



ASIIN Seal

Accreditation Report

Bachelor's Degree Programmes

Agribusiness

Agricultural Product Technology

Agronomy

Plant Protection

Soil Science

Provided by

Universitas Sriwijaya

Version: 25 September 2023

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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
Agribisnis	Agribusiness	ASIIN	BAN-PT, 2018- 2023	08
Teknologi Hasil Pertanian	Agricultural Product Technology	ASIIN	BAN-PT, 2018- 2023	08
Agronomi	Agronomy	ASIIN	BAN-PT, 2018- 2023	08
Proteksi Tanaman	Plant Protection	ASIIN	BAN-PT, 2020- 2025	08
Ilmu Tanah	Soil Science	ASIIN	BAN-PT, 2020- 2025	08
<p>Date of the contract: 30.09.2022</p> <p>Submission of the final version of the self-assessment report: 13.11.2022</p> <p>Date of the onsite visit: 07.-08.06.2023</p> <p>at: Universitas Sriwijaya, Campus Indralaya, Faculty of Agriculture.</p>				
<p>Expert panel:</p> <p>Prof Dr.-Ing. Stefan Böttinger, University of Hohenheim, Stuttgart</p> <p>Prof Dr Dieter Trautz, University of Applied Sciences Osnabrück</p> <p>Prof Dr Bernhard Seggewiß, University of Applied Sciences Neubrandenburg</p> <p>Dr Muhammad Rondhi, University of Jember</p> <p>Mr Almansyah N. Sinatrya, Universal PT Tempu Rejo</p> <p>Ms Fitria Yasmin Mazaya, student at Universitas Gadjah Mada</p>				

¹ ASIIN Seal for degree programmes.

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

Representative of the ASIIN headquarter: Christian Daniels	
Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of December 10, 2015 Subject-Specific Criteria of Technical Committee 08 – Agriculture, Forestry, Food 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
Agribusiness	S.P. (Sarjana Pertanian / Bachelor of Agriculture)	Agribusiness economics and management	Level 6	Full time	-	4 years / 8 semesters	144 credits are equivalent to 217.32 ECTS	1984, annually
Agricultural Product Technology	S.T.P. (Sarjana Teknologi Pertanian / Bachelor of Agricultural Technology)	Food and agricultural product sciences	Level 6	Full time	-	4 years / 8 semesters	144 credits equivalent to 213.46 ECTS	1985, annually
Agronomy	S.P. (Sarjana Pertanian / Bachelor of Agriculture)	Crop cultivation	Level 6	Full time	-	4 years / 8 semesters	144 credits equivalent to 213.54 ECTS	1984, annually
Plant Protection	S.P. (Sarjana Pertanian / Bachelor of Agriculture)	Plant pathology and entomology	Level 6	Full time	-	4 years / 8 semesters	144 credits equivalent to 214.13 ECTS	1984, annually
Soil Science	S.P. (Sarjana Pertanian / Bachelor of Agriculture)	1. Soil science 2. Soil physics, soil and water conservation 3. Soil survey and land evaluation 4. Soil chemistry, soil biology and soil fertility	Level 6	Full time	-	4 years / 8 semesters	144 credits equivalent to 209.13 ECTS	1984, annually

³ EQF = The European Qualifications Framework for lifelong learning

The Universitas Sriwijaya (UNSRI), founded in 1960, comprises ten faculties, including a substantial one dedicated to Agriculture.

The University's strategic plan currently envisages steps of development within the next 5, 10 and 20 years, leading up to 2042; including infrastructural improvements, new buildings and classrooms, as well as new equipment. The aim is for UNSRI to transition from a second-tier university to a first-class one, gaining full autonomy.

As part of this ambition, UNSRI seeks to internationalise its faculties to welcome students from around the globe. The staff is encouraged to prepare for this internationalisation, with an emphasis on bilingual proficiency, particularly in English. In connection to this, the University aims to achieve international accreditation for its subjects through ASIIN as a means to assure international recognition of its programmes. Furthermore, the University seeks to attract a large number of international students through scholarships within the coming years.

UNSRI's Faculty of Agriculture is the fifth in funding among the ten UNSRI faculties, employing over 100 lecturers, most of whom hold doctorate degrees. In view of Indonesia's agricultural heritage, the Faculty is seen as of particular importance, especially given its role in educating the local population on enhancing their agricultural yield.

For the Bachelor's degree programme **Agribusiness (AGB)**, the Universitas Sriwijaya (UNSRI)'s Faculty of Agriculture has presented the following profile in the programme's curriculum:

"C. Purpose

1. Producing graduates who master and apply ethical agribusiness science and technology and have awareness as God's creatures, and national vision.
2. Producing graduates who have entrepreneurial skills in the field of agribusiness, are able to manage and solve agribusiness problems, and are able to become drivers of agribusiness development.
3. Producing competent research in the field of agribusiness that can be utilized in the development of agribusiness, and play a role in the development of science and technology in the field of agribusiness.
4. Producing sustainable cooperation with related institutions both nationally and internationally.

D. Graduate Profile

Profiles of graduates of the Agribusiness Study Program, Department of Agricultural Socio-Economics, Sriwijaya University are:

- a. Agribusiness Manager
- b. Agribusiness Entrepreneur
- c. Agribusiness Community Development Facilitator
- d. Agribusiness Consultant/Researcher, Academician and Researcher
- e. Agribusiness Policy Formulator (...)

2. Knowledge

- a. To be able to develop logical, critical, systematic, and creative thinking through scientific research, creation of designs or works of art in the fields of science and technology that pays attention to and applies economic, social, humanities values according to their expertise, compiles scientific conceptions and study results based on rules, procedures, and scientific ethics in the form of a thesis or other equivalent form and uploaded on the university's website as well as papers that have been published in accredited scientific journals or accepted in international journals.
- b. To be able to carry out academic validation or studies according to their field of expertise in solving agribusiness problems in the community and relevant industries through the development of their knowledge and expertise.
- c. To be able to compile ideas, thoughts, and scientific arguments responsibly and based on academic ethics and communicate them through the media to the academic community and the wider community.
- d. To be able to identify the scientific field that is the object of his research and position it into the research map developed through an interdisciplinary or multidisciplinary approach.
- e. To be able to make decisions in the context of solving agribusiness development problems that pay attention to and apply economic, social, humanities values based on analytical studies or experiments on information and data.
- f. To be able to manage, develop, and maintain networks with colleagues, peers within the institution and the wider research community.
- g. To be able to increase learning capacity independently, and
- h. To be able to document, store, secure, and rediscover research data in order to ensure validity and prevent plagiarism.”

For the Bachelor’s degree programme **Agricultural Product Technology (APT)**, the Faculty has presented the following profile in the programme’s curriculum:

“C. Objective

1. To produce graduates who believe in the Almighty God also qualified, independent, and tough.
2. To create the Agricultural Product Technology Study Program as a reference center for the development of science, technology, and policies, especially in the field of Agricultural Product Technology.
3. To increase an active role in community development.

D. Graduate Profile

Profile of graduates of Agricultural Product Technology Study program, Agricultural Technology Department, Faculty of Agriculture, Sriwijaya University are Professionals in the field of Agricultural Product Technology (managers, supervisors, consultants, etc.) (...)

2. Knowledge

- a. Mastering the theoretical concepts and application of agricultural technology, microbiology and food safety, as well as guaranteeing the quality of agricultural products.
- b. Mastering the principles of engineering and processing, chemistry, analytical methods, biochemistry, packaging and storage technology, characteristics of agricultural products and nutrition science.

- c. Mastering general theoretical concepts of scientific methods, decision making, management of operations and production of agricultural products, as well as entrepreneurship and business based on agricultural technology.”

For the Bachelor’s degree programme **Agronomy (AGR)**, the Faculty has presented the following profile in the programme’s curriculum:

“C. Objective

To produce graduates who have qualifications in attitude, knowledge and skill competencies as described in learning outcomes, and produce publications and technology in the field of agronomy based on resources and local wisdom.

D. Graduate Profile

Profiles of graduates of the Agronomy Department, Faculty of Agriculture, Sriwijaya University are :

1. Entrepreneur in agriculture
2. Researcher in agriculture
3. Academics
4. Agricultural consultant
5. Facilitator for community development in agriculture
6. Bureaucrats (...)

2. Knowledge

- a. Mastering the theoretical concepts and being able to develop science and technology for the cultivation of food crops, plantations and horticulture based on local wisdom and resources,
- b. Mastering the theoretical concepts of plant cultivation problems and being able to manage and solve problems in the field,
- c. Mastering the theoretical concepts of sustainable and environmentally friendly plant cultivation management,
- d. Mastering theoretical concepts in the development of appropriate technology that is applicable in the community to increase agricultural production and
- e. Mastering the theoretical concepts of the latest science and technology development in plant cultivation that can be applied to the community.

For the Bachelor’s degree programme **Plant Protection (PPT)**, the Faculty has presented the following profile in the programme’s curriculum:

“B. Objective

The objectives of Plant Protection Study Program, Faculty of Agriculture, Sriwijaya University are:

1. To produce qualified graduates in the field of Plant Protection capable of implementing knowledge and skills to meet public necessities, especially in the field of plant protection.
2. To publish research article on innovative plant protection based on bio-resources and local wisdoms in national and international journals.

3. To produce innovative technology developed from applied research results to be implemented in the society through sustainable community services.
4. To build collaborations with national and international academic and non-academic institutions.

D. Graduate Profile

The graduates of Plant Protection Study Program, Faculty of Agriculture, Sriwijaya University are intended to be one of the following profiles: Farmer, Manager, Communicator, Researcher and Academic with the following competences:

1. Capable of applying know-ledge and technology to recognize, detect, and identify plant pests and pathogens, measure the damage, calculate the yield losses, and formulate environmentally friendly control practices.
2. Capable of implementing and combining modern knowledge and technology with local wisdoms for the conservation and exploitation of natural enemies to be used as biological control agents of plant pests and diseases.
3. Capable of implementing modern knowledge, technology and local wisdoms to recognize, identify and utilize domestic plants to produce botanical pesticides.
4. Capable of implementing modern knowledge, technology and local wisdoms to overcome local pest and disease problems in marginal lands of South Sumatra.
5. Capable of developing his/her talent and potential to support the preferred work.
6. Having entrepreneurship intuition and capable of creating job for others. (...)

2. Competency of Knowledge (K)

LO-K-1: Mastering theoretical concepts of plant protection comprising the causal agents, symptoms, influencing factors, yield losses, and control techniques.

LO-CN-2: Mastering theoretical concepts of the exploitation of bio-resources to be used as main components of environmental friendly pest management system.

LO-K-3: Mastering theoretical concepts of agricultural ecosystem management as parts of environmentally friendly pest management system.

LO-K-4: Mastering theoretical concepts of appropriate and environmentally friendly pesticide application.

LO-K-5: Mastering theoretical concepts of domestic and international plant quarantine.

For the Bachelor's degree programme **Soil Science (SSC)**, the Faculty has presented the following profile in the programme's curriculum:

"3.Purpose

The Educational Objective of the Unsri Soil Science Program is based on the intellectual and professional development of students. Graduates of the Unsri Soil Science Study Program are expected within a few years of graduation to have:

- a. Ability as a professional practitioner or carry out advanced studies in a relevant field;
- b. Ability to work successfully as a professional and take responsibility effectively on a professional team.

In order to fulfill the Education Program Objectives, graduate students from the Unsri Soil Science Study Program must be able to

B Characteristics of the Degree Programmes

- a. Apply knowledge of Soil Science to solve problems;
- b. Design and conduct experiments, and analyze and interpret data;
- c. Function on a multidisciplinary team;
- d. Identify, formulate, and solve agricultural and environmental problems;
- e. Understand professional and ethical responsibilities;
- f. Communicate effectively interpersonally, formally, and technically, both orally and in writing;
- g. Understand the impact of environmental solutions in a global and social context.
- h. Recognizes the need for, and has the ability to engage in, lifelong learning;
- i. Identify important issues in basic and applied soil science and formulate a scientific approach to these issues; and
- j. Demonstrate an appreciation of land as a fundamental natural resource that deserves to be used wisely and protected;

D. Graduate Profile

- a. Actors In Agriculture (Actor)
- b. Manager (Planner, Designer, Organizer, Evaluator, Mediator)
- c. Entrepreneurs (Entrepreneurs, Initiators, Adapters, Cooperators)
- d. Researcher (Researcher)
- e. Education (Educator)

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
- University Website ([here](#), [here](#), [here](#), [here](#), [here](#))
- Curricula, all programmes
- Module Handbooks, all programmes
- Subject-Specific Criteria (SSC) – Learning Objectives (LO) Interaction Matrices, all programmes
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Learning objectives (LO) are defined for all study courses under review on both a programme and module level.

On the programme level, LOs are delineated in the respective *Curriculum* documents the provided and *SSC-LO interaction matrices*. Tabular mappings of linkages between modules and programme LOs are likewise established in the individual curricula for all programmes under scrutiny. In connection to this, auditors however observe that the programme learning objectives do not appear to be accessible publicly on the University's or Faculty's website.

On the module level, learning objectives are defined in the respective module handbooks. Upon closer scrutiny, the experts however note that there are discrepancies in the documentation between the presented programmes:

⁴ This part of the report applies also for the assessment for the European subject-specific labels. After the conclusion of the procedure, the stated requirements and/or recommendations and the deadlines are equally valid for the ASIIN seal as well as for the sought subject-specific label.

The documentation (curriculum, module handbooks, SSC–LO Interaction Matrices) for the Bachelor’s programmes in **Agricultural Product Technology** and **Plant Protection** thoroughly and continuously differentiate between programme learning outcomes on the one hand, module learning outcomes on the other, as well as the provided course contents.

In contrast to this, the experts observe that the module handbooks for the undergraduate programmes **Agronomy** and **Agribusiness** do not appear to differentiate between the different types of learning outcomes, stating intended programme LOs as module LOs throughout. In the case of the documentation for the Bachelor’s programme in **Soil Science**, the auditors find a mixture of well-defined course learning outcomes on the one hand, as well as programme learning outcomes entered as module learning outcomes on the other.

