Management Summaries
Cluster 3
ACQUIN ACCREDITATION

Bengkulu, Indonesia, 2022

Overview for Management Summaries (Cluster 3, ACQUIN)

The Faculty of Mathematics and Natural Sciences (henceforth FMIPA –*Fakultas Matematika dan Ilmu Pengetahuan Alam*) was established in 1999 with the Decree of the Minister of Education and Culture of Indonesia Number: 195/O/1999. Currently FMIPA has 14 study programs which are consisting of 3 Master Programs (MP), 7 Bachelor Program (BP) dan 4 Diploma Programs (DP). The Vision FMIPA is**:** ***become a faculty that organises high-quality education, research, and application of MIPA at the Southeast Asian level in 2025, especially in managing natural resources and tropical environments to support sustainable development***. The management structure of FMIPA is shown by **Figure 1**, which is mainly consisted of Dean, Vice Dean/Deputy, Academic Senate, Quality Insurance Unit, Departments, Study Programs, Laboratories and admirative office. More details related to FMIPA official can be found at FMIPA website at https://science.unib.ac.id/ (English version) and http://fmipa.unib.ac.id (Indonesian version).

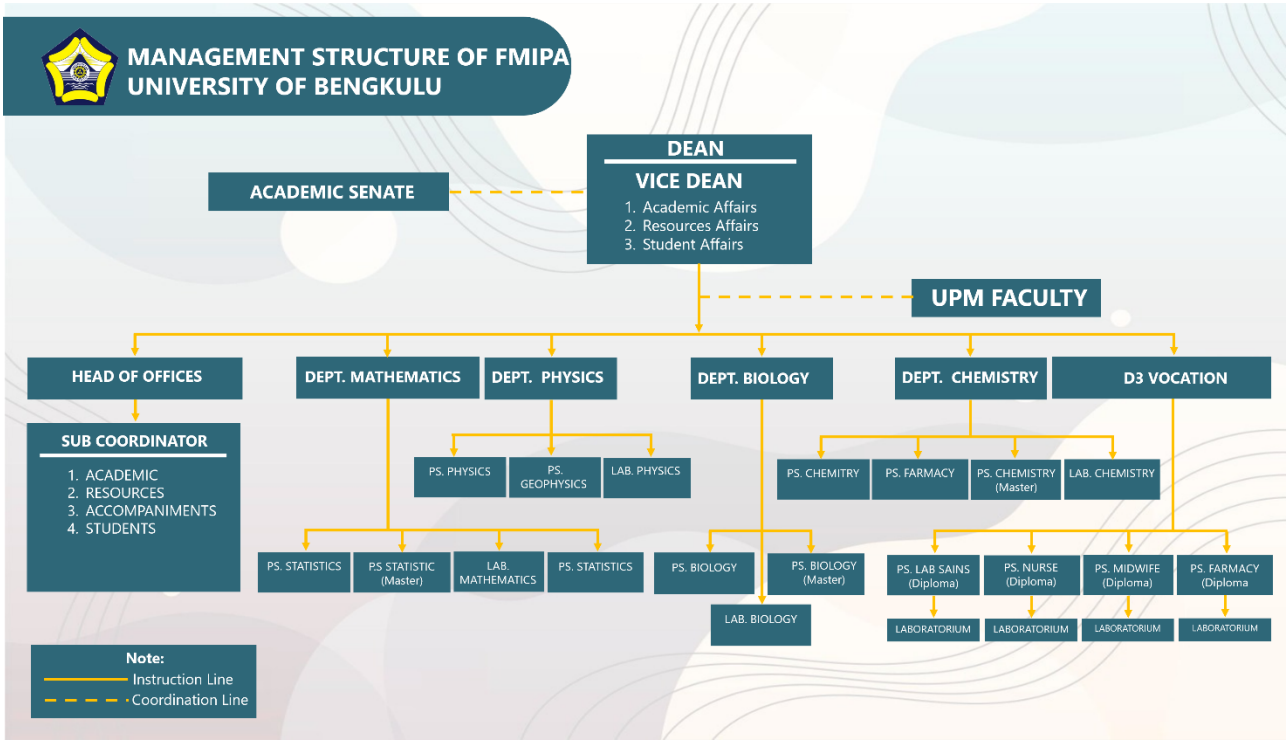

Figure 1. Flow chart of management structure at FMIPA

To improve the quality of study programs and teaching and learning activities at our faculty, we apply for international accreditation through the ACQUIN accreditation agency, which is registered on The European Quality Assurance Register for Higher Education (EQAR).

In this year, we apply the AQUIN accreditation with 7 BP and 2 MP plus one Medicine Program from Medicine and Health Faculty (FKIK), University of Bengkulu (UNIB). The FMIPA has teaching and learning facilities, especially the T building, Building V (Math, statistic and Biology Laboratory), and the Basic Science Building with an area of 4500 m^2 for the Physics, Chemistry, Geophysics and Biology Laboratory.

