



ASIIN Seal

Accreditation Report

Bachelor's Degree Programmes

Agronomy and Horticulture

Plant Protection

Capture Fisheries Technology and Management

Forest Management

Provided by

Agricultural University Bogor (IPB), Indonesia

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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
Program Studi Sarjana Agronomi dan Hortikultura (AGH)	Bachelor of Science in Agronomy and Horticulture	ASIIN	/	08
Program Studi Sarjana PRoteksi Tanaman (PTN)	Bachelor of Science in Plant Protection	ASIIN	/	08
Program Studi Sarjana Teknologi dan Manajemen Perikanan Tangkap (TMPT)	Bachelor of Science in Capture Fisheries Technology and Management	ASIIN	/	08
Program Studi Sarjana Manajemen Hutan (MNH)	Bachelor of Science in Forest Management	ASIIN	/	08
<p>Date of the contract: 20.11.2019</p> <p>Submission of the final version of the self-assessment report: 21.04.2021</p> <p>Date of the onsite visit: 12.-15.10.2021</p> <p>at: Due to continuing travel and safety restrictions caused by the Covid-19 pandemic, the audit was carried out digitally in agreement with the principal decision of the Accreditation Commission</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

Peer panel: Prof. Dr. Christian Möllmann, University of Hamburg Almansyah N. Sinatrya, R&D Manager Universal PT Tempu Rejo Prof. Dr. Alexander Stoy, Kiel University of Applied Sciences Risaldi Wajo, Student at Universitas Hasanuddin	
Representatives of the ASIIN headquarter: Christin Habermann	
Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used: ASIIN General Criteria, as of December 10, 2015 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
Agronomy and Horticulture	Sarjana Pertanian / B.Sc. in Agriculture	/	6	Full time	/	8 Semesters	144 SCH 200 ECTS	Once a year in July/August 1996
Plant Protection	Sarjana Pertanian / B.Sc. in Agriculture	/	6	Full time	/	8 Semesters	144 SCH 200 ECTS	Once a year in July/August 1996
Capture Fisheries Technology and Management	Sarjana Perikanan / B.Sc. in Fisheries	/	6	Full time	/	8 Semesters	144 SCH 200 ECTS	Once a year in July/August 1996
Forest Management	Sarjana Kehutanan / B.Sc. in Forestry	/	6	Full time	/	8 Semesters	144 SCH 200 ECTS	Once a year in July/August 1996

For the Bachelor's degree programme Agronomy and Horticulture (AGH) the institution has presented the following profile in the Self-Assessment Report:

Vision:

To become a center of academic activities with international standards in crop production technologies in a sustainable tropical agriculture system for undergraduate students.

Mission:

1. To conduct educational programs in agriculture, which includes food, horticultural, and estate crops for undergraduate students
2. To produce human resources who can manage plant resources, are resilient, professional, and keep up with society's growing challenges

³ EQF = The European Qualifications Framework for lifelong learning

Graduate Profile

1. Government officials
2. Lecturers/teachers
3. Researchers
4. Entrepreneurs in agriculture and others
5. Agricultural banking
6. NGOs officers
7. Employees in plantation companies
8. Employees in seed companies

For the Bachelor's degree programme Plant Protection (PTN) the institution has presented the following profile in the Self-Assessment Report:

Vision:

To become a leading BSc degree program in the development of human resources as well as science and technology with core competence in tropical bioresource-based plant pest and disease management to support sustainable agriculture

Mission:

1. To develop and carry out bachelor education of high quality in the field of plant pest and disease management
2. To develop science and technology in the field of bioresource-based plant pest and disease management through high-quality research
3. To support sustainable tropical agriculture through the application of science and technology in the field of eco-friendly plant pest and disease management and to improve society's welfare.

Graduate Profile

1. Central and regional government officials
2. Manager of private agrochemical and plantation companies
3. Pest control companies
4. Teachers and lecturers
5. Researchers/
6. Entrepreneurs in agriculture and other sectors
7. Banking, finance, and insurance officers
8. Certification and training agency officers
9. E-commerce
10. Pioneer farmers
11. NGOs and consulting firms

12. Drone leasing companies

For the Bachelor's degree programme Capture Fisheries Technology and Management (TMPT) the institution has presented the following profile in the Self-Assessment Report:

Vision:

To be a leading research-based faculty in innovation, international standards, and a driver of independence in maritime development towards an adaptive techno-socio-entrepreneurial faculty

Mission:

1. To produce graduates who have expertise in the utilization of fishery resources through a quality education process
2. To develop science, technology, and art (IPTEKS) of fishing related to the utilization of fishery resources through continuous research
3. To take an active role in every activity that has benefits for the development of Indonesian fisheries, especially in the field of capture fisheries through community service activities.

Graduate Profile

1. Young researchers
2. Advanced study/lecturers/teachers, bureaucrats/governmental officers/administrators
3. Employees of state-owned or private companies
4. Fisheries consultants
5. Entrepreneurs
6. Journalist/editors
7. Counselor/extension workers
8. NGO officers.

For the Bachelor's degree programme Forest Management (MNH) has presented the institution has presented the following profile in the Self-Assessment Report:

Vision:

To be a leading higher education institution in developing science, technology, and arts for ecosystem-based tropical forest management for securing ecological, economic, and social functions.

Mission:

B Characteristics of the Degree Programmes

1. To implement higher education programs to generate virtuous human resources who are competent and capable of competing at the national, regional, and international level
2. To carry out research to support the education and development of science, technology, and arts in forest management, which is adaptive to the needs of the society to support sustainable forest management
3. To conduct community services to enhance the capability of graduates and solving various problems in forestry development and ecosystem-based forest management

Graduate Profile

1. Young researchers
2. Advanced study/lecturers/teachers,
3. Bureaucrats/governmental officers/administrators, managers
4. Employees at companies, consultants, entrepreneurs
5. Journalist/editors, counselors/ advocates
6. Extension workers/community nurturers

C Peer Report for the ASIIN Seal⁴

1. The Degree Programme: Concept, content & implementation

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

Evidence:

- Self-Assessment Report
- Study plans of the degree programmes
- Module descriptions
- Webpage of the programme Agronomy and Horticulture (AGH): <https://agrohort.ipb.ac.id>
- Webpage of the programme Plant Protection (PTN): <http://ptn.ipb.ac.id/cms/en/home>
- Webpage of the programme Capture Fisheries Technology and Management (TMPT): <http://psp.fpik.ipb.ac.id>
- Webpage of the programme Forest Management (MNH): <http://manhut.fahuntan.ipb.ac.id>
- Discussions during the audit

Preliminary assessment and analysis of the peers:

The peers refer to the Subject-Specific Criteria (SSC) of the Technical Committee Agriculture, Nutritional Sciences and Landscape Architecture (TC 08) as a basis for judging whether the intended learning outcomes of the Bachelor's degree programme Agronomy and Horticulture (AGH), the Bachelor's degree programme Plant Protection (PTN), the Bachelor's degree programme Capture Fisheries Technology and Management (TMPT) and the Bachelor's degree programme Forest Management (MNH), as defined by Institut Pertanian Bogor (IPB), correspond with the competences as outlined by the SCC. They come to the following conclusion:

The qualification objectives of the AGH programme aim at producing graduates that are capable of becoming facilitators mediating between sources of innovation and the agricultural community as well as becoming catalysts of agricultural innovation development based on local wisdom and knowledge developed by the community. In addition, graduates are able to synergize the roles of various stakeholders and thus become driving forces in explaining and utilizing modern information and communication technology in order to support the activities of agricultural extension and communication.

Graduates of the PTN programme are able to apply science and technology for planning and conducting sustainable and environmental-friendly plant protection. They should gain the skills necessary to enhance human resource, the quality of education, environmental conservation and research in the area of plant protection as well as disseminate integrated pest management techniques by using both traditional and information-driven technology.

The qualification objectives of the TMPT programme should ensure that graduates are able to master and develop science and technology with regard to the processing of fishery products. In addition, they should be able to formulate concepts that address fisheries issues, especially in the realm of processing, and apply managerial principles in business developments to this area.

Graduates of the MNH programme have gained an understanding of forests as life support systems and recognize important elements in the development and management of forests and their sustainable use concerning global, national and local problems and challenges. They furthermore learn how to think critically, systematically and innovative, how to produce solutions and ideas, how to take appropriate decisions and how to communicate on both a national and international level.