Asked by the expert group about distinguishing factors between the five programmes, the programme coordinators outline that, while their learning outcomes are – to a certain extent by necessity – quite similar on a fundamental level, what sets them apart are their respective specialisations which become more evident at their later stages; highlighting various aspects such as policy analyses (in Agribusiness) or research and entrepreneurship (in Agronomy).

According to the programme coordinators, the successful achievement of the intended learning outcomes is measured through various factors such as exam performance, class attendance, and practical involvement.

During the experts’ exchanges with students and alumni of the programmes under review, an overall satisfaction with the programmes, the learning they seek to impart as well as future job perspectives emerged; with multiple alumni confirming their swift employment soon after graduation. Likewise, multiple students confirmed that the programmes’ elective offering is sufficient. As a recurring and strongly emphasised topic, however, the students repeatedly highlighted a demand for the Faculty to integrate advanced English language training in their curricula, deeming the optional, non-specific English language offering at the University insufficient. In this regard, the experts were surprised by the Faculty’s recent decision to remove classes in English for Academic Purposes as a mandatory component of the programme’s curricula, with the notable exception of the Department for Plant Protection. This aspect will be discussed further in chapter 1.3.

On their part, industry representatives from both private and public institutions especially commend the Faculty of Agriculture’s graduates’ lab competencies and motivation, confirming to have employed interns and alumni from the respective departments in the past. In terms of Faculty–industry cooperation, they point to a range of existing avenues of collaboration, ranging from MoUs covering internships and thesis supervision to exchanges

on curricular contents. Following further questions from the auditing peers, industry experts stated that the three-month internship duration was adequate.

In turn, however, they likewise centrally and repeatedly emphasise that English language proficiency is crucial, and thus strongly lament the Faculty's decision to decrease teaching hours for English language (except for the degree programme in Plant Protection).

Finally, when asked about any suggestions they would like to make to the Faculty regarding the programmes under review, the respondents voiced a range of topics ranging from molecular biology, digitalisation, product delivery, data analysis, as well as communication, public speaking, and leadership skills. The experts recommend the Faculty to consider this.

In view of the provided student and industry feedback, the experts gain the impression that the imparted qualification profiles satisfy expectations on all sides, and allow the students to take up employment corresponding to their qualification.

Following their discussions during the audit and the documentation provided by the Faculty, the experts moreover judge that the outlined programme learning objectives of the Ba programmes **Agricultural Product Technology** and **Plant Protection** are adequate for the intended levels of academic qualification, and satisfy the subject-specific criteria for (SSC) determined by ASIIN's Technical Committee 08 sufficiently.

For their assessment of the learning objectives within the offered programmes in **Agromony**, **Agribusiness**, and **Soil Science**, yet, the experts adjourn their judgement until revised module handbooks with specified course learning outcomes are provided.

Moreover, the experts – in both the University's and Faculty's own interests, striving for excellence and internationalisation – emphatically stress that the Faculty should strengthen efforts without delay to (re-)integrate advanced English language courses within all curricula, aiming for a B2 level amongst its graduates.

Criterion 1.2 Name of the degree programme

Evidence:

- Self-Assessment Report
- Curricula, all programmes
- Module Handbooks, all programmes.

Preliminary assessment and analysis of the experts:

As outlined by the University in the self-assessment report, the titles of the five programmes under review align with the nomenclature for study programmes stipulated in the corresponding decree no. 232/B/HK/2019 of the Indonesian Ministry of Research,

Technology, and Higher Education. Moreover, they seek to align closely with the relevant professional associations in their respective fields.

In light of the provided documentation, the experts confirm that the English translation and the original Indonesian names of the study programmes under review are appropriate and correspond to the programmes' intended aims and learning outcomes.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Curricula, all programmes
- Module Handbooks, all programmes
- Student and Graduate Statistics, various programmes
- ASEAN International Mobility for Students (AIMS) Certificates
- *Determination Of Prospective Students For The ASEAN International Mobility For Students (AIMS) Program In 2020*, Decree Of Rector Universitas Sriwijaya, Number: 0262/UN9/SK.BAK.AK/2020, UNSRI, 02 December 2020
- Internship Certificates
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

The curricula, structure and composition of the study programmes under review, which are based on the Indonesian National Qualification Framework, are presented in the University's provided "Curriculum" as well as "Module Handbook" documents.

Structure of the Programmes

The Bachelor's programmes Agribusiness, Agricultural Product Technology, Agronomy, Plant Protection, and Soil Science are offered by the Faculty of Agriculture, which is one of the ten faculties at the Universitas Sriwijaya.

Each of the curricula consists of 144 Indonesian credits, subdivided into subject-specific sections, as is depicted in the overview below. Each section clusters several associated courses, as can be found in annex *Programme Learning Outcomes and Curricula*. The curriculum consists of university requirements, compulsory and elective courses. The expected study duration is eight semesters (four years). Each semester is equivalent to 14 weeks of learning activities. Besides these learning activities, there is one week for midterm exams and one week for final exams.

Agribusiness	Agricultural Product Technology	Agronomy	Plant Protection	Soil Science
Attitudes and Values	Life Skills	General Basic Knowledge	Basic knowledge	Personality Development
Agricultural Science	Chemistry And Agricultural Product Analysis	Scientific Concept	Conceptual Knowledge	Scientific And Skill Subject
Economy	Microbiology And Agricultural Product Safety	Agricultural Production	Crop Production	Craft Skills
Management	Biochemistry Of Agricultural Product, Nutrition, And Health	Agricultural Production Improvement	Pest Organisms	Work Behavior
Business	Engineering & Processing Of Agricultural Products	Plant Pest Control	Plant and Pest Interaction	Community Life
Sociology and Communication	Applied Agricultural Products	Socio-Economic And Management	Management of Pest Organisms	
Skills and Information Technology Analysis		Innovation And Entrepreneurship	Agricultural Social Economics	
Community Empowerment			Entrepreneurship	

All five programmes contain varying amounts of credits to be obtained through elective courses. Five courses – Indonesian language, Religion, Pancasila, English, and Civic Education – amounting to in total ten credits are fixed within all curricula within the national requirements.

All in all, however, based on the provided documentation, the discussions during the audit, and in view of the almost forty-year runtime of the programmes under scrutiny, the expert group recognises that modules within the given study programmes embody sensible teaching and learning units, respectively imparting distinct clusters of knowledge and competencies. Through both the variety of offered programmes as well as their elective components, students are able to pursue individual pathways.

Content

The **Ba Agricultural Product Technology (APT)** curriculum includes modules such as

Physical Chemistry, Biochemistry, General Microbiology, Agricultural Product Chemistry, Agribusiness Communication, Hygiene, Sanitation and Food Industry Safety, Food and Processing Microbiology, Principles of Agricultural Products Processing, Agricultural Product Analysis, Food Crops Processing Technology, Plantation Crops Processing Technology,

Nutritional Science, Preservation Technology, Waste Handling Technology, Packaging and Storage, Thermobacteriology, Functional Food and Food Phytochemistry, South Sumatera Traditional Food Processing Technology or Halal Assurance System.

The **Ba Agribusiness (AGB)** curriculum teaches modules such as

Introduction to Agricultural Sciences, Botany, Fundamentals of Management, Introduction to Agricultural Economics, Fundamentals of Business, Fundamentals of Agronomy, Micro Economics, Human Resource Management, Introduction to Agricultural Technology, Agribusiness Accounting and Finance, Fundamentals of Soil Science, Statistics, Agribusiness System, Macro Economics, Agroclimatology, Managerial Economic, or Supply Chain and Value Chain Management.

The **Ba Agronomy (AGR)** curriculum covers modules such as

Introduction to Agriculture Science, Introduction to Agriculture Economics, Botany, Agroclimatology, Fundamentals of Management, Genetics, Fundamentals of Plant Physiology, Fundamentals of Agronomy, Fundamentals of Soil Science, Agrochemicals, Introduction to Agriculture Science, Plant Breeding, Plant Biotechnology, Agricultural Machinery and Equipment, Weeds Control, Plant Biotechnology, Research Methods and Entrepreneurship.

The **Ba Soil Sciences (SSC)** curriculum offers modules such as

Soil Fertility, Soil And Water Conservation, Irrigation And Drainage, Soil Biotechnology, Soil, Water And Plant Analysis, Fertilizer And Fertilization Technology, Regional Planning And Development, Spatial And Land Use Planning, Natural Resources And Environmental Management, Agricultural Extension, Farm Management, Agribusiness, Water Quality Management, Plantation Crops Production, Vegetable Crop Production, Food Crops Production, Management Of Annual Crops In Swamplands, Aquaculture Engineering, Soil Survey And Land Evaluation, Landscape Analysis, and more.

The **Ba Plant Protection (PPT)** curriculum is comprised of modules such as

Introduction to Agricultural Economics, Inorganic Chemistry, Mathematics, Botany, Introduction to Agricultural Sciences, Entomology, Rural Sociology, Agroclimatology, Fundamental of Agronomy, Academic Agricultural English, Agricultural Microbiology, Basic Soil Science, Crop Physiology, Fundamental of Agronomy, Statistics, Research Methods, Mycology, Principles of Plant Protection, Plant Bacteriology, Insect Collection, Plant Nematology, Important Pests of Essential Crops, Important Diseases of Essential Crops, Plant Disease Epidemiology, Integrated Pest Management, Biological Control and Habitat Management, Monitoring of Pests and Diseases, Plant Quarantine, Pesticides and Application Technique, Seed and Post-Harvest Disease, Storage Pest, Pest Forecasting System, Plant Clinique, Plant Pest Identification, Plant Disease Identification, Pesticide Residue Analysis and Bioassay, and more.

Based on the provided documentation and the discussions during the audit, the expert group assesses that the curricula and the sequence within which modules are taught enable students to achieve the intended programme learning outcomes.

As already noted in chapter 1.1, however, the auditors find that the module handbooks for **Agribusiness**, **Agronomy**, as well as **Soil Science** do not (consequently) define specific module learning outcomes, but refer to programme learning outcomes instead. This needs to be remedied, as learning outcomes must be defined for each module.

With regards to internships, the auditors appreciate that students have the option to replace the “Field Practice” module with an internship in a relevant institution and the sound process that appears to be established for such cases in terms of supervision and assessment. In connection to this, the auditors recommend offering additional support in finding suitable companies for students considering to pursue an internship, and for the Departments to consider integrating a compulsory internship in the curricula altogether.

As a central concern, students and industry representatives alike however voice the removal of integrated English language courses from all programmes’ curricula, with the exception of the Ba Plant Protection. As is visible from the University’s self-assessment report, this concern appears to have been brought to the Faculty’s attention before by various external stakeholders. This development is moreover especially surprising in view of the University’s self-stated aspirations for excellence and internationalisation, and the University leadership’s announcement of several hundred scholarships for international students to study – in English – at UNSRI within the coming years. In light of the above, statements made by lecturers that students are “encouraged” to expose themselves to English out of their own volition and to make use of the University’s extra-curricular general English language offering are not seen as convincing by the auditors. Likewise, the programme representatives’ hint that graduates of the Faculty are required to prove the achievement of a TOEFL 400 (paper-based test score) before being allowed to graduate is seen as insufficient, given that this score equals a B1 level as per the Common European Framework of Reference for Language (CEFR), defined as the ability to “understand the main points of clear standard input on familiar matters” as well as to “produce simple connected text on topics which are familiar” (cf. [here](#)).

In view of the feedback provided by students and industry representatives, as well as the University’s outlined aspirations and for the sake of the students’ ability to pursue international mobility, the experts thus, in the strongest possible terms, recommend the reintroduction of integrated English language courses into the curricula, as well as the lifting of the English language proficiency threshold for graduation to TOEFL 500 or an equivalent level at least, i.e. within the range of a B2 proficiency. In connection to this, the

experts moreover observe that the course language for essentially all modules across all five programmes under review is stated as “Indonesian”. Subsequently, the experts strongly recommend the introduction of entirely English-taught subject matter modules, especially given the abovementioned initiative to attract incoming students.

Student Mobility

As also confirmed by students of the programmes under review during the audit, UNSRI participates in various programmes for both national and international student mobility. Amongst these are:

- The ASEAN International Mobility for Students (AIMS) programme, which permits students to spend a semester studying in Malaysia, Vietnam, Thailand, or Japan.
- The Indonesian National Student Independent Programme (Program Mahasiswa Merdeka / PMM), coordinated by the Directorate of Higher Education, Research and Technology, which allows students to spend a semester at any other university in Indonesia.
- The Indonesian Plant Protection Study Programme Association (APSITA), which facilitates student exchanges among Plant Protection study programmes within Indonesia.

Besides the above, UNSRI participates in the Indonesian government’s “Independent Learning - Independent Campus” (Merdeka Belajar - Kampus Merdeka, MBKM) scheme, which enables students to pursue various activities outside their department / faculty / university through internships, mobilities, teaching assistance, entrepreneurship or project work, which are eventually credited as equivalent modules.

All in all, the experts find that various avenues for student mobility exist for students of the mentioned programmes. As general – but in view of the University’s stated aims self-evident – advice, the experts encourage the Faculty to further develop its international connection, be it through participation in mobility programmes or bilateral agreements involving student mobility, internships, or thesis supervision.

Periodic Review of the Curriculum

On a macro (i. e. curricular) level, as per the self-assessment report provided by the University and confirmed by the teaching staff during the audit, periodic reviews of all curricula take place every five years. Reviews are conducted in the course of curriculum development and revision workshops, where external stakeholders are invited to provide feedback regarding the quality of the graduates and programme objectives in regard to their relevance to the job market. Moreover, as confirmed by industry representatives

during the audit, annual feedback loops are being conducted with the industry, in which minor adjustments such as those relating to syllabi are debated.

Apart from the above, the graduate statistics for all five programmes are presented to the auditors, documenting the respective student bodies' average study times and final GPAs.

All in all, the experts are content with the provided information concerning the respective programmes' curricular review procedures, with further details to be discussed in chapter 1.6 and chapter 5.

