



ASIIN Seal

Accreditation Report

Bachelor's Degree Programme
Nutrition and Feed Technology
Animal Production Technology
Technology and Management of Aquaculture
Silviculture

Provided by
Agricultural University Bogor (IPB), Indonesia

Table of Content

| | |
|---|-----------|
| A About the Accreditation Process..... | 3 |
| B Characteristics of the Degree Programmes | 5 |
| C Peer Report for the ASIIN Seal | 8 |
| 1. The Degree Programme: Concept, content & implementation | 8 |
| 2. Exams: System, Concept and Organisation..... | 19 |
| 3. Resources | 21 |
| 4. Transparency and documentation..... | 26 |
| 5. Quality management: quality assessment and development | 28 |
| D Additional Documents | 34 |
| E Comment of the Higher Education Institution (29.07.2023) | 34 |
| F Summary: Expert recommendations (08.08.2023) | 44 |
| G Comment of the Technical Committee 08 – Agriculture, Forestry and Food Sciences (13.09.2023) | 46 |
| H Decision of the Accreditation Commission (22.09.2023) | 47 |
| Appendix: Programme Learning Outcomes and Curricula | 49 |

A About the Accreditation Process

| Name of the degree programme (in original language) | (Official) English translation of the name | Labels applied for ¹ | Previous accreditation (issuing agency, validity) | Involved Technical Committees (TC) ² |
|---|--|---------------------------------|---|---|
| Nutrisi dan Teknologi Pakan | Nutrition and Feed Technology | ASIIN | AUN, 13 April 2014 – 12 April 2018 | 08 |
| Ilmu Produksi dan Teknologi Peternakan | Animal Product Technology | ASIIN | AUN, 13 April 2014 – 12 April 2018 | 08 |
| Teknologi dan Manajemen Perikanan Budidaya | Technology and management of Aquaculture | ASIIN | AUN, 3 May 2013 – 12 April 2017 | 08 |
| Silvikultur | Silviculture | ASIIN | AUN, 16 February 2015- 15 February 2019 | 08 |
| <p>Date of the contract: 27.01.2021</p> <p>Submission of the final version of the self-assessment report: 03.04.2023</p> <p>Date of the onsite visit: 11.-12.05.2023</p> <p>at: IPB Bogor</p> | | | | |
| <p>Peer panel:</p> <p>Prof. Dr. Gerhard Schleining, University of Natural Resources and Life Sciences, Vienna</p> <p>Prof. Dr. Bernhard Hiebl, University of Veterinary medicine, Hannover</p> | | | | |

¹ ASIIN Seal for degree programmes

² TC: Technical Committee for the following subject areas: TC 08 - Agriculture, Nutritional Sciences and Landscape Architecture

A About the Accreditation Process

| | |
|---|--|
| Prof. Dr. Carsten Mann, Eberswalde University of Sustainable Development Prof. Dr. Robert Hänsch, Technical University Braunschweig Dr. Fitri Pratiwi, Universitas Padjadjaran Mag. Med. Vet. Christian Gruber, veted-consulting | |
| Representatives of the ASIIN headquarter: Daniel Seegers | |
| Responsible decision-making committee: Accreditation Commission for Degree Programmes | |
| Criteria used: ASIIN General Criteria, as of April 14, 2022 Subject-Specific Criteria of Technical Committee 08 – Agriculture, Nutritional Sciences and Landscape Architecture as of March 27, 2015 | |

B Characteristics of the Degree Programmes

| a) Name | Final degree (original/English translation) | b) Areas of Specialization | c) Corresponding level of the EQF ³ | d) Mode of Study | e) Double/Joint Degree | f) Duration | g) Credit points/unit | h) Intake rhythm & First time of offer |
|--|--|----------------------------|--|------------------|------------------------|-------------|-----------------------|--|
| Nutrition and Feed Technology | Sarjana Pertenakan (S.Pt) Bachelor of Science in Animal Science | / | 6 | Full time | / | 8 Semesters | 144 SKS 230.4 ECTS | September 2005 |
| Animal Production and Technology | Sarjana Pertenakan (S.Pt) Bachelor of Science in Animal Science | / | 6 | Full time | / | 8 Semesters | 144 SKS 230.4 ECTS | September 2005 |
| Technology and Management of Aquaculture | Sarjana Pertenakan (S.Pt) Bachelor of Science in Fisheries | / | 6 | Full time | / | 8 Semesters | 144 SKS 230.4 ECTS | September 2005 |
| Silviculture | Sarjana Pertenakan (S.Pt) Bachelor of Science in Forestry (BSc.F) | / | 6 | Full time | / | 8 Semesters | 144 SKS 230.4 ECTS | September 2005 |

For the Bachelor's degree programme Nutrition and Feed Technology, the institution has presented the following profile in the Self-Assessment Report:"

Vision

"to be an international education and research center in the field of tropical feed and nutrition as to produce human resources with entrepreneurship characteristic".

³ EQF = The European Qualifications Framework for lifelong learning

Mission

1. To apply modern higher education to produce high quality graduates who are able to utilize local feedstuffs resources, to develop animal industry, and to increase human resources with entrepreneurship characteristic as to face the globalization era,
2. To apply and develop sciences in the field of tropical nutrition and feed technology through high quality research programs as to support education processes, problem solving related to tropical nutrition and feed technology,
3. To improve community services by providing high quality experts and programs related to tropical nutrition and feed technology.”

For the Bachelor’s degree programme Animal Production Technology, the institution has presented the following profile in the Self-Assessment Report:”

Vision

Our vision is to be an excellent study program that produces competent graduates in the field of animal production and products technology.

Mission

Our missions are:

1. To organize and develop undergraduate programs in animal production and products technology that adapt to technological developments.
2. To produce graduates with high scientific competence, managerial skills, and an entrepreneurial spirit with the ability to compete at national and international levels.
3. To develop programs that ensure the sustainability of livestock production, including animal welfare, food safety of animal origin, and conservation of genetic and environmental resources.
4. To develop research activities covering the issues of, but not limited to, animal welfare, food safety of animal origin, and conservation of genetic and environmental resources, that contribute to the development of sciences and technology at the national and international levels.
5. To develop programs that contribute to community service at regional and national levels.”

For the Bachelor’s degree programme Technology and Management of Aquaculture, the institution has presented the following profile in the Self-Assessment Report:”

Vision

The vision of TMA SP is to become an international institution of higher learning which produces the qualified graduates in the field of technology and management of tropical aquaculture.

Mission

To achieve its vision, the TMA SP executes the following missions:

1. Providing a relevant education to produce qualified graduates who are able to develop and to implement science and technology in the field of tropical aquaculture in accordance with the needs of the current and future society (2014-2025)
2. Conducting research in accordance with the needs of the society, hence making the major useful for the improvement of production processes efficiency and the development of tropical aquaculture technology
3. Conducting service to society (StS) to develop social sensitivity and responsibility of all lecturers and students. The StS activities are hoped to result in concepts of tropical aquaculture development which are to be accepted as a basis for policy making.

For the Bachelor's degree programme Silviculture, the institution has presented the following profile in the Self-Assessment Report:"

Vision

A study program with the main competence of tropical silviculture leading in Asia

Mission

- (1) Organizing teaching and learning activities creatively and innovatively in the context of updating science with the support of facilities, infrastructure, educators and education personnel, as well as adequate funding to strengthen the position of educators and education personnel, as well as adequate funding to strengthen DSVK's position at the international level.
- (2) Organizing research activities in a creative and innovative manner to develop science that is beneficial for the welfare of humanity.
- (3) Organizing activities to fulfill social responsibility optimally through real action in the form of service or community service.

C Peer Report for the ASIIN Seal⁴

1. The Degree Programme: Concept, content & implementation

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| Criterion 1.1 Objectives and learning outcomes of a degree programme (intended qualifications profile) |
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Evidence:

- Objective-module matrices
- Self-Assessment Report
- Study plans of the degree programmes
- Curriculum handbooks
- Module descriptions
- Website
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The experts assess whether the intended learning outcomes of the Bachelor of Science programmes in Nutrition and Feed Technology (NFT), Animal Production Technology (APT), Technology and Management of Aquaculture (TMA) and Silviculture (SVC) as defined by the Institute Pertanian Bogor (IPB) correspond to the competences outlined in the Subject Specific Criteria (SSC) established by the Technical Committee on Agriculture, Food Science and Landscape Architecture (TC 08). Based on their evaluation, the experts came to the following conclusion:

Graduates of the Bachelor of Science in Nutrition and Feed Technology will be able to conduct research and solve problems related to the nutritional science and technology of tropical feeds, especially in the use of local resources. They will be able to explain the potential of tropical feeds and forages and apply feed technology to improve feed quality and feed efficiency, to establish/construct pasture and to produce feed based on available potential areas. They will be able to explain

the functions, utilisation and metabolism of nutrients and nutritional engineering for efficient animal production in a healthy environment and apply feed production technology and feeding systems to produce healthy, high quality and efficient animal products, formulate animal diets/feeds, design feed production and control feed quality.

Upon graduating, APT students are expected to be able to apply a wide range of skills. They have a solid understanding of animal science, analysing animal and product characteristics and applying Good Farming Practices. They can identify processing methods in line with Good Manufacturing Practices and understand logistics management in animal distribution. Graduates will excel in technology implementation, entrepreneurship and animal product processing techniques. They conduct research, demonstrate leadership and teamwork skills, communicate effectively, adapt to evolving technologies, formulate policy and disseminate innovations to farmers.

Graduates of the TMA programme are equipped with a wide range of skills essential for a successful career in aquaculture. They will have expertise in the culture of various species of fish, shellfish and aquatic plants in a variety of aquatic environments. Their knowledge extends to breeding, feed formulation and the production of live food and industrial raw materials. They are skilled in implementing good aquaculture practices and are able to diagnose and treat fish diseases. Graduates excel in laboratory activities related to aquaculture and can interpret analytical results. They will be able to measure and manage aquaculture media, design and construct aquaculture tanks, and operate production, harvesting and marketing processes. Using their skills in assessing growth, health and risk, they will provide alternative solutions and contribute to the business of aquaculture. Graduates are effective communicators of aquaculture information and possess entrepreneurial and collaborative skills, making them valuable assets in the industry.

The programme objectives of the SVC programme are specified in nine more specific and appropriate learning outcomes. The LOs aim to enable students to analyse problems in tropical silviculture and formulate future-oriented solutions, to produce high quality seeds, to manage seed banks, to analyse influences on forest ecosystems and to integrate science and technology in the field of silviculture. Students should also learn to use forest resources in a respectful, responsible and holistic manner and develop entrepreneurial skills. The LOs are regularly updated every five years in a participatory manner. They are based on the insights and requirements of a range of stakeholders, including practitioners from forest research, administration and industry, academic staff, students and alumni working in different professions. As such, the LOs are kept up to date. This enables graduates to find employment shortly after graduation in both local and national forest science, management, administration and the wood processing industry, as well as to address contemporary societal challenges such as climate change, biodiversity loss and land use conversion.

All Graduates will also learn to think critically, solve problems, take responsibility for their work independently, lead groups and communicate nationally and internationally.

In summary, the auditors are of the opinion that the objectives and intended learning outcomes of all four programmes under review are reasonable and well founded and correspond to level 6 of the European Qualification Framework. They are convinced that the intended qualification of the undergraduate programmes will enable students to take up a job appropriate to their qualification. They also learn that various stakeholders (alumni, industry and government representatives) are involved in the continuous review and development of the curricula. For example, industry representatives are regularly invited to give suggestions on the skills and expertise graduates must possess and which new materials or topics should be added to the curricula. While there is a national standard for curriculum design, IPB takes into account stakeholder feedback and incorporates their expertise by supplementing lectures with guest lecturers from the industry who address emerging issues.

This cooperation between IPB and, in particular, its industrial partners results in good chances for the graduates on the national job markets, as well as the opportunity to transfer to other academic programmes to complete a Master's or maybe even a PhD programme. Although the programmes are mainly aimed at the national market, the auditors noted that the students participating had a very high level of proficiency in English, which was very impressive.