The auditors hold the view that the objectives and intended learning outcomes of all four degree programmes under review are reasonable and well founded. They learn that various stakeholders (alumni, industrial and governmental representatives) are involved in the constant review and development of the curricula. For example, industrial 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 exists a national standard for designing the curriculum, especially the elective modules allow IPB to adapt to the suggestions from their stakeholders.

This cooperation between IPB and especially their 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. The employers confirm during the audit discussions that there is a high demand for the graduates of all four degree programmes. Furthermore, they emphasize that graduates

from IPB University are their first choice because they are generally better qualified than graduates from other Indonesian universities are.

Criterion 1.2 Name of the degree programme

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

The auditors confirm that the English translation and the original Indonesian names of the Bachelor's degree programme Agronomy and Horticulture, Plant Protection, Capture Fisheries Technology and Management, as well as Forest Management correspond with the intended aims and learning outcomes as well as the main course language.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Module descriptions
- Study plans of the degree programmes
- Webpages per programme
- Discussions during the audit

Preliminary assessment and analysis of the peers:

The curricula of the four Bachelor's degree programmes are developed and evaluated in accordance with the existing regulations and guidelines that include the university's internal regulations, the Indonesian National Qualification Framework, as well as regulations from the Ministry of Research, Technology, and Higher Education. The curricula of the degree programs are designed to match the programme objectives and programme learning outcomes and to that end, they are continuously examined and revised. In the self-assessment report and the curriculum for each program, IPB University describes in detail how the programme learning outcomes of each programme are to be achieved through the individual modules and thus explains the significance of each module for the programme as a whole. The curricula are reviewed by the auditors in order to identify whether the described learning objectives can be achieved by the available modules. Course descriptions as well as matrices matching the general learning objectives and the module contents were

provided for a detailed analysis. The discussions during the online visit reveal that the current curricula are in a constant revision process and that several modifications have already been made in recent years.

The Bachelor's degree programme consists of 8 semesters, each with a duration of 14 weeks. The curricula of the degree programmes consist of several groups of modules: Basic and General Courses or Common Courses (BC); Foundational Courses or Interdepartmental Courses (FC); Major Courses of the Study Program (MC); Minor or Supporting Courses (SC).

Modules in the BC group cover general competencies for undergraduates, such as Pancasila (state ideology), citizenship, religion, and community service. Modules in the FC group cover general competencies and provide basic sciences and general knowledge in agriculture in broad sense. The courses are taught in the first year of studies and include natural sciences, mathematics, social and economics, communication, compulsory national subjects about the civic and national character. The fundamental and major course modules cover competencies of specific knowledge in the field of each respective study program. Students of the programmes are able to take minor subject modules that support their individual interests in interdisciplinary areas.

The peers pay attention to the courses that teach computer programming, data visualization and analysis. The discussion with the programme coordinators and teaching staff reveals that they are concerned with the implementation of computing technics knowledge to the curriculum. In this regards, the new version of the programmes curricula (K2020) includes several courses in the fields of specialization which mean to teach how to deal with scientific data (remote sensing, etc), involving also the concepts in R programming.

The curricula presented seem to be very adequate in terms of job requirements and employability. Discussion with industry representatives reveal that graduates from IPB are highly appreciated and possess good skills for starting their careers.

However, the peers see a couple of skills lacking. These relate to soft skills including communication, negotiation, and leadership. During the discussions, the industry partners clarify that they are paying much closer attention to soft skills in the workplace than they did in years past. In this light, the peers propose the implementation of diverse pedagogical practices, focusing on interpersonal skills and personal development. Another aspect specified during the discussions, concerns the necessity of aligning the technological background with business strategies. In this regards, peers recommend to implement more business-related content, such as project management and project analysis, into the programmes' curricula

In summary, the peers have a very good impression of the curricula of all four programmes. By thoroughly analysing the module descriptions and following the discussions during the online visit, the peers state that the four programs are coherent, well-structured and cover the essential topics in the respective field, while also allowing for individual profile building through various elective courses.

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Report
- Academic Guidelines
- Discussions during the audit

Preliminary assessment and analysis of the peers:

According to the Self-Assessment Report, the admission procedures for all Bachelor programmes are 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 (averagely, 55 % of the students at the programmes under review are admitted through this selection system).
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). It accounts for 30 % of the admitted students at the four Bachelor's programmes.
3. Admission based on Talent Test (*Ujian Talenta Masuk IPB - UTM*). On this method, there are two selection procedures used, namely through written test conducted by IPB or based on SBMPTN scores (around 7 % of the students are admitted through this test).

IPB University presents the numbers of applicants as well as the numbers of accepted students for all study programmes for the last five academic years. It becomes visible that for all four programmes, the number of applicants exceeds by far the number of available places. For the Agronomy and Horticulture programme, around 5% of all students have

been accepted on average over the last 5 years, 8% in the Plant Protection programme, 8,6% in the Capture Fisheries Technology and Management programme and 6,6% in the Forest Management programme.

The peers inquire of the programme coordinators why there are so many students applying for studying at IPB. They learn that the offered programmes are very popular subject because the job perspectives are very good. In addition, there are many high school graduates in Indonesia and IPB is one of the most prestigious universities in the country. Consequently, IPB is able to only accept the very best candidates.

The peers, in addition, discuss if there are any requirements for students to have preliminary knowledge in the specific study programme. The University representatives explain that all study programmes build upon the knowledge attained at high school, therefore, all applicants have opportunity to apply to the University programmes. Regarding the very high number of applicants it will be worthwhile that IPB gets more co-decision in selecting their incoming students. Actually 85 % of them are selected by a written test (SNMPTN and SBMPTN), which means that applicants have to prepare optimally to a written test. But this is not an adequate criterion for getting interested students and above all for perfect graduates. Even if the admission procedures carried out centrally by the Directorate of Educational Administration is a practicable procedure, the auditors corroborate the IPB statement in the Self-Assessment-Report: "The quality of intake students needs attention". The IPB students were satisfied with the admission system, but this discussion was not significant, because all of them were winner within this system and got one of the rare university places.

In summary, the auditors find the terms of admission to be binding and transparent. They confirm that the admission requirements support the students in achieving the intended learning outcomes. The however believe it to be a fruitful undertaking if IPB were to select more students on their own.

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

Regarding Criterion 1.3 – Social Skills

In their statement, IPB generally agrees with the auditors statements regarding the lack of social skills such as communication, negotiation and leadership that were detected in the questionnaire surveys of the students as well as the discussion with the industry partners. Despite the validity of the survey results (representativeness of samples), the IPB management recognizes the importance of communication, negotiation, and leadership skills for

the Bachelor degree programmes. Addressing these issues, the four Bachelor degree programmes have already included diverse pedagogical practices to develop interpersonal skills and personal development.

The curriculum of BSc in Agronomy and Horticulture (AGH) has a field trip course (AGH 301). The students visit a number of research institutions and industries related to agronomy and horticulture fields. For example, the Indonesian Center for Rice Research (ICRR), PT East West Seed Indonesia, shallot farmer groups, coffee and sugar cane plantations, and herbal medicine companies. In between semesters, students can also do internships at the Jonggol oil palm educational plantation, Agribusiness Technology Park, or at ornamental plant companies. Students can also do an internship as a final project (AGH 499). Examples of final project internship locations are PT. Gandaerah Hendana, Riau (oil palm plantation); PT Supra Matra Abadi, North Sumatra (oil palm plantation); PTPN XII, East Java (tea plantation); Research Institute for Tea and Cinchona, Bandung; Madukismo Sugar Factory, PT Madubaru, Yogyakarta (sugarcane plantation); PT. Agro Prima Sejahtera, Lampung (banana plantation). The final project internship can also be done in a horticultural industry in the Netherlands through collaboration with SUSP (Stichting Uitwisseling en Studiereizen voor het Platteland). AGH fresh graduates may apply for a one-year internship in horticulture companies in the USA through The Ohio Program (TOP).