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Report
- University Website (here)
- Academic Guidebook of the Universitas Sriwijaya
- Student & Graduate Statistics
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Every year, the Universitas Sriwijaya admits new students through three different selection pathways:

1) The *National Joint Selection for State Higher Education Entrance (Seleksi Nasional Masuk Perguruan Tinggi Negeri, SNMPTN)*, a national admission system, which is based on academic performance during high school. UNSRI reserves a maximum of 20 per cent of its undergraduate programme capacity for students entering through this scheme.

2) The *Joint Selection for State Higher Education Entrance (Seleksi Bersama Masuk Perguruan Tinggi Negeri, SBMPTN)*, a national selection test organised by the Indonesian government every year for university candidates. UNSRI accepts 50 per cent of its undergraduate programme capacity through the SBMPTN scheme.

3) The *Joint Entrance Screening Test (Ujian Saringan Masuk Bersama, USMB)*, an admission process for prospective students facilitated by a committee formed by a decree from the Rector of the Universitas Sriwijaya. UNSRI accepts 30 per cent of its undergraduate programme capacity through the USMB scheme.

All prospective students for the Study Programmes of Agribusiness, Agricultural Product Technology, Agronomy, Plant Protection and Soil Science must have completed their

studies from a Senior High School, a Vocational High School, or an overseas High School which is accredited and recognised by competent Indonesian authorities.

In their exchanges with the programme coordinators, the auditors learn that admission capacities are reviewed on an annual basis, and that students can apply for up to three ranked programmes of interest through the admission pathways outlined above.

Upon asking about the reasoning for the colour blindness test mentioned in the Faculty's self-assessment report, the programme coordinators explain to the auditors that not being colour blind is of importance in various courses such as those involving lab titration, and that students may need to switch courses or drop out in such cases. This is seen as highly problematic by the assessors, remarking that that ways to accommodate such problems exists and are utilised by other universities or within the industry. The auditors hence ask the Faculty to look into ways of supporting students with colour blindness better, so as not to exclude them from studying their subjects of interest based on this condition.

Apart from this, the auditors find the terms of admission to be binding and transparent.

Criterion 1.5 Workload and Credits

Evidence:

- Self-Assessment Report
- Curricula, all programmes
- Module Handbooks, all programmes
- Academic Guidebook of the Universitas Sriwijaya
- Decree of the Minister of Education and Culture, Number 3 of 2020, on National Higher Education Standards ([here](#))
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

In accordance with the pertinent ministerial Decree No.3 of the Ministry of Research, Technology, and Higher Education from 2020 regarding National Standards for Higher Education (*Standar Nasional Pendidikan Tinggi, SNPT*), the Bachelor's programmes under review consists of 144 Indonesian credit points (*Satuan Kredit Semester, SKS*). One credit point equates to a weekly 170-minute workload across 14 course weeks, consisting of 50 minutes for scheduled face-to-face teaching delivery, 60 minutes for structured assignments, and 60 minutes for independent study.

Lecturers in charge of each module organise the student workload in the module description or the semester learning plan. This module description is shared and discussed with the students during their initial meeting. The lecturers are responsible to monitor student workload and to ensure the envisaged workload is met by adjusting the amount of learning material given to students for self-study.

For the University's conversion of Indonesian credits to the European Credit Transfer and Accumulation System (ECTS), UNSRI equates 25 hours of workload to 1 ECTS, within the digression permitted by the ECTS Users' Guide. Although the five study programmes all require the same total amount of Indonesian credits (144 SKS), their total amount of converted ECTS however differs due to some courses across the respective curricula envisaging diverging amounts of practical work, in line with their nature.

Despite the relevant ministerial regulations suggesting that Bachelor's programmes should be completed within 4 to 7 years, the Rector of Universitas Sriwijaya has determined that the period of study for a bachelor's programme at Universitas Sriwijaya ranges from 7 to 10 semesters, i. e. 3 ½ to 5 years instead. Students may extend their permitted student duration on a semester-to-semester basis to up to a maximum of 14 semesters by submitting an application letter for a one-semester study extension, a statement letter from the student confirming their intention to complete the study within the additional semester, or a supervisor guarantee letter.

Upon further inquiry of the auditors during the audit concerning the above, they learn that indeed no structured mechanism for structured monitoring of students' workload is in place besides lecturers' individual discretion. While the experts understand that it is difficult to accurately determine the time students spend on assignments and individual study outside the classroom, they point out that a structured surveying of students' workload needs to take place, e.g. integrated into the usual course evaluation surveys.

Apart from this, the experts assess that a credit system, which is centred around student workload, is in place. This workload encompasses both contact hours and self-study time. All obligatory elements of the study programme are incorporated into this system. For each individual module, credits are granted in accordance with the associated workload.

Criterion 1.6 Didactic and Teaching Methodology
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Evidence:

- Self-Assessment Report
- Module Handbooks
- Staff Handbooks

- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

Teaching staff in the programmes under review utilise a variety of teaching methods in alignment with the respective modules with student-centred learning in mind. Teaching is moreover enriched through digital or online teaching where suitable.

Every new staff member is required to attend a teaching method training before joining the teaching team and must possess at least a master's degree. The majority of teaching staff across the five study programmes hold doctorate degrees, numerous of these obtained abroad.

Learning methods in the five programmes include lectures, practical components (e.g. field practice), laboratory practice, contextual learning (integrating real-world scenarios to foster learning), cooperative learning (involving group work within teams of students with the aim of improving understanding of a subject), as well as project-based learning (where students gain knowledge by investigating a problem over an extended period).

In summary, the expert group considers 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 comprises a variety of teaching and learning forms as well as practical parts that are adapted to the respective subject culture and study format.

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

Accessibility of Course Learning Objectives

The experts note that the learning objectives for all programmes have been made accessible through the respective programme curricula on the individual programme pages on the Faculty's website, along with module and staff handbooks.

Revision of Module Learning Objects for the degree programmes Agribusiness, Agronomy, and Soil Science

The experts attest that course learning objectives have now been properly defined in the provided revised module handbooks for the study programmes Agribusiness, Agronomy, and Soil Science; which have been made accessible publicly on the respective programmes' websites.

Topics of interest indicated by Industry Representatives

In regards to the topics of interest mentioned by industry representatives during the audit, the auditors thank the Faculty for their thorough illustration of how these topics are present in the current curricula already, as well as their announced further consideration of these topics in future curriculum development.

Introduction of Mandatory Internships

Concerning the matter of internships and their possible compulsory integration into the curricula under review, the experts thank the Faculty for their elaboration and consider the arguments provided as understandable. In view of this, the experts conclude on this point with a recommendation for the Faculty to continue its outlined efforts to strengthen its industry collaboration in terms of future curriculum development and internship opportunities for students.

English language competencies and English-taught courses

The experts furthermore commend the planned (re-)introduction of subject specific English language courses in 2024. In this regard, however, they make the Faculty aware that the module handbooks for the applicable programmes will need to be updated once these modules have been formally (re-)introduced. Additionally, the experts commend the additional efforts intended by the Faculty (increase of course materials in English, “English Club”) mentioned in their statement.

Also in connection to this topic, the experts welcome the intended stepwise increase of the minimum English language graduation requirement until 2027 with the ultimate aim of reaching a B2 level of competency amongst all programme graduates. Likewise, the assessors encourage the Faculty to go through with the intended increase of English-taught subjects in the respective curricula.

Student Mobility and International Partnerships

The experts thank the Faculty for their provided clarifications on the Faculty’s international partnerships and efforts to increase internationalisation, and encourage the Faculty to continue these going forward with the University’s long-term ambitions in mind.

Admission of Students with Colour Blindness

The experts thank the Faculty for their acknowledgement of this issue, and look forward to proof of the further considerations and steps taken in this matter in due time.

Measurement of Student Workload

The experts thank the Faculty for their acknowledgement of this issue, and look forward to proof of conducted student evaluation surveys including pertinent questions in due time.

In summary, the experts see this criterion as largely fulfilled and adapt their requirements and recommendation accordingly. Since the Faculty's comments however frequently relate to *intended* developments and actions, the assessors insist of receiving proof of these efforts where necessary at the appropriate time.

2. Exams: System, Concept and Organisation

Criterion 2 Exams: System, concept and organisation

Evidence:

- Self-Assessment Report
- Module Handbooks
- Academic Guidebook of the Universitas Sriwijaya
- Decree of the Minister of Education and Culture, Number 3 of 2020, on National Higher Education Standards (*Peraturan Menteri Pendidikan dan Kebudayaan Nomor 3 Tahun 2020*, [here](#))
- Decree of the Rector Number 5, 2020, regarding Education Standards at Universitas Sriwijaya (*Peraturan Rektor No. 5 Tahun 2020 Tentang Standar Pendidikan*, [here](#))
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

As outlined in the provided Self-Assessment Report, the conduct, timing, and evaluation of examinations at UNSRI follow the pertinent ministerial regulations. Furthermore, Universitas Sriwijaya has developed own educational standards, which act as a reference for the conduct and quality assessment of exams.

The type(s) of examination(s) are determined by the respective lecturers, and are specified in the individual module handbooks. They include both formative (assignments, mid-term exams) as well as summative (final/end-of-term exams) assessments, using multiple choice exams, essays, practical works, quizzes, project assignments, oral presentations and field practice reports.

Lecturers provide feedback on these assignments through either in-class discussions or discussion forums on the University's learning management system. Marking is conducted according to established grading criteria. Students have the option to sit remedial exams to improve their scores if they have attended at least 85% of the course.

The final course grade is composed of

1. The Average Assignment Score (*Nilai Tugas Rata-Rata, NTR*), usually accounting for 30% of the final grade;
2. The Mid-Semester Exam Score (*Nilai Ujian Tengah Semester, NUTS*), usually accounting for 35% of the final grade; as well as
3. The Final Exam Score (*Nilai Ujian Akhir Semester, NUAS*), usually accounting for another 35% of the final grade.

The final grade is made accessible to the students through the University's electronic Academic Information System (*Sistem Informasi Akademik, SIMAK*).

The completion of a final project (i. e. undergraduate thesis) is a compulsory requirement for all students of the programmes under review. All final projects are checked for plagiarism using iThenticate.

During their perusal of various assessments, papers, and final theses, the experts note that many mid-term and final course exams appear to be in a multiple-choice format, and that they are overall focusing more on descriptive, information-centric aspects rather than analytical reasoning and critical thinking. Moreover, the experts remark that a clearer link between specific types of course assessments employed and the achievement of courses' intended learning outcomes should be established in the future. Overall, however, the experts assess the quality of the provided final theses to be adequate.

Besides the concern mentioned above, the experts find that examinations are defined for every module in a transparent manner, that the employed examination types serve to impart the intended learning objectives, and that clear regulations for resit exams exist. Furthermore, the auditors confirm that all curricula include a final project at an adequate level.

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

The experts thank the Faculty for sharing their perspective on the abovementioned observations made by the auditors, and adapt their recommendation accordingly. All in all, the experts subsequently see this criterion as fulfilled.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

- Self-Assessment Report
- Module Handbooks
- Staff Handbooks
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

The academic staff in the study programmes under scrutiny consists of teaching staff and supporting staff. All lecturers hold at least a Master's degree, and are encouraged to pursue further doctoral studies either in Indonesia or abroad in case they have not obtained a PhD already.

All lecturers are required to pass the Lecturer Certification (*Sertifikasi Dosen* or *Serdos*) mandated by the Indonesian government. Moreover, UNSRI's Institute for Learning Development and Educational Quality Assurance offers various programs to develop the professional and didactic skills of its lecturers.

Apart from their teaching responsibilities, lecturers are expected to conduct research and engage in community services. Their performance in these areas, alongside their teaching, contributes to their overall assessment.

In the course of their exchanges with teaching staff during the audit, the auditors gain the impression that, while skills development of new teaching staff is fostered through the abovementioned means, utilisation of continuous skills development offers amongst senior staff appears to be limited.

Nevertheless, the expert group comes to the conclusion that the composition and qualifications of the teaching staff are appropriate to successfully implement the degree programmes under review; and that opportunities for continued professional and didactic growth are available. Lastly, they recognise that a regular performance assessment system is in place.

Criterion 3.2 Funds and equipment

Evidence:

- Self-Assessment Report

- Visitation of participating institutes and laboratories during the audit
- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

As per the University's self-assessment report, the financial resources of the Faculty mainly stem from the number of its students and the tuition fees generated through them. All funds for study programmes at UNSRI must be planned for a year in advance. While the University recognises that not all needs regarding facilities and equipment can be satisfied at all times, facilities are reliable to support academic activities properly.

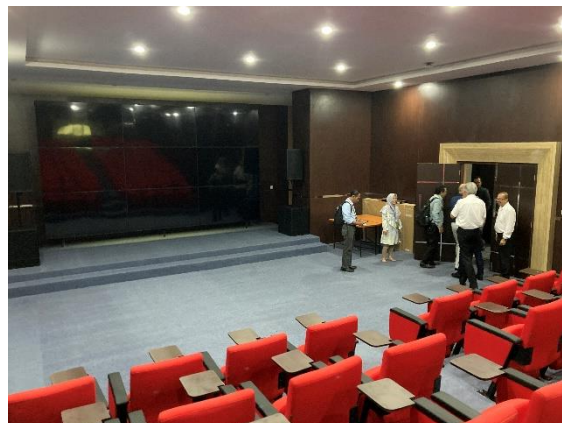
Cooperations between UNSRI and international partners are managed by the University's Office of International Affairs (OIA) at UNSRI. Collaborations with national cooperation partners are managed on a faculty level.

During the audit, the experts find that the Faculty's facilities are adequate and contain everything necessary for the programme's objectives, albeit in some aspects being in future need of overhaul, and despite additional laboratory capacities being desirable. In general, however, the auditors are impressed by the variety of the respective Departments' facilities presented, including the Faculty's weather station, greenhouses, teaching plantations, palm oil fields, Agrotech Training Center, Agribusiness Clinic Center, soil science laboratory, as well as the professional photo and communication studio, which maintains a local radio station. In view of the Faculty's displayed rich diversity, the experts warmly recommend the Faculty to further strengthen inter-Department cooperation to foster interdisciplinary training of the students and to generate economic opportunities.



