the required graduate competency standards.
11. Student learning assessment consists of formative assessment and summative assessment.
12. Formative assessment aims to:
 - Monitor the progress of student learning;
 - Provide feedback to help students meet their learning outcomes;
 - Improve the learning process.
13. Summative assessment aims to evaluate students' learning achievements as the basis for determining course completion and program graduation, based on the fulfilment of Graduate Learning Outcomes.
14. Summative assessment may take the form of written exams, oral exams, project assessments, assignment evaluations, competency tests, and/or other similar forms of assessment.
15. Both formative and summative assessments will be conducted according to the assessment mechanisms established by UI.
16. The assessment mechanisms will be communicated to students.
17. The evaluation of student learning outcomes for a course is expressed in the following forms:
 - a. Grade Point Average (GPA); or
 - b. Pass or Fail status.
18. The evaluation of learning outcomes expressed as a GPA will be represented by the following letter grades: A, A-, B+, B, B-, C+, C, D, and E.
19. The minimum passing grade for each course is C.
20. The minimum passing grade for Final Assignment is B.
21. To convert the scores from number values to letter values and the weighting of the values of the letters, the following is used as the guideline:

Score Range	Letter Value	Weighting of Letter Value
85 - 100	A	4.00
80 - < 85	A-	3.70
75 - < 80	B+	3.30
70 - < 75	B	3.00
65 - < 70	B-	2.70
60 - < 65	C+	2.30
55 - < 60	C	2.00
40 - < 55	D	1.00
00 - < 40	E	0

22. Evaluation of learning outcomes in the form of Pass or Fail) may be used for courses that:
 - a. Involve activities outside the classroom; and/or
 - b. Use summative assessments in the form of competency tests.
23. Lecturers are required to enter the course grades into the academic information system according to the schedule set in the Academic Calendar.
24. Lecturers who do not enter the grades for all students in their courses by the end of deadline for entering courses will be given sanctions.
25. Grade revisions can be made to correct errors in grading, but they must be submitted by no later than the middle of the following semester.
26. The procedure for revising grades is as follows:
 - a. The lecturer submits a written request for grade revision to the Dean or the Vice Dean responsible for academic affairs;
 - b. If the revision request is approved, the Faculty/School will process the grade revision in the academic information system; and
 - c. The Dean or Vice Dean who handles of academic affairs will report the grade revision to the UI work unit that handles educational affairs for verification and confirmation.
27. No grade revision is allowed for students who have already been declared to have completed their studies (graduated).
28. Special Courses that extend beyond the end of the semester will be given the code BS (Indonesia acronym: Belum Selesai/Not Yet Completed) and will not be counted toward credit, Semester Grade Point Average (GP), or Cumulative Grade Point Average (GPA)
29. Credit Transfer will be conducted in accordance with the guidelines approved by the Rector.
30. If the final grade of a student cannot be determined because the evaluation components are incomplete, the student will be given the code I (Incomplete), and this will not be included in the IPS. The grade must be changed to E (Fail) no later than 1 (one) month after the grade submission deadline.
31. If a student fails to meet the minimum attendance requirement for academic activities in a semester, their grade will be given the code T (Indonesia acronym: Tidak Mengikuti/Not Attended), and this will be included in the IPS with a weight of 0.
32. If a student retakes a course, the final grade for that course will be based on the most recent grade obtained.
33. If a student is granted official permission to be inactive during a semester, all courses they are enrolled in will be removed and recorded as a Not Active Academic Status.
34. The result of learning achievement assessment for each semester is expressed in the GP.

35. The result of learning achievement assessment at the end of the study period is expressed in the GPA
36. GP calculation does not include courses with the grade code BS.
37. GPA calculation includes all courses taken at UI with a minimum grade of B, starting from the first semester up to the last semester, excluding courses with grade codes BS and I.
38. GP and GPA are only calculated based on the average grade of courses that use the Grade Point Average (GPA) evaluation.
39. The result of the summative evaluation is reported by UI to the Directorate General of Higher Education (Indonesia acronym: PD Dikti).
40. Further provisions regarding the calculation of IPS (Semester Grade Point Average) and IPK (Cumulative Grade Point Average) as referred to in statements (36) and (37) are regulated in the guidelines approved by the Rector.

Examination Rules

General Regulations

a. Kehadiran di Kelas

1. Students must come to class on time. The lecturer has the right and authority to bar any student who is late from entering the class. Students are required to attend their class at all times.
2. Students who are absent without explanation more than 25% from all scheduled classes for each course shall not be allowed to attend their Final Examination (state in Rector's Decree No. 012A/SK/R/UI/2007 article 13 point 4). Unless he or she can provide evidence that the reason of absence is acceptable as per university regulation.
3. Students will be given permission and not marked absent for the following reasons:
 - a. To attend to family emergencies, death in the family
 - b. When hospitalized or ill or recuperating from illness as shown by a valid Medical Certificate
4. Students who would like to attend extracurricular activities organized by the university should ask permission from the Vice Rector I who will then consider the request and act accordingly. Vice Rector I has the right and authority to disallow or disapprove any request in the interest of the student and the university.

b. Make-Up Exam (Indonesian terminology: Ujian Susulan)

Students who are unable to conduct the exam at the prescribed time due to several reasons such as scholastic events, medical condition, death of a family member or other unavoidable circumstances may request make-up exams with different problem given by the lecturer.

Please note the following conditions carefully:

1. Request for make-up exams must be submitted to the lecturer no later than three (3) working days after the date of the prescribed examination.
2. Attach supporting documents such as your doctor's statement/parent's statement or a valid permission letter from Vice Rector 3 if you are attending an event for the university.
3. Make-up exam is not a right and permission is only given in exceptional circumstances. The Lecturer and Head of Study Program has the right to deny the student's request if fail to provide sufficient evident on the circumstances that prevented you from sitting the examination on the prescribed date.
4. Students are not allowed to defer a make-up exam. Failing to attend a make-up exam will automatically grant a ZERO (0) score on the exam.

c. Exam results

1. Students have the right to get a corrected exam file and the scores no later than 2 (two) weeks after the examination.
2. Lecturers or a team of lecturers are required to examine the exam and notify students of the test scores no later than 2 (two) weeks after the implementation.
3. Lecturers or a team of lecturers have the authority for the final exam scores while still considering the elements of academic objectivity and integrity.
4. Students have the right to ask the components of the value of the course to the lecturer or the lecturer team concerned.
5. Students have the right to file an appeal for the final score 3 days (3x24 hours) after the score is announced by the lecturer or lecturer team to SIAK NG.

d. Grade Appeal

Students who object to the final grade of a course are given the right of appeal to obtain clarification of the grades obtained.

The provisions for filing an appeal are as follows;

1. an appeal may be filed for reasons that the distribution of the value of a course is not distributed according to the normal reference standard assessment system; or
2. students feel disadvantaged due to delays in inputting grades by the lecturer to SIAK NG so that all grades in one class get B.
3. an appeal for the final score is made within 3 days (3x24 hours) after the lecturer or team of lecturers publish the score to SIAK NG.
4. students may only appeal grades based on checking the exam file that has been corrected by the lecturer or team of lecturers with the answer key and are not allowed to compare grades based on the grades of friends.

5. an appeal is submitted to the lecturer of the course (by filling out an appeal form) with the approval of the Head of the Study Program.

e. Cheating in examinations

Students who cheat in the learning evaluation process as referred to in the Rector's Regulation No. 4 of 2024, are categorized as follows:

- Moderate Violations
 1. Copying assignments or exam answers from another student and submitting them as their own work.
 2. Providing assignments or exam answers to another student to be used as their own work.
- Serious Violations
 1. Intentionally assisting another student.
 2. Collaborating with external parties outside the examination room.
 3. Impersonating an exam participant or being impersonated by another party.

The following sanctions will be applied:

- Moderate Violations
 1. A written warning or reprimand.
 2. Retaking the entire course.
 3. Reduction of grades/assessment scores related to the violation that impacts the student's graduation.
 4. Prohibition from participating in academic and non-academic activities for a certain period.
 5. Delay of student rights.
 6. Cancellation of grades for one or more courses.
 7. Prohibition from attending classes/exams for at least one (1) year; and/or
 8. Prohibition from representing the University in any extracurricular activities or from running for a position in any student group or organization at Universitas Indonesia.
- Serious Violations
 1. Sanctions may be imposed if the violation is intentional or repeated.
 2. Prohibition from attending classes/exams for at least three (3) years.
 3. Declaration of failure to graduate.
 4. Cancellation of the student's thesis if they are an active student, with an obligation to rewrite the thesis with a new topic. For graduates, the academic degree may be revoked.
 5. Dismissal from the student status without honor.
 6. Revocation of the degree if the student has graduated from a study program.

7. Revocation of a degree may be considered for students who commit fraud while enrolled at UI, and also if discovered after graduation, for fraudulent behavior involving the use of faculty and/or university attributes, transcripts, or other graduation certificates.

3.20. Administration of Learning Process

1. The Semester Score List (Indonesian acronym: DNS) provides information about:
 - a. The student identity;
 - b. Academic Advisor;
 - c. Faculty;
 - d. Study Program;
 - e. Education level;
 - f. Course code;
 - g. Course name;
 - h. number of credits taken;
 - i. number of credits earned;
 - j. score letters;
 - k. Semester Grade Point (GP); and
 - l. Cumulative Grade Point (GPA).
2. The Semester Score List (DNS) may be published in the printed form based on the request of students according to needs.
3. The official Semester Score List (DNS) is the one signed by the officer who is in charge of the educational administration at the Faculty level.

a. Academic History

1. The academic history records all academic activities of a student chronologically, from the moment they first enroll as a student at UI until they either graduate or leave the institution.
2. The academic status of a student for each semester is recorded in the academic history.
3. The academic history as a source of information for the student, academic advisor, and study program about the student's academic progress.
4. The academic history can be issued for specific purposes upon the student's request.
5. The academic history issued for the purposes stated in (4) must be authenticated by the Vice Dean of the Faculty responsible for educational affairs.
6. UI issues the Diploma along with the Academic Transcript and SKPI (Surat Keterangan Pendamping Ijazah/Diploma Supplement).