Third semester of the curriculum of BSc in Plant Protection (PTN) students carry out short field trips (under the name MIGRATORIA) to plant protection agencies both government and private as well as to successful farmers in several locations from West Java to East Java during the transition between semesters 3 to 4. In this activity, in addition to getting field experience about real and complex pest and disease problems, students also gain insight into how to communicate well with other parties. In K2014, MIGRATORIA is only an extra-curricular activity, while in the new curriculum (K2020) this activity is included in the curriculum so that all students are required to take this activity. In addition, 3rd to 7th semester students can also carry out internships for 1 or 2 months in agrochemical or agricultural companies such as Syngenta Indonesia, Petrokimia-Gresik, and Great Giant Pineapple-Lampung, and can also do internships in government agencies such as the Vegetable Research Institute and Plant Quarantine. From this internship, students will gain insights on negotiation and leadership.

Every BSc Capture Fisheries Technology and Management (TMPT) student enrolled in the Sustainable Capture Fisheries Industry course must complete an industrial internship (PSP402). Internships are available at fishing companies such as Perum Perindo, Perinus, Fisheries Ports, Net Companies, Shipyards, Non-Governmental Organizations, Research Centers, and Fish Processing Companies. BSc TMPT currently has a letter of agreement with

the government and private institutions in education, research, and community development. Internships in the fishing industry are available at PT. Arabikatama Khatulistiwa Fishing Industry, Taruna Mina Food, Record Nusantara Foundation, KUB Harapan Kita Bina Nusantara, Ngusaha Mina Marine Fisheries Production Cooperative, Cilacap Ocean Fishing Port, PT Lautan Berlian Abadi, CV. Akvodkor, Palabuhanratu Nusantara Fishery Port, Ministry of Maritime Affairs and Fisheries of the Republic of Indonesia, Coordinating Ministry for Maritime Affairs and Investment of the Republic of Indonesia, PT. Pyramide Paramount Indonesia Farm, Wildlife Conservation Society and other agencies. Students can improve their soft skills, networking and experience directly with industrial internships carried out for 2-6 months at the agency.

In the curriculum of BSc in Forest Management (MNH), at the end of 4th semester, the students are required to carry out field practice in observation forest ecosystem types. This field practice includes social-forest interaction, where student in groups practice communication with the society living around the forest. The next field practices are forest management practices in small scale forest management in Forest University (Gunung Walat Educational Forest), Large Scale Forest Management in Perum Perhutani-State own forestry enterprise (in Jawa Island), in Forest Concession Holder Company in outside of Jawa islands.

The four BSc degree program of AGH, PTN, TMPT and MNH also consist of course of Thematic Field Work (KKNT) which is conducted at the end of 6th semester. This KKNT is a form of education whose main activities outside the campus, providing students with learning experiences to live amid society. Students directly and together with the community identify, analyze, and deal with development problems the community faces integrated between professions in IPB. KKNT is an inseparable part of the undergraduate program curriculum at IPB University. KKNT is a mandatory course for all undergraduate students of the IPB University based on IPB Rector Decree No. 3/IT3/PN/2017 in 2017, which was updated with IPB Rector's Decree No. 9/IT3/PM/2020 regarding the implementation of work lecture activities thematic reality for students. The preparation of students for the KKNT program is carried out with debriefing from IPB related to the organization, implementation and evaluation of the program. Materials outside IPB were introduced to the KKNT area and made work programs during KKNT. Good communication techniques in society are also given in the debriefing lectures. Students presented their 40-day work plan to the Regional Government in a workshop for implementation. There was also supervision activity from the supervisor during the performance. The local government conducted a presentation and evaluation after the KKNT activity. From the KKNT program, students learn about leadership, work in teams, and develop projects to analyze and evaluate projects.

Students can choose the form of their final project, whether research, internships, and business plans to complete their study the final project. However, most students from the four study programs continue to choose research as their final project. Because students can immediately work or start a business after graduating, the study program encourages increased student interest in taking internships and business plans as final assignments.

Students also have the opportunity to develop their leadership capacity through involvement in student organization, such as HIMAGRON (Agronomy Student Association), HIMASITA (Plant Protection Student Association), HIMAFARIN (Capture Fisheries Student Association), FMSC (Forest Management Student Club, student organization for Forest Management BSc degree program), Student Executive Board (BEM) at Faculty and IPB levels, International Forest Student Association (IFSA) IPB, National as well as International levels, Asia Forest Student Association (AFSA) and others organizations. Various student activities can accommodate growth mindset, hard skills, soft skills, character, life skills, networking, and experience.

According to those facts, IPB agrees to the peer's statement that, the four programs are coherent, well-structured and cover the essential topics in the respective field, while also allowing for individual profile building through various elective courses.

The IPB's effort to develop interpersonal skills and personal development of student, continuously improving. In the new restructured curriculum implement since 2020 (K2020) allows students to engage in multi-activity and multi-channel learning such as exchange student, developing of village, entrepreneurship, internship, independent project, research, teaching assistant, and humanity project. The revised curriculum of K2020 facilitate the students to take activities or courses in the outside of IPB with maximum load equal to 24 credits. K2020 will allow students to be more flexible and personalized in achieving learning outcomes. They are enhancing Life Based Learning to produce superior graduates who are agile and adaptable to changes. Various student activities can accommodate mindset development, soft skills, character, life skills, networking, and experience. These activities provide opportunities for students to participate in society life, such as Professionals, Technopreneurs, Sociopreneurs, Scientists, or Bureaucrats. So far, institutional facilitation for Enrichment Program activities has been designed and implemented through activities in various Talent Pools based on the interests of students' careers as determined by the results of Talent Mapping at the first level. The results of the talent mapping are used to plan the program he chooses with the supervisor, which can begin as early as the first year of study at IPB. The supervisors assist in creating student portfolios and learning journeys for each learning menu, from Enrichment to MBKM. The Multi-activity Enrichment Course is intended to be recognized/equalized in semester credit unit weight.

To implement those activities, IPB collaborates with 411 institutions, including government, industry, and non-governmental organizations. Every year, IPB University sends students to work as interns in several of these organizations. Students must make internship proposals during practical internship activities. This proposal is created in groups, with the supervisor lecturer guiding the process. Writing proposals is one of the ways IPB teaches students to learn how to do project management and project analysis.

Recently, the student of Forest Management BSc degree program who involved the FMSC got the first winner in national competition of community empowerment program through their program of “Agroforest Edu-tourism System for Social Forestry Development in Pेतengan Village, Rancabali Sun-District, and Bandung District-West Jawa. (<https://ipb.link/closing-ceremony-abdidaya-2021>), as well as Dr Sony Trison a faculty member of Forest Management BSc degree program got award as the best nurturing faculty member for this program. IPB in general get the General Winner in this program. Two student of semester 7th MNH also received award as the best and the 3rd best for their articles in national scientific writing competition hosted by Association of Indonesia Forest concession Holder (APHI).

The auditors thank IPB for their extensive explanation on the soft skills students learn throughout their studies, especially with regard to the field practice. Yet, as this has solely been a minor complaint by representatives from the industry, which serve as the students’ future employers, the auditors like to uphold the recommendation to train the students even more in soft skills.

Regarding 1.4 – Admission Requirements

In their statement, IPB management confirms the peers’ assessment, yet they would like the opportunity of providing additional explanation about the IPB entrance selection system (admission system), especially regarding the statement in the SAR that “the quality of students’ intake needs attention.” IPB states that the former statement was referring to the number of dropped-out student in the first year and not to the selection process and the admission system. The students who dropped-out in the first year generally failed to pass courses of Mathematics, Calculus and Chemistry. Therefore, mainly in the SNMPTN selection (national written test), the performance of students in these areas could be improved; however, this is not up to the university.

The auditors view this criterion as fulfilled.

2. The degree programme: structures, methods and implementation

Criterion 2.1 Structure and modules

Evidence:

- Self-Assessment Report
- Study plans of the degree programmes
- Webpages per programme
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:

After analysing the module descriptions and the curricula, the peers confirm that all degree 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 curriculum, and the supervision by the faculty allows for their respective quality in terms of relevance, content, and structure. In addition, the peers gain the impression that the choice of modules and the structure of the curricula ensure that the intended learning outcomes of all four degree programmes can be achieved.

From the discussion with the programme coordinators, the peers understand that additions to the curriculum are mostly offered as elective modules. This includes the suggestions made by the stakeholders concerning innovations in the respective field of the study programme. The peers are glad that IPB manages to act upon these suggestions and that the elective modules give enough leeway for students to follow their individual interests for career plans.