The employers confirm during the audit interviews that there is a high demand for graduates from all four programmes. Furthermore, they emphasize that graduates from IPB University are their first choice because they are "quick learners" and able to adapt very quickly to the specific situations, bring new ideas and energy, are able to solve problems and could be a motor for SMEs. However, the industry representatives also stress that there is room for improvement in soft skills such as creative thinking, flexibility, open-mindedness and entrepreneurship. The experts recommend strengthening these competences within the programmes to better prepare graduates for the dynamic and innovative challenges of the respective industry.

Overall, all programmes aim to produce well-rounded professionals who are prepared to contribute to different sectors of their respective industries, while having the flexibility to explore career opportunities outside of them.

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| Criterion 1.2 Name of the degree programmes |
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Evidence:

- Self-Assessment Report
- Diploma Supplements
- Discussions during the audit
- List of laboratory equipment

Preliminary assessment and analysis of the experts:

The auditors confirm that the English translation and the original Indonesian names of the Bachelor's degree programmes Animal Product Technology, Technology and Management of Aquaculture and Silviculture correspond with the intended aims and learning outcomes as well as the main course language.

However, the experts identify the need to re-name the Programme "Nutrition and Feed Technology". The current name does not accurately reflect the content focus of the programme, which is specifically focused on animal nutrition and feed technology. This mismatch can lead to potential confusion as the existing name implies a broader scope, possibly including human nutrition. In addition, inconsistencies arise from the University's use of both 'Animal Nutrition and Feed Technology' and 'Nutrition and Feed Technology' in external communications. It is therefore essential to change the name of the programme to ensure clarity and consistency in branding and communication efforts.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Study plan of the degree programme
- Curriculum handbooks
- Academic guidelines
- Module descriptions
- Objective-module matrices
- Discussions during the audit

Preliminary assessment and analysis of the experts:

After analysing the module descriptions and the curricula, the experts confirm that the four undergraduate programmes under review are divided into modules and that each module is a sum of coherent teaching and learning units. All working practice intervals (community service and field training) are well integrated into the curricula, and the supervision by the faculty allows for their respective quality in terms of relevance, content, and structure. In addition, the experts gain the impression that the choice of modules and the structure of the curricula ensure that the intended learning outcomes can be achieved.

The curricula consist of eight semesters, with a total of 144 credits, equivalent to 230.4 ECTS (European Credit Transfer and Accumulation System) credits. The programmes offer a comprehensive range of courses covering various aspects of food science and technology.

The undergraduate degree programme in Nutrition and Feed Technology offers a varied curriculum covering different aspects of the field. Core subjects such as mathematics, chemistry, biology and physics provide a solid scientific background. General economics and sociology courses broaden students' understanding of the socio-economic context. Interdepartmental courses focus on animal science, statistics, genetics and animal production technology. Major courses focus on nutrition and feed technology, covering subjects such as biochemistry, principles of animal nutrition, feed processing technology and pasture management. Supporting courses in animal husbandry, logistics and economics enhance students' knowledge and skills. Practical components, including fieldwork and a dissertation, provide hands-on experience.

The undergraduate degree programme in Animal Production Technology offers a comprehensive curriculum covering various aspects of the field. Core subjects such as Principles of Animal Production, Animal Genetics, Animal Logistics, Animal Behaviour and Welfare and Animal Functional Biology provide a strong scientific background. Specialist courses focus on areas such as dairy production, commercial poultry production, breeder poultry production, ruminant production, pig production and equine production. Practical components, including fieldwork and a dissertation, provide hands-on experience.

The undergraduate degree programme in Technology and Management of Aquaculture offers a diverse curriculum covering several areas of knowledge. Students are exposed to basic subjects such as agricultural science, mathematics, chemistry, biology and physics. Specialised courses focus on specific topics such as ichthyology, marine biology, fish nutrition and aquatic microbiology. Practical skills in aquaculture management, water quality and hatchery practices are also emphasised. The programme integrates management, entrepreneurship and communication courses to develop well-rounded skills. Through final projects and seminars, students demonstrate their understanding and engage in academic debate.

The majority of the courses in the Silviculture undergraduate programme are rooted in the natural sciences and forestry engineering. They include insights into statistics and basic scientific theories and approaches, as well as forestry-related subjects such as ecosystem-based silviculture, forest utilisation and nursery practices, forest ecology, forest fire management, agroforestry, and strategies for forest restoration and rehabilitation of degraded lands. To a lesser extent, the curriculum includes insights from forest economics, forest policy and environmental ethics, which could be strengthened in the future. However, through the integration of community service into the curriculum, students appear to be well connected to local people and the regional environment, and

guided by an idea of interdependent social-ecological systems and a close link between forest management and human well-being.

By the end of the programmes, students will have acquired a specialist understanding of various aspects of their respective fields. They will be equipped with both theoretical knowledge and practical skills to address complex challenges in the animal products industry, feed science and technology, aquaculture and forestry. The progression of the curricula from basic to specialist knowledge ensures that students are well prepared for successful careers in their chosen disciplines.

Students are usually required to do community service in their final year. Programme coordinators explain that community service is compulsory for all Indonesian students. It lasts a minimum of four weeks and usually takes place in villages or rural areas where students stay and live with the local people. The course is designed to enable students to apply their knowledge in their field of study in order to empower society. During the audit, the experts learn that the students work on concrete tasks/contents in coordination with their supervisors and that they feel well supervised in the process. The evaluation of the community service consists of a work plan, the implementation of the programme and an activity report.

Internships are usually conducted during the semester breaks and students are responsible for finding suitable work placements. Internships are often unpaid for the first three months, but there is often the possibility of extending them on a contractual basis, leading to paid positions.

The curricula are regularly reviewed according to the Standard Operational Procedure (SOP) and feedback is received from various stakeholders, including students, lecturers, alumni and private sector partners. While minor changes are made on an ongoing basis, the curricula are revised and reviewed in more detail every five years. It is also aligned with, the Indonesian National Qualifications Framework and industry recommendations. The curricula effectively address the needs of IPB's stakeholders and Indonesian society.

As part of the K2020 curriculum redesign, significant changes have been implemented to meet the requirements of stakeholders. The revised curricula emphasises the development of students' communication and collaboration skills, critical thinking and creativity in both general and specialised in the respective fields.

The departments have successfully implemented student-centred learning and participatory teaching methods in various courses. This approach emphasises the active involvement and participation of students in their learning journey. Many courses within the four programmes have successfully incorporated project-based learning, allowing students to actively participate in hands-on projects and collaborative activities. Through these student-centred approaches, students are empowered to take ownership of their education, enhance their problem-solving skills, foster creativity and develop critical thinking skills. This learner-centred environment fosters a dynamic and interactive

learning experience, enabling students to apply theoretical knowledge to real-world scenarios and develop practical skills relevant to their field of study. Feedback from both students and teachers on these modules has been overwhelmingly positive, with the workload perceived to be reasonable based on calculations.

The experts discuss with IPB how students are encouraged to improve their English language skills. They learn that different courses are available to familiarise students with subject-specific English vocabulary and expressions. Furthermore, the integration of English literature is evident through the recommended reading in the module descriptions. At present, some IBP programmes already offer fully English taught international classes, a feature that is highly valued by experts and stakeholders who have expressed satisfaction with the English language skills of IBP students. However, in order to further enhance the international attractiveness of IBP, the experts recommend the introduction of international classes in all undergraduate programmes.

Both students and representatives of industry and public institutions are satisfied with the overall composition of the curricula. However, as noted in Criterion 1.1, industry representatives would like to see more emphasis on soft skills such as creative thinking, flexibility and open-mindedness, as well as entrepreneurial skills. The experts recommend strengthening these competences in the four programmes under review in order to better prepare graduates for the dynamic and innovative challenges of industry.

Overall, the experts are satisfied with the curricula. They see that the programmes are well-structured and that the modules build on each other in a reasonable way, enabling the students to effectively reach the learning outcomes as laid down for the programme.

Mobility

Since 2020, the MBKM programme provides students with the opportunity to earn up to 40 SCU (equivalent to 2 semesters) outside the university, and up to 20 SCU (equivalent to 1 semester) outside the field of their study programme. This programme offers various possibilities for students, including internships in industry, research, independent projects, student exchanges, teaching assistance in education units, entrepreneurship, building a village, and humanitarian projects.

The MBKM-programme is optional for students. They are required to consult with their academic supervisor to determine their MBKM programme and hand in a Learning Agreement accordingly. The number of credit points students can earn by participating in one of the activities in the MBKM programme for a single semester depends on their workload.

There are two options for participation in the MBKM programme: full-time and part-time. Full-time participation involves leaving the campus for one semester without attending regular lectures, while part-time participation allows students to utilize their spare time between academic activities on campus.

The Self-Assessment-Report report highlights that the MBKM programme actively promotes international mobility, which further motivates students to engage in various opportunities abroad. These include attending summer courses, enrolling in individual courses at different universities or spending a full semester abroad. The four undergraduate programmes evaluated show a strong emphasis on both outbound and inbound mobility. IPB has successfully established collaborations with many partner institutions worldwide, particularly in South East Asia. However, IPB's reach has expanded to countries such as Canada, France, the Netherlands, the USA, Germany, Italy and Australia. In 2020, a total of 126 IPB students had the opportunity to participate in international mobility, while 123 students from all over the world were welcomed. This global exposure is complemented by the faculty members' extensive international networks and diverse educational backgrounds.

The reviewers were informed that IPB University has established numerous international partnerships and developed a scholarship programme. In addition, the university offers scholarships to foreign students who wish to study at IPB. Universities involved in student exchange programmes include Kangwon National University in the Republic of Korea, Kookmin National University in the Republic of Korea, Tokyo University of Agriculture in Japan, the Faculty of Forestry at the University of British Columbia in Canada, University Putra Malaysia in Malaysia, the University of Göttingen in Germany, and the Faculty of Agriculture at Kasetsart University in Thailand.

The experts consider that the emphasis on international mobility in the programmes evaluated is highly commendable and adds significant value to the overall educational experience. The active promotion and facilitation of student participation in various international opportunities demonstrates a strong commitment to fostering global perspectives and intercultural understanding. The establishment of collaborations with numerous universities around the world underlines the programmes' commitment to widening the scope of international mobility beyond South East Asia. The significant number of students engaged in international experiences and the reciprocal exchange of international students further illustrate the programmes' success in this area. Overall, the emphasis on international mobility is a notable strength that enriches the educational environment and prepares students for global engagement.

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| Criterion 1.4 Admission requirements |
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Evidence:

- Self-Assessment Report
- Academic Guidelines
- Websites

- Discussions during the audit

Preliminary assessment and analysis of the experts:

According to the Self-Assessment Report, the admission procedure is carried out centrally by the Directorate of Educational Administration. The requirements, the schedule and the registration venue are announced on the University's webpage and published in form of a Guidance Book as well. Therefore, the admission system is accessible for all stakeholders.

There are three main schemes by which students can be admitted to a Bachelor's programme at IPB:

1. National Entrance Selection of State Universities (Seleksi Nasional Perguruan Tinggi Negeri, SNMPTN), a national admission system, which is based on the academic performance during the high school.
2. Joint Entrance Selection of State Universities (Seleksi Bersama Masuk Perguruan Tinggi Negeri, SBMPTN). This national selection test is held every year for university candidates. It is a nationwide written test (subjects: mathematics, Bahasa Indonesia, English, physics, chemistry, biology, economics, history, sociology, and geography).
3. Admission based on Talent Test (*Ujian Talenta Masuk IPB - UTM*). Written test conducted by IPB (around 15 % of the students are admitted through this test).

In addition to the conventional admission routes, IPB offers alternative pathways for admission, including those based on international achievements or regional representative scholarships, which account for a smaller portion of the overall admission process.

The admission website informs potential students in very detailed about the requirements and the necessary steps to apply for admission into the programmes. Since the rules are based on decrees by the ministry of education and on the university's written regulations, the experts deem them binding and transparent.

Based on the university's Self-Assessment Report, it has come to the experts' attention that the current admissions policy does not align with the principles of inclusivity and equal opportunities for all students. Unfortunately, the university's policy explicitly excludes students with colour blindness from the admission process. This exclusionary practice undermines the university's commitment to creating a diverse and accessible learning environment. In order to meet accreditation standards, it is imperative for the university to revise their admissions policy and eliminate any discriminatory practices against colour-blind students. By adopting a more inclusive approach, the university can ensure that all qualified applicants, regardless of color blindness or any other visual impairment, have equal access to higher education opportunities.