b. Diploma

1. Diploma is given to students who have been declared graduated from a Study Program.
2. Diploma provides information as follows:
 - a. national Diploma number;
 - b. University emblem;
 - c. name of University;
 - d. accreditation decision number of the university and/or study program;
 - e. higher education program;
 - f. name of the study program;
 - g. full name of the diploma holder;
 - h. place and date of birth of the diploma holder;
 - i. student ID number;
 - j. national identity number in Indonesia (Indonesia acronym: NIK) for Indonesian students or passport number for international students;
 - k. title awarded along with its abbreviation;
 - l. date, month, and year of graduation;
 - m. place, date, month, and year of diploma issuance;
 - n. Name and position of the head of the higher education institution who is authorized to signs the diploma;
 - o. university stamp; and
 - p. photo of the diploma owner.
3. The national diploma number that stated in (2) letter (a) uses a number issued by the PIN integrated with PD Dikti.
4. The diploma is issued only once for each student who has graduated.
5. UI is not responsible for diplomas that are not collected by graduates within one (1) year from the date of issuance.
6. In cases where the diploma has not been issued by UI, the Faculty may issue a certificate of graduation.
7. The diploma may be translated into English.
8. Of the diploma is loss or damage, the diploma owner may request a certificate of replacement diploma.
9. The procedure for issuing the diploma and certificate of replacement diploma is regulated in the guidelines approved by the Rector.
10. The head of the UI work unit responsible for academic affairs signs and legalizes the certificate of replacement diploma on behalf of the Rector.
11. The diploma will be awarded when the student has completed administrative obligations and has paid the tuition fees.

c. Academic Transcript

1. Academic Transcript is given to students who have been declared graduated from a Study Program.
2. Academic Transcript contain at least:
 - a. Name;
 - b. Student ID number;
 - c. Place and date of birth;
 - d. Previous education;
 - e. Education level;
 - f. Study program;
 - g. List of courses, including course codes;
 - h. Letter grades;
 - i. Number of credits required;
 - j. Number of credits obtained;
 - k. Cumulative GPA;
 - l. Dissertation title;
 - m. Diploma number; and
 - n. Graduation date.
3. All courses taken by students, including those students retake and have obtained through credit transfer are recorded in the Academic Transcript.
4. Academic Transcript is published using Indonesian and English language.
5. The Academic Transcript is issued once for each student who has graduated.
6. The Director of Education, on behalf of the Rector, signs the academic transcript and official copy of the academic transcript.
7. If Academic Transcript is lost or damage, the owner may request a copy of the Academic Transcript.
8. The Academic Transcript will be awarded when the student has completed administrative obligations and has paid the tuition fees.

d. Diploma Supplement (Surat Keterangan Pendamping Ijazah)

1. Diploma Supplement is given to students who have been declared graduated from a Study Program.
2. Diploma Supplement contain the information as follows:
 - a. Diploma Supplement number;
 - b. the symbol and name of university;
 - c. name of Study Program;
 - d. identity of Diploma Supplement owner (name, place and date of birth);
 - e. level of qualifications, competence and access to higher education;
 - f. achievements and/or awards obtained;
 - g. student activities that have been participated in; and
 - h. date, month, and year of Diploma Supplement issued.

3. Diploma Supplements is issued in both Indonesian and English.
4. Diploma Supplement is signed by the head of the UI work unit that handles academic affairs.

3.21. Graduation and Predicate

1. Master Program students are declared to have completed their studies based on the graduation determination meeting at the UI level, chaired by the leader of the UI unit responsible for educational affairs, and the graduation determination meeting at the Faculty level, chaired by the Dean.
2. Graduation Determination Meeting may be held 2 (two) times in 1 (one) semester based on the academic calendar.
3. Students of Master Program are declared graduated if they meet the following prerequisites:
 - a. Registered as active student both administratively and academically in respective semester;
 - b. Not exceeding the maximum Study Period stipulated by the Universitas Indonesia;
 - c. Having completed all administrative obligations, including returning all borrowed library/laboratory collections; and
 - d. Having completed all academic obligations and/or assignments that have become their responsibility in accordance with the curriculum regulated for the Study Program with GPA greater than or equal of 3,00 (three point zero).
4. Graduation after taking/completing a Master Program can be awarded with consisting of levels:
 - a. Satisfactory;
 - b. Very Satisfactory;
 - c. With honors (*cum laude*); and
 - d. With the highest honor (*summa cum laude*).
5. GPA as the basis for determination of graduation predicate of a Master Program is:
 - a. 3,00 – 3,50 = Satisfactory;
 - b. 3,51 – 3,75 = Very Satisfactory;
 - c. 3,76 – 3,94 = With honors (*cum laude*); or
 - d. 3,95 – 4,00 = With the highest honor (*summa cum laude*).
6. The predicate of graduation with honors (*cum laude*) or the highest honors (*summa cum laude*) awarded to graduates of Master Programs with the following provisions:
 - a. Have completed studies not exceeding the Curriculum Study Period;
 - b. Have consecutive active Academic Status; and
 - c. Have not repeated any courses.

7. If a Master's program student achieves a GPA of 3,76 (three point seventy-six) to 4,00 (four point zero zero) but does not meet the requirements as stated in statement (6), the student will be awarded the graduation status of "Very Satisfactory."
8. The provisions regarding the graduation predicate as stated in (6) are exempted if the examination committee decides that the student is eligible to receive the predicate with honors (*cum laude*) or with highest honors (*summa cum laude*) based on the achievements or results of their research.

3.22. Uploading Scientific Works

Master program students are required to upload their scientific work to the UI library repository at the end of their study period, in accordance with the applicable regulations.

3.23. Credit Transfer and Credit Earning

Students may apply for Credit Transfer and/or Credit Earning for credits earned from learning activities recognized by UI.

3.24. Academic Leave, Inactive, and Studying Outside Universitas Indonesia

a. Academic Leave

1. Academic Leave is granted for a maximum duration of 2 (two) semesters, either consecutively or non-consecutively.
2. The period of leave is counted as part of the student's study period.
3. Students who are granted Academic Leave are not permitted to participate in academic activities.
4. Further provisions regarding Leave for Special Reasons as outlined in statement (3) are regulated in the Guidelines approved by the Rector.
5. The request for Academic Leave must be submitted by the student to the Dean before the Administrative Registration period, by filling out the available form at the Faculty.
6. If the Academic Leave request, as stated in (5), is approved by the Dean, the faculty's academic information system operator will update the student's Academic Status to "Academic Leave" before the Administrative Registration period ends.
7. The tuition fees for the semester for students who request Academic Leave, as stated in (5) and (6), are regulated by the Rector's Regulation regarding Student Tuition Fees at Universitas Indonesia.
8. In granting approval for leave, as stated in (5) and (6), the Dean must send a copy of the approval to the Vice Rector responsible for academic affairs and the Vice Rector responsible for financial affairs.

b. Inactive

1. In certain cases, students who have obtained an Active academic status may request a change in their status to Inactive.
2. Inactive academic status is counted as part of the student's Study Period.
3. Students with inactive academic status are not permitted to participate in academic activities.
4. Further provisions regarding the reasons for changes in academic status as stated in (1) are regulated in the guidelines approved by the Rector.
5. The request for a change in academic status to Inactive must be submitted by the student to the Dean, using the form available at the Faculty.
6. If the request for a change in academic status, as stated in (4), is approved by the Dean, the academic information system operator at the Faculty will update the student's status to Inactive and IRS will be cancelled.
7. The tuition fees for the semester for students who request a change to Inactive status, as stated in (5) and (6), are non-refundable.
8. In providing approval for the change of academic status, as stated in (7), the Dean must send a copy of the approval to the Vice Rector responsible for academic affairs and the Vice Rector responsible for financial affairs.

c. Studying Outside the Universitas Indonesia

1. Students who are studying outside the Universitas Indonesia for at least 1 (one) semester obtain the status Studying Outside the Universitas Indonesia.
2. Students who are studying outside the Universitas Indonesia conduct administrative registration by paying the tuition fee whose amount is in accordance with the applicable provisions and protocols of tuition fee payment.
3. Academic Status as regulated in the aforementioned (1) is given to students who are studying outside the Universitas Indonesia to take part in the Universitas Indonesia programs in the form of:
 - a. Student Exchange Program;
 - b. visit; or
 - c. other programs that are acknowledged by the University.
4. The Study Period of students while they are carrying out their Studies Outside the University is accounted as student with Active status.

3.25. Dropped out criteria evaluation

1. Students of Master Program is declared to have dropped out:
 - a. In the Evaluation of Learning Outcomes for the first 2 (two) Semesters, failed to obtain 14 (fourteen) credits and a minimum GPA of 3,00 (three point zero zero) from the total credits completed;

- b. In the end of the study period, the student has not completed all the required coursework in accordance with the curriculum, with a minimum grade of C; and/or
 - c. not carrying out Administrative Registration and Academic Registration for 2 (two) consecutive semesters.
- 2. In certain cases, the Faculty may establish policies related to the Evaluation of Learning Outcomes with specific prerequisites and criteria.
- 3. The Faculty/School policy referred to in statement (2) shall be implemented with prior approval from the relevant unit at the UI level responsible for educational affairs.
- 4. In cases where students receive Credit Transfer upon entry, the evaluation of Study Termination is regulated in the guidelines approved by the Rector.
- 5. Master Program students may be declared as having Dropped Out Criteria in the following cases:
 - a. having administrative issues;
 - b. being sanctioned for academic violations;
 - c. being sanctioned for violations of UI's code of ethics; and/or
 - d. being declared unfit to continue studies based on health considerations from an institution recognized by UI.
- 6. The academic status of withdrawal due to Dropped Out for Master Program students is proposed by the Head of the Study Program to the Dean for submission to the Rector.
- 7. The Rector determines the Dropped Out status for Master Program students as referred to in statement (6).

3.26. Intermediate Semester

- 1. The duration of the learning process for the Intermediate Semester (Term-3) is 8 (eight) weeks, equivalent to 16 (sixteen) face-to-face sessions, including the Mid-Semester Exam and Final Exam.
- 2. The Intermediate Semester may be held if necessary.
- 3. The Intermediate Semester cannot be the final semester of study.
- 4. The courses offered during the Intermediate Semester are limited to those provided by each Faculty/Study Program.
- 5. Special Courses may be held during the Intermediate Semester.
- 6. The minimum number of participants required for the implementation of courses as stated in (4) and (5) is determined based on considerations of implementation efficiency.
- 7. Students who are eligible to attend courses during the Intermediate Semester must meet the following requirements:
 - a. Be registered as an active student in the previous odd semester (Term-2);
 - b. Have at least one semester of study remaining until the next even semester (Term-1) of the academic year;

- c. Register as a participant in the Intermediate Semester courses; and
 - d. Complete the payment of the Intermediate Semester tuition fees.
8. Courses offered during the Intermediate Semester can be added or canceled no later than the second week after the start of the semester.
 9. The tuition fees for the Intermediate Semester are determined by each Faculty and set by the Rector.
 10. The recap of course grades in the Intermediate semester period will be administrated in the same period.