In addition, the peers discussed the practical training aspects of the degree programmes under review. According to the study plans, the practical work and industrial internships are a mandatory part of all programmes and aimed at strengthening and deepening theoretical knowledge as well as acquiring skills of practical nature. Internship activities are set up for a period of thirty days and students are free in choosing the company they want to conduct their internship with. Practitioners are also invited to train students at IPB. In addition, alumni regularly visit their old study programmes and discuss their work experience with the students. While these are all valuable options, the industry representatives wish for the internships to last for a longer period of time so that the students are able to gain

deeper insights into the company's work. The peers share this opinion and advice IPB University to enable students to spend a longer period, preferably one semester, in a company of their choosing.

Mobility

According to the opinion of the peer group, a critical aspect of the degree programmes under review is the limited academic mobility of the students. The programme coordinators admit that the number of Bachelor's students who participate in international exchange programmes is still low, despite students' high interest.

According to the Self-Assessment Report, the curriculum is structured in a way that allows students to spend a semester abroad and rules to recognize achievements and competences acquired by the students outside IPB University are set in place. The students confirm during the discussion with the peers that some opportunities for international academic mobility exist. However, they also point out that they wish for more places, more exchange programmes and more scholarships. The peers discuss with IPB's management if there is a strategic concept to increase the international mobility of students and teachers. They learn that IPB University has many international partners, has developed a fellowship programme, and provides scholarships for foreign students to study at IPB. Among the universities involved to student exchange programmes are Kangwon National University (Republic of Korea), Kookmin National University (Republic of Korea), Tokyo University of Agriculture (Japan), Faculty of Forestry University of British Columbia (Canada), Universiti Putra Malaysia (Malaysia), the University of Göttingen (Germany), and Faculty of Agriculture of Kasetsart University (Thailand). The peers support the measures undertaken, however they recommend increasing the effort to further internationalise IPB University by, on the one hand, integrating international mobility structurally into the curriculum and on the other hand establishing more international cooperation and exchange programmes and offering more and better endowed scholarships.

In addition, while the students present at the audit were generally able to communicate fluently in English, this may not be the case for all of the students partaking in the study programmes. As a lack of English language capabilities may also hinder international mobility, the peers recommend IPB to offer more modules and courses taught in English.

Criterion 2.2 Work load and credits
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Evidence:

- Self-Assessment Report
- Study plans of the degree programmes
- Information on IPB University Credit Points

- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:

Based on the National Higher Education policy, all four programmes use a credit point system called SCH. In comparison to ECTS credit system, wherein 1 ECTS equals 25-30 hours of students' workload per semester, it is determined that 1 SCH 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 SCH. A standard 3 SCH module is approximately equals 4 ECTS. Therefore, to reach the usual workload, students need to take on average 18 SCH per semester. However, the regular schedule usually covers 20-21 SCH 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 period to finish the programme is 8 semesters. The peers notice, however, that in the programmes under review student on average study one semesters longer. They learn from the programme coordinators and professors that most students struggle with finishing their studies within four years due to the internship as well as their research project (final thesis). With regard to the internship, which is set for a duration of one month, many students opt to extend the internship in order to gain more experiences even if it means not finishing their studies on time. Here, the peers advice IPB to generally allow for a longer internship to be undertaken (cf. criterion 2.1). The students however struggle mostly with the duration of their research project. This is due to the several distinct reasons. First, the students' research projects deal with living and growing matter. Accordingly, a longer period of time is needed to produce results when working, for example, with growth observation or seasonal changes. Research also depends heavily on external conditions, such as the weather, which is unpredictable. In addition, students also state that they sometimes struggle with actually writing the thesis after having concluded the research. Here, the University has already begun taking measures, including intensifying the supervision of the thesis-writing process or further motivating the students.

Overall, the peers gain the impression that workload for all degree programmes is generally suitable and that modules are adequately credited. They only ask the IPB University to structure the research project (Bachelor's thesis) in a manner that allows students to finish their studies on time.

Criterion 2.3 Teaching methodology

Evidence:

- Self-Assessment Report
- Study plans of the degree programmes
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:

IPB University has the goal to support the transition from a teacher-centred to a student-oriented teaching method, in order to involve all students in the learning process and to develop their thinking and analytical skills. Among other methodologies, blended learning is introduced as a modern way of teaching. The use of e-learning elements in the learning process allows for class activity without physical attendance. In this regard, IPB's Lecture Management System and other internet resources are actively used to provide students with the course materials. To deliver support and guidance to the teachers in utilizing these instruments, all members of the teaching staff have attended workshops on blended learning.

All four degree programmes make use of several different educational methods for each course, such as practical laboratory work, field studies, lectures, Community Service as well as the final research project.

During the classes, active and interactive teaching methods (e.g. lectures, discussions, reports, presentations, and group work) are applied. IPB University wants to encourage the students to gain knowledge from different scientific areas and wants to introduce them to research activities. This should ultimately contribute to the transition from a teacher-centred to a student-centred learning approach.

In summary, the peer group judges the teaching methods and instruments to be suitable to support the students in achieving the intended learning outcomes. In addition, they confirm that the study concept of all four-degree programmes comprises a variety of teaching and learning forms as well as practical parts that are adapted to the respective subject culture and study format. It actively involves students in the design of teaching and learning processes (student-centred teaching and learning).

Criterion 2.4 Support and assistance

Evidence:

- Self-Assessment Report

- Academic Guidelines
- Discussions during the audit

Preliminary assessment and analysis of the peers:

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 peers that they all have an academic advisor.

In conjunction with the academic and mental support, University 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 peers 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.

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

Regarding Criterion 2.1 – Internship

IPB states that the curriculum of all four Bachelor degree programmes actually provides opportunities for longer internships in companies and governmental institutions up to six months, yet these opportunities need to be linked to the students' final projects. If it is not students will consequently not be able to finish their studies on time.

In order to avoid the later, IPB has structured the new curricula K2020 in a way that no compulsory courses are to be taken within the last two semesters to provide more opportunities for internships whether related to their final project or not. In addition, due to the newly established “freedom of learning”, students can perform learning activities outside the campus with the maximum workload equal to 24 credits, which includes the opportunities to undertake internships for one semester.

The auditors thank IPB for this explanation and see this recommendation as already fulfilled.

Regarding 2.1 – International Mobility

IPB provides the following additional information regarding the university’s internationalization strategy: “Additional information regarding more internationalized IPB university is that IPB University has been and continues to make efforts to internationalize its educational programs. The effort shows an increasing international educational quality standard. Based on the world university rankings, IPB's ranking for the last 5 years has continued to increase, from rank 701-750 to 511-520 (2021). In the Agriculture and Forestry subjects, IPB University is ranked 1st in Southeast Asia, 10th in Asia, and 62nd in the world (<https://www.topuniversities.com/university-rankings/university-subject-rankings/2021/agriculture-forestry>).

Regarding the *integrating international mobility structurally into the curriculum*, the student’s international mobility (including one semester study abroad) has already structured in the curriculum (K2014) as a substitution course (including final project) or as additional courses. It is depending on the course/activity subjects taken by students. It is very hard to make international student mobility to become a compulsory subject in the curriculum. This is related to the limited financial capacity of the students and it also depending on the external factors of IPB University, namely the limited capacity of university partners, and scholarships for international mobility, relative to the number of student body (AGH:821 students, PTN: 463 students, TMPT: 420 students, and MNH: 396 students).

The IPB University program is in line with peer’s recommendations about the need *establishing more international cooperation and exchange programs and offering more and better endowed scholarships*. For this regard, IPB University actively engages numerous well-established collaborations with overseas partners. IPB has developed active collaborations with more than 200 universities and institutions around the World, which it shows the increasing number of international collaborations. Various networking activities have been conducted such as: joint degree, double degree, students/teaching staffs/academic staffs

exchange, short course (summer/winter), joint research/supervision/publication, joint seminars, general lecture (including “The IPB Talk on Sustainability and Complexity Sciences” series), training, and other areas (<http://ico.ipb.ac.id/active-mou/>).

Scholarship sponsors for IPB students and the number of scholarship recipients are increasing from year to year. In 2021, almost 50% of IPB University students receive scholarships (<https://m.medcom.id/amp/zNAXgwAK-hampir-separuh-mahasiswa-ipb-jadi-penerima-beasiswa>), However, the availability of scholarships for BSc student of IPB University to do international mobility including student exchange, international seminars, and other international activities is still very limited relative to student body of Study. IPB University provides travel grant for international mobility in very competitive number (<http://ico.ipb.ac.id/student-mobility/>). The Government of Indonesia also provide award called Indonesian International Student Mobility Awards (IISMA) which is open every semester to all students in Indonesia (<https://kampusmerdeka.kemdikbud.go.id/km/IISMA/landing.html>).