Criterion 1.5 Workload and Credits

Evidence:

- Self-Assessment Report
- Study plan of the degree programme
- Curriculum handbooks
- Survey of student satisfaction related to the workload
- Module descriptions
- Discussions during the audit
- Students handbook

Preliminary assessment and analysis of the experts:

Based on the National Higher Education policy, the FTSP uses a credit point system called SKS. In comparison to ECTS credit system, wherein 1 ECTS equals 25-30 hours of students' workload per semester, it is determined that 1 SKS is awarded for 170 minutes of workload per week and the relation between the different kind of learning (contact hours, self-studies) is fixed. Most of the modules are rather small and encompass between 1 and 3 SKS. A standard 3 SKS module is approximately equals 4 ECTS. Therefore, to reach the usual workload, students need to take on average 18 SKS per semester. However, the regular schedule usually covers 19-21 SKS per semester to give more space in the last semesters for final projects, or more electives. If a student is not satisfied with his GPA, she or he can repeat the classes, but this will lead to a prolongation of the study time.

According to the Self-Assessment Report, the expected time to complete the programmes is 8 semesters. The average length of study is slightly longer than 8 semesters. A number of corrective measures have already been taken to compensate for this slight delay, which is mainly due to the implementation of the final year project. However, the impact of these corrective measures can only be assessed when the restrictions imposed by Covid 19 no longer affect the study. The experts appreciate these efforts.

Overall, the experts gain the impression that workload of the four undergraduate programmes is generally suitable and that modules are adequately credited.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Photos and videos of laboratories
- Self-Assessment Report
- Module descriptions

- Samples of lecturer evaluation by students
- Websites
- Discussions during the audit

Preliminary assessment and analysis of the experts:

IPB University aims to support the transition from teacher-centred to student-centred teaching in order to involve all students in the learning process and to develop their thinking and analytical skills. Among other methods, blended learning is being introduced as a modern way of teaching. The use of e-learning elements in the learning process allows for classroom activity without physical presence. In this respect, IPB's Lecture Management System and other internet resources are actively used to provide students with course materials. In order to support and guide teachers in the use of these tools, all members of the teaching staff have attended workshops on blended learning.

All four programmes use several different teaching methods for each course, such as practical laboratory work, field studies, lectures, community service and the final research project.

Active and interactive teaching methods (e.g., lectures, discussions, reports, presentations and group work) are used in the classroom. IPB aims to encourage students to acquire knowledge from different scientific fields and to introduce them to research activities. This should ultimately contribute to the transition from a teacher-centred to a student-centred approach to learning.

In addition, with the 2020 curriculum, IPB has tried to implement teaching methods that better prepare students for their working lives and are closer to the expected cases they will be working on. Therefore, they added problem-based learning to strengthen students' communication and collaboration skills, critical thinking and creativity.

In summary, the expert group judges that the teaching methods and tools are appropriate to support students in achieving the intended learning outcomes. In addition, they confirm that the study design the four programmes under review includes a variety of teaching and learning methods and practical parts, adapted to the respective subject culture and study format. Students are actively involved in the design of teaching and learning processes (student-centred teaching and learning).

Another tool IPB uses to improve the diversity of teaching and learning is the invitation of guest lecturers from the industry or alumni who are able to convey practical experiences and present examples of how the contents of the study programme are applied in practice. The experts welcome this approach and recommend deepening the efforts since they could learn during the discussion with the industry representatives that this exchange is highly valued by them and that all parties benefit from the opportunity to cooperate.

During the discussions with the programme coordinators and the teaching staff, the experts learn that the teaching staff tries to implement English assignments such as presentations and written

homework to support the English language proficiency of the students. Some of the face-to-face teaching is also held in English depending on the lecturer.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 1:

Criterion 1.1

The experts highly commend IPB's unwavering dedication to enhancing students' soft skills. While the results of the 2020 curriculum modifications and the MBKM programme remain unseen to employers due to the absence of completed students from this cohort, the experts are optimistic that these introduced changes will ultimately enhance overall employability and foster a more practical learning experience.

Criterion 1.2

The experts value IPB's acknowledgment of the need to align the program's name with its content and objectives, favouring "Animal Nutrition and Feed Technology." They recognise that the process will take time and look forward to official confirmation of the name change.

Criterion 1.3

The experts are impressed by the various approaches taken to improve students' exposure to English courses and exchange opportunities. They believe these programs and measures will contribute to raising the international standard among students and support IPBS's plan to increase the number of international classes.

Criterion 1.4

The experts recognise that the APT, SVK and TMA programmes have no colour blindness restrictions. However, they find it difficult to agree with IPB's argument regarding the need for NFT students to discriminate between colours. Instead, they urge IPB to focus on facilitating the students' learning process in this regard.

The experts consider criterion 1 **partly fulfilled**.

2. Exams: System, Concept and Organisation

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| Criterion 2 Exams: System, concept and organisation |
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Evidence:

- Self-Assessment Report

- Module descriptions
- Examination regulations
- Curriculum handbooks
- Samples of student's work (projects, exams and thesis)
- Statistical data
- Websites
- Academic Calendar

Preliminary assessment and analysis of the experts:

According to the Self-Assessment Report, the students' academic performance is evaluated based on their attendance and participation in class, their laboratory works, assignment reports, homework, presentations, mid-term exam, and the final exam at the end of each semester. The system, concept, and organization of exams are stated in the Guidance Book of Bachelor Degree Programmes of the University, which is available to the students and faculty members in printed and electronic forms. Everyone can access the Guidance Book via website of the University also. All final exams take place within a certain timeframe at the end of each semester. This timeframe (exam weeks) is communicated at the beginning of each academic year. Before the exam week there is a preparatory week offered for students to prepare intensively for their final exams.

If a student fails, he or she must take a remedial exam in order to pass the courses or repeat the entire module in the following semesters. The further details are described the Academic Guidelines.

The experts discussed also the availability of special measures for students with disabilities or illnesses when examinations take place. They learn that IPB University has regulations for disability compensation, which include the extending deadlines, leave of absence (one semester break), alternatives examination forms.

In addition to the course assessments, undergraduate students are required to complete a final project in the form of a bachelor's thesis. The final year student fulfilling the academic performance requirements is admitted to the final stage consisting of the following items: preparation phase (proposal drafting), research implementation, writing the thesis, seminar (presentation of preliminary findings), and thesis exam. In the preparation phase, students need to prepare and submit a research proposal including a suitable topic to the Thesis Advisory Committee. The Committee reviews the proposal and decides about the supervisor, who mentors the student until the final report

submitted and presented. Assessment of the thesis exam is conducted by a supervisor, an examiner, and a chairperson of the degree examination session.

The experts also inspect a sample of examination papers and final theses and are overall satisfied with the general quality of the samples.

In conclusion, the experts note that all relevant examination regulations are in place and well communicated in a transparent way. The forms of exams are oriented toward the envisaged learning outcomes of the respective courses, and the workload is distributed in an acceptable way.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 2:

IPB does not comment on criterion 2.

The experts consider criterion 2 **fulfilled**.

3. Resources

Criterion 3.1 Staff and Staff Development

Evidence:

- Self-Assessment Report
- Staff Handbook
- Samples of lecturer evaluation by students
- Study plan of the degree programme
- Module descriptions
- Websites
- Discussions during the audit

Preliminary assessment and analysis of the experts:

At IPB, the staff members have different academic positions. There are professors, associate professors, assistant professors, lecturers, and assistant lecturers. The academic position of each staff member is based on research activities, publications, academic education, supervision of students, and other supporting activities. For example, a full professor needs to hold a PhD degree. In addition, the responsibilities and tasks of a staff member with respect to teaching, research, and supervision depend on the academic position.

The university provides the following table, displaying the lecturer student ratio:

| Degree Program | Ratio of students and lecturers | Ratio of student final year and lecturers |
|----------------|---------------------------------|---|
| NFT | 1 : 12 | 1:4 |
| APT | 1: 12 | 1:4 |
| TMA | 1 : 16 | 1 : 5 |
| SVC | 1: 9 | 1 : 3.4 |

After reviewing the staff handbooks associated with each programme, the experts confirm that the current faculty is sufficiently qualified and in sufficient numbers. It is worth noting that many lecturers have PhDs from overseas institutions and have returned to IPB. This enriches their expertise with up-to-date knowledge and an international perspective, which they effectively impart to the students. As a result, the qualifications and diverse backgrounds of the faculty contribute to a well-rounded educational experience at IPB.

The experts discuss with IPB's management how new staff members are recruited. They learn that every year the faculties and departments announce their vacancies to the University's management. Since IPB is semi-autonomous, they can decide themselves what staff members to hire.

The experts also inquire whether there are any requirements for staff members to hold practical experience when applying to IPB. During discussions with the University's management, it is clarified that practical experience has importance for the academic staff, particularly for those practitioners involved in teaching in vocational schools. As regards the faculty, staff positions are mostly taken by PhD degree holders, therefore, the requirements mainly addressed the scientific profile with the capability to apply theory in the field of research.

The auditors are impressed at how the staff members and programme coordinators are engaged to the teaching process, and certainly, this atmosphere of understanding and support is one of the strong points of the degree programmes.

In summary, the experts confirm that the composition, scientific orientation and qualification of the teaching staff are suitable for successfully implementing and sustaining the degree programmes.

In order to encourage the training of its academic and technical staff, IPB University has developed a programme for improving the didactic abilities and teaching methods. One part of the capacity-building programme focuses on subject-specific skills (to keep up with current developments and trends in the areas of the programmes under review), whereas other training courses are intended to further improve the teachers' didactic skills and to introduce new teaching methods (e.g., blended learning, project based learning).

The professional and scientific development of the staff members is coordinated both at the University and faculties level. There are financial resources available for staff members to go abroad for a limited time and to take part at conferences or other events in order to stay up to date with the scientific development in their area of expertise. In addition, all four faculties want to promote the process of internationalisation at IPB by hosting international scientific events, facilitating sabbatical leaves, and inviting international professors.

The experts discuss with the members of the teaching staff the opportunities to develop their personal skills and learn that the teachers are satisfied with the internal qualification programme at IPB University, their opportunities to further improve their didactic abilities and to spend some time abroad to attend conferences, workshops or seminars.

Additionally, the experts pay attention to the scientific research that is funded by the industry, and to what extent the students can take part in such activities together with the lecturers. In this regard, programme coordinators and lecturers alike refer to examples of research projects IPB carries out in cooperation with the industry. According to the University, the purpose of such collaborations is to implement innovations currently needed by the industry, and to form industrial atmosphere at the campus as well. In order to strengthen the bridge between science and industry, a Science-Techno Park has been developed at the campus.

In summary, the auditors confirm that IPB University offers sufficient support mechanisms and opportunities for members of the teaching staff who wish to further develop their professional and teaching skills.

Criterion 3.2 Student Support and Student Services

Evidence:

- Self-Assessment Report
- Curriculum handbooks
- Students handbook
- Discussions during the audit

Preliminary assessment and analysis of the experts:

IPB University offers a comprehensive advisory system for all undergraduate students. At the start of the first semester, the academic supervisors are assigned to students. The role of the academic supervisor is to help the students with the process of orientation during the first semester, the

introduction to academic life and the university's community, and to respond promptly to any questions. They also offer general academic advice, make suggestions regarding relevant careers and skills development and help if there are problems with other teachers. The students confirm during the discussion with the experts that they all have an academic advisor.

The university has also implemented a mentoring system with the aim of fostering student development. The system brings numerous benefits, including promoting collaboration and a sense of community among faculty members, facilitating effective pedagogical practices, offering personalized support, and enabling experienced faculty members to contribute to the professional growth of their experts. This initiative reflects the university's dedication to enhancing the quality of education and creating a supportive learning environment for students.

In conjunction with the academic and mental support, IPB provides financial support for students with economic difficulties. In addition, the University manages and distributes scholarships to assist students with high academic performance.

The University also provides student counselling services and medical center services for personal problems a student might face. Students' interests and talents are furthermore facilitated through several centers, such as the career development center or the scholarship information portal. In order to provide students with sufficient information about the available support and assistance, IPB distributes a Guidance Book for Bachelor's degree students that is regularly updated. All necessary information can also be found on IPBs websites.