In FMIPA the curriculum developed by the Study Program includes learning outcomes that refer to the Regulation of the Minister of Education, Culture, Research, and Technology Number 3 of 2020 on SNDIKTI and a description KKNI level 6 for bachelor program and KKNI level 8 according to the Regulation

of the President of the Republic of Indonesia Number 8 of 2012 or equivalent to level 7 of the European Qualification Framework (EQF). One regular cycle of the Master curriculum can be completed in 3-4 semesters and 7-14 semester for bachelor program. The minimum total credit that each student at bachelor program. must achieve is 144 credits points, equivalent to 217.144 in ECTS credits points while for Mater Program is 32 credits which is equivalent to 54.36 ECTS, consisting of compulsory courses and elective courses. Example of the detailed courses offered (mapping) from Bachelor Physics Study Program for each semester which is also related PLO are shown in **Figure 2.**

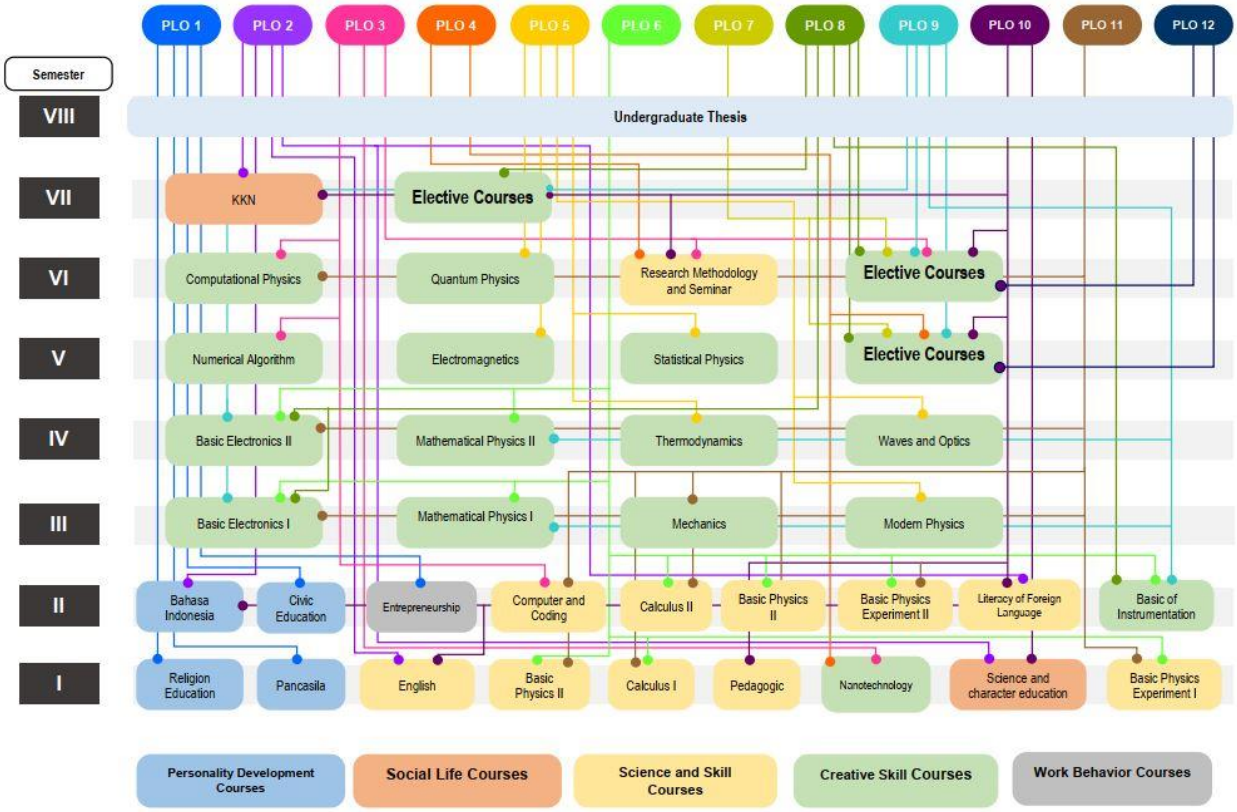

Figure 2. Curriculum Map of Bachelor Physics Study Program

The developed curriculum structure is designed to achieve the objectives of the study programme, implement the vision and mission, and meet the needs of the profile of the graduates. This is must be in lined with Institutional Learning Outcomes (ILOs) are the foundational knowledge, skills, and dispositions that characterize all of FMIPA graduates. To do so, each study program creates the Program Learning Outcomes (PLO), stating at the curricula. PLOs represent the big picture of a program/department by depicting broad aspects of desired student capabilities and reflecting the key distinguishing characteristics of the transition from student to professional/practitioner. To have more specific take-aways from a course or activity that students are meant to apply in future settings, Course Learning Outcomes (CLOs) are designed and are written by instructors to align with the PLOs. Each study program must create in general three types of LO that have been designed in the curricula i.e Knowledge, ideas, beliefs, facts (cognitive), Skills and abilities (performative) and Values, attitudes, emotions (affective). The developed curriculum is supported by the RPS/modules that represents the conformity of the graduate's profile with the LO, CLOs, the learning method used, and the variety of assessments used to measure the LO accomplishment.