3.27. Similarity Test for Thesis Manuscript

In order to guarantee the quality of thesis manuscripts, to build student academic integrity, prevent plagiarism, and implement 9 UI values, starting from the academic year 2019, all thesis manuscripts must pass the similarity test using Turnitin.

The implementation procedure is as follows:

1. Students who register for the final examinations are required to perform a similarity test to their dissertation manuscripts.
2. Similarity test is carried out on the entire contents of the thesis manuscript starting from the introduction to the conclusion.
3. The similarity test can be performed in one of the following two ways:
 - a. Send an email request for a similarity test to the Knowledge Editing and Plagiarism section of the UI Central Library (lpp.lib@ui.ac.id) by attaching a softcopy of the thesis manuscript. Test results can generally be obtained within 24 hours.
 - b. Using the UI Authentic System (<http://otentik.ui.ac.id/>)
4. Acceptable similarity test results are not more than 20% in total or similarity to the main source is not more than 5%.
5. When submitting a hardcopy of thesis to be tested, students are required to submit acceptable similarity test results to the related Study Program as one of the requirements for the thesis defense.
6. If in certain cases the conditions for the similarity test results in point 4 are difficult to fulfill, the thesis examination can be carried out by including information from the Supervisor/Promoter approved by the Head of the Study Program. The Thesis Examination Team will decide whether the thesis can be accepted or need further paraphrasing to fulfill point 4.

3.28. Study Program Profile and Curriculum

a. Master Program in Mathematics

1. Study Program Identity

1.	Institution Name	Universitas Indonesia
2.	Study Program Name	Master Program in Mathematics
3.	Education Level	Master
4.	Address	Jl. Prof. Dr. Mahar Mardjono Department of Mathematics, D Building Faculty of Mathematics and Natural Sciences, Universitas Indonesia (FMIPA UI) UI Campus, Depok 16424
5.	Accreditation Status and Accrediting Body	Unggul (Excellent) by LAMSAMA
6.	Graduate Title	Master of Science (M.Si.)
7.	Vision	To establish the Master Program in Mathematics at FMIPA UI as a leading institution in the fields of mathematics, data science, and interdisciplinary applications in industry and government through research that can play a role at the national and global levels to advance science and sustainable development
8.	Mission	1. Produce graduates who are capable of keeping up with developments in mathematics, data science, and their applications 2. Support and develop research activities in mathematics, data science, and interdisciplinary applications in the fields of life sciences, urban life, smart society, and the financial industry 3. Carry out community service through information services, consultation, and solutions in the fields of mathematics and data science, as well as their interdisciplinary applications, contributing to addressing national and societal challenges

9.	Graduate Profile	A Master's graduate in Mathematics is capable of applying and developing their knowledge in accordance with academic ethics in a professional manner in the fields of mathematics, data science, and interdisciplinary applications. They are prepared for a professional career as an academic, researcher, or practitioner in industry or government and are capable of collaborating to solve problems that improve the welfare of society, the nation, and the state. PL1 (Academic): Possesses strong knowledge in mathematics, data science, and interdisciplinary applications. PL2 (Researcher): Capable of designing, developing, and conducting research in mathematics, data science, and interdisciplinary applications in line with the expertise related to the Master's Program in Mathematics at UI. PL3 (Practitioner): Demonstrates professionalism as an industrial or governmental practitioner in solving problems in mathematics, data science, and interdisciplinary applications.
10.	Graduate Learning Outcomes	1. Demonstrates academic ethics (C4). 2. Able to think logically, analytically, critically, and innovatively (C4). 3. Able to utilize information technology tools in everyday work (C3). 4. Able to analyze sustainable development issues using mathematical and scientific principles in an interdisciplinary and multidisciplinary approach (C4). 5. Able to model problems and solve them, especially using computational approaches and data science (C4). 6. Able to master mathematical theories, data science, and their applications through innovative and tested research in their area of expertise (C4). 7. Able to solve mathematical and data science problems in line with their development and

		application using a multidisciplinary and interdisciplinary approach (C5). 8. Able to adapt to new insights in the field of science and technical skills required to apply, develop, and/or create new concepts (C5). 9. Able to develop scientific concepts in mathematics, data science, and their applications through independent research (C6). 10. Able to analyze the results of research in mathematics, data science, and their applications through publications in national or international scientific media (C6).
11.	Study Period and Credit (SKS)	4 semesters, 54 Credits (SKS)

2. Curriculum Structure

Research Pathway

	Study Load	Credits (SKS)	%
Resume	Study Program Compulsory Courses	54	100%
	Total of Compulsory Courses	54	100%
	Elective Courses	-	-
	Total of Study Load	54	100%

Taught Pathway

	Study Load	Credits (SKS)	%
Resume	Faculty Compulsory Courses	3	5.56%
	Study Program Compulsory Courses	33	61.11%
	Total of Compulsory Courses	36	66.67%
	Study Program Elective Courses	6	11.11%
	Field-Specific Elective Courses	12	22.22%
	Total of Elective Courses	18	33.33%
	Total of Study Load	54	100%

3. Course Distribution for each Semester

Research Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMA802901	Literature Review 1	5	SCMA802904	Scientific Publication 1	2
SCMA802902	Literature Review 2	5	SCMA802905	Research Result Examination 1	4
SCMA802903	Research Proposal	8			
Total Credit for Semester 1		18	Total Credit for Semester 2		8

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMA802906	Scientific Publication 2	8	SCMA802908	Thesis	16
SCMA802907	Research Result Examination 2	6			
Total Credit for Semester 3		12	Total Credit for Semester 4		16

Resume	Study Program Compulsory Courses	54
	Total of Compulsory Courses	54
	Study Program Elective Courses	-
	Total of Study Load	54

Taught Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCSC800001	Integration of Science and Mathematics for Master Program	3	SCMA801005	Data Science Statistics	3
SCMA801010	Real Analysis	3		Elective Course in Specialization (MKPB)	9
SCMA801002	Matrix Theory and Linear Algebra	3			
SCMA801003	Computing and Data Management	2			
SCMA801011	Practical of Computing and Data Management Practicum	1			

	Study Program Elective Courses (MKPP)	6			
Total Credit for Semester 1		18	Total Credit for Semester 2		12
SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMA801901	Scientific Dissemination	2	SCMA802908	Thesis	16
SCMA801902	Proposal	3			
	Specialization Elective Course (MKPB)	3			
Total Credit for Semester 3		8	Total Credit for Semester 4		16

Resume	Study Program Compulsory Courses	33
	Faculty Compulsory Courses	3
	Total of Compulsory Courses	36
	Study Program Elective Courses	6
	Specialization Elective Courses	12
	Total of Elective Courses	18
	Total of Study Load	54

4. List of Elective Courses

Study Program Elective Courses

CODE	COURSE NAME	SKS
SCMA801004	Advanced Graph Theory	3
SCMA801006	Advanced Mathematical Modeling	3
SCMA801008	Data Science Computing	3
SCMA801009	Advanced Financial Mathematics	3

Specialization Elective Courses

CODE	COURSE NAME	SKS
Elective Courses of Theoretical Mathematics (15 sks)		
SCMA801103	Structure of Algebra	3
SCMA801104	Combinatorial Optimization	3
SCMA801105	Coding Theory	3
SCMA801106	Advanced Functional Analysis	3
SCMA801107	Algebra Graph Theory	3
SCMA801108	Complex Analysis	3
SCMA801110	Measure Theory	3
SCMA801109	Special Topic - Theoretical Mathematics	3
Elective Courses of Data Science (15 sks)		
SCMA801210	Computation and Big Data	3

SCMA801203	Advanced Data Exploration & Visualization	3
SCMA801204	Advanced Machine Learning	3
SCMA801205	Advanced Bioinformatics	3
SCMA801206	Advanced Genome Data Science	3
SCMA801207	Advanced Statistical Analysis	3
SCMA801208	Applied Deep Learning	3
SCMA801209	Special Topic B - Data Science	3
Elective Courses of Modeling and Applied (15 SKS)		
SCMA801302	Advanced Dynamic System	3
SCMA801303	Advanced Partial Differential Equations	3
SCMA801304	Stochastic Modeling	3
SCMA801305	Advanced Biomathematics	3
SCMA801306	Chaos Functions in Cryptography	3
SCMA801307	Financial Mathematics	3
SCMA801308	Control Theory	3
SCMA801309	Special Topic of Modeling and Applied	3
Elective Courses of Actuarial Science (15 sks)		
SCMA801401	Actuarial Mathematics I	3
SCMA801402	Risk Theory	3
SCMA801403	Actuarial Stochastic Processes	3
SCMA801404	Time Series Analysis	3
SCMA801405	Predictive Financial Analysis	3
SCMA801406	Actuarial Mathematics II	3
SCMA801407	Quantitative Risk Management	3
SCMA801408	Special Topic of Actuarial Science	3

b. Master Program in Physics

1. Study Program Identity

1	Institution Name	Universitas Indonesia
2	Study Program Name	Master Program in Physics
3	Education Level	Master
4	Address	Jl. Prof. Dr. Mahar Mardjono Department of Physics, F Building Faculty of Mathematics and Natural Sciences, Universitas Indonesia (FMIPA UI) UI Campus, Depok 16424
5	Accreditation Status and Accrediting Body	International Accredited by ASIIN
6	Graduate Title	Master of Science (M.Si.)
7	Vision	To become a center of excellence in education and research in physics and its applications, capable of competing internationally, and providing support for the development of knowledge and technology for the benefit of Indonesia and the world.
8	Mission	1. To organize learning programs that integrate education and research through a curriculum based on research in the field of physics and

		its applications, centered on the students, using effective teaching approaches, and optimizing the utilization of technology. 2. To conduct research in the field of physics and its applications based on advanced technology, with findings oriented towards new innovations and internationally recognized, which can be applied in Indonesian society and globally. 3. To carry out community service focused on solving various societal issues through the application of science and technology in the field of physics and its applications. 4. To foster an intellectual atmosphere and community in various multidisciplinary and interdisciplinary fields based on physics. 5. To enhance educational and research resources through partnerships and networks with researchers, research institutions, government agencies, and industry both domestically and internationally.
9	Graduate Profile	Graduates of the Master's in Physics are those who are able to think critically and creatively, contributing to producing scientific works and creative outputs at the national and international level, and building a professional career in fields related to physics and its applications.
10	Graduate Learning Outcomes	1. Able to analyze scientific problems and case studies in their field of work comprehensively and thoroughly across all aspects of physics knowledge and its applications (C4). 2. Able to correlate knowledge of physics and its applications with various experimental methods (experimental physics) or simulation methods (theoretical physics) to solve problems scientifically (C4). 3. Able to recommend solutions for scientific problems and sustainable development that are relevant to physics and its applications in a collaborative and comprehensive manner, using interdisciplinary or multidisciplinary approaches (C5). 4. Able to integrate scientific methods and problem-solving strategies in any

		professional field (C4). 5. Able to review current international research literature relevant to developing advanced understanding of the progress of science in one area of physics (C5). 6. Able to formulate solutions to problems through scientific research in one of the fields of Physics and Applied Physics while adhering to guidelines, ethics, safety, and considering environmental impacts (C6). 7. Able to generate valuable insights, methods, knowledge, and technology related to Physics and Applied Physics to contribute to industry and society (C6). 8. Able to manage research and development projects with adequate competencies in communication and teamwork (C6). 9. Able to prepare systematic and clear reports and manuscripts of research results in the form of thesis books or international/national publications (C6). 10. Able to create innovative and tested works as a result of research presented at international or national academic forums (C6).
11	Study Period and Credit (SKS)	4 semesters, 2 years and 54 Credits (SKS)