The experts notice the good and trustful relationship between the students and the teaching staff; there are enough resources available to provide individual assistance, advice and support for all students. The support system helps the students to achieve the intended learning outcomes and to complete their studies successfully and without delay. The students are well informed about the services available to them.

Criterion 3.3 Funds and equipment

Evidence:

- List of laboratories and equipment
- Photos and videos of the facilities
- Partnership agreements
- Recapitulation of budget
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The experts had a close look at the equipment used for practical training in the laboratories. They saw an advanced research laboratory equipped with the latest research technology (e.g., FACS, confocal laser scanning microscope, deep genetic sequencing device, mass spectroscopy) and some research laboratories equipped with research equipment representing the current state of the art. The research equipment in these laboratories is provided to support research staff and postgraduate students. In contrast, the technical equipment in the laboratories used only for the training of undergraduate students is at a very basic level.

However, most of the bachelor students are looking for jobs in industry after graduation, and in industry they usually have to work with more modern research equipment than is offered for teaching at the IBP. Therefore, the experts suggest that (A) the undergraduate students should also be given an insight into the use and possibilities of the research equipment available in the advanced laboratory and the research laboratories, and (B) the students should also be offered more modern analytical equipment in the teaching laboratories (e.g., photometers for ELISAs, spectrometers).

Basic funding of the degree programmes and the facilities is provided by the IPB University. Additional funds, e.g. for research activities or special equipment, can be provided by IPB or by the National Indonesian Government, but the teachers have to apply for them.

The experts are satisfied that the teaching and office facilities, libraries and computer labs which are adequate for all students and staff. The experts can also assess that safety measures, such as safety policies and protocols, fire extinguishers and emergency showers, are available and in line with international guidelines. Students are also required to undergo safety training in order to work in the laboratories.

In the interviews with the students, it became clear that the current libraries of the individual IBP faculties are not used very often. This is mainly due to outdated literature and a lack of additional facilities (e.g., creative areas set up for group learning and discussion). The experts believe that the library concept should be adapted to modern standards and the literature used for learning and teaching should be modernised. Access to such resources is crucial in fostering a comprehensive and globally informed learning environment. To address this, the university should consider expanding its library collection and online databases to include a wide range of international journals. By providing students with access to these resources, the university will enable them to engage with diverse perspectives and stay up-to-date with current research and developments from around the world. This recommendation aligns with the university's commitment to offering a high-quality education that prepares students for success in a globalized society.

In summary, the experts confirm that current funding allows standards to be maintained and additional instrumentation to be purchased if required, that IPB University generally has sufficient workspace and laboratories, and that all laboratories are equipped with modern and sophisticated instrumentation.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 3:

Criterion 3.3

The experts are highly confident in the overall quality and satisfaction level of the equipment available to students. They appreciate IPBS's drive to enhance the equipment further, emphasizing that their main concern was the availability of modern tools in the teaching environment.

The experts are convinced that overall accessibility to literature is not an issue at IPB. However, they pointed out specific areas where improvements could be made, particularly in adapting library facilities to better cater to students' needs and follow a more modern approach. Enhancing these facilities would offer students more opportunities for group learning and discussions.

The experts consider criterion 3 **fulfilled**.

4. Transparency and documentation

| |
|--|
| Criterion 4.1 Module descriptions |
|--|

Evidence:

- Module descriptions
- Websites

Preliminary assessment and analysis of the experts:

The students, as well as all other stakeholders, have access to the module descriptions via IPB's homepage. The more detailed syllabus is handed out to the students by the lecturers at the beginning of each semester. The syllabus includes a practical guideline and detailed description of the practical parts of each course.

After reviewing the module descriptions, the experts confirmed that they contain all the essential details, including information on the module coordinators, teaching methods, workload, credit

points awarded, intended learning outcomes, content coverage, applicability, admission and examination requirements, as well as assessment methods and a comprehensive explanation of how the final grade is calculated.

However, the experts noted that some of the module descriptions submitted were outdated and not in line with accreditation requirements. To remedy this, the experts are asking IPB to provide module descriptions specifically tailored to the 2020 curriculum. The updated module descriptions must include all modules taught in the programmes to ensure comprehensive coverage. In addition, it is essential to include the correct allocation of ECTS credits for each module to ensure accurate credit calculation and workload assessment. For example, in the Nutrition and Feed Technology programme, it was found that each module was assigned a workload of 135 hours, which appears to be a copy and paste error.

In addition, it is crucial to demonstrate the changes and improvements made in the new curricula. This includes highlighting the use of innovative teaching methods, such as project-based learning, and clearly outlining how these methods enhance the student learning experience and align with the intended learning outcomes.

Updated versions of the module handbooks must be uploaded to the relevant websites and be accessible to all stakeholders.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Sample Transcript of Records
- Sample Diploma certificate
- Sample Diploma Supplement

Preliminary assessment and analysis of the experts:

The experts confirm that all students receive a diploma and a diploma supplement upon graduation. The diploma consists of a diploma certificate and a transcript of records. The transcript of records lists all the courses taken by the graduate, the credits earned, the grades and the cumulative GPA. The Diploma Supplement contains information about the degree programme, including soft skills acquired and awards (extra-curricular and co-curricular activities). However, it does not currently provide information on the grade distribution within the student cohort and the ECTS credits earned, which is necessary for potential employers to be able to properly assess a student's performance. Therefore, IPB has to add this statistical information.

Criterion 4.3 Relevant rules

Evidence:

- Self-Assessment Reports
- Curriculum handbooks for all degree programmes
- Academic Guidelines
- Examination regulations
- All relevant regulations as published on the university's website

Preliminary assessment and analysis of the experts:

The auditors confirm that the rights and duties of both IPB and the students are clearly defined and binding. All rules and regulations are published on the university's website and hence available to all relevant stakeholders. In addition, the students receive all relevant course material in the language of the degree programme at the beginning of each semester.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 4:

Criterion 4.1

IPB has shared the K 2020 curriculum structure, but it seems that the new module handbooks are missing. The experts kindly request IPB to provide the updated versions of the module handbooks, including the information mentioned earlier.

Criterion 4.2

IPB provides updated versions of the Diploma Supplements for each programme. These new versions contain all the necessary information.

The experts consider criterion 4 **partly fulfilled**.

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report

- Academic Guidelines
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The experts learn that there are two levels of quality assurance. The first level is external quality assurance, which consists of an external review of IPB's study programmes by the National Higher Education Accreditation Body (BAN-PT). All study programmes received an "A", which means "Unggul (Excellent)" in the new BAN-PT rating. The second level consists of an internal quality assurance system carried out by different actors.

The first actor at the university level is the Quality Management and Internal Audit Office (KMMAI). Its role is to develop and monitor the university's quality assurance system in order to continuously improve the quality and accountability of academic and non-academic programmes throughout the university. It follows a Plan-Do-Check-Action (PDCA) cycle.

At faculty level, IPB has established Quality Assurance Groups (Gugus Penjamin Mutu, GPM) that work in close collaboration with the Quality Control Units (Gugus Penjamin Mutu, GPM) at departmental level. While the Vice-Dean coordinates the GPMs, the Secretary of the Department coordinates the GKMs.

IPB University presents the published document "Quality Assurance System for undergraduate programmes (IQAS(/SPMI(Internal Quality Assurance System)))", complying with the University's Education Quality Standards for Education. The regulations encompass all core processes of the University and the respective quality assurance measures, processes and responsibilities. All of the mentioned quality assurance units on the different levels use this tool to work towards the same standard.

The IQAS mandates regular monitoring, assessment, and audit of quality achievement, involving students, alumni, and graduate users. Students are involved in assessing the learning process, while alumni and graduate users evaluate the outcomes of graduates through tracer studies. There are seven quality standards for BSc degree programmes at IPB University, covering various aspects of education and research:

1. Standard-1: Vision, Mission, Objectives, and Targets, as well as Strategic Programmes. This standard ensures that the vision, mission, objectives, and targets of the BSc degree programmes are well-defined and aligned with the overall goals of IPB University. It also includes strategic programmes to support the achievement of these objectives.

2. Standard-2: Government, Leadership, Management, and Quality Assurance Systems. This standard focuses on the governance structure, leadership, and management of the BSc degree programmes. It ensures that effective systems for quality assurance are in place to maintain educational standards.
3. Standard-3: Students and Graduates. Standard-3 emphasizes the well-being and success of students throughout their academic journey. It includes aspects such as student support services, student development, and the overall satisfaction and performance of graduates.
4. Standard-4: Human Resources. This standard addresses the quality and competence of faculty members and staff involved in delivering the BSc degree programmes. It includes aspects such as recruitment, professional development, and the evaluation of teaching staff.
5. Standard-5: Curriculum, Learning Process, and Academic Atmosphere. Standard-5 focuses on the curriculum design, the learning process, and the overall academic environment offered to students. It ensures that the curriculum is relevant, the teaching methods are effective, and the academic atmosphere is conducive to learning.
6. Standard-6: Funding, Infrastructure, and Information Systems. This standard covers the availability of adequate funding, infrastructure, and information systems to support the delivery of BSc degree programmes. It ensures that the necessary resources are provided to facilitate effective teaching, research, and learning.
7. Standard-7: Research, Community Empowerment, and Collaboration. Standard-7 emphasises the importance of research, community engagement, and collaboration within the BSc degree programmes. It encourages research activities, partnerships with external stakeholders, and contributions to the development of the community.

Two important tools highlighted by IPB are the curriculum evaluation and development process and the evaluation of teaching and learning.

Curriculum evaluation aims to improve programmes and ensure relevance to current issues and developments. The evaluation process involves various stakeholders and takes place every five years. Feedback from alumni and stakeholders is used to adapt the curriculum. In 2014, the curriculum was enhanced by incorporating new courses such as KKNT (Knowledge, Skills, and Attitudes for Natural Resource Management) and Field Work. These additions provided students with more opportunities to learn independently in the field, interact with the community and engage in entrepreneurial activities. In addition, a new curriculum was introduced in 2020 with a focus on the demands of the Industrial Technology 4.0 era. This curriculum encouraged students to take enrich-

ment courses of approximately 20 credits in total. These courses aimed to enhance students' competence through independent learning activities. In addition, the curriculum emphasised the development of students' character by offering various opportunities such as student exchanges, internships/field placements, teaching in schools, research projects, humanitarian initiatives, entrepreneurial activities, independent projects and village development projects. Overall, the 2014 and 2020 revisions aimed to improve the relevance of the curriculum, encourage student engagement and enhance the overall student learning experience.

The learning evaluation is completed online by students each semester. Ten elements of courses are evaluated, including course design, delivery of materials, knowledge acquisition, attendance, independent work, teaching materials, teaching facilities, examination questions and prompt notification of examination results. Quality assurance activities include planning, implementation, monitoring and evaluation with the aim of improving the teaching and learning process. Student satisfaction is assessed through the Evaluation of the Teaching and Learning Process (EPBM), which provides feedback on course parameters and lecturer performance. The EPBM results for all departments are consistently good, with no negative impact on student participation or feedback.

During the audit, the experts discuss the quality management system at IPB with the rectorate representatives, programme coordinators and the students. They concluded that IPB has established a well-organised system of quality assurance that involves all relevant stakeholders. All programmes and courses are constantly under review for further development. Students learning outcomes throughout the whole student life cycle are monitored through various surveys and the results are used to improve the quality of the degree programmes. In this regard, it is particularly noteworthy that the faculty seems to have succeeded in establishing a remarkably responsive feedback culture between teachers and students. During the discussions, students report that their assessment of the courses and their criticism of the work of University' services are taken seriously and that they feel well informed about the follow-up to any critical remarks. The lecturers also confirm the trusting and cooperative relationship in the teaching/learning community at the faculties. Moreover, IPB University and the Faculty of Agricultural Engineering and Technology maintain close contact with their alumni, who also support the Faculty by raising funds.

Through the student representatives, opinions and wishes can also be expressed during the weekly "Rabuan" meetings, which serve as a discussion forum for the faculty. It is advisable to complement this approach with the introduction of formal voting rights to enable students to actively participate in decision-making processes. This would further increase student engagement and ensure that their voices are heard effectively.