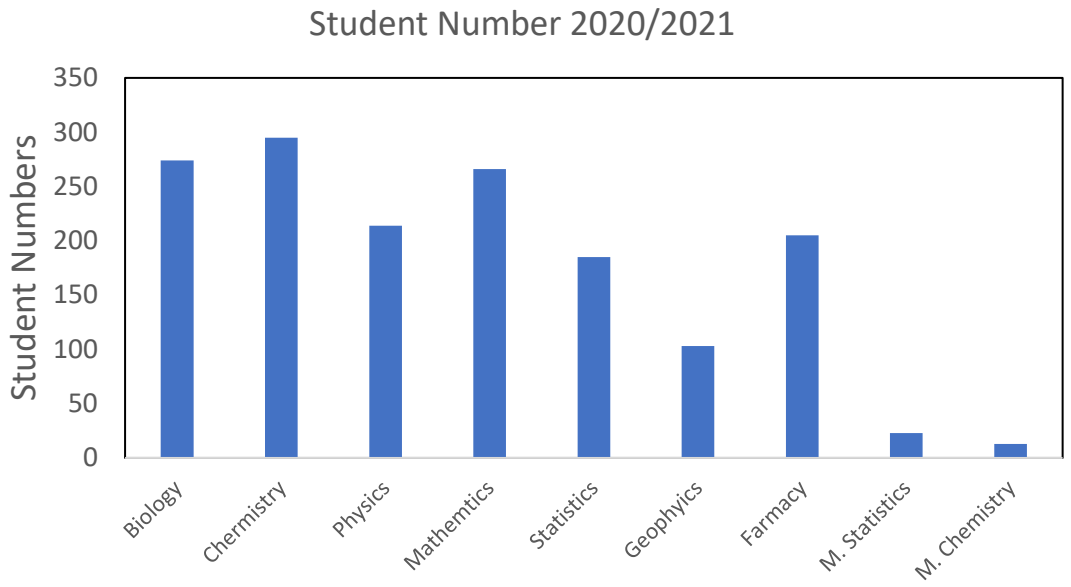

Figure 3. Student number for study program that conducting ACQUIN Accreditation.

The implementation of the learning process in each course takes place in the form of interaction between lecturers, students, and learning resources in a particular learning environment. The learning process is conducted following the RPS. The learning process is conducted systematically and structured through various effective learning methods set in the RPS. Every lecturer will conduct the learning process by following the RPS flexibly. Lecturers can develop the learning process according to the situation dynamics that occur in the classrooms. The curriculate for each study program can be found at https://bit.ly/3V1C2o1 or https://science.unib.ac.id/.

The learning systems implemented in FMIPA are blended learning, synchronous, and asynchronous systems. To support the implementation of the learning activity, UNIB, through LPTIK, facilitates the availability of e-learning that can be accessed by students and lecturers on https://elearning.unib.ac.id/ page. The implementation of the Teaching-Learning Process (henceforth PBM - *Proses Belajar Mengajar*) at FMIPA is monitored through an online presence that can be accessed on https://presensi.unib.ac.id/ page. Filling in attendance on this page includes lecture themes, sub-themes, and the attendance of lecture participants. Attendance filling is evaluated by the faculty manager at the end of each semester and used as the basis for assessing the performance of lecturers.

Currently, total students' number in FMIPA are 2758 students for all study program with lecturer-students ratio is 1: 21. **Figure 3.** Shows student number for study program that conducting ACQUIN Accreditation for 9 study programs from FMIPA. Prospective FMIPA students not only come from Bengkulu Province but also come from outside Bengkulu Province. New student selection mechanism, acceptance pathway FMIPA new students are conducted through the National Selection to Enter State Universities (SNMPTN), State University Entrance Joint Selection (SBMPTN), and Selection Independent Entrance to State Universities (SMMPTN). Average Entry tightness level at FMIPA is around 1:5 during 2018-2021.

Facilities in the laboratory can contribute to the process of learning, research, and community service. The equipment in laboratory contributes to the implementation of student practicums, so that students can be trained and accustomed to using tools, analysing and interpreting data both in the laboratory and in the field. The laboratory equipment also supports student research for final assignments

(thesis) and Student Creativity Program (PKM) research, research and service for lecturers and education staff. Now, the total permanent lecturers at FMIPA until the end of 2021 are 132 lecturers with contract lecturers with 6 professors. Details academic rank of lecturer at FMIPA is shown by **Figure 4**. Among of them of lecturers with doctoral education is 25%. In addition, supporting employees at FMIPA are dominated by 65 employees where 39 people with graduating from bachelor education, of the 14 people with high school education or equivalent.