With regards to its library, the auditors found UNSRI's facilities to be well-equipped as a modern learning and group work environment, with numerous computer workstations, open spaces, as well as an auditorium. This being said, the auditors found that the range and number of available book (copies) should be expanded on in the future. Additionally,

library staff explained to the assessors that students have access to a range of literature databases, including Taylor & Francis, Springer, EBSCO, and Science Direct. Moreover, students are given access to iThenticate plagiarism software through their lecturers.



In view of the above, the experts judge funding for the facilitation of the programmes under review to be sufficiently secured, the physical facilities to be adequate, and library capacities to be all in all sufficient. Nevertheless, in view of the University's stated ambition, the experts recommend the Faculty to invest in more modern laboratory equipment and additional laboratories to enable advanced research and teaching contents, as well as to potentially offer its usage to industry partners as a means of fostering university-industry cooperation.

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

The experts thank the Faculty for the provided explanations and welcome the soon opening of an additional, modern laboratory on the University's Palembang campus. All in all, the experts see this criterion as fulfilled.

4. Transparency and documentation

Criterion 4.1 Module descriptions

Evidence:

- Self-Assessment Report
- University Website ([here](#), [here](#), [here](#), [here](#), [here](#))
- Module Handbooks, all programmes

- Discussions with programme coordinators, lecturers, students, and industry representatives during the audit.

Preliminary assessment and analysis of the experts:

The module handbooks provided for all five programmes under review are found to contain most of the required information, and to be presented in a visually clear format. This being said, the experts observe a number of necessary revisions in the provided documentation:

1. All of the module handbooks, with the exception of the documentation for the Ba Plant Protection, do not indicate a “Date of last amendment”. This needs to be remedied, so as to provide a clear chronological reference for all future revisions of these modules.
2. As already noted in chapter 1.1, the module handbooks for the undergraduate programmes Agronomy and Agribusiness, as well as – to a limited degree – the one for Soil Science indicate programme objectives as module learning outcomes. This is not permissible, as clear learning objectives need to be phrased for every module, as is the case in the module handbooks for the programmes in Agricultural Product Technology and Plant Protection. This needs to be remedied, as all modules need to have clearly identified module learning objectives.
3. Moreover, the experts observe that the module handbooks provided to the auditors appear to be unavailable through the Faculty’s website. As per the applicable Standards and Guidelines, yet, the module handbooks need to be made available publicly in full detail (e.g. in PDF format).
4. Some courses appear to be listed in the curricula but not in the module handbook (example Soil Science: PTN 47715 Land Resource and Environmental Management).
5. Some curricular sections within the module handbooks appear to display implausible numbers of total credits (example Agribusiness, section Agricultural Science (2): Total indicated as 21 Credits, the sum of the table however amounting to 30 Credits).

In view of the above, the experts judge the criterion to be partially fulfilled.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

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

Preliminary assessment and analysis of the experts:

The auditors confirm that the students of all five degree programmes under review 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, and cumulative GPA, and mentions the seminar and thesis title. The criterion is hence fulfilled.

Criterion 4.3 Relevant rules

Evidence:

- Self-Assessment Reports
- University Website ([here](#), [here](#))
- Academic Guidebook of the Universitas Sriwijaya

Preliminary assessment and analysis of the experts:

The auditors confirm that the rights and duties of both UNSRI and the students are defined clearly and bindingly. All rules and regulations are published on the university's website as well as in the University's comprehensive *Academic Guidebook*, 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.

The criterion is hence fulfilled.

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

The experts thank the efforts of the Faculty concerning the abovementioned observations and the provided revised documents. The revisions include all aspects enumerated above, as also partially outlined under criterion 1 already. The experts hence conclude that this criterion is fulfilled.

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-Assessment Reports
- Teaching–Learning Questionnaire (mid-term and final)
- Student Satisfaction Reports
- Alumni Tracer Studies

Preliminary assessment and analysis of the experts:

As already indicated in chapter 1.3, all study programmes at UNSRI are subject to both annual internal evaluation conducted by the University’s Institute for Learning Development and Educational Quality Assurance (*Lembaga Pengembangan Pembelajaran dan Penjaminan Mutu Pendidikan, LP3MP*) as a means of continuous improvement.

In addition to internal evaluation, each study programme also undergoes an external accreditation process every five years. In the course of this, all five of the study programmes under review have been reaccredited by the National Accreditation Body for Higher Education (*Badan Akreditasi Nasional-Perguruan Tinggi, BAN-PT*) within the last five years.

Students are involved in this process through questionnaires circulated every semester following the final exams, which are designed to collect students’ opinions concerning the service quality of the study programme, especially those closely related to the teaching and learning process. Teaching staff are likewise part of the internal quality assessment process.

Finally, the Faculty of UNSRI provides tracer studies conducted amongst the Departments’ alumni, amongst other tracking employment status, number of companies applied for, sector of employment, time until employment after graduation, entry-level salary, and required soft skills.

In connection to the above, the auditors, based on their discussions with programme responsables, students, and lecturers, as well as based on the provided documentation, learn that course evaluations are usually conducted using through Google Forms or paper forms. In the case of the course evaluation survey for the Ba Agronomy from 2022, however, the experts note that students are seemingly asked to state their full name (“Nama Lengkap”) when filling out the survey. This urgently needs to be corrected, as student surveys need to be anonymous to avoid possible fear of retaliation.

Moreover, the experts learn that the results of course feedback are relayed to the respective Heads of Departments, who are asked to discuss the received input with the individual lecturers as needed. From the discussions during the audit, also, the auditors gain the impression that there is no discernible communication of the results of this feedback process to the students. Both aspects – the indirect communication of teachers' course evaluations to the lecturers, as well as the missing communication of its results to the students – is seen as critical by the experts.

In summary, however, the expert group assesses that the study programmes undergo regular internal quality assurance processes involving all relevant stakeholders and drawing from a range of surveys and student statistics.

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

The experts thank the Faculty for their response to the observations made in the documentation as well as during the audit. In principle, the experts see this criterion as fulfilled. Since the Faculty's comments however relate to *intended* developments and actions, the assessors insist of receiving proof of these efforts in due time, i.e. of anonymised course evaluation surveys in the Agronomy programme, as well as an explanation of how survey results have been responded to and communicated to the students.

Concerning the latter aspect, the experts encourage the Faculty to embrace the intended closing of the study feedback cycle as a representation of an institutionalised quality culture and student orientation, in line with the University's long-term ambitions and the European Standards and Guidelines for Quality Assurance in Higher Education (ESGs).

D Additional Documents

Before preparing their final assessment, the panel ask that the following missing or unclear information be provided together with the comment of the Higher Education Institution on the previous chapters of this report:

No additional documents needed.

E Comment of the Higher Education Institution (31.07.2023)

The institution provided the following additional documents

- Revised module handbooks for the study programmes under review.
- Revised Subject-Specific Criteria (SSC) - Learning Objectives (LO) Interaction Matrices for the programmes Agribusiness and Soil Science
- Revised curriculum for the Ba Agribusiness.

as well as the following detailed statement (quoted as relevant):

„Criterion 1 The Degree Program: Concept, Content, and Implementation

Criterion 1.1 Objectives and Learning Outcomes of a degree program (intended qualification profiles)

In general, we agree with the report drafted by ASIIN reviewers on this criterion, but we also understand that there are some issues that we will respond or clarify more detailed.

We realize that Program Learning Objectives of all Study Programs at Faculty of Agriculture Sriwijaya University, had not been uploaded to our website. Therefore, we have prioritized this issue to be settled as quickly as possible. We are optimistic that Intended Learning Objectives as compiled in Module Handbook of each Study Program will shortly be available on the website of Faculty of Agriculture Universitas Sriwijaya not later than 02 August 2023 (<https://fp.unsri.ac.id/>).

Study Programs with inappropriate Intended Learning Outcomes in their module handbook (Agribusiness, Agronomy, and Soil Science) have revised their module handbooks, and Agricultural Product Technology (APT) has added “**Date of last revision**” in Handbook of APT. All revised Module Handbooks (4 Study Programs) are sent separately.

Concerning English insufficiency aroused by our stakeholders, alumni, and students, we realized that the omission of English from our curricula as University compulsory course is not appropriate. Faculty has instructed Coordinators of Study Programs to establish English course as a compulsory course in the Study Programs as well as create academic activities to support the English Proficiency of students in four Study Programs Agribusiness, Agronomy, Agricultural Product Technology dan Soil Science.

The English Courses for those study programs are listed in **Table 1**. The English course will be delivered by Lecturers from English Education Study Program, Faculty of Teacher Training and Education, Universitas Sriwijaya. This English course will commence in year 2024.

Table 1. Code and name of English Course for Study Programs of AGB, AGR, APT and SSC

No.	Study Program	Code and Name of English Course
1	Agribusiness (AGB)	PSA2211 English for Agribusiness
2	Agronomy (AGR)	PAG2214 English for Agronomy
3	Agricultural Product Technology (APT)	PTH2217 English for Agricultural Product Technology
4	Soil Science (SSC)	PTN2210 English for Soil Science

In addition, there are academic activities to support English Proficiency of students in each Study Program as described as follows (**Table 2**):

Table 2. Academic activities to support the English Proficiency of students

No.	Academic activity	Date of commencement
1	Increasing the number of Study Program's subject courses that use English in teaching materials, assignment, and examination questions (up to 50% of total number of subject courses).	Odd Semester 2023/2024 (August 2023)
2	Creating an "English Club" of the Study Program. It is organized by Student Body of Study Program. English Club members meet in every month with different agendas that are relevant to increase English Proficiency, such as Practice English Speaking, Practice solving questions in English Test, etc.	Odd Semester 2023/2024 (August 2023)

Universitas Sriwijaya provides full scholarships for international students who will study in a Bachelor Program at Unsri. With the presence of international students at Unsri, particularly at Faculty of Agriculture, domestic students will be motivated to be more active

in improving their English language skills. Students are demanded to communicate in English.

In relation to suggestion concerning the enhancement of our curricula with intended subjects such as molecular biology, digitalization, product delivery, data analyses, communication, public speaking and leadership skill, Faculty of Agriculture realizes the importance of those subjects in concern in the current job market. Faculty has instructed the program Coordinator to enrich those materials in the current relevant subject courses in each study program as described in **Table 3**.

Table 3. Subject courses that are relevant to molecular biology, digitalization, product delivery, data analyses, communication, public speaking, and leadership skill

No.	Study Program	Current Subject Course
1	Agribusiness	<p>Agribusiness Program has compulsory and elective course which is very closely to some subject stated by the expert in report. In AGB curricula, there are compulsory courses of (1) Applied Computer (ABI 601117); and Information Technology and Multimedia (ABI 703217) that is very closely to digitalization subject; (2) Agribusiness Marketing Management (ABI 307317) that is very closely to product delivery subject, (3) Statistics for Social and Economic Studies (ABI 602317) and Econometrics (ABI 604317) that is very closely to data analyses subject, (4) Agribusiness communication (ABI 405317) and Agriculture Extension (ABI 502217) that is very closely to communication and public speaking subject, (5) Agribusiness Social Organization and Leaderships (ABI 504217) that is very closely to leadership skill subject.</p> <p>Study Program of AGB also has elective course: (1) Supply and Chain and Value Chain Management (ABI 303217) that is very closely to product delivery subject, (2) Mass Communication (ABI 506317) that is very closely to communication and public speaking subject.</p> <p>Besides that, AGB Study Program also improve the student's communication skill and public speaking trough (1) training by Student Organization, (2) course presentation, since almost all the course in Agribusiness giving assignment or examination in the form of presentation of paper.</p>
2	Agronomy	<p>Several courses in Agronomy Study Program have accommodated student's competency in molecular biology, such as Genetics (PAG 108116), Plant Breeding (PAG 110216), Tissue Culture (PAG 605216) and Plant Biotechnology (PAG 306316). The skill of data analysis is enriched in Statistics (PER 21116) and Experimental Design (PER 24116). Public speaking and communication can be enriched through activities held by</p>

		study program or faculty such as debate in English also in the subject course of PER 49416 Seminar .
3	Agricultural Product Technology	There is a subject course that is related to molecular biology, namely Physiology and Post-Harvest Technology (PTH105317) and Agricultural Industry Biotechnology (PTH509317) . Mastery of digitalization can be obtained from Applied Computer (PTH508317) . Skill of data analysis can be obtained from the subject courses of Statistics (PER606117) , Experimental Design (PER607217) , System Analysis (PTP508317) . Public speaking and communication can be enriched in Technopreneurships (PTP606317) , Agribusiness Communication (ABI601217) , and Seminar . Study Program often organizes an event regarding Public Speaking for students by inviting an Expert to provide material on how to speak in public.
4	Plant Protection	Plant Protection has compulsory course named Introduction to Plant Protection Biotechnology (PPT35115) which is very closely related to molecular biology, and Experimental Design and Data Analyses (PPT 2212) closely related to data analyses. Public speaking and communication skill are provided through extra-curricular activity and give as much time as possible to students to make oral presentation in all courses.
5	Soil Science	Study Program has subject courses that relevant to molecular biology, namely Soil Biotechnology (PTN35215) and Soil Microbiology (PTN23415) . Digitalization is enriched in the subject courses of Geodetic Surveying and Cartography (PTN24315) , and Land Resource Information System (PTN36315) . Skill of data analysis is in the subject courses of Experimental Design (PER24116) and Statistics (PER21116) . The public and communication skill can be enriched in subject courses of Entrepreneurship (PER37109) , Seminar (PER49409) as well as in activity held by study program or faculty such as debate in English.

Concerning Intended Learning Outcomes (ILO) of the study programs under review and their relation to SSC determined by ASIIN Technical Committee 08, study programs of Agribusiness, Agronomy and Soil Science have revised their matrices of the relation between their ILO and SSC08. The documents are submitted as separate files.

(...)

Criterion 1.3. Curriculum

In general, we agree with and appreciate the report made by ASIIN reviewers concerning the curriculum of each study program under review. However, we also realize that there

are many issues in our curricula aroused by ASIIN reviewers, and we are happy to clarify the aroused issues.