2. Curriculum Structure

Research Pathway

No	Course	SKS
1	Study Program Compulsory Courses	54
2	Specialization Elective Courses	0
Total of Study Load		54

Taught Pathway

No	Course	SKS
1	Study Program Compulsory Courses	32
2	Specialization Elective Courses	22
Total of Study Load		54

3. Course Distribution for each Semester

Research Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCPH801001	Literature Review 1 (R)	5	SCPH801004	Research Result Examination 1 (R)	4
SCPH801002	Literature Review 2 (R)	5	SCPH801005	Scientific Publication 1 (R)	2
SCPH801003	Proposal (R)	8			
Compulsory Courses		18	Compulsory Courses		6
Elective Courses		0	Elective Courses		0
Total Credit for Semester 1		18	Total Credit for Semester 2		6

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCPH801006	Research Result Examination 2 (R)	6	SCPH801008	Thesis (R)	16
SCPH801007	Scientific Publication 2 (R)	8			
Compulsory Courses		14	Compulsory Courses		16
Elective Courses		0	Elective Courses		0
Total Credit for Semester 3		14	Total Credit for Semester 4		16

Resume	
Study Program Compulsory Course	54
Specialization Elective Courses	0
Total Credit	54

Taught Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCSC800001	Integration of Science and Mathematics	3		Elective Courses (13 - 14 SKS)	14
SCPH802001	Mathematical Methods	3			
SCPH802002	Computational Methods	3			
SCPH802003	Physics Methodology	2			
	Elective Courses (3 - 5 SKS)	4			
Compulsory Courses		11	Compulsory Courses		0
Elective Courses		4	Elective Courses		14
Total Credit for Semester 1		15	Total Credit for Semester 2		14

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCPH802004	Proposal	3	SCPH802006	Thesis	16
SCPH802005	Scientific Dissemination	2			
	Elective Courses (3 - 5 SKS)	4			
Compulsory Courses		5	Compulsory Courses		16
Elective Courses		4	Elective Courses		0
Total Credit for Semester 3		9	Total Credit for Semester 4		16

Resume	
Study Program Compulsory Course	32
Specialization Elective Courses	22
Total Credit	54

4. List of Elective Courses

CODE	COURSE NAME	SKS
SCPH803001	Quantum Mechanics	3
SCPH803002	Statistical Mechanics	3
SCPH803003	Analytical Dynamics	3
SCPH803004	Angular Momentum Theory	2
SCPH803005	General Relatives and Introduction to Astrophysics	3
SCPH803006	Classical Electrodynamics	3
SCPH803007	Quantum Fields Theory	3
SCPH803008	Advanced Spectroscopy	3
SCPH803009	Symmetry, Energy Bands, and Phonons	3
SCPH803010	Electromagnetism in Solids	3
SCPH803011	Quantum Phase Materials	2
SCPH803012	Special Topics in Condensed Matter Physics	3
SCPH804001	Sensor Technology	2
SCPH804002	Data Science for Instrumentation	2
SCPH804003	Embedded System Design	2
SCPH804004	Intelligent Control Systems	2
SCPH804005	Intelligent Instrumentation	2
SCPH804006	IoT for Instrumentation	2
SCPH804007	Time Series Analysis	2
SCPH804008	Image-Based Measurement	2
SCPH804009	Special Topics in Instrumentation Physics	4

SCPH805001	Structure Geology	3
SCPH805002	Petroleum Geology	2
SCPH805003	Well Log Analysis and Formation Evaluation	2
SCPH805004	Reservoir Engineering	2
SCPH805005	Seismic and Sequential Stratigraphy	2
SCPH805006	Sedimentology	2
SCPH805007	Seismic Data Processing and Interpretation	3
SCPH805008	Geopotential Methods	2
SCPH805009	Geostatistics	2
SCPH805010	Geothermal Systems and Technologies	2
SCPH805011	Geothermal Geology	2
SCPH805012	Geothermal Geochemistry	2
SCPH805013	Geothermal Drilling	2
SCPH805014	Geothermal Reservoir Engineering	2
SCPH805015	Geothermal Economics and Management	2
SCPH805016	Geothermal Geophysics I	3
SCPH805017	Geothermal Geophysics II	3
SCPH805018	Geothermal Prospect Evaluation	2
SCPH806001	Green Technology for Sustainability	2
SCPH806002	Environmental Physics	2
SCPH806003	Physics for Green Technology 1	3
SCPH806004	Physics for Green Technology 2	3
SCPH806005	Physics for Green Technology 3	3
SCPH806006	Research Design for Green Technology	2
SCPH806007	Principles of Photonics Physics	3
SCPH806008	Waste Remediation Technology	2

c. Master Program in Materials Science

1. Study Program Identity

1	Institution Name	Universitas Indonesia
2	Study Program Name	Master Program in Material Science
3	Education Level	Magister
4	Address	Jl. Prof. Dr. Mahar Mardjono Department of Physics, F Building Faculty of Mathematics and Natural Sciences,

		Universitas Indonesia (FMIPA UI) UI Campus, Depok 16424
5	Accreditation Status and Accrediting Body	International Accredited by ASIIN
6	Graduate Title	Master of Science (M.Si.)
7	Vision	To become a center of education and research in the field of Materials Science that is excellent, competitive, and capable of solving problems and challenges at both the national and global levels, aiming for excellence in Southeast Asia.
8	Mission	1. To implement the tridharma (three pillars of higher education) activities to produce graduates in Materials Science who are intellectually superior, intelligent, virtuous, and capable of competing globally. 2. To develop an academic atmosphere and research culture for the advancement of science, generating innovations and solutions in Materials Science to support sustainable development. 3. To contribute actively to the development of Materials Science and innovationnovasi
9	Graduate Profile	Graduates of the Master's in Materials Science program are critical and creative thinkers with a strong understanding of advanced materials science as a foundation for further developing their knowledge. They will build professional careers as scientists, entrepreneurs, and industry practitioners, capable of collaborating and communicating as global citizens.
10	Graduate Learning Outcomes	1. By comprehensively understanding the structure, properties, processing, and performance of material systems, graduates are able to critically assess the latest developments in materials science and technology. 2. Graduates are capable of designing and implementing experimental research methods and mathematical modeling in an academically responsible manner, analyzing

		data critically and systematically, and drawing conclusions. 3. Graduates can identify and analyze issues in the field of materials science and propose scientifically responsible solutions while considering ethics, environmental, and socio-economic aspects. 4. Graduates are able to create and design new materials, processing methods, and material analysis techniques, as well as innovative material products that take into account humanistic values, benefiting the development of materials science, industry, and society at large. 5. Graduates are able to apply materials science concepts in solving complex industrial materials application problems through a multidisciplinary approach, taking into account safety, social, and ethical aspects.
11	Study Period and Credit (SKS)	4 semesters and minimum 54 sks

2. Curriculum Structure

Research Pathway

No	Course	SKS
1	Faculty Compulsory Courses	0
2	Study Program Compulsory Courses	54
3	Elective Courses	0
Total Study Load		54

Taught Pathway

No	Course	SKS
1	Faculty Compulsory Courses	3
2	Study Program Compulsory Courses	39
3	Elective Courses	12
Total Study Load		54

3. Course Distribution for each Semester

Research Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMS801001	Literature Review-1	5	SCMS801004	Scientific Publication-1	2
SCMS801002	Literature Review-2	5	SCMS801006	Research Result Examination-1	4

SCMS801003	Research Proposal	8		
Faculty Compulsory Courses		0	Faculty Compulsory Courses	0
Study Program Compulsory Courses		18	Study Program Compulsory Courses	6
Elective Courses		0	Elective Courses	0
Total Credit for Semester 1		18	Total Credit for Semester 2	6

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMS801005	Scientific Publication-2	8	SCMS801008	Thesis (Research Pathway)	16
SCMS801007	Research Result Examination-2	6			
Faculty Compulsory Courses		0	Faculty Compulsory Courses		0
Study Program Compulsory Courses		14	Study Program Compulsory Courses		16
Elective Courses		0	Elective Courses		0
Total Credit for Semester 3		14	Total Credit for Semester 4		16

Resume	Faculty Compulsory Courses	0
	Study Program Compulsory Courses	54
	Elective Courses	0
Total of Study Load		54

Taught Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMS802001	Materials Structure	4	SCMS802005	Scientific Literation	2
SCMS802002	Material Properties and Performance	4		Elective Courses	12
SCMS802003	Thermodynamics and Kinetics of Materials	4			
SCMS802004	Materials Characterization and Analysis	4			
SCST8000001	Integration of Science and Mathematics	3			
Faculty Compulsory Courses		3	Faculty Compulsory Courses		0
Study Program Compulsory Courses		16	Study Program Compulsory Courses		2
Elective Courses		0	Elective Courses		12
Total Credit for Semester 1		19	Total Credit for Semester 2		14

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMS802006	Proposal	3	SCMS802008	Thesis	16
SCMS802007	Scientific Dissemination	2			
Faculty Compulsory Courses		0	Faculty Compulsory Courses		0
Study Program Compulsory Courses		5	Study Program Compulsory Courses		16
Elective Courses		0	Elective Courses		0
Total Credit for Semester 3		5	Total Credit for Semester 4		16

Resume	Faculty Compulsory Courses	3
	Study Program Compulsory Courses	39
	Elective Courses	12
Total of Study Load		54