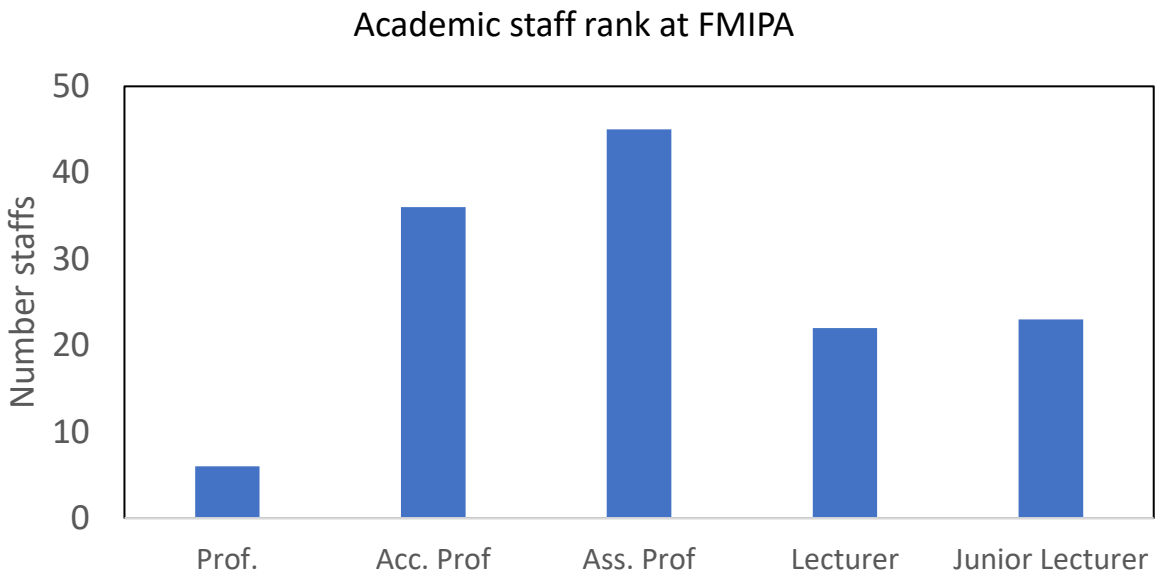

Figure 4. Distribution academic rank at FMIPA, UNIB

Since UNIB is a government university, most of the receipt of FMIPA funds comes from the governments of Indonesia, on average 70%. sources funding from student admissions fee and tuition fee is 28.3% in average and from other sources likes collaboration funds and endowment fund is about 2.38%. Detail source funding for FMIPA is described in **Figure 5.**

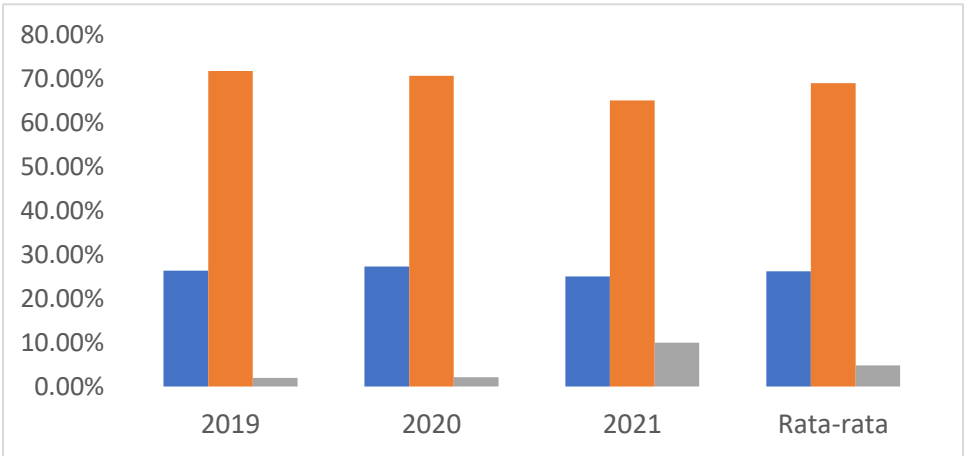

Figure 5. Source funding for FMIPA, blue bar from student fee and orange bar from government

Results measuring Learning Outcomes for each study program has been shown (https://bit.ly/3V1C2o1) that PLO measurement uses the PLO assessment. The results of PLO

measurement can be seen from several assessment indicators. The following is an example of measuring PLO: Lecture assignments are given to students at the end of each discussion topic to measure the level of student understanding of the material. Mid-semester exams are held on the 8th week of lecture while the final semester exams are held after the 16th week of lecture. Practical activities that are assessed, include preliminary assignments, quizzes, reports and midterm dan final exams of practicum, presentation, attendance and project based on case study.

Overall, the evaluation results of course outcomes in the all-Program Studies have exceeded the standard with good grades dominated. Students' skills in understanding and applicating each course learning outcome can be seen in the evaluation of course outcomes. The example results from evaluation of Course Outcome from Bachelor Farmacy Study Program can be seen at **Figure 6.**