In term of internship, we highly appreciate the suggestion from ASIIN reviewers concerning the finding more suitable companies for students to pursue internship and for study programs to integrate internship into their curricula. The faculty has been continuously increasing the number of internship partners by making more and more agreements and Memorandum of Understandings (MoU) with various industries in South Sumatra, especially agricultural and forestry industries. However, the capacities of the companies to facilitate students pursuing internship are still far under the number of interested students. Furthermore, the Directorate General of Higher Education, Research, and Technology (DGHERT) of the Ministry of Education, Culture, Research, and Technology (MOECRT) of the Republic of Indonesia also offers internship program entitled MSIB (*Magang dan Studi Independen Bersertifikat/ Certified Independent Study and Internship*). However, it seems likely that we face difficulty to integrate compulsory internship into curricula, because under current regulation, we must set aside 3 semesters for Independent Learning-Independent Campus (MBKM) and most of MBKM schemes are related to internship. It means that we have to offer approximately 60 credits as elective courses under scheme of MBKM, and some are in the form of internship and entrepreneurship. Therefore, the best effort to increase internship opportunity for our students is by involving as many companies as possible in our learning process, and we keep seeking such companies. Not only companies, regional and national government agencies have also opened opportunities for student internships. Currently, the Faculty of Agriculture has collaboration with local government agencies for providing internship. In addition, the associations of each study program also develop program for internship. For example, Indonesian Plant Protection Study Program Association (APSITA) has also been establishing internship collaboration following the success of APSITA student mobility.

Regarding English, as has been responded in Criterion 1.1, every study program under review will enrich activities that involved “English.” This might be helpful to increase the TOEFL score. Faculty of Agriculture agrees with Auditors of ASIIN to increase the minimum requirement score of TOEFL as one of graduation requirement. It will be gradually increased to meet B2 level of English, but for the moment we decide to increase from 400 to 425 starting the academic year of 2024/2025, 450 for academic year of 2025/2026, and 475 for academic year 2026/2027. In addition, we believe that with the international students, it will be faster to reach the intended score. English proficiency is not only assessed by using TOEFL Score but also the ability to speak English confidently; therefore, Faculty of Agriculture believes that all proposed activities as stated in this report as well as

delivering lectures in English entirely along with assignments and examinations can improve English language skills well.

For the suggestion of providing entirely English-taught subjects in each study program, we highly appreciate the suggestion and we had come to decision that each study program offers at least 2 suitable courses to be taught in English entirely as presented in **Table 4**.

Table 4. Subject courses that will be taught in English entirely

No.	Study Program	Subject courses that will be taught in English entirely
1	Agribusiness	<ul style="list-style-type: none"> • Agribusiness Communication (ABI 503217) • Natural Resource Economics (ABI 208317)
2	Agronomy	<ul style="list-style-type: none"> • Plant Breeding (PAG 110216) • Plant Biotechnology (PAG 306316)
3	Agricultural Product Technology	<ul style="list-style-type: none"> • Sensory Evaluation (PTH501217) • Fermentation Technology (PTH205317)
4	Plant Protection	<ul style="list-style-type: none"> • Plant Virology (PPT 24315) • Pesticides and Application Technique (PPT 35515)
5	Soil Science	<ul style="list-style-type: none"> • Land Resource Information System (PTN36315) • Spatial Planning and Land Use (PTN47315)

In the issue of student mobility, especially at international level, the opportunities provided by The Directorate General of Higher Education, Research, and Technology (DGHERT) of the Ministry of Education, Culture, Research, and Technology (MOECRT) of the Republic of Indonesia are obviously not enough compared to the number of interested students in joining the program. Therefore, the faculty strongly support lecturers who have international network to strengthen collaboration with overseas university and establish bilateral agreement which open more opportunities for students to pursue international student exchange or internship. AIMS (Asian International Mobility for Students) is an international program funded by DGHERT, and only few universities involve in the program. There are 78 universities in 9 countries involved in the AIMS Program. In the intention of establishing bilateral cooperation with foreign universities, staff of the faculty have successfully established bilateral collaboration with, among others, Okayama University, Saga University, Mie University, Nagoya University, Kagoshima University, and Thai Nguyen University of Agriculture and Forestry. Multilateral collaborations have also been established with Center for International Forestry Research (CIFOR), The International Center for Research in Agroforestry (ICRAF) and National Institute of Forest Science (NiFos). The multilateral research collaborations have given invaluable opportunities for students to participate in international joint research program and joint publications.

Criterion 1.4. Admission Requirements

Basically, we do agree with the report draft made by ASIIN reviewers concerning admission requirement in Universitas Sriwijaya. There is an issue of colorblindness aroused by the reviewers, and we do agree that disallowing colorblind students to study in the faculty, for whatever reason, is not sensible. Therefore, the faculty is serious about trying settle the issue so that prospective students with colorblindness can be accepted as students at the Faculty of Agriculture.

Criterion 1.5 Workload and Credits

We totally agree with the report draft on workload and credits made by ASIIN reviewers and no specific issues of this criterion need further clarification. It is a fact that even though all of study programs under review have the same amount of credit (144 credits) under Indonesian system, but when being converted into European system they have different amount of total ECTS due to different workload allocated for each course containing practical works.

We highly appreciate ASIIN reviewer to understand the difficulty to determine the time students spend on assignment and individual study outside classroom and laboratory and suggested that structured survey on time spent by students for assignment and independent study. We decided to integrate the survey into course evaluation survey by adding some questions regarding student time spending outside classroom.

(...)

Criterion 2. Exam: System, Concept and Organization.

We agree with the report prepared by ASIIN reviewer on exam criterion and we also find there are issues to be clarified. In the issue of exam questions, we could understand when the reviewers identified that the exam questions are mostly more descriptive than analytical. We have checked the matter to our lecturer and we found that the number of exam question submitted to ASIIN was different among study programs. In some study programs, analytical question is more common than descriptive ones, but in certain study program is less common. It is also written in the report draft that many mid-term and final-term course exams appear to be in multiple choice format. This finding does not express the real situation, because most lecturers at the faculty prefer to make question in essay format rather than in multiple choice format. The faculty will continuously monitor the quality of exam questions. Questions in multiple choice format should be involving analytical thinking process before choosing the correct answer. At the end of semester, Faculty Quality Assurance Unit together with study program always conducts a monitoring

and evaluation on the quality of exam questions by conducting a survey to students. The reviewers also suggested to the faculty to make link between specific type of course assessment and the achievement of course Intended Learning Outcomes. We appreciate the suggestion, but we also need to clarify that most of our lecturers have evaluate the achievement of each course Intended Learning Outcomes based on course assessment applied, and the evaluation is presented in portfolio of each course.

Criterion 3 Resources

(...)

Criterion 3.2 Fund and Equipment

We also appreciate the reviewers' comments concerning criterion of fund and equipment. In term of laboratory equipment, we also realize that many old-fashioned equipment should not be in the laboratory anymore but we still very carefully use them to meet the need of practical works and students' research. In the meantime, we are building new laboratory in Palembang campus with new and more sophisticated equipment, especially those required in molecular biological works. The laboratory belongs to the faculty and does not belong to a single laboratory, as in Inderalaya. We also agree with reviewers' recommendation to strengthen inter-department cooperation to foster interdisciplinary training of the students and to generate economic opportunity. We will make the use of our facilities to create multidiscipline training and to establish income generating activities.

Criterion 4. Transparency and documentation

Criterion 4.1 Module description

We understand and agree with comments of ASIIN reviewer concerning our documentation. We realize that the submitted documents are not the same among study program under review. We highly appreciate that the reviewers read the documents thoroughly and noticed some mistakes in some of the documents.

In term of missing course in the module handbook such as the missing of **PTN 47715 (Land Resources and Environmental Management)** which is listed in the curriculum of Soil Science but not in the Module Handbook. The Study Program of Soil Science has revised their module handbook by adding the subject course. Moreover, in the issue of inaccurate sum of credits in one of tables in the curriculum of Agribusiness, the Study Program has revised the table and realized that they have put the credit of elective courses in the column of compulsory courses. The 9 credits of three elective courses should not be in that column.

(...)

Criterion 5. Quality Management: quality assessment and development

Comments on this criterion by reviewers are very interesting and understandable. There are some issues that need to be discussed or clarified. In the issue of evaluation of learning proses by google form or paper form, students of Agronomy Study Program are asked to write down their full names in the form, unlike other study programs. The study program of Agronomy has revised the questionnaire and there will be no more instruction to write name anymore in the questionnaire.

It is true that the results of course feedback are only used to evaluate lecturers' performance so that the lecturers know what to improve in relation to their teaching performance, and getting better and better by years. It is also true that there is no information given to the students about the result of course feedback. We think that it will be counterproductive if we inform the results to the students about the weakness or mistakes of lecturers. This problem was discussed in internal meeting of Study Program to improve the quality of learning and teaching. However, since the ASIIN reviewers think that missing communication of course feedback result to the students is critical, we will find a way to communicate the results to the students. The dean will instruct to each head of Study Program to have meeting with students and inform the course feedback results to the students.“

F Summary: Peer recommendations (15.08.2023)

Taking into account the additional information and the comments provided by the Faculty, the auditors summarise 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 Agribusiness	With requirements for one year	30.09.2029	–	–
Ba Agricultural Product Technology	With requirements for one year	30.09.2029	–	–
Ba Agronomy	With requirements for one year	30.09.2029	–	–
Ba Plant Protection	With requirements for one year	30.09.2029	–	–
Ba Soil Science	With requirements for one year	30.09.2029	–	–

Requirements

For all degree programmes

- A 1. (ASIIN 1.4) Ensure efforts that students with colour blindness are not excluded from studying the subjects under review at the Faculty of Agriculture.
- A 2. (ASIIN 1.5) Implement a recurring mechanism to survey students' actual course workload.
- A 3. (ASIIN 5) Results of the course feedback and student satisfaction surveys need to be made accessible to the students in a suitable form.

For the Bachelor's degree programme Agronomy

- A 4. (ASIIN 5) Create an anonymised course feedback mechanism for students.

Recommendations

For all degree programmes

- E 1. (ASIIN 1.3) It is recommended to further develop its industry collaboration with future curriculum development and internship opportunities for students in mind.
- E 2. (ASIIN 1.3) It is recommended to raise the English language proficiency threshold for graduation toward a B2 proficiency. Moreover, it is recommended to introduce entirely English-taught subject matter modules across the five programmes under review.
- E 3. (ASIIN 1.3) It is recommended for the Departments to further develop their international connections.
- E 4. (ASIIN 2) It is recommended to ensure that examinations appropriately focus on analytical reasoning and critical thinking, rather than descriptive, information-centric aspects.
- E 5. (ASIIN 3.1) It is recommended to raise awareness and to stronger incentivise continuous didactic development amongst senior teaching staff.
- E 6. (ASIIN 3.2) It is recommended to further strengthen inter-Department cooperation, and to continue the modernisation of laboratory equipment and facilities.
- E 7. (ASIIN 5) It is recommended to implement an IT-based course feedback and survey system, through which moreover students' final course feedback is provided to lecturers without any intermediaries such as the Heads of Departments.

For the Bachelor's degree programme **Agricultural Product Technology, Agribusiness, Agronomy, and Soil Science**

- E 8. (ASIIN 1.3) It is recommended in the strongest possible terms to (re-)introduce subject-specific English language courses into the curriculum.

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

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the accrediting procedure and follows the assessment of the peers without any changes. However, it questions the wording of E. 8, but cannot decide whether a recommendation in the "strongest possible terms" might be justified.

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

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Agribusiness	With requirements for one year	30.09.2029	–	–
Ba Agricultural Product Technology	With requirements for one year	30.09.2029	–	–
Ba Agronomy	With requirements for one year	30.09.2029	–	–
Ba Plant Protection	With requirements for one year	30.09.2029	–	–
Ba Soil Science	With requirements for one year	30.09.2029	–	–

For the Bachelor’s degree programme Agricultural Product Technology, Agribusiness, Agronomy, and Soil Science

E 8.(ASIIN 1.3) It is recommended in the strongest possible terms to (re-)introduce subject-specific English language courses into the curriculum.

H Decision of the Accreditation Commission (22.09.2023)

Assessment and analysis for the award of the ASIIN seal:

The AC discusses the procedure and agrees to amend the phrasing of recommendation E8 as suggested by the Technical Committee 08 (Civil Engineering, Geodesy and Architecture) to match standard wording, i.e. to delete the emphasis “in the strongest possible terms”. Apart from this, the AC accepts the proposed requirements and recommendations without further changes.

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 Agribusiness	With requirements for one year	30.09.2029	–	–
Ba Agricultural Product Technology	With requirements for one year	30.09.2029	–	–
Ba Agronomy	With requirements for one year	30.09.2029	–	–
Ba Plant Protection	With requirements for one year	30.09.2029	–	–
Ba Soil Science	With requirements for one year	30.09.2029	–	–

Requirements

For all degree programmes

- A 1. (ASIIN 1.4) Ensure efforts that students with colour blindness are not excluded from studying the subjects under review at the Faculty of Agriculture.
- A 2. (ASIIN 1.5) Implement a recurring mechanism to survey students’ actual course workload.

- A 3. (ASIIN 5) Results of the course feedback and student satisfaction surveys need to be made accessible to the students in a suitable form.

For the Bachelor's degree programme Agronomy

- A 4. (ASIIN 5) Create an anonymised course feedback mechanism for students.

Recommendations

For all degree programmes

- E 1. (ASIIN 1.3) It is recommended to further develop its industry collaboration with future curriculum development and internship opportunities for students in mind.
- E 2. (ASIIN 1.3) It is recommended to raise the English language proficiency threshold for graduation toward a B2 proficiency. Moreover, it is recommended to introduce entirely English-taught subject matter modules across the five programmes under review.
- E 3. (ASIIN 1.3) It is recommended for the Departments to further develop their international connections.
- E 4. (ASIIN 2) It is recommended to ensure that examinations appropriately focus on analytical reasoning and critical thinking, rather than descriptive, information-centric aspects.
- E 5. (ASIIN 3.1) It is recommended to raise awareness and to stronger incentivise continuous didactic development amongst senior teaching staff.
- E 6. (ASIIN 3.2) It is recommended to further strengthen inter-Department cooperation, and to continue the modernisation of laboratory equipment and facilities.
- E 7. (ASIIN 5) It is recommended to implement an IT-based course feedback and survey system, through which moreover students' final course feedback is provided to lecturers without any intermediaries such as the Heads of Departments.