4. List of Elective Courses

NO	CODE	COURSE NAME	SKS
1	SCMS803001	Advanced Laboratory Work	3
2	SCMS803002	Magnetic Material Physics	3
3	SCMS803003	Permanent Magnets: Process and Characterization	3
4	SCMS803004	Applied Ceramics	3
5	SCMS803005	Polymer Materials	3
6	SCMS803006	Biomedical Composites	3
7	SCMS803007	Nanomaterial Properties and Applications	3
8	SCMS803008	Advanced Composite Materials	3
9	SCMS803009	Corrosion and Material Protection	3
10	SCMS803010	High Temperature Metal Oxidation	3
11	SCMS803011	Functional Materials	3
12	SCMS803012	Synthesis and Characterization of Nanomaterial	3
13	SCMS803013	Numerical Methods for Materials	3
14	SCMS803014	Engineering Economy	2
15	SCMS803015	Independent Project	4
Total			45

d. Master Program in Medical Physics

1. Study Program Identity

1	Institution Name	Universitas Indonesia
2	Study Program Name	Master Program in Medical Physics
3	Education Level	Master
4	Address	Jl. Prof. Dr. Mahar Mardjono

		Department of Physics, F Building Faculty of Mathematics and Natural Sciences, Universitas Indonesia (FMIPA UI) UI Campus, Depok 16424
5	Accreditation Status and Accrediting Body	Good (Baik) by LAMSAMA
6	Graduate Title	Master of Science (M.Si.)
7	Vision	To be the organizer of the Master's Program in Medical Physics that produces qualified Medical Physicist candidates with high academic capabilities, upholding objectivity, professionalism, and ethics at both national and international levels.
8	Mission	1. To organize a learning program that integrates education and research in the field of Medical Physics, along with specialized skills in Medical Physics services in hospitals. 2. To produce graduates who are capable of conducting research and possess analytical, critical, creative, innovative, conceptual thinking, problem-solving orientation, and a strong commitment to objectivity, professionalism, and ethics. 3. To carry out research that contributes to the development of scientific knowledge and technology in the application of physics in the medical field. 4. To produce Medical Physicist candidates who are competitive at regional and international levels. 5. To enhance research resources through partnerships and collaborations with researchers, research institutions, and industries both domestically and internationally. 6. To meet the national demand for Medical Physicists with both national and international standards.
9	Graduate Profile	Graduates of the Master's in Medical Physics program are critical and creative thinkers with a strong mastery of physics in medical applications, capable of contributing to solving

		scientific and technological problems related to medical applications at both national and international levels. They will build professional careers in fields related to medical physics and be able to communicate and collaborate with other professions
10	Graduate Learning Outcomes	1. Able to analyze sustainable development problems using interdisciplinary and multidisciplinary principles of mathematics and science (C4). 2. Able to design the development of physics applications in the medical field and innovations related to medical physics, considering humanistic values that benefit the development of the medical world, industry, and society at large (C6). 3. Able to critically analyze the laws and principles of physics in the medical field and the latest developments in medical science and technology (C5). 4. Able to design experimental research methods and mathematical modeling in a critical and systematic manner, adhering to academic ethics (C6). 5. Able to develop solutions for medical physics problems and publish them responsibly and scientifically, while observing academic ethics (C6). 6. Able to integrate concepts of medical physics in solving complex clinical and medical technology problems through a multidisciplinary approach, considering safety, social, and ethical aspects (C4). 7. Able to collaborate with colleagues from various professions to complete tasks, organizing teamwork to solve problems collectively (P5). 8. Able to adapt to the latest developments in science by continuously learning new things relevant to their work/profession (P4). 9. Able to manage the storage of research data, computational programs, prototypes, and important literature, ensuring validity and preventing plagiarism (A4).
11	Study Period and Credit (SKS)	4 semester and minimum 54 sks

2. Curriculum Structure

Research Pathway

	Study Load	Credits (SKS)	%
Resume	Study Program Compulsory Courses	54	100%
	Total of Compulsory Courses	54	100%
	Elective Courses	-	-
	Total of Study Load	54	100%

Taught Pathway

	Study Load	Credits (SKS)	%
Resume	Faculty Compulsory Courses	2	3.04%
	Study Program Compulsory Courses	46	69.69%
	Total of Compulsory Courses	48	72.73%
	Elective Courses	18	27.27%
	Total of Study Load	66	100%

3. Course Distribution for each Semester

Research Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMP801041	Literature Review 1	5	SCMP802044	Scientific Publication 1	2
SCMP801042	Literature Review 2	5	SCMP802045	Research Result Examination 1	4
SCMP801043	Proposal	8			
Total Credit for Semester 1		18	Total Credit for Semester 2		6

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMP802046	Scientific Publication 2	8	SCMP804048	Thesis	16
SCMP802047	Research Result Examination 2	6			
Total Credit for Semester 3		14	Total Credit for Semester 4		16

Resume	Study Program Compulsory Courses	54
	Total of Compulsory Courses	54
	Study Program Elective Courses	-
	Total of Study Load	54

Taught Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMP801001	Patho-Anatomy and Physiology	2	Compulsory Course	Scientific Literation	2
SCMP801002	Advanced Radiological Physics & Dosimetry	2	SCMP802009	Radiation Safety and Protection	2
SCMP801003	Medical Physics Computation	2	SCMP802010	Profesionalism and Medical Ethics	2
SCMP801004	Application of Radiobiology	2	SCSC800001	Integration of Science and Mathematics	3
SCMP801005	Biomedical Physics	2	SCMP802016	Pract. of Radiation Protection	2
SCMP801006	Medical Imaging Physics	3	Specialization	Elective Courses	
SCMP801007	Radiotherapy Physics	3	Radiotherapy Physics		
SCMP802008	Nuclear Medicine Physics	2	SCMP802014	Teknologi Pencitraan dan Perencanaan Radioterapi	4
			SCMP802015	Advanced Techniques of Radiotherapy	4
			Diagnostic and Interventional Radiology Physics		
			SCMP802017	Advanced Medical Imaging Physics	4
			SCMP802018	Non-Ionizing Medical Imaging Physics	4
			Nuclear Medicine Physics		
			SCMP802020	Pencitraan Kedokteran Nuklir	3
			SCMP802021	Dosimetri Kedokteran Nuklir Lanjut	2
			SCMP802022	Production & Safety of Radiopharmaceutica l	3

Total Credit for Semester 1	18	Total Credit for Semester 2	17
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SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
Elective Courses					
SCMP803011	Scientific Dissemination	2	SCMP804013	Thesis	16
SCMP803012	Proposal	3			
Specialization	Elective Courses				
Radiotherapy Physics					
SCMP803024	Practical of Acceptance Test & Commissioning RT	2			
SCMP803025	Practical of Planning IMRT and VMAT	2			
SCMP803026	Practical of Brachytherapy Planning	2			
SCMP804027	Practical of Advanced Radiotherapy	2			
SCMP802028	Practical of Radiotherapy Dosimetry	2			
Diagnostic and Interventional Radiology Physics					
SCMP803029	Practical of Quality Assurance in Radiology	2			
SCMP803030	Practical of Radiology Quality Control Testing	2			
SCMP803031	Practical of Dose Audit in Radiology	2			
SCMP804032	Practical of Dose optimization and Radiology Image	2			
SCMP802033	Practical of Radiology Dosimetry	2			
Nuclear Medicine Physics					
SCMP803034	Practical of Nuclear	2			

	Medicine Quality Control				
SCMP803035	Practical of Radiopharmaceutical Production Quality Control	2			
SCMP803036	Practical of NM Imaging Planning	2			
SCMP804037	Practical of NM Therapy Planning	2			
SCMP802038	Practical of Nuclear Medicine Dosimetry	2			
Total Credit for Semester 3		15	Total Credit for Semester 4		16

e. Master Program in Chemistry

1. Study Program Identity

1	Institution Name	Universitas Indonesia
2	Study Program Name	Master Program in Chemistry
3	Education Level	Master
4	Address	Jl. Prof. Dr. Mahar Mardjono Department of Chemistry, G Building Faculty of Mathematics and Natural Sciences, Universitas Indonesia (FMIPA UI) UI Campus, Depok 16424
5	Accreditation Status and Accrediting Body	International Accredited by The Royal Society of Chemistry (RSC)
6	Graduate Title	Master of Science (M.Si.)
7	Vision	To be a center of education and research in chemistry and its applications, with the ability to play a role at the international level.
8	Mission	1. To implement the tridharma (three pillars of higher education) activities to produce Master's graduates in Chemistry with a focus on energy, environment, and health, who are globally competitive, virtuous, and highly ethical. 2. To develop an academic atmosphere and research culture for the advancement of Chemistry, generating innovations and solutions to support sustainable development goals.

		3. To contribute and play an active role in the development of Chemistry and its innovations.
9	Graduate Profile	Graduates of the Master's in Chemistry program at the Faculty of Mathematics and Natural Sciences, University of Indonesia (FMIPA UI), are Master's-level chemists who can play roles as: (i) educators/teachers; (ii) researchers in government or private institutions; (iii) consultants and industry practitioners; (iv) graduates who are ready to continue to relevant doctoral programs, both domestically and internationally.
10	Graduate Learning Outcomes	1. Able to develop knowledge and/or chemical technologies in the form of models/phenomena/chemical systems in the fields of Biochemistry, Inorganic Chemistry, Industrial Biotechnology, or Environmental Toxicology through research, resulting in innovative and tested works while adhering to ethics and norms (C6, A5) 2. Able to solve problems in science and/or technology within the field of chemistry using interdisciplinary or multidisciplinary approaches, while supporting the development of professionalism independently and lifelong learning (C5, A5) 3. Able to develop research in chemistry that benefits society and the scientific community in the areas of energy, health, food security, and the environment, and achieve national and international recognition (C6).
11	Study Period and Credit (SKS)	4 semesters, 54 sks

2. Curriculum Structure

Research Pathway

	Study Load	Credits (SKS)	%
Resume	Study Program Compulsory Courses	54	100%
	Total of Compulsory Courses	54	100%
	Elective Courses	-	-

	Total of Study Load	54	100%
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Jalur Kuliah

	Study Load	Credits (SKS)	%
Resume	Faculty Compulsory Courses	3	5.56%
	Study Program Compulsory Courses	37	68.52%
	Specialization Compulsory Courses	6	11.11%
	Total of Compulsory Courses	48	85.19%
	Elective Courses	8	14.81%
	Total of Study Load	54	100%

3. Course Distribution for each Semester

Research Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCCH802036	Literature Review 1	5	SCCH802039	Research Result Examination 1	4
SCCH802037	Literature Review 2	5	SCCH802041	Scientific Publication 1	2
SCCH802038	Research Proposal (R)	8			
Total Credit for Semester 1		18	Total Credit for Semester 2		6

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCCH802042	Scientific Publication 2	8	SCCH801018	Thesis	16
SCCH802040	Research Result Examination 2	6			
Total Credit for Semester 3		14	Total Credit for Semester 4		16