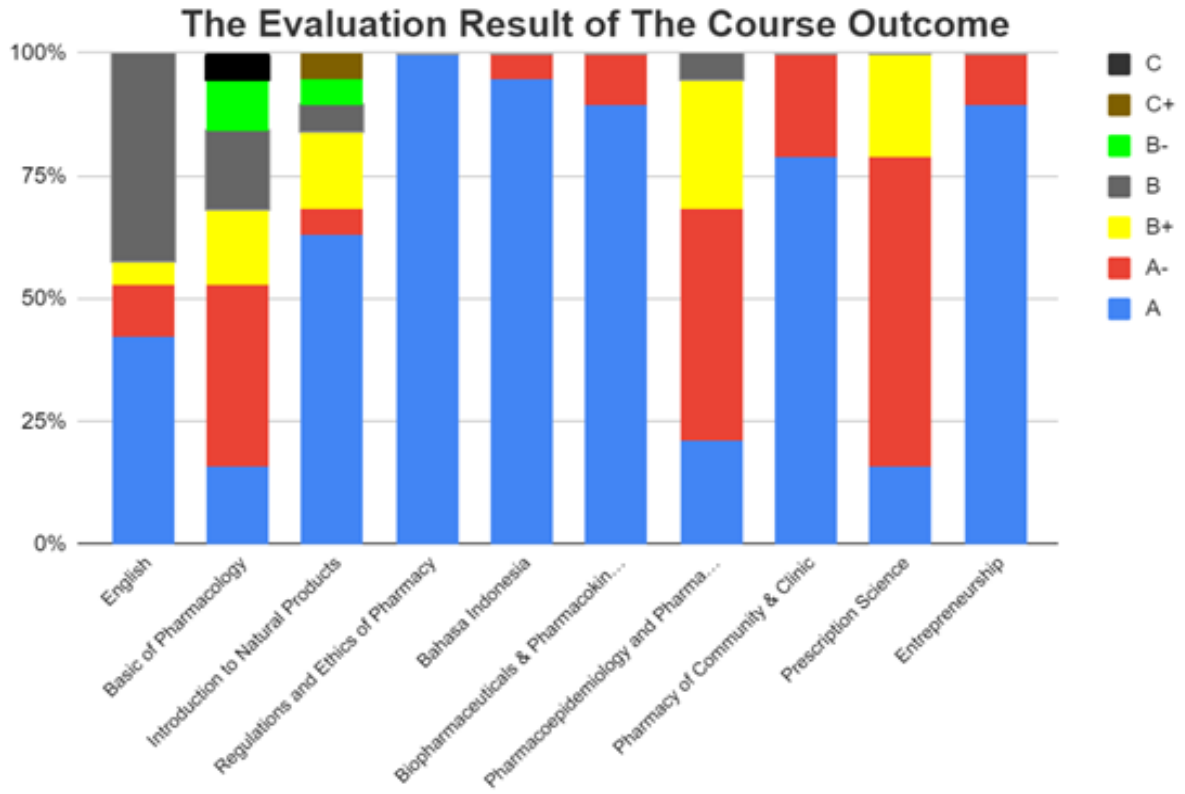

Figure 6. The Evaluation Result of the Course Outcome in BPharm Study Programme

Every Study Programme has different number of Intended Learning Outcomes (ILO). The ILOs are designed to meet the needed skills in the professional world by the predetermined graduate profiles. The achievements for each of the ILOs were analysed based on the study results of the 2017 students. In general, the assessment results show that graduates have exceeded the intended standards. In **Figure 7**, we show an example the ILO Assessment of the Bachelor in Biology Study Programme, the standard set for each ILO is 7.5 on a scale of 10.