For the Bachelor's degree programme Agricultural Product Technology, Agribusiness, Agronomy, and Soil Science

- E 8. (ASIIN 1.3) It is recommended to (re-)introduce subject-specific English language courses into the curriculum.

Appendix: Programme Learning Outcomes and Curricula

According to the respective Curricula, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved:

Ba Agribusiness

E. Learning Outcomes

To fulfill these competencies, the learning outcomes (Learning Outcomes) of the graduates of agribusiness study program are compiled, and divided into the following aspects:

1. Attitudes and Values:

LO – AV 1 :	To fear of The Almighty God
LO – AV 2:	To have good morals, ethics and personality in completing their duties
LO – AV 3 :	To play a role as a proud citizen and love the homeland and support world peace
LO – AV 4 :	To be able to work together and have social sensitivity and high concern for society and the environment.
LO – AV 5 :	To appreciate the diversity of cultures, views, beliefs, and religions as well as other people's original opinions/findings
LO – AV 6 :	To highly uphold law enforcement and have the spirit to put the interests of the nation and the wider community first.
LO – AV 7 :	To be able to internalize correct academic values and norms related to honesty, ethics, attribution, copyright, confidentiality and data ownership
LO – AV 8 :	To be able to internalize the entrepreneurial spirit

2. Science Competencies

LO - SC 1	To be able to understand the latest issues in the field of agribusiness both at the basic level and at the advanced level
LO - SC 2	To be able to understand knowledge and technology in the field of agribusiness including the development of professional practice through research studies to produce proven innovative work in the field of agribusiness
LO - SC 3	To be able to understand the fields of economics, management, business, entrepreneurship, institutions, sociology, counseling, and communication as well as agricultural sciences for the development of sustainable agribusiness operation systems.

LO - SC 4	To be able to understand operationally the social, economic, and technological principles that underlie the management of agricultural businesses, and agricultural industries as well as socio-cultural aspects in rural areas for decision making and problem solving in the field of agribusiness.
LO - SC 5	To be able to manage research, and development in the field of agribusiness that is beneficial to society and science and is able to gain national and international recognition.
LO - SC 6	To be able to communicate research results in the field of agribusiness education in the form of scientific publications in national, and international accredited scientific journals.

3. Occupational Skills

3.1 General Skills

LO – OS 1	To be able to plan, implement, and evaluate the allocation of natural, human, capital and social resources to improve the efficiency of agribusiness system operations, and be able to operate, and develop innovative, accountable agribusiness business units, creating added value by prioritizing social principles agricultural economics, and quantitative, and qualitative approaches to realizing sustainable, and efficient agribusiness.
LO – OS 2	To be able to manage, develop, and market sustainable agriculture- based agribusiness products by applying agricultural socio-economic principles through quantitative and qualitative approaches.
LO – OS 3	To be able to make the right decisions using quantitative, and qualitative methods, and able to recommend alternative solutions individually and in groups on various agribusiness problems.
LO – OS 4	To be able to apply, and utilize science and technology in solving problems in the field of agribusiness that is adaptive to environmental changes.
LO – OS 5	To be able to communicate, and negotiate effectively with stakeholders in developing agribusiness operating systems by utilizing information technology in the agribusiness sector, to realize sustainable, and efficient agribusiness.

3.2 Specific Skills

LO – OS 6	To be able to use methods, and formulate strategies for using resources to increase self, and community capacity in facing the challenges of future agribusiness development.
LO – OS 7	To be able to communicate business policies, and agribusiness management for the benefit of farmer empowerment.
LO – OS 8	To be able to motivate, and empower the community in the field of agribusiness development to improve community welfare.
LO – OS 9	To be able to create job opportunities, or business in the agribusiness sector in a sustainable manner by involving the wider community.

0 Appendix: Programme Learning Outcomes and Curricula

LO – OS 10	To be able to integrate concepts, and practices in the field of agribusiness and entrepreneurship.
LO – OS 11	To be able to manage, and develop agribusiness by implementing a management system that guarantees quality output.

The following **curriculum** is presented:

Semester	Codes	Courses	Credits
1	UNI 002117	Civic	2 (2-0)
	UNI 001117	Religion	2 (2-0)
	PER 101117	Mathematics	3 (2-1)
	PER 102117	Introduction to Agricultural Sciences	2 (2-0)
	PER 103117	Botany	3 (2-1)
	ABI 301117	Fundamentals of Management	2 (2-0)
	ABI 201117	Introduction to Agricultural Economics	3 (2-1)
	ABI 401117	Fundamentals of Business	3 (2-1)
		Total	20

2	UNI 003117	Indonesian	2 (2-0)
	UNI 004117	English	2 (2-0)
	UNI 005117	Pancasila	2 (2-0)
	PER 104117	Research Methods	2 (2-0)
	PER 105117	Fundamentals of Agronomy	3 (2-1)
	ABI 601117	Applied Computer	3(2-1)
	ABI 501117	Rural Sociology	3 (2-1)
	ABI 202117	Micro Economics	3 (2-1)
	ABI 302117	Human Resource Management*	2 (2-0)
	PER 106117	Introduction to Agricultural Technology*	2 (1-1)
		Total	24

3	ABI 701117	Demography	3(2-1)
	ABI 403217	Agribusiness Accounting and Finance	2 (2-0)
	PER 109217	Fundamentals of Soil Science	3 (2-1)
	PER 107217	Statistics	3 (2-1)
	ABI 402217	Agribusiness System	2 (2-0)
	ABI 203217	Macro Economics	3 (2-1)
	PER 108217	Agroclimatology	3 (2-1)
	ABI 702217	Community Empowerment	3(2-1)
	ABI 204217	Managerial Economic*	2 (2-0)
	ABI 303217	Supply Chain and Value Chain Management***	2 (2-0)
		Total	26

4	ABI 502217	Agricultural Extension	3 (2-1)
	ABI 703217	Information Technology and Multimedia	2(2-0)
	ABI 504217	Agribusiness Social Organization and Leaderships	2(2-0)
	ABI 205217	Economics of Agribusiness Institutions	3(2-1)
	ABI 305217	Agribusiness Strategic Management and Policy	3(2-1)
	ABI 304217	Farm Management	3(2-1)
	PER 110217	Fundamentals of Plant Protection	3(2-1)
	ABI 503217	Agribusiness Communication	3 (2-1)
	ABI 206217	Sharia Economics*	2(2-0)
		Total	24

0 Appendix: Programme Learning Outcomes and Curricula

5	ABI 207317	International Economics	3(2-1)
	ABI 505317	Development Sociology	2 (2-0)
	ABI 602317	Statistics for Social and Economics Studies	3(2-1)
	ABI 306317	Agribusiness Production Management	3(2-1)
	ABI 404317	Agribusiness Feasibility Analysis	4(2-2)
	ABI 208317	Natural Resource Economics	2(2-0)
	ABI 209317	Agribusiness Production Economics	3 (2-1)
	ABI 506317	Mass Communication*	3 (2-1)
	PER 111317	Soil and Water Conservation*	3 (2-1)
	ABI 704317	Group Dynamics and Participatory Development***	3 (2-1)
	ABI 705317	Participatory Development Methods*	3 (2-1)
		Total	32

6	ABI 307317	Agribusiness Marketing Management	3 (2-1)
	ABI 605317	Operation Research	3(2-1)
	ABI 603317	Social Economics Research Methodology	3(2-1)
	ABI406317	Entrepreneurships	2(2-0)
	ABI405317	Agribusiness Multicommodity and Ecosystem	4(2-2)
	ABI604317	Econometrics	3(2-1)
	ABI 308717	Regional Planning*	3(2-1)
	ABI 706317	Participatory Development Planning and Evaluation*	3(2-1)
		Total	24

7	ABI 707417	Community Service Program**	4(0-4)
	ABI 607417	Internship**	3(0-3)
	PER 112417	Field Practice	3(0-3)
	ABI 606417	Seminar	1(0-1)
	ABI 608417	Thesis	6(0-6)
		Total	17

8	ABI 608417	Thesis	Extension
		Total	144-162

Information:

*** Required to select at least one

** Required to select one

* Electives (permissible to be selected or not)

Ba Agricultural Product Technology

E. LEARNING OUTCOME (LO)
1. Attitudes and Values (AV)
LO-AV-1: Fear Good Almighty and be able to show a religious attitude
LO-AV-2: Upholding human values in carrying out duties based on religion, morals, and ethics
LO-AV-3: Contribute to improving the quality of life in society, nation, state, and the progress of civilization based on Pancasila
LO-AV-4: Act as citizens who are proud and love their homeland, have nationalism and a sense of responsibility to the country and nation
LO-AV-5: Respect the diversity of cultures, views, religions, and beliefs, as well as the opinions or original findings of others
LO-AV-6: Work together and have social sensitivity and concern for society and the environment
LO-AV-7: Obey the law and discipline in social and state life
LO-AV-8: Internalize academic values, norms, and ethics
LO-AV-9: Demonstrate a responsible attitude towards work in their field of expertise independently
LO-AV-10: Internalize the spirit of independence, struggle, and entrepreneurship
2. Knowledge Ability (KA)
<u>LO-KA-1: Chemistry and Agricultural Product Analysis</u>
LO-KA-1.1: Explain the main chemical events that underline the properties and reactions of various components of agricultural production
LO-KA-1.2: Explain how to control chemical reactions that occur in agricultural products
LO-KA-1.3: Explain the relationship between chemical reactions and the mechanism of damage and shelf life of agricultural products
LO-KA-1.4: Explain the principles of techniques and methods of analysis of food/agricultural products
LO-KA-1.5: Have skills in performing various basic and applied chemical analysis techniques on agricultural products
<u>LO-KA-2: Microbiology and Agricultural Product Safety</u>
LO-KA-2.1: Identify pathogenic microbes and causes of damage to agricultural products and their growing conditions
LO-KA-2.2: Explain environmental factors that affect microbial growth
LO-KA-2.3: Identify conditions for inactivating and killing spoilage and pathogenic microbes

LO-KA-2.4: Describe the principles of preservation and processing of agricultural products by the fermentation process LO-KA 2-5: explain and have skills in performing microbiological analysis techniques in agricultural products

LO-KA-3: Biochemistry, Nutrition and Health

LO-KA-3.1: Explain biochemical processes, basic concepts of nutrition science and the relationship between food consumption and nutritional status, and health

LO-KA-3.2: Describe the process of digestion and metabolism of nutrients

LO-KA-3.3: Explain the differences between nutrients and functional foods in relation to health and fitness LO-KA-3.4: describe changes in nutrients during processing and storage

LO-KA-3.5: Describe laboratory techniques commonly applied in biochemistry and evaluation of the biological value of food

LO-KA-4: Engineering and Processing of Agricultural Products

LO-KA-4.1: Describe the characteristics of raw materials, ingredients and food additives and their effect on the characteristics agricultural production

LO-KA-4.2: Describe the mechanism of damage to agricultural product and identify how to control it LO-KA-4.3: describe mass and energy balance in the processing of agricultural product

LO-KA-4.4: Describe principles of heat and mass transfer process of agricultural product processing LO-KA-4.5: describe the principle of unit operation and unit process in the agricultural product industry

LO-KA-4.6: Identify the appropriate operating unit and process equipment in the processing of agricultural products

LO-KA-4.7: Describe the principles and techniques of handling and processing agricultural products, as well as the influence of process parameters on quality, safety and shelf life of agricultural product

LO-KA-4.8: Describe the characteristics and uses of packaging materials.

LO-KA-4.9: Describe water requirements for processing agricultural products and how to manage waste from processing products agriculture

LO-KA-5: Applied Agricultural Product Science

LO-KA-5.1: Applying and incorporating the principles of agricultural products science in practice and real conditions in the produce industry agriculture

LO-KA-5.2: Mastering the basic principles of sensory evaluation/sensory assessment of agricultural product

LO-KA-5.3: Choose packaging and storage techniques for agricultural products in extending the shelf life of agricultural products LO-KA-5.4: apply the principles of statistics and computers in the field of agricultural product.