Regarding criterion 2.1 – English-language capacity

IPB provides the following additional information regarding the auditors’ recommendation of offering more modules and courses taught in English: “We agree that the *lack of English language capabilities may also hinder international mobility*. However, it important to provide the following additional information:

- The education system in Indonesia has introduced English since the 6th year of elementary school. The National Selection System for National University includes English as one of subjects to be evaluated/examine.
- The National Selection System for National University includes English as one of subjects to be evaluated/examine.
- IPB University students are required to take and pass English courses (IPB108) in the first year. The grade of students' English Course (IPB108) for 3 years (2014-2016, graduating in 2017/18 - 2020/2021) were 53% of students scored Very Good to Excellent (Grade 3.5 – 4.0), 35% Good (Grade 3.0), 9% Poor (Grade 2.0), and 3% failed (grade < 2). The percentage is of 314 students.
- Almost all the courses at IPB University use learning material in English as references (text-books, articles, videos/YouTube), and some modules written in English.

According to that information, we strongly believe that the ability of students and graduates in English reading and writing is above the average. However, it is also believed that verbal communication skills in English are mostly still poor.

Lack of verbal communication skill in English is not an inhibiting factor for participating in international mobility. Students who wish to participate the international mobility/programs usually will take short conversation courses, or courses for English Proficiency Test (TOEFL, IELTS, etc.). For this purpose, IPB has a Language Training Center which has the main task and function of providing languages training and development services, including providing service for students and the academic staff of IPB University in improving foreign language skills. The IPB University Language Training Center also periodically holds TOEFL prediction tests, TOEFL ITP and EPT tests.

The most likely obstacle for participating in International Mobility/Programs is the financial limitations of students and the limited number of scholarships or support funding for international mobility, as well as the capacity of recipient universities, especially for long-term international mobility.

IPB University continuously drive student and lecturer to increase the capability of English Communication skill through the program, activities of:

- Encouraging lecturers to offer special international classes as the embryo of international classes.
- English Training for lecturer for having the confidence to communicate and access a lifetime of enriching experiences and opportunities through Teaching Knowledge Test: Content and Language Integrated Learning (CLIL) - Cambridge Assessment English.
- Inviting Guest lectures from overseas universities, research institutes, and companies to deliver lecture in English.
- Encouraging lecturers and student to participate in the international seminar events. Students are directed by their supervisors to present their research results in international seminar events whether in Indonesia or abroad funded by lecturers' research projects.
- Inviting foreigner student to participate in summer or winter courses in Indonesia (in-bound activities), and IPB University students are encouraged to take part in this activity to improve their experience in interaction with foreigners.

Regarding criterion 2.2 – Duration of study

With regard to the fact that most students are unable to finish their studies on time due to

the final thesis, IPB states the following: “The length of study had been high concern of higher education in Indonesia as long as the history of higher education itself. The “Sarjana” educational program (BSc degree program) in Indonesia at the beginning was set as 6 years education program and changed to be 4 years education program with the maximum length of study of 7 years. The maximum length of study was tried to be shorter to become 5 years (10 semesters) (Education and Cultural Ministerial Regulation No. 49/2014 about the National Standard of Higher Education). However, this national policy raises objections from higher education management, and as the result, in 2015 that National Higher Education Policy 2014 was canceled and the maximum length of study since that become 7 years (14 semesters) – (Research, Technology and Higher Education Minister Regulation No. 44/2015 about the National Standard of Higher Education). IPB Policy decided the maximum length of study for student of BSc degree program is 6 years (IPB Undergraduate Program Education Guide Book). This situation show that in fact reduction of length of study is a big concern, challenging.

The BSc degree program in Indonesia is an academic program, where the academic logical thinking become the main priority relative to the length of study. This academic program differs with 4 years vocational program, which more emphasize on specific work skills. The implication of this principle, during supervising student’s final projects, the final projects supervisors trying to explore ideas, interests, and guide students to find out their final project ideas. In this stage, the capacity of student to find out the final project’s topics are different. The completion of these research processes is highly depend on the students performance, student interest, personal factors influences the decision to finish study faster This situation is one of several factors influence the length of study (which already mentioned in SAR and peer fact finding from student and professor).

The assessed curriculum of 2014–2019 of four BSc degree programs of AGH, PTN, TMPT, and MNH actually are structured curriculum of 2009–2013 to allow students graduate within 48 months. Compared to the previous curriculum of 2009–2013, the curriculum of 2014–2019 provides more time for student to finish their study faster, including through:

- Providing the 8th semester just for finishing student final projects, where before, the student have to write and present Field Work Report in the 8th semester.
- Assign Lecturer as BSc thesis supervisors at the beginning of 6th Semester to allow students to formulate their research proposal as soon as possible. In some cases, some students were able to conduct a data collection for their researches while they took some courses in 7th Semester.
- Encouraging lecturers to involve students in their researches/projects, so that students have an opportunity to carry out their BSc researches.

The delayed graduation of more than 48 months does not merely associated with the BSc research. In some cases, students were intentionally postpone their graduations for the following reasons as mentioned also in SAR:

- Students repeated some courses at 8th Semester to improve their GPA.
- Students focussed on organizational activities.
- Students involved in a student-exchange program abroad for at least one semester.
- Students took a part-time job.

For such personal reasons, it was difficult for the four study programs to force students finish their studies within 48 months.

The effort of IPB to reduce the length of study continuously improve. In the revised curriculum of K2020, which was running since 2020 implement the more flexibility and personalized learning, where curriculum provides flexibilities in choosing their own courses up to 24 SCH outside their study programs, and more variety of final projects schemes. The final project of student could be a result from student scientific essay competition, internship, or capstone project, which could be carried out by students before entering 8th Semester. Through this flexibility and personalized curriculum scheme, the shorter length of study up to 4 years could more possible to be achieved.

While the auditors understand that not all students struggle with the final thesis and that other who prolong their studies do so out of personal reasons such as holding a job or simply wanting to study longer, they nonetheless see that the thesis' structure makes it very difficult to finish studies within the allotted time of four years.

The auditors view this criterion as mostly fulfilled.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation
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Evidence:

- Self-Assessment Report
- Module descriptions
- Academic guidelines
- Academic Calendar

- Discussions during the audit

Preliminary assessment and analysis of the peers:

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

In conclusion, the peers 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 peers after the comment of the Higher Education Institution regarding criterion 3:

IPB gives no statement for this criterion.

The auditors view this criterion as fulfilled.

4. Resources

Criterion 4.1 Staff

Evidence:

- Self-Assessment Report
- Staff Handbooks
- Study plans
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:

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.

According to the Self-Assessment Report, the teaching staff has the following structure:

- Agronomy and Horticulture programme consists of 18 professors, 28 associate professors, 14 assistant professors, 9 lecturers, and 2 assistant lecturers
- Plant Protection programme holds 5 professors, 12 associate professors, 17 assistant professors, and 4 lecturers
- Capture Fisheries Technology and Management programme consists of 6 professors, 16 associate professors, 9 assistant professors, and 3 lecturers
- Forest Management programme holds 10 professors, 13 associate professors, 5 assistant professors, 5 lecturers, and 2 assistant lecturers.

The peers 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 peers 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 process, and certainly, this atmosphere of understanding and support is one of the strong points of the degree programmes.

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

Criterion 4.2 Staff development
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Evidence:

- Self-Assessment Report
- Staff handbooks
- Discussions during the audit

Preliminary assessment and analysis of the peers:

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).

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 three faculties want to promote the process of internationalisation at IPB by hosting international scientific events, facilitating sabbatical leaves, and inviting international professors.

The peers 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 peers 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 4.3 Funds and equipment

Evidence:

- Self-Assessment Report
- Videos and photographs depicting the teaching facilities and infrastructure of the university
- Information about the availability of equipped classrooms and facilities for practical training (and the software included) Appendix M11 - Information on the department premises
- Discussions during the audit

Preliminary assessment and analysis of the peers:

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.