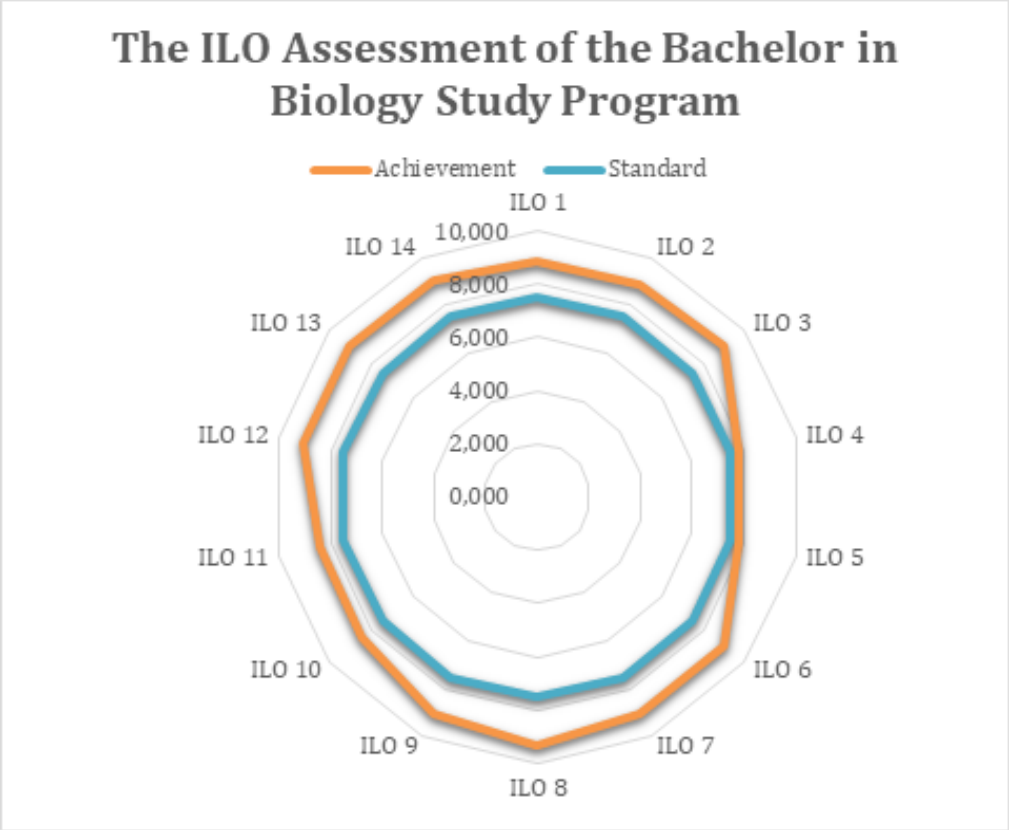

Figure 7. The ILO Assessment of the Bachelor in Biology Study Programme.

Currently the world is entering an era of innovation disruption, so a university must also do so innovation in various ways including the field of learning in accordance with developments technology. Therefore, FMIPA has taken various ways to update the process learning one of them by applying electronic learning (e-learning) via http://elearning.unib.ac.id. E-learning continues to be developed by making rules relating to the implementation of e-learning as well as by continuing to encourage lecturers using e-learning in learning. From a regulatory standpoint, e-learning has been recognized as a teaching and learning process that is equated with face-to-face through Decisions Chancellor (UNIB) Number 2524/UN.30/HK/2019 concerning Guidelines for Lecturer Workload (BKD).

Based on the Law for University, number 12, 2012, article 31 concerning Education Distance learning (PJJ) explains that PJJ is a teaching and learning process remotely through the use of various communication media. PJJ will provide higher education services to groups of people who cannot attending face-to-face or regular education; and expanding access as well facilitating higher education services in education and learning. PJJ organized in various forms, modes and scopes supported by means and learning services as well as an assessment system that guarantees the quality of graduates according to SNDIKTI standard.

Technological developments make learning media not only in textbooks library building. Open Course Ware (OCW) is a site or application that provide learning materials made by universities or government agencies. Course materials are usually in the form of videos and article presentations. Library Unit Service or the UNIB Library UPT has been developed online. This case does for serve stakeholders, especially students, effectively and efficiently. Expected service UPT Library UNIB, is able to increase the reading resources needed online students to improve their academic abilities optimally. Online service to utilize the UNIB library as a source of knowledge can be accessed through the website http://library.unib.ac.id, to search for scientific journals and other learning materials seen at

http://repository.unib.ac.id. In it already connected with http://garuda.ristekdikti.go.id. For scientific article services already linked to the page http://ristekdikti.summon.serialsolution.com. To support all academic activities at FMIPA and UNIB we had established several system information like: https://sisinfo.UNIB.ac.id/ https://simpeg.UNIB.ac.id/ https://pak.UNIB.ac.id/ https://sister.UNIB.ac.id/ https://prisma.UNIB.ac.id/ https://elearning.UNIB.ac.id/ https://siremun.UNIB.ac.i/ https://presensi.UNIB.ac.id/ https://www.UNIB.ac.id/ http://FMIPA.UNIB.ac.id/; https://simawa.UNIB.ac.id/.

All programs in FMIPA are subject to regular internal quality assessment procedures aiming at continuous improvement. All responsibilities and mechanisms defined for the purposes of continued development are binding. Students and other stakeholders take part in the quality assurance process. The outcomes and all measures derived are made known to anyone involved. All methods employed and data analyzed are suitable for the purpose and used to continue improving the degree program, especially with a view to identifying and resolving weaknesses. To this end, the information they provide includes whether the intended learning outcomes required to obtain the degree have been achieved; the academic feasibility of the degree program; student mobility (abroad, where applicable); how the qualifications profile is accepted on the labor market; the effect of measures in use to avoid unequal treatment at the higher education institution (if any).