LO-KA-5.5: Develop agricultural products based on the principles of agricultural science

LO-KA-5.6: Implement a quality assurance system in the agricultural product processing chain

- LO-KA-5.7: Apply the principles of cleaning and sanitation in the processing of agricultural products
LO-KA-5.8: apply food safety regulations and management
LO-KA-5.9: Understand the latest issues in the field of agricultural products

LO-KA-6: Life Skills

- LO-KA-6.1: Demonstrate oral and written communication skills related to the technical and non-technical aspects
LO-KA-6.2: Think critically, identify the root of the problem and solve it comprehensively,, and make the right decisions based on analysis of information and data
LO-KA-6.3: Has professional integrity and is committed to ethical values
LO-KA-6.4: have an attitude to life-long learning
LO-KA-6.5: Lead and work in a team, independent and responsible for his work.
LO-KA-6.6: Cooperate with individuals who have diverse social and cultural backgrounds
LO-KA-6.7: Searching, tracing, extracting scientific and non-scientific information independently and critically
LO-KA-6.8: adapt to the situation at hand and handle various activities simultaneously in various condition

3. Specific Capability (SC)

- LO-SC-1: Able to design agricultural product production process based on the application of technology principles and agricultural product processing in an effective, efficient, and precise manner so as to produce a well-standardized production process
LO-SC-2: Able to design the development of agricultural products that meet the quality criteria of agricultural products, are safe, nutritious and/or useful based on the principles of agricultural technology
LO-SC-3: Able to conduct research on the combination of operations for processing agricultural products, so that they can produce safe and quality agricultural products along the agricultural production chain, and can provide added value to agricultural products
LO-SC-4: Able to analyze problems with agricultural products technology approach in solving production problems and agricultural products so that they are efficient, safe, and with guaranteed quality
LO-SC-5: Able to design agricultural product packaging in order to protect and maintain product durability and quality, as well as safe, with informative labels for consumers in accordance with regulations and laws related to agricultural products
LO-SC-6: Able to provide added value to agricultural products with Indonesian characteristics, especially the Southern part of Sumatera with locally-based agricultural products and optimal utilization of Indonesia's biological diversity through production processes that are safe, standardized, efficient, and effective

4. General Capability (GC)	
LO-GC-1:	Able to apply logical, critical, systematic, and innovative thinking in the context of the development or implementation of science and technology that pay attention to and applies humanities values in accordance with their field of expertise
LO-GC-2:	Able to demonstrate independent, quality, and measurable performance
LO-GC-3:	Able to examine the implications of developing or implementing science and technology that pay attention to and applies humanities values according to their expertise based on scientific principles, procedures and ethics in order to produce solutions, ideas, designs or art criticism
LO-GC-4:	Able to compile a scientific description of the results of the studies mentioned above in the form of a thesis or final project report, and upload it on the university website
LO-GC-5:	Able to make appropriate decisions in the context of solving problems in their area of expertise, based on the results of analysis of information and data
LO-GC-6:	Able to maintain and develop a network with supervisors, colleagues. Colleagues both inside and outside the institution
LO-GC-7:	Able to be responsible for the achievement of group work results and supervise and evaluate the completion of work assigned to workers under their responsibility
LO-GC-8:	Able to carry out the process of self-evaluation of the work group under their responsibility, and able to manage learning independently
LO-GC-9:	Capable of documenting, storing, securing, and retrieving data to ensure validity and prevent plagiarism

The following **curriculum** is presented:

First Semester

No	Code	Course	Credit
1	UNI 002117	<i>Pancasila</i>	2 (2-0)
2	UNI 003117	<i>Indonesian</i>	2 (2-0)
3	PER 601117	<i>Mathematics</i>	3 (3-0)
4	PER 102117	<i>Inorganic Chemistry</i>	3 (2-1)
5	PER 604117	<i>Biology</i>	3 (2-1)
6	PER 605117	<i>Physics</i>	3 (2-1)
7	PTP601117	<i>Introduction to Agricultural Technology</i>	2 (1-1)
8	PTH 301117	<i>Food and Nutrition</i>	2 (2-0)
Total			20 Credits

Second semester

No	Code	Course	Credits
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1	UNI 001117	<i>Religion</i>	2 (2-0)
2	UNI 004117	<i>English</i>	2 (2-0)
3	UNI 005117	<i>Civics</i>	2 (2-0)
4	PER 103117	<i>Organic Chemistry</i>	3 (2-1)
5	PER 606117	<i>Statistics</i>	3 (2-1)
6	PTH 101117	<i>Analytical Chemistry</i>	3 (2-1)
7	PTH 401117	<i>Operation Unit I</i>	3 (2-1)
8	PTP 607117	<i>Engineering Physics</i>	3 (2-1)
Total			21 Credits

Third Semester

No	Code	Course	Credit
1	PER 607217	<i>Experimental Design</i>	3 (2-1)
2	PTH 102217	<i>Physical Chemistry</i>	2 (2-0)
3	PTH 302217	<i>Biochemistry I</i>	3 (2-1)
4	PTH 201217	<i>General Microbiology</i>	3 (2-1)
5	PTH 402217	<i>Material Science</i>	3 (2-1)
6	PTH 403217	<i>Operation Unit II</i>	3 (2-1)
7	PTH 103217	<i>Agricultural Product Chemistry</i>	3 (2-1)
8	ABI 601217	<i>Agribusiness Communication</i>	3 (2-1)
Total			23 Credits

Fourth Semester

No	Code	Course	Credit
1	PER 608217	<i>Research Methods</i>	2 (2-0)
2	PTH 303217	<i>Biochemistry II</i>	2 (2-0)
3	PTH 202217	<i>Hygiene, Sanitation and Food Industry Safety</i>	3 (2-1)
4	PTH 203217	<i>Food and Processing Microbiology</i>	3 (2-1)
5	PTH 404217	<i>Principles of Agricultural Products Processing</i>	3 (2-1)
6	PTH 501217	<i>Sensory Evaluation</i>	3 (2-1)
7	PTH 104217	<i>Agricultural Product Analysis</i>	3 (2-1)
8	PTH 405217	<i>Food Crops Processing Technology</i>	2 (2-0)
9	PTH 406217	<i>Plantation Crops Processing Technology</i>	2 (2-0)
1	PER 608217	<i>Research Methods</i>	2 (2-0)
Total			23 Credits

Fifth semester

No	Code	Course	Credit
1	PTP 605317	<i>Engineering Economics</i>	2 (2-0)
2	PTH 304317	<i>Nutritional Science</i>	3 (2-1)
3	PTH 105317	<i>Physiology and Post-Harvest Technology</i>	3 (2-1)

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4	PTH 502317	<i>Quality Assurance</i>	3 (2-1)
5	PTH 503317	<i>Preservation Technology</i>	3 (2-1)
6	PTH 407317	<i>Waste Handling Technology</i>	2 (2-0)
7	PTH 504317	<i>Packaging and Storage</i>	3 (2-1)
8	PTH 204317	<i>Thermo bacteriology*</i>	2 (2-0)
9	PTH 305317	<i>Functional Food and Food Phytochemistry*</i>	3 (2-1)
10	PTH 410317	<i>South Sumatera Traditional Food Processing Technology*</i>	3 (2-1)
11	PTH 507317	<i>Halal Assurance System*</i>	2 (2-0)
12	PTP 404317	<i>Postharvest Tool and Machine*</i>	3 (2-1)
Total			32 Credits

Notes: * Optional courses

Sixth semester

No	Code	Course	Credit
1	PTH 205317	<i>Fermentation Technology</i>	3 (2-1)
2	PTP 606317	<i>Technopreneurship</i>	3 (2-1)
3	PTH 505317	<i>Product Development</i>	3 (2-1)
4	PTH 506317	<i>Agricultural Industry Management</i>	3 (2-1)
5	PTH 408317	<i>Agricultural Product Process Engineering</i>	3 (2-1)
6	PTP 508317	<i>System Analysis*</i>	2 (1-1)
7	PTH 409317	<i>Tropical Horticulture Processing Technology*</i>	2 (2-0)
8	PTH 306317	<i>Nutrition Evaluation in Processing*</i>	3 (2-1)
9	PTH 509317	<i>Agricultural Industry Biotechnology*</i>	3 (2-1)
10	PTH 508317	<i>Applied Computer*</i>	3(2-1)
11	PTH 307317	<i>Food Fortification Technology*</i>	2 (2-0)
12	PTH 106317	<i>Food Enzyme Technology*</i>	2 (2-0)
Total			32 Credits

Notes: * Optional courses

Seventh semester

No	Code	Course	Credit
1	PER 609417	<i>Field Practice</i>	3 (0-3)
2	PTH 411417	<i>Oil Palm Downstream Technology*</i>	2 (2-0)
3	PTH 412417	<i>Polymer Technology*</i>	2 (2-0)
4	UNI 606417 /PER 611417	<i>Community Service Program**</i>	4 (0-4)
5	PER 610417	<i>Research Project</i>	6 (0-6)
Total			17 Credits

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Notes: * Optional courses **) select one

Eighth semester

No	Code	Course	Credit
1	PER 602417	<i>Field Practice</i>	3 (0-3)
2	PER 603417	<i>Research Project</i>	6 (0-6)
Total			9 Credits

Ba Agronomy

E. LEARNING OUTCOMES (LO)

To achieve these competencies, graduate learning outcomes are arranged by following three aspects:

1. Attitudes and Values (AV)

In accordance with National Higher Education Standards (Permenristek-Dikti No. 44 Tahun 2015), Attitude competencies in Learning Outcomes of the Unsri Agronomy Department are as follows:

- LO-AV-1: Faithful to God Almighty and capable of actualizing a religious attitude,
- LO-AV-2: Act as citizens who are proud and love their homeland, have nationalism and are responsible for the State and nation,
- LO-AV-3: Capable of contributing in improving the quality of life in society, nation and state based on Pancasila,
- LO-AV-4: Upholding human values based on morals and ethics,
- LO-AV-5: Capable of collaborating and have social sensitivity and concern for society and the environment,
- LO-AV-6: Respect the diversity of cultures, views, religions, and beliefs, as well as the opinions,
- LO-AV-7: Obey the law and discipline in social and state life,
- LO-AV-8: Capable of internalizing academic values, norms and ethics,
- LO-AV-9: Capable of internalizing the spirit of independence and struggle (DIKTI)
- LO-AV-10: Demonstrate a responsible attitude towards work in their area of expertise independently and,
- LO-AV-11: Internalize the spirit of independence, struggle, and entrepreneurship.

2. Knowledge Competence (KC)

- LO-KC-1: Mastering the theoretical concepts and being able to develop science and technology for the cultivation of food crops, plantations and horticulture based on local wisdom and resources,
- LO-KC-2: Mastering the theoretical concepts of plant cultivation problems and being able to manage and solve problems in the field,
- LO-KC-3: Mastering the theoretical concepts of sustainable and environmentally friendly plant cultivation management,
- LO-KC-4: Mastering theoretical concepts in the development of appropriate technology that is applicable in the community to increase agricultural production,
- LO-KC-5: Mastering the theoretical concepts of the latest science and technology development in plant cultivation that can be applied to the community.

3. Skills

The skills element consists of general job skills and specific job skills.

3.1. General Skills (GS)

In accordance with the Permen Ristek-Dikti No. 44 tahun 2015, General Skills in Learning Outcomes in the Agronomy Department, Faculty of Agriculture Universitas Sriwijaya are as follows:

- LO-GS-1: Capable of applying logical, critical, systematic, and innovative thinking in the context of the development or implementation of science and technology that pays attention to and applies humanities values in accordance with their field of expertise,
- LO-GS-2: Capable of demonstrating independent, quality, and measurable performance,
- LO-GS-3: Capable of examining the implications of the development or implementation of science and technology that pays attention to and applying humanities values according to their expertise based on scientific principles, procedures and ethics in order to produce solutions, ideas, designs or art criticisms,
- LO-GS-4: Capable to compiling a scientific description of the results of the studies mentioned above in the form of a Research Project or final project report, and upload it on the university's website,
- LO-GS-5: Capable of appropriating decisions in the context of solving problems in their area of expertise, based on the results of analysis of information and data,
- LO-GS-6: Capable of maintaining and developing work networks with supervisors, colleagues, colleagues both inside and outside the institution,
- LO-GS-7: Capable of responsible for the achievement of group work results, supervising and evaluating the completion of work assigned to workers under their responsibility,
- LO-GS-8: Capable of conducting process of self-evaluation of the work group under their responsibility, and able to manage learning independently,
- LO-GS-9: Capable of documenting, storing, securing, and recover data to ensure validity and preventing plagiarism and
- LO-GS-10: Capable of adapting quickly to the world of work and the environment.

3.2. Specific Skills (SS)

In accordance with the profile, vision and mission of the study program, as well as the qualifications of graduates of the undergraduate program as stated in the KKNi (Perpres No. 8 Tahun 2012), Specific Skills in Learning Outcomes of the Agronomy Study Program, Faculty of Agriculture Universitas Sriwijaya are as follows:

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LO-SS-1:	Capable of applying plant cultivation in agricultural systems by utilizing biological resources creatively and innovatively,
LO-SS-2:	Capable of applying and modifying local wisdom by using the latest science and technology to be applied in plant cultivation practices with specific locations,
LO-SS-3:	Capable of conducting plant cultivation practices and collaborating with teams from various scientific backgrounds,
LO-SS-4:	Capable of identifying problems, providing alternative solutions, and making decisions in the cultivation of crops in the agricultural and plantation industrial systems
LO-SS-5:	Capable of planning and evaluating efficient and effective crop cultivation systems,
LO-SS-6:	Capable of recognizing and taking advantage of business opportunities in the field of agricultural cultivation,
LO-SS-7:	Capable of accessing resources including capital, labor, and technology to initiate and run a business in the field of plant cultivation,
LO-SS-8:	Capable of actualizing creative and innovative ideas related to plant cultivation technology into commercial activities,
LO-SS-9:	Capable of conducting basic research on the development and implementation of plant cultivation science and technology based on scientific methodologies to generate specific plant cultivation ideas or recommendations,
LO-SS-10:	Capable of writing research results as mentioned above in the form of scientific articles and present them in scientific forums,
LO-SS-11:	Capable of thinking analytically and synthetically regarding plant cultivation problems and be responsive to the development of related science and technology,
LO-SS-12:	Capable of communicating aspects of plant cultivation in an attractive, efficient, effective and productive manner and
LO-SS-13:	Capable of analyzing and evaluating potential barriers to plant cultivation on the sustainability of national biological resources.