Considering the numerous methods available for students to provide feedback to teachers, the experts express scepticism regarding the effectiveness of the efforts in EPBM. Mandating feedback

may lead to responses lacking in validity. It is advisable for IPB to re-evaluate its approach to collecting feedback data, adopting a more nuanced strategy that saves students' time when completing surveys and reduces the burden on the university's resources in managing the extensive data collected. Additionally, it is noteworthy that students mention not receiving any feedback on the evaluations, leaving them unaware of any improvements derived from their written comments. Hence, it is crucial for IPB to address this issue and ensure effective communication of the results to enhance the feedback process.

The experts learn from the representatives of IPB's partners from public institutions and private companies that there are regular meetings with the partners on faculty level, where they discuss the needs and requirements of the employers and possible changes to the degree programmes. The experts see that changes in the curriculum are implemented as a result of feedback from employers.

The experts found a very open and innovative attitude to addressing disadvantage, for example in recruiting candidates from remote areas of Indonesia. Several measures have been taken to support female staff (e.g., childcare) and staff with disabilities. IPB has created a new central unit to meet their needs.

However, when it comes to students with disabilities or chronic illnesses, the experts could not find a consistent policy or strategy on the direction IPB is taking. Similarly, in the area of gender equality, no pathways or objectives were identified. The fact that only full-time positions are offered seems to be one of the limiting factors for women to apply for a position at IPB.

The experts recommend that IPB proactively addresses at least the most common diversity issues (such as age, gender, race, religion, sexual orientation, physical and mental (dis)ability, etc.), not only prohibit discrimination on these grounds, but actively promote diversity.

In summary, the expert group confirms that the quality management system is overall suitable for identifying weaknesses and improving the programme. All stakeholders are involved in the process, but the closure of the feedback loop with students needs to be ensured.

Final assessment of the experts after the comment of the Higher Education Institution regarding criterion 5:

The experts acknowledge the rationale behind making student surveys mandatory and commend IPB's commitment to enhancing the validity of the system. While they understand that due to the pandemic, feedback may not have consistently reached the students, they urge IPB to implement a process that effectively communicates survey results and the actions taken as a result. One suggested approach could be discussing the results during the final lecture or publishing them in a format accessible to all participating students, such as through the learning management system.

Furthermore, the experts highly appreciate IPB's efforts towards equality and the inclusion of students with disabilities. They commend the university for its various programs aimed at fostering an even more diverse and inclusive learning environment.

The experts consider criterion 5 to be **partly fulfilled**.

D Additional Documents

No additional documents needed.

E Comment of the Higher Education Institution (29.07.2023)

The institution provided a statement as well as the following additional documents: Criterion 1.1:

Strengthening the soft skills such as creative thinking, flexibility, open-mindedness and entrepreneurship to better prepare graduates for the dynamic and innovative challenges of the respective industry

We are grateful for the reviewer's input on the study programs' objective and learning outcomes implementation. We strive always to improve the quality of curricula to develop highly qualified graduates in their respective fields.

We highly appreciate the positive feedback we have received from industries regarding the adaptability of IPB graduates to the dynamic environment. We acknowledge the importance of strengthening soft skill competencies to further enhance our students' ability to adapt to the fast-paced and ever-changing professional landscape. To achieve this goal, all of study programs has made significant adjustments to the 2020 curriculum (K2020) to provide more opportunities for students to improve their skills.

Under the K2020 curriculum, we have designed various platforms, such as internships, capstone projects, and enrichment courses, aimed at equipping students with the skills required by industries. Additionally, it incorporates entrepreneurship principles to prepare students for running their businesses successfully. These initiatives foster a holistic approach to learning and skill development.

Moreover, the K2020 curriculum includes the Merdeka Belajar, Kampus Merdeka (Freedom Campus-Freedom to Learn / MBKM) program, allowing students to participate in off-campus activities (up to 20 credits) to further enhance their skills and pursue their interests for future careers. Many students have already taken advantage of this opportunity by engaging with industries, NGOs, or other campus activities to improve their soft skills, including leadership, interpersonal and intrapersonal communication, managerial skills, critical thinking, networking, and more.

To ensure practical relevance and real-world exposure, the study programs actively engage industrial and field practitioners as well as academicians and researchers outside the IPB Campuses in the classroom as guest lecturers. They bring their expertise and experiences to enrich the learning process. In addition to the curriculum, the Study Programs has a dedicated Student Affairs Commission, facilitating numerous student activities as platforms for enhancing soft skills, including seminars, industry and field visits, exhibitions, and competitions, providing students with ample opportunities to apply their knowledge and build practical skills.

While we currently lack quantitative data on the precise impact of the program on student soft skills due to its recent implementation, we firmly believe that all the study programs are on the right track by continuously aligning the program with the needs of industries and the community. Nonetheless, we are aware of the importance of evaluating this new curriculum and collecting industry feedback to further refine and improve our initiatives in the future.

Criterion 1.2:

Confirmed from TMA-SP, APT-SP, and SVC-SP

Changing the name of the programme to ensure clarity and consistency in branding and communication efforts.

Comment from NFT-SP:

We thank the reviewer's suggestion for renaming our study program. The existing name is "Nutrition and Feed Technology", because the word "Feed" is already referring to animal feed. We agree with the reviewers that the current name may lead to potential confusion to the scope of other study programs, such as Human Nutrition. We agree to change it into "Animal Nutrition and Feed Technology". As the name has been registered in the Ministry of Education However see the following link <https://ipb.link/nftsp-pdddikti> changing the name of study program may take a longer time due to the bureaucratic process we should face, such as conduct the workshop that invite all of the stakeholder and prepare the powerful academic technical note before the IPB Senate agreeing the change. The process to name changing can be seen in this link <https://ipb.link/prosedur-namaps> (available in Bahasa only)

Criterion 1.3:

Improving student English language skills and student mobility

We are fully aware of the significance of English as the primary means of international communication. In line with the reviewer's feedback, all of study programs is dedicated to enhancing the quality of English proficiency among students to make the department more attractive. To achieve this goal, APT-SP, TMA-SP, NFT-SP and SVC-SP offers certain courses as international classes every semester, although there is a limitation in the number of participants, as University policy dictates a minimum of 20 students per class. Nonetheless, we are actively working on promoting the international class further to attract more students and meet the required quota.

Moreover, the teaching methods in regular classes also frequently incorporate English, both in handouts and as references for reading, such as journals and books. These efforts are aimed at improving students' English proficiency within the classroom setting.

However, we recognize that conventional classes alone may not be enough to achieve significant improvement in English proficiency. As a result, all the study programs organize various activities to provide additional platforms for students to enhance their English skills, including:

1. **Summer Course Program:**

Conducted annually in collaboration with numerous universities in Indonesia and abroad, this program aims to equip students with English communication skills while also attracting international students to the study programs. Please see some summer course program activities in APT-SP (https://iptp-fapet.ipb.ac.id/?page_id=4944), in NFT-SP (<https://intp-fapet.ipb.web.id/iosc/>), and in SVC-SP (<https://ipb.link/iscfe-2022>)

2. **International Student Competition:**

Held in conjunction with the summer course program, this competition requires students to submit English essays on specific topics. It is open to students worldwide and serves as an excellent platform to improve students' English writing abilities. The SVC-SP introduced the Outstanding Student Presentation Award on its International Conference conducted every 2-years. Both undergraduate students and lecturers are encouraged to join this conference (as committees, presenters, and/or participants) to disseminate their research, enlarge networking, and expose their capability at the international level. As a presenter, they deliver their finding through oral and/or poster presentations (<https://ipb.link/icts2019-pics>). In addition, APT-SP <https://iptp-fapet.ipb.ac.id/?p=4798> is also held international student competition, aiming to develop science and technology innovations in animal production, disseminate the results of animal research or idea on livestock production improvement related to sustainable organic farming to support green animal production for food security and human welfare and strengthen international networking in coping the millennial challenges. Another international student competition held by SVC-SP is Youth Initiative Contest 2022 (<https://ipb.link/yic-fahutan-2022>)

3. **Student Exchange:**

The study programs benefit from a wide network of international connections and funding opportunities, enabling students to participate in international exchange programs. Through initiatives like the SUIJI program (Japan), APT-SP students for instance have successfully joined these programs, leaving positive impressions on host universities, some of which have even recruited them as postgraduate students under full scholarships (https://iptp-fapet.ipb.ac.id/?page_id=327). The SVC-SP welcomed an undergraduate student from South Korea last semester for joining an agroforestry course (<https://ipb.link/exchange-south-korea>). Additionally, students from all study programs may travel abroad for research under research grants, further enhancing their English communication skills

4. **Stadium General and Joint Lectures with English Speakers:**

All the study programs frequently organize general lectures delivered by international speakers visiting IPB University, with English as the medium of communication. Students are encouraged to attend these talks, which are often related to their subjects of study, providing them with an opportunity to experience an international atmosphere and engage in English conversations. An example from SVC-SP on the general lecture delivered by the academician from abroad can be found in <https://ipb.link/guest-lecture-ignacio>

5. **Encouraging the students to write their bachelor thesis in English and present it in English as well.**

6. **Many programs offered by IPB (international collaboration office) such as IISMA, Erasmus+, international summer courses, student exchange, and travel grants for students to foster student's international experiences and prepare them for global engagement.**

We firmly believe that elevating students' English proficiency requires continuous effort. As a result, we are constantly designing relevant activities to serve this purpose. Future strategies include offering incentives to students who choose to write their theses or conduct seminars in English. Additionally, as an area of improvement, we plan to facilitate student-led activities for English improvement, such as English clubs, TOEFL/IELTS classes, English language days, and more. These initiatives aim to foster a conducive environment for English language development at all the study programs.

We agree that we need to improve international mobility programs. Currently, all of study programs tried to allocate funds for international mobility programs for students and for lecturers. The lecturers also participate as speakers at various international events. Furthermore, we also allocate funding from to support student participation in various international exchange programs. In the future, we will improve the quality and quantity of the international mobility activity with various global universities.

We greatly appreciate your recommendation to introduce international classes. We wholeheartedly agree that fostering international mobility and experiences is crucial for enriching the learning experience and promoting a global outlook within our academic community. Both students and lecturers are supported to join international academic activities.

Criterion 1.4:

Revising the admissions policy and eliminate any discriminatory practices against colourblind students.

The university sets admission requirements if the criteria used are not discriminatory. These requirements are considered a proportionate means to achieve the learning outcomes. practice. With regards the policy to colourblind students, APT-SP, SVK-SP, and TMA-SP confirmed that there is no restriction for colourblind candidates.

As for NFT-SP, we accept students with partial colour blindness in the admission process. This is since most fields in NFT-SP, such as in feed quality control and microbiology require the ability to well distinguish the colour. We think that students with full colour blindness will have difficulty following the learning process which will certainly hinder these students in the future.

Criterion 1.5:

Confirmed from TMA-SP, APT-SP, and NFT-SP, SVC-SP Criterion 1.6:

Involving the industry representatives in the learning process to benefit the opportunities to cooperate.

We fully agree that involving the industries and alumni to participate in the learning process could provide widen perspective for students. At APT-SP, we have invited some representatives from industries or alumni to provide lecture, herewith we called as guest lecture. The invited guest lecture should relate with the course, and it is expected that they can provide for example practical information, challenges, and opportunities in the related field. Here are some guest lectures that have been invited by the APT-SP https://iptp-fapet.ipb.ac.id/?page_id=321 .

Criterion 2:

Confirmed from TMA-SP, APT-SP, and NFT-SP, SVC-SP Criterion 3.1:

Confirmed from TMA-SP, APT-SP, and NFT-SP, SVC-SP Criterion 3.2:

Confirmed from TMA-SP, APT-SP, and NFT-SP, SVC-SP

Criterion 3.3:

The possibilities of students of using the research equipment available in the advanced laboratory and the research laboratories and be offered more modern analytical equipment in the teaching laboratories.

We are thankful for the reviewer's suggestion about analytical equipment for undergraduate students. We wholeheartedly agree with the reviewers' feedback that students should have increased access to high-quality laboratory equipment to produce exceptional research output.

In principle, all students have access to the laboratory for research purposes. The establishment of the Advanced Laboratory (ARL) aims to integrate and facilitate students in conducting high-quality research. In practice, the study programs provide briefings to final-year students on various aspects related to their final year projects, including clarifying the open access policy for the entire laboratory throughout IPB University. However, it is important to note that each laboratory has its capacity limitations and safety regulations that must be adhered to. The ARL lab is a newly developed and unique facility, established in 2019. Some undergraduate students from all the study programs have used the equipment in the ARL lab for their research as a part of their undergraduate thesis. Students may have access to the equipment by applying a permission known by their supervisor.