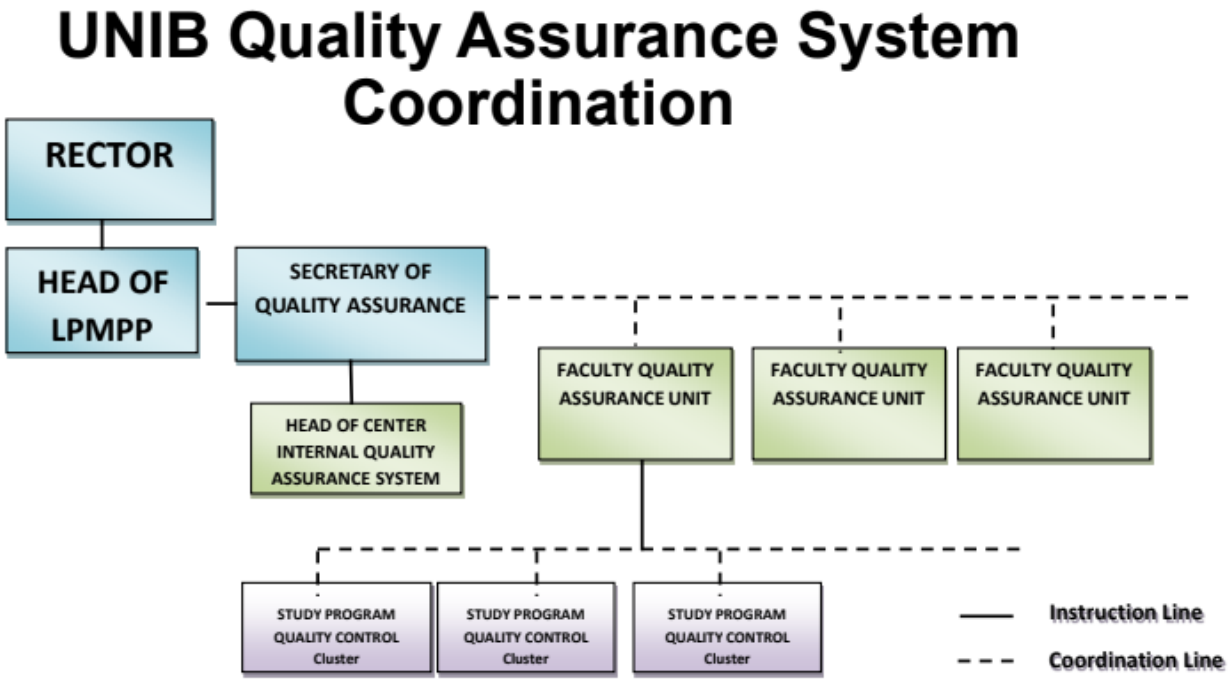

Figure 8. UNIB quality assurance system coordination

The Internal Quality Assurance System (SPMI) at UNIB is a tiered system. University level quality assurance is carried out by the Rector / Vice Rector and assisted by the Quality Assurance Centre which is under the Institute for Learning Development and Quality Assurance (LPMPP), UNIB. The quality assurance organization elements at FMIPA level are implemented by the Dean/ Vice Dean and assisted by the Quality Assurance Unit (UPM). Meanwhile, the quality assurance organization at Study Program level is controlled by Head of Department, Manager of Study Program and is assisted by the Quality Assurance Group (GKM). GKM and UPM are selected through selection by faculty manager and Manager of Study

Program and they are appointed based on the UNIB Rector's Decree. For more details, it can be seen in this **Figure 8.** Documents the Quality Assurance for can be found at https://bit.ly/3V1C2o1.

The activities of the internal quality assurance system carried out at the University/ Faculty/ Study Program are in accordance with the pattern of Quality Standard Setting, Implementation, Quality Standard Evaluation, Quality Standard Control, and Quality Standard Improvement (**Figure 9**). The determination of Quality Standards refers to the SPMI Standard Setting Manual that has been carried out by UNIB. The SPMI Quality Standard was ratified by the UNIB Rector. While the SOP at FMIPA level has been issued and signed by the FMIPA's dean. Implementation of Quality Standards in Study Programs at FMIPA is based on the quality standards and standard operating procedures at UNIB. Evaluation of quality standards is carried out in the form of monitoring and evaluation (Monev) and The Internal Quality Assurance (IQA) System of UNIB is regulated based on Rector Decree No 1506/UN30/HK/2016. The head of study program and GKM conduct Monev in the beginning of the semester to check lecture preparation and in the middle of the semester to check lecture process. At the end of the semester, students are involved in evaluating the lecture process that has been carried out by filling in the provided questionnaire. Then, the last process, there is an internal quality audit. Monev which is carried out by the head of the Study Program based on the formats provided by IQA of UNIB. Furthermore, the Monev activities are validated by UPM and agreed upon the results and plans for improvements to be made on the findings at the Study Program level. UPM creates Monev reports based on Monev conducted by the head of the Study Program and recapitulated by GKM at the faculty level. GKM makes a report and sends it to IQA of UNIB. Then, Monev results are submitted to the leaders of faculties, departments and study program for its follow-up.