As the audit was conducted online, the peers were not able to visit the laboratories and teaching spaces. Instead, IPB University has provided extensive documentation, including lists of laboratories and equipment and a variety of videos. In addition, during the audit, faculty staff members made informative presentations, gave a live-tour through some of the many laboratorial spaces IPB hold and answered questions the peers had. The peers took positive note of the Advanced Research Laboratory (established in 2019), where the

IPB' lecturers, undergraduate and graduate students, non-IPB scientists have opportunity to perform their researches using most modern equipment. In addition, the Self-Assessment Report provides details regarding the overall infrastructure of the university and its campuses. The peers are convinced that the teaching and office facilities, the libraries and the computer labs are sufficient for all students and staff members. The peers can further assess that safety measures, such as safety guidelines and protocols, fire extinguishers, and emergency showers, are available and in line with international guidelines. Students also have to pass a safety training in order to work in the laboratories.

In summary, the peers confirm that the current funding allows for maintaining the standards as well as purchasing further instruments, if necessary, and that IPB University generally holds enough work spaces and laboratories and that all laboratories are equipped with modern and sophisticated instruments.

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

IPB gives no statement for this criterion.

The auditors view this criterion as fulfilled.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Self-assessment report
- Module descriptions
- University's web page: www.ipb.ac.id

Preliminary assessment and analysis of the peers:

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 studying the module descriptions, the peers confirm that they include all necessary information about the persons responsible for each module, the teaching methods and work load, the awarded credit points, the intended learning outcomes, the content, the

applicability, the admission and examination requirements, and the forms of assessment and details explaining how the final grade is calculated.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report
- Sample Diploma for each degree programme
- Sample Diploma Supplement for each degree programme

Preliminary assessment and analysis of the peers:

The peers confirm that the students of all four degree programmes are awarded a Diploma and a Diploma Supplement after graduation. The Diploma consists of a Diploma Certificate and a Transcript of Records. The Diploma Supplement contains all necessary information about the degree programme including acquired soft skills and awards (extracurricular and co-curricular activities). The Transcript of Records lists all the courses that the graduate has completed, the achieved credits, grades, cumulative GPA, and mentions the seminar and thesis title.

Criterion 5.3 Relevant rules

Evidence:

- Self-Assessment Report
- All relevant regulations as published on the university's webpage: www.ipb.ac.id

Preliminary assessment and analysis of the peers:

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 peers after the comment of the Higher Education Institution regarding criterion 5:

IPB gives no statement for this criterion.

The auditors view this criterion as fulfilled.

6. Quality management: quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:

- Information on the quality management system
- Academic guidelines
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

IPB University presents the published document “Quality Assurance System for undergraduate programmes (IQAS/SPMI)”, complying with the University’s Education Quality Standards for Education. The regulations encompass all core processes of the University and the respective quality assurances measures, processes and responsibilities.

During the audit, the peers discuss the quality management system at IPB with the rectorate representatives, programme coordinators and the students. They are of the impression that IPB has established a well-organized system of quality assurance that includes all relevant stakeholders. All programmes and courses are constantly under review for further development. Students learning results across the whole student life cycle are monitored in different surveys and the results aid the improvement of the degree programmes’ quality. In this regard, it is particularly noteworthy that the faculties apparently manage to establish a remarkably responsive feedback culture between teachers and students. During the discussions, students report that they perceive their assessment of the courses and their criticism on the work of university’ services to be taken serious and that they feel well informed about follow-up measures in response to potential critical remarks. The lecturers also confirm the trustful and cooperative relationship in the teaching/learning community at the faculties. Moreover, IBP University and the Faculties of Agriculture, Fisheries and Marine Sciences, and Forestry stay in close contact with their alumni who also support the Faculty by raising funds.

The peers 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 peers see that due to the feedback from the employers, changes in the curriculum are implemented.

In summary, the peer group confirms that the quality management system is suitable to identify weaknesses and to improve the degree programmes. All stakeholders are involved in the process.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 6:

IPB gives no statement for this criterion.

The auditors view this criterion as fulfilled.

D Additional Documents

No additional documents needed“

E Comment of the Higher Education Institution (14.12.2021)

The institution provided a detailed statement that has been integrated into the report.

F Summary: Peer recommendations (10.01.2022)

Taking into account the additional information and the comments given by IPB the peers 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 Agronomy and Horticulture	With requirements for one year	30.09.2027	–	/
Ba Plant Protection	With requirements for one year	30.09.2027	–	/
Ba Capture Fisheries Technology and Management	With requirements for one year	30.09.2027	–	/
Ba Forest Management	With requirements for one year	30.09.2027	–	/

Requirements

For all degree programmes

- A 1. (ASIIN 2.2) Structure the final research project in a manner that ensures that students can finish their studies on time.

Recommendations

For all degree programmes

- E 1. (ASIIN 1.3) It is recommended to include more business-related contents, such as project management and project analysis into the curriculum.
- E 2. (ASIIN 1.3) It is recommended to enhance the soft skills of the students, such as negotiation, communication and problem solving.
- E 3. (ASIIN 2.1) It is recommended to further promote the academic mobility of the students.
- E 4. (ASIIN 2.1) It is recommended to offer more modules in English.

G Comment of the Technical Committee 08 – Agriculture, Nutritional Sciences and Landscape Architecture (10.03.2022)

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, Nutritional Sciences and Landscape Architecture recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Agronomy and Horticulture	With requirements for one year	30.09.2027	–	/
Ba Plant Protection	With requirements for one year	30.09.2027	–	/
Ba Capture Fisheries Technology and Management	With requirements for one year	30.09.2027	–	/
Ba Forest Management	With requirements for one year	30.09.2027	–	/

H Decision of the Accreditation Commission (18.03.2022)

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

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 Agronomy and Horticulture	With requirements for one year	30.09.2027	–	/
Ba Plant Protection	With requirements for one year	30.09.2027	–	/
Ba Capture Fisheries Technology and Management	With requirements for one year	30.09.2027	–	/
Ba Forest Management	With requirements for one year	30.09.2027	–	/

Requirements

For all degree programmes

- A 1. (ASIIN 2.2) Structure the final research project in a manner that ensures that students can finish their studies on time.

Recommendations

For all degree programmes

- E 1. (ASIIN 1.3) It is recommended to include more business-related contents, such as project management and project analysis into the curriculum.
- E 2. (ASIIN 1.3) It is recommended to enhance the soft skills of the students, such as negotiation, communication and problem solving.

- E 3. (ASIIN 2.1) It is recommended to further promote the academic mobility of the students.
- E 4. (ASIIN 2.1) It is recommended to offer more modules in English.

I Fulfilment of Requirements (24.03.2023)

Analysis of the peers and the Technical Committee (16.03.2023)

For all degree programmes

- A 1. (ASIIN 2.2) Structure the final research project in a manner that ensures that students can finish their studies on time.

Initial Treatment	
Peers	fulfilled Justification: IPB clearly demonstrates that it has analyzed and deduced the reasons why the final research projects hinders students from finishing their studies on time. IPB has invented and implemented strategies that address these issues both for the overall structures of all four Bachelor's programmes as well as for each programme individually. These impressive steps, already implemented, convince the auditors that IPB ensures that student can finish their studies on time.
TC 08	fulfilled Justification: The technical committee follows the assessment of the auditors.