Resume	Study Program Compulsory Courses	54
	Total of Compulsory Courses	54
	Study Program Elective Courses	-
	Total of Study Load	54

Taught Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCCH801001	Research Methodology: Design and Analysis	2	SCCH801XXX	Specialization Compulsory Course 1	2
SCCH801002	Bonding, Structure and Reaction Mechanism	4	SCCH801XXX	Specialization Compulsory Course 2	2
SCCH801003	Statistical Thermodynamics	2	SCCH801XXX	Specialization Compulsory Course 3	2
SCCH801004	Analytical Methods	2	SCCH8015XX	Elective Course 1	2
SCCH801005	Molecular Biology and Biochemistry	2	SCCH8015XX	Elective Course 2	2
SCCH801009	Advanced Instrument Chemistry	2	SCCH8015XX	Elective Course 3	2
SCCH801010	Computational Chemistry	2	SCCH8015XX	Elective Course 4	2
SCSC800001	Integration of Science and Mathematics	3			
Total Credit for Semester 1		19	Total Credit for Semester 2		14

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCCH801017	Scientific Dissemination	2	SCCH801018	Thesis	16
SCCH801016	Research Proposal	3			
	Elective Course	0			
Total Credit for Semester 3		5	Total Credit for Semester 4		16

Resume	Faculty Compulsory Courses	37
	Study Program Compulsory Courses	3
	Specialization Compulsory Courses	6
	Total of Compulsory Courses	46
	Elective Courses	8
	Total of Study Load	54

4. List of Elective Courses

Specialization Compulsory Courses (MKK)

No.	CODE	COURSE NAME	SKS
		Specialization Courses in Biological Chemistry	

1	SCCH801101	Advanced Molecular Structure Determination	2
2	SCCH801102	Metabolism	2
3	SCCH801104	Synthesis of Natural Products Chemistry	2
		Specialization Courses in Non-Biological Chemistry	2
1	SCCH801201	Molecular Physical Chemistry and Macromolecule	2
2	SCCH801203	Organometalics	2
3	SCCH801204	Chemometrics	2
		Specialization Courses in Industrial Biotechnology	
1	SCCH801301	Biotechnology	2
2	SCCH801302	Enzymology	2
3	SCCH801303	Genetics Engineering	2
		Specialization Courses in Environmental Toxicology	
1	SCCH801401	Advanced Toxicology	2
2	SCCH801402	Analysis, Identification of Toxicants, and Environmental Pollutants	2
3	SCCH801403	Chemicals Risk Assessment	2

Elective Courses

KODE	COURSE NAME	SKS
SCCH801501	Bioassay	2
SCCH801502	Bioorganic	2
SCCH801509	Carbohydrate Chemistry	2
SCCH801513	Environmental Biotechnology	2
SCCH801515	Food Chemistry	2
SCCH801519	Separation Methods	2
SCCH801521	X-Ray Spectroscopy	2
SCCH801522	Speciation and Trce Analysis	2
SCCH801523	Photo-Electro-Catalytic	2
SCCH801527	Polymer Kinetics	2
SCCH801529	Chemical catalyst	2
SCCH801530	Inorganic Solids	2
SCCH801534	Nuclear Radiation Chemistry	2
SCCH801542	Advanced Materials Chemistry	2
SCCH801543	Advanced Biosynthesis	2
SCCH801544	Advanced Natural Products Chemistry	2
SCCH801545	Oleochemistry	2
SCCH801546	Reactivity of Organic Compounds	2
SCCH801547	Macromolecular Chemistry	2
SCCH801548	Stereoselectivity	2
SCCH801549	Applied Microbiology	2
SCCH801550	Advanced Chromatography	2
SCCH801551	Applied Bioinformatics	2
SCCH801552	Advanced Environmental Chemistry	2

SCCH801553	Forensic Science	2
SCCH801554	Human Biomonitoring Biomarker	2
SCCH801555	Advanced Bioinorganic	2
SCCH801556	Physical Electrochemistry	2
SCCH801557	Nanomaterials Chemistry and Applications	2
SCCH801558	Surface Chemistry and Applications	2
SCCH801559	2-Dimensional NMR	2
SCCH801560	Coordination Chemistry and Applications	2

f. Master Program in Biology

1. Study Program Identity

1	Institution Name	Universitas Indonesia
2	Study Program Name	Master Program in Biology
3	Education Level	Master
4	Address	Jl. Prof. Dr. Mahar Mardjono Department of Biology, E Building Faculty of Mathematics and Natural Sciences, Universitas Indonesia (FMIPA UI) UI Campus, Depok 16424
5	Accreditation Status and Accrediting Body	A by BAN-PT International Accredited by ASIIN
6	Graduate Title	Master of Science (M.Si.)
7	Vision	To be an excellent provider of higher education tridharma (three pillars) in the field of biodiversity, particularly in conservation and bioprospecting, producing Master's graduates in Biology who can play a role at the national and global levels in advancing science, technology, and sustainable development.
8	Mission	1. To organize high-quality education, research, and community service activities, particularly in the areas of conservation and bioprospecting of Indonesia's biodiversity. 2. To produce Master's graduates in Biology who are capable of managing and conducting research, enabling them to contribute to the advancement of science, technology, and sustainable development at the national and global levels
9	Graduate Profile	Graduates of the Master's in Biology program at the Department of Biology, FMIPA UI, are: 1. Master's-level biologists with up-to-date knowledge, capable of thinking critically, ethically, professionally, and being lifelong learners.

		2. Capable of designing innovative research in the field of biodiversity, especially in conservation and bioprospecting, using multidisciplinary or interdisciplinary approaches to advance science and technology for the benefit of society.
10	Graduate Learning Outcomes	1. Able to think critically, creatively, and innovatively, with integrity and intellectual curiosity to solve problems both individually and in groups. 2. Able to select relevant up-to-date biological concepts and technologies to identify, analyze, and solve problems related to biology. 3. Able to conduct research independently or in teams with a multidisciplinary and interdisciplinary approach. 4. Able to communicate research results in the form of scientific information, both orally and in writing, at the international level. 5. Able to advance knowledge and engage in lifelong learning in accordance with professional ethics, to contribute to society.
11	Study Period and Credit (SKS)	4 semesters (55 sks)

2. Curriculum Structure

Research Pathway

	Study Load	Credits (SKS)	%
Resume	Study Program Compulsory Courses	54	100%
	Total of Compulsory Courses	54	100%
	Elective Courses	-	-
	Total of Study Load	54	100%

Taught Pathway

	Study Load	Credits (SKS)	%
Resume	Study Program Compulsory Courses	35	63.81%
	Total of Compulsory Courses	35	63.81%
	Elective Courses	19	36.19%
	Total of Study Load	54	100%

3. Course Distribution for each Semester

Research Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCBI801008	Literature Review 1	5	SCBI801011	Scientific Publication 1	2
SCBI801009	Literature Review 2	5	SCBI801012	Research Result Examination 1	4
SCBI801010	Research Proposal (R)	8			
Total Credit for Semester 1		18	Total Credit for Semester 2		6

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCBI802013	Scientific Publication 2	8	SCBI802007	Thesis	16
SCBI802014	Research Result Examination 2	6			
Total Credit for Semester 3		14	Total Credit for Semester 4		16

Resume	Study Program Compulsory Courses	54
	Total of Compulsory Courses	54
	Elective Courses	-
	Total of Study Load	54

Taught Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCSC800001	Integration of Science and Mathematics	3	SCBI801XXX	Elective Courses	15
SCBI801001	Scientific Writing	3			
SCBI801002	Integration of Biosystematics and Biodiversity	3			
SCBI801003	Ecoscience, Conservation, and Bioprospecting	3			
SCBI801004	Statistics	2			
SCBI801XXX	Elective Courses	4			
Total Credit for Semester 1		18	Total Credit for Semester 2		15

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCBI802005	Research Proposal	3	SCBI802007	Thesis	16

SCBI802006	Scientific Dissemination	2		
Total Credit for Semester 3		5	Total Credit for Semester 4	16

Resume	Study Program Compulsory Courses	35
	Total of Compulsory Courses	35
	Elective Courses	19
	Total of Study Load	54

4. List of Elective Courses

Elective courses for the Master Program in Biology FMIPA UI, Curriculum 2024 for the Taught Pathway are designed based on the exiting Research Groups (RG) in Department of Biology, namely *Community Ecology and Environmental Biology (CEEB)*, *Cellular and Molecular Mechanism in Biological System (CEMBIOS)*, *Metabolomics and Chemical Ecology (MECE)*, *Microbial Systematics and Prospecting (MSP)*, dan *Wildlife Biology and Sustainable Landscape (WILD)*, as follows:

Code	Elective Courses	SKS
RG CEEB		
SCBI801115	Land Restoration	3
SCBI801116	Toxicology	2
RG CEMBIOS		
SCBI801217	Cellular and Molecular Mechanisms of Cancer and Aging	2
SCBI801218	Plant Development	2
SCBI801219	Genomics and Proteomics	3
SCBI801220	Cell and Molecular Biology	3
SCBI801221	Neurobiology	2
SCBI801222	Advanced Cellular and Molecular Techniques	3
RG MECE		
SCBI801323	Metabolomics	2
SCBI801324	Advanced Chemistry Ecology	2
SCBI801325	Advanced Natural Production	2
SCBI801326	Plant Ecophysiology	2
SCBI801327	In Vitro Plant Culture for Natural Product Production	3
SCBI801328	Advanced Nanobiology	2
SCBI801329	Advanced Bioremediation	2
RG MSP		
SCBI801430	Biodiversity and Conservation Microorganism	3
SCBI801431	Microorganism Ecology	3
SCBI801432	Microorganism Biotechnology	3