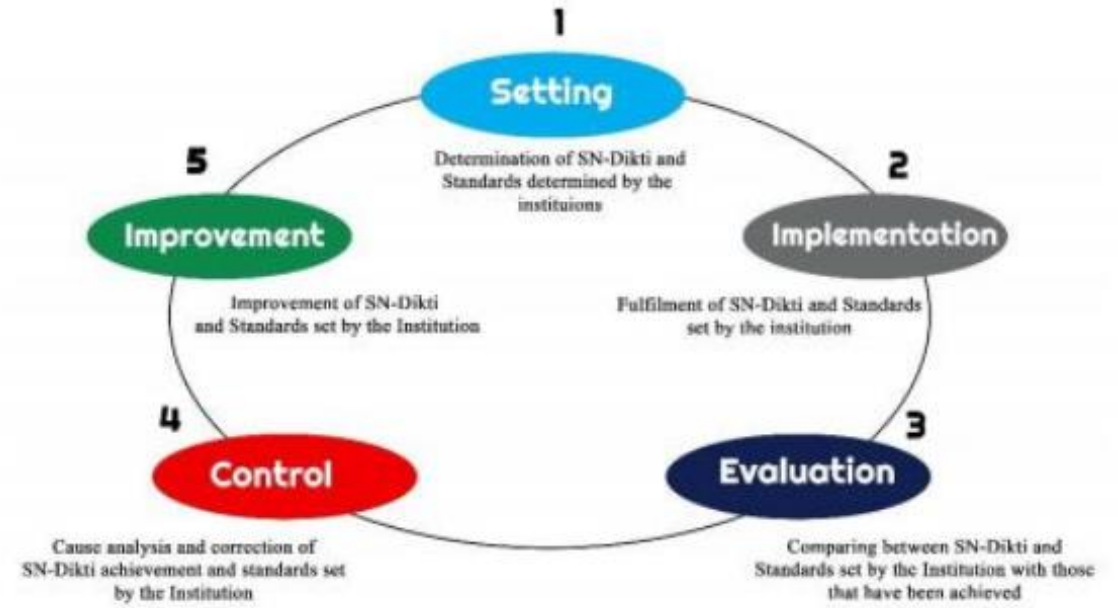

Figure 9. Quality Assurance System Cycle

Evaluation of the implementation of education is carried out by LPMPP and FMIPA through UPM using instruments that are filled out by each student through SIAPEL website (https://siepel.unib.ac.id) which contains learning process services. Evaluation that carried out includes 5 aspects which are carried out routinely every semester. This evaluation is conducted by IQA through SIAPEL website for each semester. Evaluation result followed up by giving rewards and punishments to lecturers. The control mechanism in the learning field is carried out in real-time every time face-to-face meetings between lecturers and students through the existing portal very well, namely: https://presensi.unib.ac.id. Dean

through academic sub coordinator can see the recapitulation of face-to-face implementation. The dean also carries out supervision to lecturers and students periodically in the form of direct process monitoring learning through reports from the Study Program Coordinator

During 2018-2021 the number of research activities conducted by lecturers FMIPA has recently increased. For example, in 2019 the number of research titles UNIB PNBP funds for all schemes (research development, leading research, research fundamentals, national collaborative research, international collaborative research, and PLP research) 63 titles. The number of these titles has increased quite significantly in 2020-2021. This is included number of research funded by DRPM Dikti (National level, ministry of education) and other institutions both national and international institutions. Mostly, the researchers conducted by lecturers at FMIPA is helped by students as a part of final project. As a result, the trend of publications and seminar activities at international and national levels at FMIPA in general has also increased in the last three years. This increasing trend will continue maintained by sharing efforts, one of which is by holding conferences internationally with the output of Scopus indexed (reputable), WoS journals etc.

Beside that the Community Service Activities are also carried out by FMIPA lecturers' accordance with the scientific competence and service roadmap at the university level, faculties and departments. In each service activity there are mandatory outputs and outputs additional requirements that must be fulfilled by the lecturer implementing the Community Service Activities. In addition to mandatory outputs and additional outputs, a handover is usually carried out for each activity appropriate technology products that can be utilized by the public and stakeholders related. The compulsory output of Community Service Activities is in the form of publication in accredited national journals. Further, the greater the funding obtained, the level of publication in national journals. While additional outputs can be in the form of implementation videos activities on the YouTube page, publications in print and online media as well as participation at the Community Service Activities seminar.

In order to achieve the FMIPA mission, we had established a large number of international networks and projects. Working together with its many partner universities, the University maintains a range of joint programs, providing students and researchers alike with a range of opportunities to cooperate with leading international institutions of higher education. Many cooperation at the national level with LIPI, BMKG, and the Ministry of Maritime Affairs and Fisheries (KKP) to carry out joint research and publication. Collaboration with various researchers from well-known universities in the world such as UKM Malaysia, Korea's Universities, Japan's Universities as well as USA universities. We are also having a collaboration with NTU Singapore, Universiti Brunei Darussalam (UBD), Chinese's Universities, Taiwan's universities), and others. Legal documents are digitally documented in the database (http://ksli.UNIB.ac.id/kerjasama-UNIB/).

Efforts to meet the needs of the workforce, FMIPA has attempted with as well as possible so that graduates are able to compete in the job market. In the academic field PS has compiled a curriculum in accordance with the National Higher Education Standards (SNDIKTI) and KKNI. Laboratory facilities both buildings and equipment also continue to be developed. All laboratories in FMIPA in their management have met operational standards which exists. FMIPA has consistently analyzed the results of surveys with alumni users the purpose of assessing and providing an overview of the extent of the capabilities of alumni against predetermined criteria. The results of this survey were obtained from the http://tracer.unib.ac.id page which is managed centrally under the rectorate. At FMIPA UNIB, arrived currently have more than 3000 graduated students because since the beginning of 2004.

FMIPA encourages alumni so that they can provide information on the data of their direct superiors so that superiors get notified automatically to fill out surveys. Based on tracer study data mentioned, FMIPA graduates have worked in various agencies as civil servants (such as ESDM, BPS, PEMDA, teachers, etc.), BUMN (Banks, Hospitals, etc.), further studies so that they become researchers and lecturers, private employees, entrepreneurs, and so forth.