Decision of the Accreditation Commission (24.03.2023)

Degree programme	ASIIN-label	Subject-specific label	Accreditation until max.
Ba Agronomy and Horticulture	All requirements fulfilled	/	30.09.2027
Ba Plant Protection	All requirements fulfilled	/	30.09.2027
Ba Capture Fisheries Technology and Management	All requirements fulfilled	/	30.09.2027
Ba Forest Management	All requirements fulfilled	/	30.09.2027

Appendix: Programme Learning Outcomes and Curricula

According to Diploma Supplement the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Agronomy and Horticulture:

Learning Objectives

The learning objectives of Bachelor degree programme in Agronomy and Horticulture are to produce graduates with qualifications such as:

1. Have the understanding of the principles of natural and physical sciences, mathematics, social and economics, of the concept of characteristics of crops and their genetic diversity, and of plant growth and development and their physiological responses to different growing environments
2. Have knowledge and skill to manage sustainable crop production
3. Have awareness of life long learning, entrepreneurial attitude, compliances to ethical and professional standards, communication ability and team working, and are able to further develop abilities independently

The following curriculum is presented:

A. BSc In Agronomy and Horticulture (AGH)

No	Code	Course	Semester credit hours (SCH)	Prerequisite
Semester 1			16 SCH	
1	IPB100-104, IPB110	Religion Education	3(2-2)	
2	IPB106	Bahasa Indonesia	2(1-2)	
3	IPB107	Introduction to Agricultural Science	2(2-0)	
4	IPB112	Sport and Art*	1	
5	MAT101	Fundamentals of Mathematics	3(2-2)	
6	BIO100	Biology	3(2-3)	
7	KPM130	General Sociology	3(2-2)	
Semester 2			18 SCH	
1	IPB111	Pendidikan Pancasila (Civics Education)	2(1-2)	
2	IPB108	English	3(2-2)	
3	KIM101	Chemistry	3(2-3)	
4	FIS100	Physics	3(2-3)	
5	EKO100	General Economics (Civic Education)	3(2-2)	
6	AGB100	Introduction to Entrepreneurships	1(1-0)	
7	KPM110	Basics of Communication	3(2-2)	
Semester 3			24 SCH	
1	TSL202	Introduction to Soil Science	3(3-0)	
2	AGH250	Principles of Seed Science and Technology	3(2-3)	
3	GFM221	Climatology	3(3-0)	
4	BIO234	Botany	3(2-3)	
5	AGH200	Principles of Agronomy	3(2-3)	
6	AGH210	Genetic for Plant Breeding	3(2-3)	
7	ESL211	Agricultural Economics	3(3-0)	
8	Minor/Supporting courses		3	
Semester 4			22 SCH	
1	BIO242	Basic of Plant Physiology	3(2-3)	
2	STK211	Statistical Methods	3(2-3)	
3	AGH211	Principles of Plant Breeding	3(2-3)	AGH210
4	AGH240	Principles of Horticulture	3(2-3)	AGH200
5	AGH241	Cultivation Plant Technique	3(2-3)	AGH200
6	AGH301	Field Trip	1(0-3)	
7	PTN200	Principles of Plant Protection	3(2-3)	
8	Minor/Supporting courses		3	

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No	Code	Course	Semester credit hours (SCH)	Prerequisite
Semester 5			21 SCH	
1	STK222	Experiments Design	3(2-3)	STK211
2	ARL200	Principles of Landscape Architecture	3(2-3)	
3	AGH330	Principles of Plant Biotechnology	3(2-3)	
4	AGH340	Food Crops Science	3(2-3)	AGH200
5	AGH320	Agricultural Ecology	3(2-3)	AGH200
6	AGH321	Weed Control	3(2-3)	AGH200
7	Minor/Supporting courses		3	
Semester 6			22 SCH	
1	FPA400	Community Services Projects	3	
2	AGH331	Plant Propagation	3(2-3)	AGH200, AGH240
3	AGH341	Estate Plantation Science	3(2-3)	AGH200
4	AGH398	Technique of Scientific Writing	2(1-2)	
5	AGH401	Integrated Agriculture	2(1-2)	AGH200
6	AGH322	Water and Nutrition Plant Management	3(2-3)	AGH200 AGH240
7	Elective courses		3(2-3)	
9	Minor/Supporting courses		3	
Semester 7			17 SCH	
1	FPA401	Agriculture Politics	2(2-0)	
2	AGH403	Agriculture Production and Bussiness Practices	2(0-6)	AGH200 AGH240 AGH241
3	AGH440	Post Harvest of Agriculture Crops	3(2-3)	
4	AGH441	Crop Production Management	3(2-2)	AGH200 AGH240 AGH341
5	AGH402	Capita Selecta in Agriculture	1(1-0)	
6	Elective courses		3(2-3)	
7	Minor/Supporting courses		3	
Semester 8			7 SCH	
1	AGH498	Seminar	1	
2	AGH499	Final Project	6	AGH398 STK222
		Total	148 SCH	

According to Diploma Supplement the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Plant Protection:

Learning Objectives

The learning objectives of Bachelor degree programme in Plant Protection are to produce graduates who

1. Master basic and applied knowledge to identify analyse and solve plant pest and disease problems
2. Have skills in plant health management to provide an effective approach to implementing environmentally friendly plant protection technologies
3. Have good communication skills
4. Have good managerial skills
5. Have reasonable entrepreneurial skills

The following curriculum is presented:

B. BSc in Plant Protection (PTN)

No.	Code	Subject Course	SC ¹	Course Category
1st SEMESTER (19 SCU)				
1	BIO100	Biology	3 (2-0)	BNSC
2	EKO100	General Economy	3 (3-0)	BNSC
3	IPB100	Religion	3 (2-2)	BNSC
4	IPB105	Indonesian Language	2 (1-2)	BNSC
5	IPB107	Introduction to Agricultural Science	2 (2-0)	BNSC
6	KIM101	Chemistry	3 (2-3)	BNSC
7	MAT101	Introduction to Mathematics	3 (2-3)	BNSC
2nd SEMESTER (19 SCU)				
1	AGB100	Introduction to Entrepreneurship	1 (1-0)	BNSC
2	FIS100	Physics	3 (2-3)	BNSC
3	IPB111	Pancasila and Civic Education	2 (1-2)	BNSC
4	IPB108	English	3 (2-2)	BNSC
5	IPB112	Sports and Arts	1 (0-3)	BNSC
6	KPM130	General Sociology	3 (2-2)	BNSC
7	PTN211	General Entomology	4 (2-5)	MCC
8	PTN201	Introduction to Agroecology	2 (2-0)	MCC
3rd SEMESTER (19 SCU)				
1	AGH200	Principles of Agronomy	3 (2-3)	BAC
2	TSL202	Introduction to Soil Science	3 (2-3)	BAC
3	PTN224	Introduction to Plant Micology	3 (2-3)	MCC
4	PTN223	Introduction to Plant Virology	2 (1-3)	MCC
5	PTN220	Introduction to Plant Nematology	2 (1-3)	MCC
6	ESL211	Agricultural Economics	3 (3-0)	BAC
7	ARL200	Principles of Landscape Architecture	3 (2-3)	BAC
4th SEMESTER (21 SCU)				
1	BIO242	Basic Plant Physiology	3 (2-3)	BAC
2	AGH212	Introduction to Plant Breeding	3 (2-3)	BAC
3	BIO212	Basic Microbiology	3 (2-3)	BAC
4	BIO230	General Botany	3 (2-3)	BAC
5	PTN212	Principles of Plant Pests Science	3 (2-3)	MCC
6	PTN222	Fundamentals of Plant Pathology	3 (2-3)	MCC
7	PTN214	Management of Vertebrate Pests	3 (2-3)	MCC
5th SEMESTER (22 or 24 credits)				
1	AGH321	Weed Management	3 (2-3)	BAC
2	STK211	Statistical Methods	3 (2-2)	BAC
3	GFM221	Climatology	3 (3-0)	BAC
4	PTN307	Pests and Diseases of Food and Horticulture Crops	4 (3-3)	MCC
5	PTN305	Biological Control and Habitat Management	3 (2-3)	MCC
6	PTN311	Stored-Product and Urban Pests	2 (1-3)	MCC
7	-	Minor or Supporting Course 1	2 or 3	SCC
8	-	Minor or Supporting Course 2	2 or 3	SCC
6th SEMESTER (23 or 25 credits)				
1	PTN308	Pests and Diseases of Estate Crops	3 (2-3)	MCC
2	PTN300	Plant Quarantine	2 (2-0)	MCC
3	PTN 306	Pesticide In Crop Protection	3 (2-3)	MCC
4	PTN 309	Biometrics In Crop Protection	3 (2-2)	MCC

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No.	Code	Subject Course	\$CH ¹	Course Category
5	PTN398	Techniques of Scientific Writing and Presentation	3 (2-2)	MCC
6	PTN321	Seeds and Postharvest Diseases	2 (1-3)	MCC
7	FPA400	Professional Field Work	3	BAC
8	-	Minor or Supporting Course 3	2 or 3	SCC
9	-	Minor or Supporting Course 4	2 or 3	SCC
7th SEMESTER (11 or 12 credits)				
1	PTN401	Integrated Pest and Disease Management	3 (2-3)	MCC
2	PTN402	Plant Clinic	2 (0-5)	MCC
3	PTN403	Introduction to Biotechnology in Crop Protection	2 (2-0)	MCC
4	FPA401	Agricultural Politics	2 (2-0)	BAC
5	-	Minor or Supporting Course 5	2 or 3	SCC
8th SEMESTER (7 credits)				
1	PTN498	Seminar	1	MCC
2	PTN499	Final Project (Skripsi)	6	MCC