We also acknowledge the need for further improvements in teaching laboratories, particularly in field laboratories. However, in the case of APT-SP, we have made significant strides in transitioning from conventional to more modern equipment and facilities. For instance, genetic testing analysis at the genetic laboratory has seen remarkable advancements. The APT-SP animal genetic laboratory and SVC-SP forest tree genetic laboratory has now become leading laboratories for genetic analysis, setting a benchmark for other faculties of animal science (for APT-SP) and forestry science (for SVC-SP) and serving as a reference for numerous genetic studies. Similarly, the APT-SP has introduced a modern slaughterhouse that enables students to familiarize themselves with advanced slaughter equipment, which is a crucial skill for those intending to work in the meat industry.

As for the area of improvement, IPB rectors already assigned a policy that some of the university funds will be allocated to update laboratory equipment in the laboratory. TMA-SP through The Department of Aquaculture has proposed to buy a new quantitative real-time PCR to support student and lecturers research activity, while the NFT-SP, SVC-SP and APT-SP allocates funds in rotation for completing the analytical equipment in each laboratory. In various field laboratories in APT-SP such as dairy, sheep, and poultry, the faculty has allocated funds for renovating stables and has displayed a strong commitment to enhance the teaching laboratories. These new and high-tech equipment will improve students' ability to use modern analytical equipment and in turn will improve the research capacity of the study program. This commitment is evident through the provision of additional funding for these improvements.

In conclusion, we value the reviewers' feedback and are dedicated to addressing the concerns raised. Our commitment to enhancing laboratory facilities and equipment remains unwavering, and we are continually working towards providing students with the resources they need to excel in their research endeavours.

The library concept should be adapted to modern standards and the literature used for learning and teaching should be modernised.

We greatly appreciate the expert's comments and acknowledge the importance of adapting the library concept to modern standards and enhancing the literature used for learning and teaching. We understand that access to a diverse and comprehensive collection of resources is crucial in fostering a globally informed learning environment.

However, we would like to highlight that our budget is a limiting factor when it comes to expanding the library collection as much as in developed countries. Nevertheless, we are committed to continuously improving the library's collection, and we have seen a consistent increase in the number of resources available year by year. To bridge the gap and provide students with access to a wide range of international journals, we have subscribed to most of the prominent databases, including Scopus, Wiley Library, ScienceDirect, CABI Publishing, and others. These subscriptions allow our students and faculty to access cutting-edge research and stay up to date with current developments from around the world.

In Indonesia, IPB library is known for its substantial reference collection, and we are proud of this achievement. However, we understand the importance of striving for continuous improvement, and we are actively working towards expanding our collection further.

While budget constraints may pose challenges, we are fully committed to fulfilling our university's mission to offer a high-quality education that prepares students for success in a globalized society. Providing access to a diverse array of resources is a priority for us, and we will continue to explore avenues for enhancing our library collection and online databases to meet the needs of our students and faculty.

We sincerely thank the expert for their valuable input, and we assure them that their recommendations align with our aspirations for offering the best educational experience possible to our students. Their feedback reinforces our commitment to providing a world-class learning environment at IPB University

Criterion 4.1:

Module descriptions specifically tailored to the 2020 curriculum

We uploaded the description for K2020 on the website for APT-SP <https://iptp-fapet.ipb.ac.id/wp-content/uploads/2023/05/TPT.pdf>
SVC-SP <https://ipb.link/k2020svk> NFT-SP (<https://intp-fapet.ipb.web.id/en/education/undergraduate>)

Please also visit the following link <https://ipb.link/asiindocument>

Criterion 4.2

Providing information on the grade distribution within the student cohort and the ECTS credits earned, which is necessary for potential employers to be able to properly assess a student's performance.

Thank you for your valuable input regarding the content of the Diploma Supplement. We agree that by providing the grade distribution could provide a more comprehensive and informative that enhances the employability of our graduates. By including these statistics, we believe employers will have a more holistic understanding of a student's academic journey, soft skills acquired, and extracurricular achievements. We have provided the student cohort and ECTS earned in our Diploma supplement. Please kindly check the following link <https://ipb.link/asiindocument>

Criterion 4.3

Confirmed from TMA-SP, APT-SP, and NFT-SP, SVC-SP Criterion 5

The effectiveness of EPBM to collecting feedback data

We appreciate the feedback from the reviewers regarding the effectiveness of EPBM (Evaluation of Teaching and Learning). We would like to clarify that EPBM is the official evaluation system used for active students. However, we also conduct an additional survey for our alumni (or fresh graduates) as part of our tracer study. This survey is essential in evaluating our program's industry acceptance and the satisfaction level of our graduates.

EPBM is designed to evaluate each subject individually, allowing us to pinpoint specific issues for improvement in each subject. Based on our experiences, each subject may have unique challenges that require distinct approaches for enhancement. We do understand that making EPBM mandatory might compromise its validity, but from our experience, making it "voluntary" could

lead to significantly lower feedback, which is even worse for the system's validity. Nevertheless, we agree to adjust the system to enhance its validity.

All of the study programs use EPBM results as feedback to evaluate the curriculum as well as the learning process in the regular meeting of the study program. The new curriculum K2020 is an example of improvement that the study program made from EPBM feedback. However, due to the pandemic situation the improvement from EPBM feedback was not informed to the students. We are aware of the importance of this issue and will find a way to communicate the improvement to students.

In addition to EPBM, the study programs provide several platforms for students to express their concerns and comments about the program. These platforms include the Academic Supervisory Team (acting as a mentor team), sharing sessions with the Dean or Head of Department, and a Complaint Box (if available). We encourage students to share their opinions and feedback openly and voluntarily through these channels. The Student Commission Affairs team also holds regular meetings with student representatives to gather their concerns related to the department or program.

While we acknowledge that there is currently no direct response system in place to address student suggestions after EPBM evaluations, all comments and feedback are carefully accommodated, discussed, and evaluated at the department level through regular meeting (Wednesday Meeting or other relevant meeting). These discussions ultimately lead to proposed improvements that are then communicated to the faculty level for implementation. We understand that improvements may take time, which sometimes leaves students unaware of the changes being made. Additionally, the reason some students who fill out the EPBM for a certain subject might not be aware of the improvements is because they have already passed the subject. The impact of these improvements is usually felt by the new batch of students who take the subject. Statistically, we have observed that EPBM scores consistently improve over time, indicating that we consider previous evaluations for continuous improvement.

In conclusion, we value and take seriously all feedback received through EPBM and other platforms, using it as a valuable resource to enhance the quality of our programs and services. We remain committed to making necessary adjustments to improve the student experience and to ensure that students' concerns and suggestions are given due consideration.

A policy and strategy for students with disabilities or chronic illnesses and addresses at least the most common diversity issues.

We greatly appreciate the concerns raised by the reviewers regarding equality issues in education, particularly at IPB University. IPB University has always followed a policy of recruiting prospective students from all parts of the country through the invitation channel without testing. This approach stems from the awareness that equal access to higher education for all Indonesian

people is crucial in caring for diversity. While there may be historical tensions among different groups, it is essential to ensure equal access to education, economics, and politics to maintain trust and unity among the population. Access justice plays a vital role in upholding justice, fostering trust, and creating a sense of unity among the students. IPB University has actively developed a spirit of diversity through its one-year dormitory system, which promotes multicultural living and smoother cross-cultural communication. Students are educated from the beginning to recognize and appreciate multi-culture, and events like the Gebyar Nusantara and Nusantara Cultural Festival reflect their awareness of the importance of caring for diversity. These efforts showcase IPB University's commitment to strengthening national unity by promoting diversity.

IPB University aspires to become a Diversity Campus, embracing students from various regions and fostering a multicultural environment on campus. While this may still be on a small scale, it represents the university's contribution to nurturing diversity and promoting unity. IPB University believes in the power of even small actions, like candles, to bring hope and eventually illuminate the world.

Apart from equality issues, IPB also believes in equity in education. As recognized by the United Nations, inequity is a significant problem in education worldwide, leading to differences in access to schooling, retention rates, and learning outcomes. To address this, IPB implements admission requirements that are not intended to restrict students but rather to ensure that the program aligns with the students' capacities and future career goals.

Furthermore, IPB's admission requirements do not involve any racial, religious, or sex-oriented background. The university does not make statements that disallow candidates from admission based on such factors. The admission system is based on academic records, achievements, or admission tests. Diversity among students at IPB University is regarded as a strength to be maintained and capitalized on. The university firmly believes in the five ecological principles proposed by Capra philosophers, namely diversity or interdependence, networking, holism, and flexibility. These principles are reflected in nature's survival, and humans should imitate them to recognize diversity, build interdependence, network, gain holistic insight, and adapt to dynamic changes for survival. Any disregard for diversity, unwillingness to be interdependent, or refusal to network with diverse communities would be a violation of nature's principles.

Only full-time positions are offered limits women to apply for a position at IPB.

The full-time employment form is in accordance with national regulations, where all staff under government employment must be full-time. However, being on a full-time contract does not limit the recruitment of women as staff members. IPB University has established regulations and policies to support the activities of female workers, ensuring a conducive work environment. These initiatives include Paid Maternity Leave, Transportation Escort for those with extra work hours, designated lactation rooms, and support for employees with children. Additionally, in accordance with the Indonesian Labor Act No. 13/2003, female workers are entitled to menstrual leave.

Moreover, there are further developments on the horizon to improve opportunities for women in the workforce. The draft bill of the Civil Servant, scheduled to be presented in Parliament in 2023, will permit the recruitment of part-time civil servants, offering more flexibility and convenience for women seeking employment. It is worth noting that supporting staff for non-academic positions in IPB University, falling under the non-civil servant category, have been hired on a part-time basis (*Pekerja Harian Lepas/PHL*). Many women are currently working under this part-time mode, which indicates the university's commitment to providing diverse employment options and promoting gender equality in the workplace.

Above all, IPB University is firmly bound by the national principle of Pancasila, which emphasizes unity in diversity. Any form of discrimination within the university would be inconsistent with national policy and may negatively impact the university's existence.

In conclusion, IPB University is committed to promoting equality and equity in education and maintaining a diverse and inclusive campus environment. It adheres to national principles and strives to ensure that all students have equal access to opportunities for education and personal growth.

F Summary: Expert recommendations (08.08.2023)

Taking into account the additional information and the comments given by IPB the experts summarize their analysis and **final assessment** for the award of the seals as follows:

| Degree Programme | ASIIN Seal | Maximum duration of accreditation | Subject-specific label | Maximum duration of accreditation |
|---|--------------------------------|-----------------------------------|------------------------|-----------------------------------|
| Ba Nutrition and Feed Technology | With requirements for one year | 30.09.2029 | – | / |
| Ba Animal Production Technology | With requirements for one year | 30.09.2029 | – | / |
| Ba technology and Management of Aquaculture | With requirements for one year | 30.09.2029 | – | / |
| Ba Silviculture | With requirements for one year | 30.09.2029 | – | / |

Requirements for all study programmes:

- A 1. (ASIIN 4.1) Submit the current module handbooks and ensure that all necessary information is contained correctly.
- A 2. (ASIIN 5) Ensure that students get a feedback on the results of those evaluations they were involved in.

Requirements for Ba Nutrition and Feed Technology

- A 3. (ASIIN 1.2) Ensure that the name of the programme matches the content of the programme and that only one name is used.
- A 4. (ASIIN 1.4) The university shall not exclude or discriminate against any student in the admission process on the basis of color blindness or any other visual impairment.

Recommendations

- E 1. (ASIIN 1.3) It is recommended that the soft skills of graduates should be further developed, particularly in terms of creative thinking, flexibility, open-mindedness and entrepreneurship.
- E 2. (ASIIN 1.3) It is recommended to teach more modules in English and to foster the development of more international classes.
- E 3. (ASIIN 3.3) It is recommended to implement a comprehensive revitalization plan that includes updating literature resources and incorporating modern facilities to enhance group learning and discussion opportunities for students in the IBP faculties.
- E 4. (ASIIN 3.3) It is recommended that equipment be improved to ensure that basic laboratories have access to more modern devices.
- E 5. (ASIIN 5) It is recommended that a coherent inclusion strategy be developed.
- E 6. (ASIIN 5) It is recommend to give voting rights to the students and to directly involve them in the decision making process for further developing the degree programs.