SCBI801433	Bioactive Metabolites of Microorganisms	2
SCBI801434	Trends in Microbiology Research	2
SCBI801435	Microbiology Research Methods	3
RG WILD		
SCBI801536	Ethnobiology and Conservation	2
SCBI801537	Wildlife Reproduction and Conservation	2
SCBI801538	Landscape and Restoration Ecology	2
SCBI801539	Conservation Biology Method	3
SCBI801540	Wildlife Forensics	3
SCBI801541	Bioeconomy	2
SCBI801542	Conservation Genetics and Wildlife	2

g. Master Program in Marine Science

1. Study Program Identity

1	Institution Name	Universitas Indonesia
2	Study Program Name	Master Program in Marine Science
3	Education Level	Master
4	Address	Jl. Prof. Dr. Mahar Mardjono Department of Biology, E Building Faculty of Mathematics and Natural Sciences, Universitas Indonesia (FMIPA UI) UI Campus, Depok 16424
5	Accreditation Status and Accrediting Body	Excellent (Unggul) by LAMSAMA
6	Graduate Title	Master of Science (M.Si.)
7	Vision	To be an excellent provider of higher education tridharma (three pillars) in the field of Marine Science, especially marine biosciences, focusing on bioprospecting and marine biodiversity conservation. The program aims to support the development of knowledge and technology with a multi- and interdisciplinary approach and to produce Master's graduates in Marine Science who are capable of competing at the global level in advancing science, technology, and sustainable development for the benefit of Indonesia and the world
8	Mission	1. To organize educational programs that integrate teaching and research, with a focus on students, through effective learning approaches and optimal utilization of technology. 2. To conduct research and community service in the field of Marine Science, aimed at

		solving societal issues with appropriate technology, leading to innovative solutions that are globally recognized and can be applied to communities in Indonesia and the world. 3. To produce human resources in Marine Science who are globally competitive, with integrity, and able to provide solutions to societal and environmental problems. These graduates should also be capable of managing and conducting research, thereby contributing to the global advancement of science, technology, and sustainable development. 4. To enhance educational and research resources through increased academic cooperation and partnerships, strengthening global networks involving the quadruple helix (academia and research institutions, industry, government, and community), both domestically and internationally. 5. To create a conducive academic atmosphere and scientific environment that attracts intellectuals to collaborate in research and educational activities with a multi- and interdisciplinary approach.
9	Graduate Profile	The profile of graduates from the Master's in Marine Science program is as follows: "A Master's graduate in Marine Science who is capable of developing knowledge and technology in the field of Marine Science, especially marine biosciences, with strong character and intellectuality as a lifelong learner. This graduate will contribute to solving problems in Marine Science independently, both individually and as part of a team, through interdisciplinary and multidisciplinary approaches."
10	Graduate Learning Outcomes	1. Able to identify various problems in Marine Science and/or case studies in their field of work comprehensively. 2. Able to apply knowledge of Marine Science to solve problems scientifically. 3. Able to recommend solutions to Marine Science problems and/or case studies in their field of work, especially those related to sustainable development issues, in a collaborative and comprehensive manner

		using interdisciplinary or multidisciplinary approaches. 4. Able to master the theories in the field of Marine Science to develop knowledge and technology through research. 5. Able to conduct a review of the latest global research literature relevant to developing an advanced understanding of scientific progress, especially in Marine Science. 6. Able to design a research plan in compliance with scientific methods and ethical guidelines, safety standards, and environmental health. 7. Able to conduct research and produce consistent, reliable, relevant, and meaningful results. 8. Able to develop knowledge and technology related to Marine Science through research. 9. Able to disseminate innovative and tested work in academic forums at the national or international level. 10. Able to apply scientific methods and have the right strategies to solve scientific problems in Marine Science and/or case studies in their field of work. 11. Able to manage research and development that benefits society and science, with results recognized nationally and internationally, through proficient communication skills and effective, efficient teamwork. 12. Able to prepare reports and manuscripts of research results systematically and according to the guidelines of scientific writing, in the form of theses and articles published in national or international journals.
11	Study Period and Credit (SKS)	4 semesters, 2 years and 54 SKS

2. Curriculum Structure

Research Pathway

	Study Load	Credits (SKS)	%
Resume	Study Program Compulsory Courses	54	100%
	Total of Compulsory Courses	54	100%
	Elective Courses	-	-
	Total of Study Load	54	100%

Taught Pathway

	Study Load	Credits (SKS)	%
Resume	Faculty Compulsory Courses	3	5.56%
	Study Program Compulsory Courses	29	53.70%
	Total of Compulsory Courses	32	59.26%
	Elective Courses	22	40.74%
	Total of Study Load	54	100%

3. Course Distribution for each Semester

Research Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMB824101	Literature Review 1	5	SCMB824201	Scientific Publication 1	2
SCMB824102	Literature Review 2	5	SCMB824202	Research Result Examination 1	4
SCMB824103	Research Proposal	8			
Total Credit for Semester 1		18	Total Credit for Semester 2		6

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMS824301	Scientific Publication 2	8	SCMB824401	Thesis	16
SCMS824302	Research Result Examination 2	6			
Total Credit for Semester 3		14	Total Credit for Semester 4		16

Resume	Study Program Compulsory Courses	54
	Total of Compulsory Courses	54
	Elective Courses	-
	Total of Study Load	54

Taught Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCSC800001	Integration of Science and Mathematics	3	SCMB824203	Physical and Chemical Oceanography	3
SCMB824104	Biology Oceanography	2	SCMB824204	Scientific Writing	3
	Elective Courses	11		Elective Courses	11
Total Credit for Semester 1		19	Total Credit for Semester 2		14

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCMB824303	Research Proposal	3	SCMB824401	Tesis	16
SCMB824304	Scientific Dissemination	2			
Total Credit for Semester 3		5	Total Credit for Semester 4		16

Resume	Faculty Compulsory Courses	29
	Study Program Compulsory Courses	3
	Total of Compulsory Courses	32
	Elective Courses	22
	Total of Study Load	54

4. List of Elective Courses

CODE	COURSE NAME	SKS
SCMB824105	Prospecting of Marine Natural Resources and Biodiversity	3
SCMB824205	Marine Chemical Ecology	2
SCMB824106	Marine and Coastal Management	2
SCMB824206	Sustainability of Marine Biodiversity Resources	2
SCMB824107	Coastal Ecosystem Ecology and Services	2
SCMB824207	Marine Algae Biotechnology	2
SCMB824108	Marine Harmful Algal Blooms (HAB) Ecology	2
SCMB824208	Genetic and Morphological Diversity of Marine Biota	2
SCMB824109	Sedimentology and Biology of Interstitial Fauna	2

SCMB824209	Marine Pollution	3
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h. Master Program in Geography

1. Study Program Identity

1	Institution Name	Universitas Indonesia
2	Study Program Name	Master Program in Geography
3	Education Level	Master
4	Address	Jl. Prof. Dr. Mahar Mardjono Department of Geography, H Building Faculty of Mathematics and Natural Sciences, Universitas Indonesia (FMIPA UI) UI Campus, Depok 16424
5	Accreditation Status and Accrediting Body	Excellent (Unggul) by LAMSAMA
6	Graduate Title	Master of Science (M.Si.)
7	Vision	To become a center of excellence and a national reference in the field of Geography, capable of contributing at the global level in supporting sustainable development.
8	Mission	1. To organize higher education activities in geography based on competencies and research to produce geography graduates with high intellect, intelligence, noble character, and the ability to compete regionally/internationally. 2. To carry out research and the development of geography knowledge and applied research within an academic atmosphere and a culture of research, advancing the field of geography to produce innovations and solutions that support sustainable development. 3. To carry out community service or applied geography activities to contribute and play an active role in the development of science and innovation.
9	Graduate Profile	The Graduate Profile of the Master's Program in Geography at FMIPA UI is as follows: " Master of Science in Geography who is capable of developing spatial models based on spatial information technology for decision-making in the management of sustainable life resources through multidisciplinary or interdisciplinary approaches."

		This graduate profile can be applied to several professions or fields relevant to the science of geography, as outlined below: • Scientist/Researcher: Able to develop themselves and their knowledge in a precise and professional manner through research, education, and community involvement, in line with the advancement of knowledge and technology in geography, while adding value to related fields of knowledge. • Spatial Information Analyst: Able to construct clear, assertive, and effective arguments based on analysis, interpretation, and recommendations derived from reliable spatial information systems for strategic decision-making. • Data Manager: Able to develop effective and harmonious coordination alternatives for the management of spatial data for specific purposes. • Spatial Planner: Able to synthesize the key factors in decision-making related to life resource issues at various scales and regional characteristics using a geographical approach. • Decision-Maker: Able to recommend decision-making priorities based on specific methods, procedures, and spatial analysis technologies, in order to expand the benefits of geographical knowledge for the advancement of science, business, and society. • Community Leader: Able to manage community aspirations and capacities to enhance independence based on the available life resources in the local environment. Other professions suitable for graduates of the Master's Program in Geography include: GIS/remote sensing specialist, professional cartographer, GIS program manager, spatial database developer, spatial analysis supervisor, ecosystem services analyst, environment analyst, land use analyst, urban/regional/spatial planner, spatial policy supervisor, disaster mitigation
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		manager, land/property appraisal, transportation planner, lecturer/teacher, and research. These professions indicate that graduates of this program can work in the public sector (government agencies), the business sector (consultants, companies, and industries), and non-governmental organizations (NGOs) in fields such as mapping, information systems, land administration, agriculture, urban / regional / spatial planning, environmental management, forestry, disaster management, coastal and marine studies, real estate, taxation and finance, transportation, education, and other related fields. Graduates also have opportunities to pursue careers through entrepreneurship in these areas. The knowledge, skills, and professionalism acquired through this program also provide broad opportunities for further studies at the postgraduate level.
10	Graduate Learning Outcomes	1. Able to assess the complexity of human-environment interactions comprehensively based on geographical concepts and theories. 2. Able to project sustainable development issues spatially according to the characteristics of the region. 3. Able to evaluate geographical facts, data, and information for spatial modeling following geographical work procedures. 4. Able to assess spatial models based on spatial information technology according to the characteristics of the region. 5. Able to combine geographical approaches and methods with principles of mathematics, science, and other relevant disciplines as a foundation for solving sustainable development problems. 6. Able to formulate specific geographical problems related to life resources according to the principles of sustainable development using multi- and interdisciplinary approaches. 7. Able to synthesize specific spatial models for solving problems related to life resources.