According to Diploma Supplement the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Capture Fisheries Technology and Management:

Learning Objectives

The learning objectives of Bachelor degree programme in Capture Fisheries Technology and Management are to produce graduates who are able to:

1. Master the science and technology in captured fisheries as required by the industry, government and entrepreneurship
2. Possess the skills to take the advantage of science, technology and policy in solving problems in relevant captured fisheries in industry, government and entrepreneurship
3. Able to handle open or complex problems regarding the captured fisheries fields, considering especially aspects covering technical, special economics, cultural and business
4. Perform the ability to adapt and to adjust independently and to globally compete
5. Have working ethic and professional obedience

The following **curriculum** is presented:

No.	Courses		SCH ²⁾
	Code	Name	
1st Semester			19 SCH
1	IPB100	Religion Education	3(2-2)
2	IPB106	Indonesian Language	2(1-2)
3	IPB107	Introduction to Agricultural Sciences	2(2-0)
4	MAT101	Fundamentals of Mathematics	3(2-2)
5	KIM101	Chemistry	3(2-3)
6	BIO100	Biology	3(2-3)
7	EKO100	General Economics	3(2-2)
2nd Semester			15 SCH
8	FIS100	Physics	3(2-3)
9	IPB111	Civic Education	2(1-2)
10	IPB112	Sport and Arts	1(0-3)
11	IPB108	English	3(2-2)
12	KPM130	General Sociology	3(2-2)
13	AGB100	Introduction Entrepreneurships	1(1-0)
14	FPK101	Introduction to Fisheries and Marine Sciences	2(2-0)
3rd Semester			22 SCH
15	FPK302	Fisheries and Marine Sciences Softskill Development	2(2-0)
16	BDP200	Fundamental of Aquaculture	3(2-3)
17	MSP223	Ichthyology	3(2-3)
18	ITK221	General Oceanography	3(2-3)

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19	KPM110	Principles of Communication	3(2-3)
20	PSP202	Basic Fishery Policy	2(2-0)
21	PSP212	Fishing Methods	3(2-3)
22	PSP221	Fishing Gear	3(2-3)
4th Semester			24 SCH
23	THP200	Fundamental of Aquatic Technology	3(2-3)
24	ITK211	Marine Biology	3(2-3)
25	STK211	Statistics	3(2-3)
26	PSP222	Fishing Tools Materials	3(2-3)
27	PSP231	Fishing Boat	3(2-3)
28	PSP241	Fishing Ground	3(2-3)
29	PSP251	Fishing Port	3(2-3)
30	PSP252	Introduction Catch Analysis	3(2-3)
5th Semester			24 SCH
31	PSP313	Fish Behavior	3(2-3)
32	PSP321	Fishing Gear Technology	3(2-3)
33	PSP335	Under Water Observation Methods	3(2-3)
34	PSP334	Introduction Fishing Boat Dynamics	3(2-3)
35	PSP342	Operation Rersearch In Capture Fisheries	3(2-3)
36	PSP344	Capture and Fisheries System	3(2-3)
37	PSP353	Planning Technics for Fishing Port Construction and Utilization	3(2-3)
38	ITK311	Tropical Marine Ecology	3(2-3)
6th Semester			22 SCH
39	PSP398	Research Metodologies	3(2-3)
40	PSP302	Marine Law and Fisheries	2(2-0)
41	PSP312	Fishing Technology	3(2-3)
42	PSP314	Exploratory Fishing	3(2-3)
43	PSP333	Seamanship	3(2-3)
44	PSP332	Fisheries Navigation	3(2-3)
45	PSP345	Planning and Optimizing in Capture Fiheries Industry	3(2-3)
46	FPK401	Community Services	2(2-0)
7th Semester			9 SCH
47	PSP401	Special Topics on Capture Fisheries	2(2-0)
48	PSP402	Sustainable Capture Fisheries Industry	3(2-3)
49	PSP403	Marine Fisheries Practices	4(1-9)
8th Semester			7 SCH
50	PSP498	Seminar	1
51	PSP499	Undergraduate Thesis	6

According to Diploma Supplement the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor degree programme Forest Management

Learning Objectives

The learning objectives of Bachelor degree programme in Capture Fisheries Technology and Management are to produce graduates who are able:

1. To apply and integrate basic natural sciences, social, economics, and policy sciences; quantitative and qualitative methods; forest techniques and sciences, which are needed for planning, organizing, governing and evaluating ecosystem-based forest management
2. To continue more advanced education and research
3. To do public administration of forestry work
4. To advocate the development of forestry
5. To work for other professions related to forest management and forestry

The following **curriculum** is presented:

No	Courses		
	Code ¹⁾	Name	SCH ²⁾
1st Semester			19 CSU
1	IPB100/104/IPB110	Religion	3(2-2)
2	IPB106	Indonesian	2(1-2)
3	IPB107	Introduction to Agriculture	2(2-0)
4	MAT100	Introduction to Mathematics	3(2-2)
5	KIM101	Chemistry	3(2-3)
6	BIO100	Biology	3(2-3)
7	EKO100	General Economics	3(2-3)
2nd Semester			19 SCH
8	IPB111	Pancasila (Basic Indonesian Ideology)	2(1-2)
9	IPB108	English	3(2-2)
10	IPB112	Sport and Art ³⁾	1(0-3)
11	FIS100	Physic	3(2-3)
12	MAT103	Calculus	3(2-3)
13	KPM130	General Sociology	3(2-2)
14	AGB100	Introduction to Entrepreneurship	1(1-0)
15	KSH210	Bio-resources Conservation	2(2-0)
16	MNH201	Introduction to Forestry Science & Environmental Ethic	2(2-0)
3rd Semester			20 SCH
17	STK211	Statistical Methods	3(2-3)
18	SVK211	Dendrology	3(2-3)

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No	Courses		
	Code ¹⁾	Name	SCH ²⁾
19	TSL203	Introduction to Soil Science	3(3-0)
20	GFM221	Climatology	3(3-0)
21	KPM210	Basic Communication	3(2-3)
22	MNH211	Geodesy and Cartography	3(2-3)
23	MNH291	Scientific Writing Methods	2(1-2)
4th Semester			21 SCH
24	MAN101	Introduction to Management	3(3-0)
25	SVK212	Forest Ecology	3(2-3)
26	SVK232	Forest Protection	3(2-3)
27	HHT201	Forest Products as Raw Materials	2(2-0)
28	HHT202	Forest Product Processing	2(2-0)
29	MNH212	Forest Resource Inventory	3(2-3)
30	MNH322	Forestry Policy and Legislation	2(2-0)
31	FHT100	Field Forestry Practices	3
5th Semester			18 SCH
32	SVK322	Sylviculture	3(2-3)
33	MNH313	Forest Resources Inventory Techniques	3(2-3)
34	MNH341	Forest Hydrology	3(2-3)
35	MNH316	Forest Biometrics	3(2-3)
36	MNH323	Community Forestry	3(2-3)
37	MNH331	Forest Harvesting	3(2-3)
38	Elective/supporting courses**		
6th Semester			22 SCH
39	MNH315	Remote Sensing and GIS for Forestry	3(2-3)
40	MNH327	Forest Management Economics	3(3-0)
41	MNH324	Forestry Business	2(2-0)
42	MNH325	Private Forest Management	2(2-0)
43	MNH332	Forest Opening	3(2-3)
44	MNH317	Integrated Forest Management	3(2-3)
45	MNH314	Forest Management	3(2-3)
46	MNH403	Integrated/Thematic Field Practice/Forestry Works Practice	3
7th Semester			11 SCH
47	MNH425	Forest Valuation	3(2-3)
48	MNH426	Forestry Policy Analysis	2(2-0)
49	MNH433	Forest Utilization Operation	3(2-3)

No	Courses		
	Code ¹⁾	Name	SCH ²⁾
50	MNH434	Forest Management Cost Analysis	3(2-3)
51	Elective/supporting courses**		
8th Semester			7 SCH
52	MNH404	Seminar	1
53	MNH405	Thesis	6