G Comment of the Technical Committee 08 – Agriculture, Forestry and Food Sciences (13.09.2023)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the accrediting procedure and follows the assessment of the peers without any changes.

The Technical Committee 08 Agriculture, Forestry and Food Sciences recommends the award of the seals as follows:

| Degree Programme | ASIIN Seal | Maximum duration of accreditation | Subject-specific label | Maximum duration of accreditation |
|---|--------------------------------|--|-------------------------------|--|
| Ba Nutrition and Feed Technology | With requirements for one year | 30.09.2029 | – | / |
| Ba Animal Production Technology | With requirements for one year | 30.09.2029 | – | / |
| Ba technology and Management of Aquaculture | With requirements for one year | 30.09.2029 | – | / |
| Ba Silviculture | With requirements for one year | 30.09.2029 | – | / |

H Decision of the Accreditation Commission (22.09.2023)

Assessment and analysis for the award of the subject-specific ASIIN seal:

The Accreditation Commission discusses the procedure and follows the assessment of the peers and the Technical Committee. Nevertheless, it has chosen to eliminate E.5 due to its absence of discernible concerns in connection with this matter, while emphasizing that IPB is already actively striving towards a more inclusive direction.

The Accreditation Commission decides to award the following seals:

| Degree Programme | ASIIN Seal | Maximum duration of accreditation | Subject-specific label | Maximum duration of accreditation |
|---|--------------------------------|--|-------------------------------|--|
| Ba Nutrition and Feed Technology | With requirements for one year | 30.09.2029 | – | / |
| Ba Animal Production Technology | With requirements for one year | 30.09.2029 | – | / |
| Ba technology and Management of Aquaculture | With requirements for one year | 30.09.2029 | – | / |
| Ba Silviculture | With requirements for one year | 30.09.2029 | – | / |

Requirements for all study programmes:

- A 1. (ASIIN 4.1) Submit the current module handbooks and ensure that all necessary information is contained correctly.
- A 2. (ASIIN 5) Ensure that students get a feedback on the results of those evaluations they were involved in.

Requirements for Ba Nutrition and Feed Technology

- A 3. (ASIIN 1.2) Ensure that the name of the programme matches the content of the programme and that only one name is used.
- A 4. (ASIIN 1.4) The university shall not exclude or discriminate against any student in the admission process on the basis of color blindness or any other visual impairment.

Recommendations

- E 1. (ASIIN 1.3) It is recommended that the soft skills of graduates should be further developed, particularly in terms of creative thinking, flexibility, open-mindedness and entrepreneurship.
- E 2. (ASIIN 1.3) It is recommended to teach more modules in English and to foster the development of more international classes.
- E 3. (ASIIN 3.3) It is recommended to implement a comprehensive revitalization plan that includes updating literature resources and incorporating modern facilities to enhance group learning and discussion opportunities for students in the IBP faculties.
- E 4. (ASIIN 3.3) It is recommended that equipment be improved to ensure that basic laboratories have access to more modern devices.
- E 5. (ASIIN 5) It is recommend to give voting rights to the students and to directly involve them in the decision making process for further developing the degree programs.

Appendix: Programme Learning Outcomes and Curricula

According to Self-Assessment Report the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Nutrition and Feed Technology:

LOs of NFT

LO#1-NFT Able to explain tropical potential feedstuffs and forage as well as to apply feed technology as to improve feed quality and feed efficiency

LO#2-NFT Able to establish/construct pasture area, and to produce forage based on available potential areas

LO#3-NFT Able to explain the functions, utilizations, and metabolism of nutrients as well as nutrition engineering for efficient animal production with less polluted/healthy environment

LO#4-NFT Able to apply feed production technology and feeding system as to produce wholesome and high quality and efficient animal products

LO#5-NFT Able to formulate animal diet/feed, to design feed production, and to control feed quality in the feed industries

LO#6-NFT Able to solve problems in the field of nutrition and feed technology through data analysis, and to interpret the result using scientific appropriate methods¹⁹

LO#7-NFT Able to communicate with colleagues, think analytically/critical thinking, creative, and innovative in their duties/tasks

LO#8-NFT Able to take responsibility, to lead in group(s) as well as in individual, have flexibility and sustainability

LO#9-NFT Able to use data, facts, ideas, for problem solving with ethical profession and allow “life-long learning” in accordance with the development in science and technology

0 Appendix: Programme Learning Outcomes and Curricula

The following **curriculum** is presented:

| | | | | | | | | | |
|--------|--|----------------------------|--|---------------------------------|--|--|---------------------------------|---|--------------------------------|
| 8 sem. | NTP498 | NTP499 | | | | | | | |
| | 1.6 ECTS | 9.6 ECTS | | | | | | | |
| | Seminar | Undergraduate Thesis | | | | | | | |
| 7 sem. | NTP443 | | NTP391 | | FPT406 | | FPT405 | | |
| | 4.8 ECTS | | 4.8 ECTS | | 4.8 ECTS | | 4.8 ECTS | | |
| | The Providing and Planning of Forage Livestock | | Application of Nutrition and Feed Technology | | Animal Logistic | | Livestock Business | | |
| 6 sem. | NTP244 | NTP224 | NTP416 | NTP438 | NTP392 | NTP497 | NTP417 | FPT401 | |
| | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 3.2 ECTS | 4.8 ECTS | 3.2 ECTS | 4.8 ECTS | 4.8 ECTS | |
| | Pasture Ecology | Nutrition Microbiology | Management Feedmill | Nutrition of Various Animals | Nutrition and Feed Technology Laboratories Technique | Field Practice | Feed Quality Control and Policy | Extension and Communication of Animal Science | |
| 5 sem. | NTP446 | NTP415 | NTP337 | NTP339 | NTP313 | NTP393 | | FKH301 | |
| | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | | 4.8 ECTS | |
| | Pastures Management | Storage and Warehousing | Draught Animal Nutrition | Feed Formulation Technique | Feed Industry | Research Methodology and Experimental Design | | Management of Tropical Livestock Health | |
| 4 sem. | NTP312 | NTP332 | NTP333 | NTP334 | NTP345 | PTP231 | PTP221 | PTP211 | |
| | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | |
| | Feed Processing Technology | Poultry Nutrition | Dairy Nutrition | Meat Animal Nutrition | Introduction to Physiology of Forage Plants | Production of Commercial Poultry | Production of Large Ruminants | Production of Dairy Cattle | |
| 3 sem. | NTP231 | NTP222 | NTP211 | NTP243 | | GFM221 | STK211 | PTP341 | |
| | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | | 3.2 ECTS | 4.8 ECTS | 4.8 ECTS | |
| | Principle of Animal Nutrition | Physiological of Nutrition | Feedstuff | Introduction of Pasture Science | | Climatology | Statistics | Livestock Genetics | |
| 2 sem. | IPB108 | KIM101 | | FIS100 | | KMP130 | NTP225 | AGB100 | FPT101 |
| | 4.8 ECTS | 4.8 ECTS | | 4.8 ECTS | | 4.8 ECTS | 4.8 ECTS | 1.6 ECTS | 3.2 ECTS |
| | English | Chemistry | | Physics | | General Sociology | Nutritional Biochemistry | Introduction to Entrepreneurships | Introduction to Animal Science |
| 1 sem. | IPB100 | IPB106 | IPB307 | IPB111 | MAT101 | BIO101 | EKO100 | | |
| | 4.8 ECTS | 3.2 ECTS | 3.2 ECTS | 3.2 ECTS | 4.8 ECTS | 4.8 ECTS | 4.8 ECTS | | |
| | Religion Education | Indonesian Language | Introduction to Agricultural Science | Civics Education | Fundamentals of Mathematics | Biology | General Economics | | |

Note:

| | |
|--|--------------------------------------|
| | General Competency Education Courses |
| | Inter-department Courses |
| | Major Courses |
| | Supporting Courses |

According to Self-Assessment Report the following **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Animal Product Technology:

LOs of APT

LO#1-APT Capable to explain and describe basic knowledge of animal science. LO#2-APT Capable to analyze animal and animal product characteristics.

LO#3-APT Capable to organize and examine production technology within Good Farming Practices.

LO#4-APT Capable to identify and differentiate processing of animal products in accordance with Good Manufacturing Practices.

LO#5-APT Capable to explain and identify logistic management in the animal distribution process.

LO#6-APT Capable to implement technology and management of animal production. LO#7-APT Capable to design and develop entrepreneurship in the animal production field.

LO#8-APT Capable to execute techniques of animal product processing.

LO#9-APT Capable to operate research for problem-solving in the animal husbandry field based on the data and information.

LO#10-APT Capable to lead, manage and collaborate in teamwork, in addition, capable to work with professional, autonomous, critical, analytical, creative, and innovative.

LO#11-APT Capable to communicate effectively both verbal and nonverbal, norm and ethics implementation, utilize the information to develop self-potency, also capable to adapt in the alteration of science and technology.

LO#12-APT Capable to compile and formulate animal husbandry policy.

LO#13-APT Capable to communicate and disseminate innovation on animal husbandry for farmers.

0 Appendix: Programme Learning Outcomes and Curricula

The following curriculum is presented:

| Semester | Courses | | | | | | | | SUM |
|----------|--|---|---|--|--|--|--|-----------------------------------|---------------|
| 8 | TPT 1497 Internship 4.8 ECTS | TPT 1499 Final Projec/Undergraduate Thesis 9.6 ECTS | | | | | | | 14.4 ECTS |
| 7 | TPT 1400 Community Service Program 6.4 ECTS | TPT 1498 Seminar 1.6 ECTS | TPT 1401 Developing Livestock Business Model 4.8 ECTS | TPT 1402 Mini Project of Animal Production 6.4 ECTS | | | | | 19.2 ECTS |
| 6 | TPT 1301 Abattoir 4.8 ECTS | TPT 1303 Research Methodology for Animal Production 4.8 ECTS | TPT 1305 Halal Management of Livestock 3.6 ECTS | TPT 1351 Safety of Livestock Products 3.2 ECTS | FPT 1402 Logistics 4.8 ECTS | EC 3.2 ECTS | EC 3.2 ECTS | EC 3.2 ECTS | 30.8 ECTS |
| 5 | TPT 1302 Livestock Environmental Management 4.8 ECTS | TPT 1304 Livestock Production Extension 4.8 ECTS | TPT 1321 Design of Ruminat Animal Production 4.8 ECTS | TPT 1323 Tropical Integrated Farming 4.8 ECTS | TPT 1341 Animal Breeding 4.8 ECTS | TPT 1342 Animal Molecular Technology 3.2 ECTS | TPT 1351 Livestock Waste Management 4.8 ECTS | EC 4.8 ECTS | 36.8 ECTS |
| 4 | TPT 1202 Building and Equipment of Animal Production 4.8 ECTS | TPT 1224 Prospective Animal Production 4.8 ECTS | TPT 1233 Diversity of Animal Hobbies 3.2 ECTS | TPT 1221 Ruminant Production 4.8 ECTS | TPT 1232 Breeder Poultry Production 4.8 ECTS | TPT 1241 Animal Genetics 4.8 ECTS | EC 4.8 ECTS | EC 4.8 ECTS | 36.8 ECTS |
| 3 | TPT 1101 Principal of Animal Production Behaviour 4.8 ECTS | TPT 1102 Animal Functional Biology 3.2 ECTS | TPT 1201 Animal Behaviour and Welfare 4.8 ECTS | TPT 1211 Dairy Production 4.8 ECTS | TPT 1222 Pig and Horse Production 4.8 ECTS | TPT 1231 Commercial Poultry Production 4.8 ECTS | EC 4.8 ECTS | EC 4.8 ECTS | 36.8 ECTS |
| 2 | Bio 1102 Fundamental of Biology 4.8 ECTS | IPB 1111 Pancasila Education 1.6 ECTS | IPB 1114 Civic Education 1.6 ECTS | FPT 1101 Innovative Farm 3.2 ECTS | KOM1 100 Computational Thinking 3.2 ECTS | KIM 1104 Chemistry Science and Technology 4.8 ECTS | STA 1111 Statistical and Data Analysis 4.8 ECTS | IPB 1108 English 3.2 ECTS | 27.2 ECTS |
| 1 | IPB 1100 Religion 4.8 ECTS | IPB 1106 Indonesian Language 3.2 ECTS | IPB 1112 Sports and Arts 1.6 ECTS | FIS 1104 Physical Science and Technology 4.8 ECTS | IPB 1113 Smart Agriculture 3.2 ECTS | EKO 1101 Economics 3.2 ECTS | MAT 1102 Mathematic and Logical Thinking 4.8 ECTS | KPM 1131 Sociology 3.2 ECTS | 28.8 ECTS |
| SUM | | | | | | | | | 230.8 ECTS |

| | | | |
|------------------------|--------------------------------------|-----------------------|---------------------------------------|
| Common Core Course | IPB General Competencies Courses | Academic Core Courses | Core Courses for Study Program |
| SP in Depth Core | In-dept Courses within Study Program | Enrichment Courses | Independent Study Program |
| Fundamental Literacies | Skills to apply core skills | Final Year Project | Final Year Project / Capstone Project |