		8. Able to develop specific opinions and conclusions on life resource issues based on spatial models. 9. Able to demonstrate moral excellence, self-confidence, maturity in adaptation, and tolerance in developing intellectual curiosity according to scientific, professional, and environmental ethics. 10. Able to sharpen opportunities for applying the discipline of geography as creative and innovative solutions to life resource problems.
11	Study Period and Credit (SKS)	4 Semesters and 54 sks

2. Curriculum Structure

Research Pathway

	Study Load	Credits (SKS)	%
Resume	Study Program Compulsory Courses	54	100%
	Total of Compulsory Courses	54	100%
	Elective Courses	-	-
	Total of Study Load	54	100%

Jalur Kuliah

	Study Load	Credits (SKS)	%
Resume	Faculty Compulsory Courses	3	5.56%
	Study Program Compulsory Courses	41	75.93%
	Total of Compulsory Courses	44	81.49%
	Elective Courses	10	18.51%
	Total of Study Load	54	100%

3. Course Distribution for each Semester

Research Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCGE801301	Literature Review 1	5	SCGE801304	Scientific Publication 1	2

SCGE801302	Literature Review 2	5	SCGE801306	Research Result Examination 1	4
SCGE801303	Proposal	8			
Total Credit for Semester 1		18	Total Credit for Semester 2		6

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCGE801305	Scientific Publication 2	8	SCGE801401	Thesis	16
SCGE801307	Research Result Examination 2	6			
Total Credit for Semester 3		14	Total Credit for Semester 4		16

Resume	Study Program Compulsory Courses	54
	Total of Compulsory Courses	54
	Elective Courses	-
	Total of Study Load	54

Taught Pathway

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCGE801101	Concept and Theory in Geography	2	SCSC800001	Science and Mathematics Integration	3
SCGE801102	Spatial Dynamics of Physical Environment	2	SCGE801105	Research Methodology in Geography	2
SCGE801103	Spatial Dynamics of Social Economy	2	SCGE801106	Fieldwork	2
SCGE801104	GIS and Spatial Analysis	3	SCGE801108	Spatial Dynamics Modeling	3
SCGE801105	Geography and Sustainable Development	2	SCGE801109	Regional Dynamics of Tropical Environment	2
	Elective Courses	6		Elective Courses	4
Total Credit for Semester 1		17	Total Credit for Semester 2		16

SEMESTER 3			SEMESTER 4		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCGE801110	Proposal	3	SCGE801401	Thesis	16
SCGE801111	Scientific Publication	2		Elective Courses	0
	Elective Courses	0			
Total Credit for Semester 3		5	Total Credit for Semester 4		16

Resume	Study Program Compulsory Courses	41
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Faculty Compulsory Courses	3
Total of Compulsory Courses	44
Elective Courses	10
Total of Study Load	54

4. List of Elective Courses

SEMESTER 1			SEMESTER 2		
CODE	COURSE NAME	SKS	CODE	COURSE NAME	SKS
SCGE801201	Landform Dynamics	2	SCGE801202	Land and Water Resources Evaluation	2
SCGE801203	Issues and Problems of Climate Change	2	SCGE801206	Political Ecology and Resources Conflict	2
SCGE801204	Disaster and Regional Resilience	2	SCGE801208	Regional Development Policy	2
SCGE801205	Sustainable Land Use	2	SCGE801210	Spatial Big Data and Geo-AI	2
SCGE801207	Spatial Economics and Locational Decision	2	SCGE801211	GIS and Decision Making	2
SCGE801209	Urban and Rural Transformation	2	SCGE801212	Application of GIS/RS for Regional Development	2
SCGE801213	Application of GIS/RS for Coastal & Marine	2	SCGE801214	Aplication of GIS/RS for Land Evaluation	2
SCGE801215	Application of GIS/RS for Urban Climate	2			

CHAPTER 4

Research and Community Services

A decorative teal geometric shape consisting of a horizontal bar at the bottom and a diagonal line extending upwards and to the right, forming a large, stylized 'L' or step-like shape.

The FMIPA UI PPM Unit has broad duties and functions to provide, facilitate, and monitor research grant activities and community service carried out by students and lecturers at FMIPA UI. The research and community service activity grant scheme can come from various sources, both internal and external, such as from the University of Indonesia, FMIPA UI, the Ministry of Research and Technology, BRIN, and various other funding sources. These various forms of activities are aligned with the performance targets implemented by the Dean of FMIPA UI related to research and community service, including the number of publications in international journals, lecturers' participation in scientific meetings, the number of IPRs, patents, and other achievements.

4.1. Research

a. Policy and Strategy

The Research and Community Service Division of FMIPA UI plays a major role in managing research and community service activities carried out by lecturers at FMIPA UI. These management activities include dissemination of external grants (from university level, ministries, or other sources), provision of internal grants of FMIPA UI, monitoring the progress of the research process, to monitoring research output.

b. Types of Grants

There are various types of grants offered in the FMIPA UI environment, including:

1. External Funding

Research grant funding from external sources comes from both research schemes at the Indonesian Ministry of Education and Culture, as well as from various other funding outside the ministry, such as through cooperation with industry, foreign research institutions, and so on. Examples of forms of external funding schemes from the Ministry of Education and Culture in 2022 include Basic, Applied, and Development Research schemes. In addition, in 2017-2022, there were also several funding schemes that were successfully achieved by lecturers at FMIPA UI through external funds such as Newton fund, Asahi, UITM, INSINAS, PPKI and etc.

2. Pendanaan Internal oleh Universitas Indonesia

Various research grant funding schemes are provided by the University of Indonesia every year, where the scheme is adjusted from year to year depending on the long-term target of the research vision at the University of Indonesia. The research grant policy prepared by the University of Indonesia aims to improve the quality and quantity of research publications, both by lecturers and students at the University of

Indonesia. The Directorate of Research and Development of the University of Indonesia (Risbang UI) organizes the UI Research Grant with the "Internationally Indexed Publication" scheme, abbreviated as PUTI. This grant consists of PUTI Hi-Impact, PUTI Q1, PUTI Q2, and PUTI Postgraduate.

3. Internal Funding by the Faculty of Mathematics and Natural Sciences, UI Research Grant Program is a research grant program and administration organized by FMIPA UI with funding sources originating from Activity Budget Plan FMIPA UI. In 2023 – 2024, priority is given to several focus topics as follows:
 - Materials and science for energy storage
 - Handling and prevention of infectious diseases
 - Disaster management and mitigation
 - Basic sciences that have the potential to have a high impact and are potentially useful in the future.
 - Other topics that have high impact, are innovative, and have high potential in solving national problems.

4.2. Community Service

Strategic policies related to research and community service at FMIPA UI are designed in line with the Research and Community Service Roadmap at the University of Indonesia level. Every lecturer at FMIPA UI is required to carry out the tridharma of education activities, one of which is how a lecturer can devote his knowledge to the community directly. This can be accommodated through community service activities. Through community service activities, lecturers at FMIPA UI are expected to be able to provide real contributions in the downstreaming of research both at the local and global levels.

Based on the 2020-2024 community service and empowerment roadmap guidebook released by the Directorate of Community Service and Empowerment (PPM) of the University of Indonesia, UI's development policy through community service activities is detailed in three policies, namely:

1. Community service as a research-based or expertise-based activity.
2. Community service activities are carried out by the PPM Directorate in collaboration with various directorates at UI to optimize UI's potential to benefit the community.
3. UI research branding to the industrial world needs to be improved to encourage an increase in the number of collaborations with industry.

The focus of the community service targeted by the University of Indonesia automatically also becomes the focus that must be targeted by all forms of community service implemented at FMIPA UI. The focus of community service includes:

1. Health and Wellbeing
2. Energy and material resources
3. Innovative and connected society
4. Earth, climate, and environment
5. Resilience and Security

4.3. Symposium and Webinar Series

To enhance scientific knowledge and improve communication quality among the academic community at FMIPA UI, as well as with academic communities outside UI and abroad, FMIPA also organizes an International Symposium, which is held annually, namely:

- a. The International Symposium on Current Progress in Mathematics and Sciences (ISCPMS)

ISCPMS is an academic forum that can be a means for undergraduate and postgraduate students, lecturers and researchers in the fields of mathematics and science to present their research results, share experiences and tips in conducting research and follow the latest research developments in this field.

- b. The International Symposium on Current Progress in Functional Materials (ISCPFM)

ISCPFM is a symposium held with the support of the University of Indonesia as a means for undergraduate and postgraduate students, lecturers and researchers in the field of functional materials to present their research results, share experiences and tips in conducting research and follow the latest research developments in this field. The program of activities is attached.

- c. The Life and Environmental Sciences Academics Forum (LEAF)

LEAF is an academic forum that can be a means for undergraduate and postgraduate students, lecturers and researchers in the fields of life sciences, environmental sciences, earth sciences, geography and geosciences to present their research results, share experiences and tips in conducting research and follow the latest research developments in this field.

- d. The International Science and Mathematics in Academics Research Talks (ISMART)

ISMART is an academic forum that can be a means for undergraduate students in mathematics and science to present their research results, share experiences and tips in conducting research and follow the latest research developments in this field.

CHAPTER 5

Alumni



5.1. Alumni

Alumni is one of the important components in each department / faculty / university in addition to faculty, staff and students. Alumni FMIPA is part of a Big Family ILUNI UI, which is referred to as ILUNI FMIPA UI.

Universitas Indonesia was one of the first universities in Indonesia who started tracking studies of alumni (Tracer Study) at the college level. In 2008 UI is seriously working on the Tracer Study UI 2008. In spite of some shortcomings in the pilot study, UI Tracer Study 2008 has proven to be beneficial for college and the world of work.

Since 2014 the Faculty of Mathematics and Natural Sciences began working consistently Tracer Study FMIPA UI. Consistency is visible from some of the role of alumni FMIPA UI through consulting services, grants, and voluntary donations that will fund these funds will be used for the development of the Faculty of Mathematics and Natural UI through a specific event or events. Not only that, ILUNI FMIPA UI regularly will make a bulletin ILUNI FMIPA UI and will do Tracer Study FMIPA UI-based expertise to serve directory book FMIPA UI graduates.

ILUNI MIPA UI regularly hold annual event, titled "Homecoming Day MIPA UI" with the purpose of (i) unites and strengthens kinship between fellow alumni MIPA UI, (ii) as a forum that facilitates sustainable relationships between alumni, faculty, departments, and the UI Faculty students will be expected to devote knowledge in every aspect of social life and state, (iii) dig more detailed information about the biographies of the alumni who will be a bridge between alumni and students seeking learning experience in the world of higher education and as a precondition performance in the workplace, (iv) explore further information regarding the transition from higher education to the world of work, the relevance of education and competence acquisition alumni, sociobiografi aspects alumni, as well as photographing the relationship between the learning experience in the world of higher education and the prerequisites and performance in the workplace.

The first graduates FIPIA UI academic year 1949-1950 as many as 171 people. Until 2024 FMIPA UI graduates has reached $\pm 28,000$. UI FMIPA alumni who have been successful and work for Indonesia scattered in various areas in government agencies such as: BPPT, BAPETEN, BP Migas, BATAN, LIPI, the Ministry of Education and Culture, Ministry of Interior, Ministry of Energy and Minerals, Ministry of Agriculture, Ministry of Finance, PT.Telkom. While in the non-governmental organizations such as WWF, CI, WALHI, NRM, the World Bank. As a private company, which is engaged in banking, insurance, media, mining and petroleum, agribusiness, consumer goods, computers & IT, telecommunication, digital mapping, pharmaceutical industry, chemical industry, semiconductor industry, metal industry, education and research, survey.

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