According to Self-Assessment Report the following **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Technology and Management of Aquaculture:

LOs of TMA

LO#1-TMA Ability to culture various finfish, shellfish, and aquatic plant species (marinewater brackishwater and freshwater)

LO#2-TMA Ability to perform breeding of various fish and shellfish species (marinewater, brackishwater and freshwater)

LO#3-TMA Ability to formulate feed for artificial feed production in aquaculture

LO#4-TMA Ability to produce phytoplankton, zooplankton and benthos, both as live food and as industrial raw materials

LO#5-TMA Ability to apply good aquaculture practices

LO#6-TMA Ability to identify disease agent, diagnose treat diseased fish

LO#7-TMA Ability to perform laboratory activities that are related to aquaculture (in fish reproduction and genetics, fish nutrition, aquaculture environment, fish health and production systems) and interpret the analytical results

LO#8-TMA Ability to measure and manage the quality of aquaculture media

LO#9-TMA Ability to perform planning and designing of aquaculture containers (including size, shape and layout)

LO#10-TMA Ability to operate and manage hatchery production, grow out production, harvesting and marketing of aquaculture products

LO#11-TMA Ability to evaluate the growth and health status of the cultured species

LO#12-TMA Ability to evaluate the benefit and risk of aquaculture activities

LO#13-TMA Ability to interpret data and to provide various alternative solutions

LO#14-TMA Ability to demonstrate the scope of knowledge and technology application in fisheries business

LO#15-TMA Ability to clearly deliver information regarding aquaculture to the society

LO#16-TMA Ability to operate aquaculture activities as business activities

LO#17-TMA Ability to collaborate and to adapt to their environmental condition, to act communicatively, innovative, and entrepreneurial

0 Appendix: Programme Learning Outcomes and Curricula

The following curriculum is presented:

| TMA STUDY PROGRAM | | | | | | | | | |
|-------------------|---|--|---|--|---|--|---|---|-----------|
| Semester | | | | | | | | Workload/ Semester (not included elective course) | |
| 8 | BDP 498 Seminar 1.6 ECTS | BDP 499 Final Project 9.6 ECTS | | | | | | 11.2 ECTS | |
| 7 | BDP 414 Tehnopreneurship in Aquaculture 4.8 ECTS | BDP 400 System and Management of Aquaculture Quality 3.2 ECTS | BDP 411 Mariculture Management 4.8 ECTS | BDP 412 Freshwater Aquaculture Management 4.8 ECTS | BDP 413 Aquaculture Industrial Planning 4.8 ECTS | Elective Enrichment Course | Elective Enrichment Course | Elective Enrichment Course | 22.4 ECTS |
| 6 | BDP 352 Aquaculture Engineering 4.8 ECTS | BDP 332 Production Technology of Plankton, Benthos, and Algae 4.8 ECTS | BDP 342 Health Management of Aquaculture Organism 4.8 ECTS | BDP 442 Fish Hatchery Management 4.8 ECTS | BDP 497 Aquaculture Field Practise 6.4 ECTS | Elective Enrichment Course | Elective Enrichment Course | Elective Enrichment Course | 25.6 ECTS |
| 5 | BDP 339 Scientific Research Method 4.8 ECTS | BDP 301 Principles of Aquaculture Biotechnology 4.8 ECTS | BDP 321 Reproductive Physiology of Aquatic Organism 4.8 ECTS | BDP 331 Feed Processing and Feeding Technology 4.8 ECTS | BDP 341 Disease of Aquatic Organism 6.4 ECTS | BDP 351 Water Quality Management 4.8 ECTS | BDP 302 Ornamental Fish and Aquascape 4.8 ECTS | Elective Enrichment Course | 35.2 ECTS |
| 4 | MSP 225 Physiology of Aquatic Organism 4.8 ECTS | ITK 211 Marine Biology 4.8 ECTS | THP 200 Basic Fish Processing Technology 4.8 ECTS | BDP 220 Fundamental Knowledge of Fish Genetics 4.8 ECTS | BDP 230 Fish Nutrition 4.8 ECTS | BDP 250 Water Physic and Chemistry 4.8 ECTS | Elective Enrichment Course | Elective Enrichment Course | 24 ECTS |
| 3 | MSP 223 Ichthyology 4.8 ECTS | ITK 221 General Oceanography 4.8 ECTS | PSP 212 Capture Fisheries 4.8 ECTS | BIK 200 General Biochemistry 4.8 ECTS | STK 211 Statistic 4.8 ECTS | BDP 200 Fundamental Knowledge of Aquaculture 4.8 ECTS | BDP 240 Fundamental Knowledge of Aquatic Microbiology 4.8 ECTS | Elective Enrichment Course | 33.6 ECTS |
| 2 | IPB 111 Pancasila 3.2 ECTS | IPB 108 English 4.8 ECTS | IPB 112 Sport and Arts 1.6 ECTS | IPB 100 Physic 4.8 ECTS | KPM 140 General Sociology 4.8 ECTS | AGB 100 Introduction to Entrepreneurship 1.6 ECTS | FPK 101 Introduction to Fisheries and Marine Science 3.2 ECTS | MAN111 Introduction to Management 4.8 ECTS | 28.8 ECTS |
| 1 | IPB 111 Religion 4.8 ECTS | IPB 108 Indonesian 3.2 ECTS | IPB 107 Introduction to Agricultural Sciences 3.2 ECTS | EKO 100 General Economics 4.8 ECTS | MAT 101 Fundamental of Mathematics 4.8 ECTS | KIM 101 Chemistry 4.8 ECTS | BIO 100 Biology 4.8 ECTS | | 30.4 ECTS |
| | Common core course | In-depth course | | | | | | | |
| | Fundamental literacy | Final year/ capstone course | | | | | | | |
| | Academic core course | Room for elective course | | | | | | | |

According to Self-Assessment Report the following **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Silviculture:

LOs of SVC

LO#1-SVC Be devoted to God Almighty, have noble character, national insight, and integrity, have the motivation continuously to develop themselves, be disciplined, and be responsible

LO#2-SVC Have a strong leadership, able to work well in teams in the national and international scope; able to think logically and systematically, communicate effectively both orally and in writing, always follow the development of science and technology, and be able to adapt to environmental changes.

LO#3-SVC Able to analyze problems and formulate alternative solutions for tropical Silviculture in general and specifically for the silviculture field, based on data and information analysis using relevant mathematical, statistical, biological, physical, and chemical theories and approaches, forest engineering, forestry economics, and policies, utilization, senses, forest product management, and conservation of living natural resources, and environmental ethics

LO#4-SVC Able to produce high-quality seeds, seeds, and trees in terms of genetic, physiological, and physical through conventional or biotechnological approaches

LO#5-SVC Able to design appropriate models and techniques for building, managing, monitoring, and evaluating seedbeds, planting, maintaining, protecting, and harvesting in various silvicultural systems

LO#6-SVC Able to examine and analyze the influence of the physical environment, nutrient cycle, and energy cycle, including hydrology and climate, for the success of ecosystem-based Silviculture

LO#7-SVC Able to integrate science and technology in the field of silviculture, including forest productivity, silvicultural systems, agroforestry, ecological fields including dendrology, forest ecology, forest syn-ecology, tropical tree ecology, and forest protection including management of pests, diseases and forest fires with forest and environmental dynamics to increase the quality and productivity of natural and plantation forests for the achievement of sustainable forest and environmental management

LO#8-SVC Able to synergize the latest silvicultural science, art, and technology based on local wisdom in the implementation, monitoring, and evaluation of Silviculture activities, including agroforestry and restoration and rehabilitation of degraded land to ensure the achievement of desired values and goals with the principle of ecosystem-based sustainability for the welfare of the community

LO#9-SVC Able to apply fundamental science and applied silviculture based on the principles of scientific research and writing

The following **curriculum** is presented:

0 Appendix: Programme Learning Outcomes and Curricula

| Semester | COURSES | | | | | | | | | | Total ECTS |
|----------|--|---|--|--|--|---|---|--|--|---|------------|
| 8 | SVK1498 1.6 ECTS Seminar | SVK149B 9.6 ECTS Final Project/Undergraduate Thesis | | | | | | | | | 11.2 |
| 7 | SVK149A 1.6 ECTS Colloquium | | | | | | | | | | 1.6 |
| 6 | SVK1319 4.8 ECTS Reclamation of Post-Mining Land | SVK131A 4.8 ECTS Forest Influence | SVK131B 3.2 ECTS Tropical Tree Ecology | SVK132A 4.8 ECTS Agroforestry | VK1338 3.2 ECTS Forest Health and Arboriculture | SVK132B 3.2 ECTS Forest Ecosystem Data Science | IPB400 6.4 ECTS Thematic Services Learning Program/Community Outreach (KKN-T) | | | | 30.4 |
| 5 | SVK1327 6.4 ECTS Forest Genetics and Tree Breeding | | SVK1328 6.4 ECTS Forest Plant Propagation Technology | | SVK1398 3.2 ECTS Research Methods and Scientific Writing | SVK1336 4.8 ECTS Forest Pathology | | SVK1335 4.8 ECTS Forest and Land Fire | SVK1329 4.8 ECTS Natural Forest Silviculture | SVK1313 4.8 ECTS Forest Syn-ecology | 33.6 |
| 4 | SVK1212 4.8 ECTS Forest Ecology | SVK1225 4.8 ECTS Silviculture | MNH1212 4.8 ECTS Forest Resources Inventory | MNH1231 4.8 ECTS Forest Harvesting | SVK1234 4.8 ECTS Forest Entomology | | SVK1235 3.2 ECTS Spatial Analysis for Forestry and Environment | FHT1200 4.8 ECTS Forestry Field Practice (PLK) | | 32.0 | |
| 3 | SVK1211 4.8 ECTS Dendrology | SVK1231 4.8 ECTS Forest Protection | SVK1215 4.8 ECTS Forest Climate Dynamics | SVK1216 4.8 ECTS Pedology and Forest Nutrition | SVK1224 3.2 ECTS Silvics | THH1201 3.2 ECTS Basic Properties of Biomaterials | | | | | 25.6 |
| 2 | IPB10F 3.2 ECTS English | FIS104 4.8 ECTS Physical Science and Technology | | KIM104 4.8 ECTS Chemistry Science and Technology | KPM131 3.2 ECTS Sociology | KOM102 3.2 ECTS Computational Thinking | STA111 4.8 ECTS Statistics and Data Analysis | IPB10G 1.6 ECTS Sports and Arts | MNH1101 3.2 ECTS Forestry Science and Environment Ethics | 28.8 | |
| 1 | IPB100 4.8 ECTS Religion | IPB10D 1.6 ECTS Pancasila | IPB10E 1.6 ECTS Civic Education | IPB106 3.2 ECTS Indonesian Language | BIO102 4.8 ECTS Fundamentals of Biology | EKO101 3.2 ECTS Economics | IPB10C 3.2 ECTS Innovative Agriculture | MAT102 4.8 ECTS Mathematics and Logical Thinking | | 27.2 | |

Note:

| | | | |
|----------------------------|----------------------------------|--------------------|---------------------------------------|
| Common Core Course | IPB General competencies courses | Academic Core | Core courses for study program |
| Study Program Fundamentals | Basic courses for study program | SP In-depth Core | In-depth courses within study program |
| Foundational Literacy | Skills to apply core skills | Final Year Project | Final Year Project and Capstones |