The following **curriculum** is presented:

1st Semester

No	Course Code	Course Name	Credits	
			Compulsory	Elective
1	UNI 10516	Pancasila	2 (2-0)	
2	UNI 10316	Indonesian	2 (2-0)	
3	PER 11116	Mathematics	3 (3-0)	
4	Pag 10116	Agro Chemical	3 (2-1)	
5	PER 12216	Introduction to Agriculture Science	2 (2-0)	
6	ABI 11216	Introduction to Agriculture Economics	3 (2-1)	
7	PER 12116	Botany	3 (2-1)	

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8	PAG 20116	Agroclimatology	3 (2-1)	
9	ABI 11116	Fundamentals of Management	2 (2-0)	
Number of compulsory course credits			23	
Number of elective course credits				0

*: Elective Course

2nd Semester

No	Course Code	Course Name	Credits	
			Compulsory	Elective
1	UNI 10116	Religion	2 (2-0)	
2	UNI 10416	English	2 (2-0)	
3	PAG 108116	Genetics	3 (2-1)	
4	PAG 109116	Fundamentals of Plant Physiology	3 (2-1)	
5	PAG 202116	Fundamentals of Agronomy	3 (2-1)	
6	PTN 10116	Fundamentals of Soil Science	3 (2-1)	
7	UNI 10216	Civic	2 (2-0)	
8	ABI 11316	Rural Sociology	3 (2-1)	
9	PAG 113116	Plant Growth Regulator *	-	3 (2-1)
Number of compulsory course credits			21	
Number of elective course credits				3

*: Elective Course

3rd Semester

No	Course Code	Course Name	Credits	
			Compulsory	Elective
1	PER 21116	Statistics	3 (2-1)	
2	PAG 304216	Plant Ecology	3 (2-1)	
3	PAG 114216	Plant Physiology	3 (2-1)	
4	PAG 112216	Plant Biochemistry	3 (2-1)	
5	PAG 402216	Weeds Science	3 (2-1)	
6	PAG 301216	Fundamentals of Seed Science and Technology	3 (2-1)	
7	PPT 21116	Fundamentals of Plant Protection	3 (2-1)	
8	PTN 20116	Soil fertility	3 (2-1)	
Number of compulsory course credits			24	

*: Elective Course

4th Semester

No	Course Code	Course Name	Credits	
			Compulsory	Elective
1	PER24116	Experimental Design	3 (2-1)	
2	PAG 110216	Plant Breeding	3 (2-1)	
3	PAG 204216	Annual Crops Cultivation	3 (2-1)	
4	PAG 205216	Perennial Crops Cultivation	3 (2-1)	
5	PAG 206216	Horticultural Crops Cultivation	3 (2-1)	

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6	PAG 303216	Plant Nutrition	3(2-1)	
7	PAG 602216	Organic Agriculture	3 (2-1)	
8	ABI 24216	Farm Management *	-	3 (2-1)
9	PAG 605216	Tissue Culture *	-	3 (2-1)
10	PAG 606216	Hydroponics *	-	3 (2-1)
Number of compulsory course credits			21	
				9

*: Elective Course

5th Semester

No	Course Code	Course Name	Credits	
			Compulsory	Elective
1	PAG 207316	Advanced Annual Crops Cultivation	3 (2-1)	
2	PAG 208316	Advanced Perennial Crops Cultivation	3 (2-1)	
3	PAG 209316	Vegetable Crops Cultivation	3 (2-1)	
4	PAG 210316	Fruit Crops Cultivation	3(2-1)	
5	PTE 33316	Agricultural Machinery and Equipment	3 (2-1)	
6	PAG 403316	Weeds Control	3 (2-1)	
7	PAG 306316	Plant Biotechnology	3 (2-1)	
8	PAG 211316	Spice, Medicinal and Industrial Crops Cultivation *	-	3 (2-1)
9	PAG 212316	Ornamental Plants Cultivation *	-	3 (2-1)
10	PTN 36516	Irrigation and Drainage *	-	3 (2-1)
11	PTN 36216	Fertilization and Fertilizers Technology *	-	3 (2-1)
Number of compulsory course credits			21	
Number of elective course credits				9

*: Elective Course

6th Semester

No	Course Code	Course Name	Credits	
			Compulsory	Elective
1	PER 31116	Research Methods	2 (2-0)	
2	PER37116	Entrepreneurship	2 (2-0)	
3	PAG 116316	Field Study	1 (0-1)	
4	PAG 111316	Advanced Plant Breeding *		3 (2-1)
5	PAG 603316	Seed Production Techniques *		3 (2-1)
6	PAG 213316	Swamp Land Agriculture *		3 (2-1)
7	PAG 214316	Forest Crops Cultivation *		3 (2-1)
8	PAG 603316	Landscape Architecture *		3 (2-1)
9	PAG 307316	Plant Propagation *		3 (2-1)
Number of compulsory course credits			5	
Number of elective course credits				18

*: Elective Course

7th Semester

No	Course Code	Course Name	Credits	
			Compulsory	Elective
1	UNI 40116	Community Service Program	4 (0-4)	
2	PER49216	Field Practice	3 (0-3)	
3	PER49316	Research Project	6 (0-6)	
4	PER49416	Seminar	1 (0-1)	
Number of compulsory course credits			14	
Number of elective course credits				0

*: Elective Course

8th Semester

No	Course Code	Course Name	Credits	
			Compulsory	Elective
1	PER49316	Research Project	6 (0-6)	
2	PER49416	Seminar	1 (0-1)	
Number of compulsory course credits			7	
Number of elective course credits				0

* : Elective Course

Ba Plant Protection

E. LEARNING OUTCOMES

To fulfill the above stated competencies, Plant Protection Study Program, Faculty of Agriculture Sriwijaya University formulated learning process consisting of attitude and norm (AN), knowledge (K), general skills (GS) and specific skills (SS).

1. Competency of Attitude and Social Norms

In accordance to National Standard of Higher Education (Permenristek-Dikti No. 44 Tahun 2015), competence of attitude in the Student Learning Outcomes of Plant Protection Study Program, Sriwijaya University are as follow:

- LO-AN-1: Believing in God the Almighty, and is capable of showing religious attitude
- LO-AN-2: Upholding human values while on duty, based on religion, moral and ethics.
- LO-AN-3: Contributing to the improvement of life quality at the society, nation and state levels, and to the advancement of civilization based on Pancasila.
- LO-AN-4: Playing an important role as a citizen who is proud and loves the country, has spirit of nationalism and responsibility to the nation and state.
- LO-AN-5: Respecting to the diversity of culture, insight, religion, belief, and other people's originality.
- LO-AN-6: Being cooperative, sensitive and responsive to the society and environment.
- LO-AN-7: Complying with the law and discipline in living under society and state.
- LO-AN-8: Internalizing academic values, norms and ethics.
- LO-AN-9: Showing attitude of personal responsibility for the works under his/her expertise.
- LO-AN-10: Internalizing the spirit of self-confidence, exertion and entrepreneurship.
- LO-AN-11: Caring about the safety of food crop products from pesticide contamination.

2. Competency of Knowledge (K)

- LO-K-1: Mastering theoretical concepts of plant protection comprising the causal agents, symptoms, influencing factors, yield losses, and control techniques.
- LO-CN-2: Mastering theoretical concepts of the exploitation of bio-resources to be used as main components of environmental friendly pest management system.
- LO-K-3: Mastering theoretical concepts of agricultural ecosystem management as parts of environmentally friendly pest management system.
- LO-K-4: Mastering theoretical concepts of appropriate and environmentally friendly pesticide application.
- LO-K-5: Mastering theoretical concepts of domestic and international plant quarantine

4. Competency of General Skill (GS)

In accordance with Permenristek-Dikti No. 44 tahun 2015, Competencies of General Skill in the Learning Outcomes of Plant Protection Department, Faculty of Agriculture, Sriwijaya University, are as follow:

- LO-GS-1: Capable of implementing logical, critical, systematic, and innovative thinking in the concept of development or implementation of knowledge and technology reflecting and concerning human values, in accordance with his/her expertise.
- LO-GS-2: Capable of showing qualified and measurable self-performance.
- LO-GS-3: Capable of researching the implication implementation of knowledge and technology reflecting and concerning human values, in accordance with his/her expertise, based on scientific nature, procedure and ethics, in order to formulate solution, suggestion, design or art criticism.
- LO-GS-4: Capable of formulating scientific description based on the result of abovementioned research in the form of script or final assignment report and uploading the work to the university website.
- LO-GS-5: Capable of making accurate decision in the context of problem solution in his/her expertise, based on the results of information and data analyses.
- LO-GS-6: Capable of maintaining and developing network with supervisor, colleagues, and workmates, both inside and outside his/her institutions.
- LO-GS-7: Capable of being responsible for the achievement of working group and conducting supervision as well as evaluation of the accomplishment of works assigned to workers under his/her responsibility.
- LO-GS-8: Capable of conducting self-evaluation of working group under his/her responsibility and capable of managing learning process by his/herself.
- LO-GS-9: Capable of documenting, saving, and protecting data, and regaining the data to assure the authenticity and to prevent plagiarism.
- LO-GS-10: Capable of making quick adaptation to working environment.

4. Competency of Specific Skill (SS)

In accordance with profiles, visions and missions of the department, as well as the qualification of graduates as stated in KKNi (Perpres No. 8 Tahun 2012), Specific Skills in Learning Outcomes of Plant Protection Department, Faculty of Agriculture Sriwijaya University are as follow:

- LO-SS-1: Capable of recognizing and measuring damages caused by plant pest and diseases.
- LO-SS-2: Capable of recognizing as well as identifying plant pests and pathogens.
- LO-SS-3: Capable of planning, executing, and evaluating efficient and effective plant protection system under multi discipline team.
- LO-SS-4: Capable of creative and innovatively exploiting local bio-resources to be used in environmentally friendly pest management system.

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LO-SS-5:	Capable of identifying and modifying local wisdoms by combining with latest knowledge and technology to be applied in the locally specific plant protection system.
LO-SS-6:	Capable of identifying business opportunities in plant protection sector and taking benefit from the opportunities.
LO-SS-7:	Capable of accessing resources involving capital, labor, and technology to initiate and operate business in plant protection sector.
LO-SS-8:	Capable of actualizing creative and innovative ideas related to plant protection technology into commercial activities.
LO-SS-9:	Capable of conducting basic research on plant protection technology development based on scientific methodology to formulate solution or recommendation on specific plant protection.
LO-SS-10:	Capable of writing research report as described above in the form of scientific paper and presenting the paper in scientific forum or seminar.
LO-SS-11:	Capable of thinking analytically concerning plant pest and disease cases and responsive to the development of related knowledge and technology.
LO-SS-12:	Capable of performing attractive, efficient, effective and productive communication of plant protection aspects.
LO-SS-13:	Capable of analyzing and evaluating the potential threats from exotic organisms to the continuation of national bio-resources.
LO-SS-14:	Capable of identifying pest and plant pathogens quickly and accurately by implementing molecular bio-technology, both microscopic and macroscopically.
LO-SS-15:	Capable of collecting representative samples of pests and plant pathogens within large crop population

The following **curriculum** is presented:

Semester I

No	Course Code	Course name	SCU
1	ABI 11215	Introduction to agricultural economics	3 (2-1)
2	PER 11215	Inorganic chemistry	3 (2-1)
3	PER 11515	Mathematics	3 (3-0)
4	PER 12115	Botany	3 (2-1)
5	PER 11215	Introduction to agricultural sciences	2 (2-0)
6	PPT 11115	Entomology	3 (2-1)
7	UNI 10515	Pancasila	2 (2-0)
8	UNI 10315	Indonesian	2 (2-0)
9	UNI 10415	English	2 (2-0)
Total credits of compulsory courses			23
Total credits of elective courses			23

Semester II

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No	Course Code	Course name	SCU
1	ABI 11115	Principles of management	2 (2-0)
2	ABI 11315	Rural sociology	3 (2-1)
3	PAG 11315	Agroclimatology	3 (2-1)
4	PAG 11615	Fundamental of agronomy	3 (2-1)
5	PPT 11215	Academic Agricultural English*	2 (2-0)
6	PPT 11415	Agricultural microbiology	3 (2-1)
7	PPT 24515	Acarology*	
8	PTN 10115	Basic soil science	3 (2-1)
9	UNI 10115	Religion	2 (2-0)
10	UNI 10215	Civic	2 (2-0)
Total credits of compulsory courses			21
Total credits of elective courses			5

Note: *elective course

Semester III

No	Course Code	Course name	SCU
1	ABI 11415	Principles of business*	3 (2-1)
2	PAG 21215	Crop Physiology	3 (2-1)
3	PAG 21815	Weed control*	3 (2-1)
4	PAG 33615	Tissue culture*	3 (2-1)
5	PER 21115	Statistics	3 (2-1)
6	PER 37115	Entrepreneurship	2 (2-0)
7	PPT 11315	Mycology	3 (2-1)
8	PPT 21115	Principles of plant protection	3 (2-1)
9	PPT 22215	Plant bacteriology	3 (2-1)
10	PPT 22315	Insect collection	1 (0-1)
11	PPT 24415	Plant nematology*	3 (2-1)
Total credits of compulsory courses			18
Total credits of elective courses			12

Note: *elective course

Semester IV

No	Course Code	Course name	SCU
1	ABI 24215	Farm management*	3 (2-1)
2	PAG 21115	Crop ecology*	3 (2-1)
3	PER 24115	Experimental design	3 (2-1)
4	PPT 22115	Vertebrate pest	3 (2-1)
5	PPT 24115	Insect ecology	3 (2-1)
6	PPT 24215	Urban entomology*	3 (2-1)
7	PPT 24315	Plant virology*	3 (2-1)
8	PPT 24615	Apiology*	3 (2-1)
9	PTN 24115	Soil fertility	3 (2-1)
Total credits of compulsory courses			12
Total credits of elective courses			15

Note: *elective course

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No	Course Code	Course name	SCU
1	ABI 34715	International economics*	3 (2-1)
2	ABI 34415	Agricultural extension*	3 (2-1)
3	PAG 24215	Annual crop cultivation**	3 (2-1)
	PAG 24315	Perennial crop cultivation**	3 (2-1)
	PAG 24415	Horticultural crop cultivation**	3 (2-1)
4	PAG 33215	Organic Farming*	3 (2-1)
5	PER 31115	Scientific methods	2 (2-0)
6	PPT 35115	Introduction to plant protection biotechnology	3 (2-1)
7	PPT 35215	Agricultural entomology	3 (2-1)
8	PPT 35315	Plant pathology	3 (2-1)
9	PPT 35415	Plant quarantine	2 (2-0)
10	PPT 35515	Pesticides and application technique	3 (2-1)
11	PPT 35915	Silkworm farming*	2 (1-1)
12	PTN 36215	Fertilizer and fertilizing technology*	3 (2-1)
13	PTN 47415	Organic Material Management*	2 (2-0)
Total credits of compulsory courses			19
Total credits of elective courses			16

Note: *elective course; **must take one of the three courses

Semester VI

No	Course Code	Course name	SCU
1	PAG 36515	Swamp Farming*	3 (2-1)
2	PPT 35615	Important pests of essential crops	3 (2-1)
3	PPT 35715	Important diseases of essential crops	3 (2-1)
4	PPT 35815	Plant disease epidemiology*	2 (2-0)
5	PPT 37115	Integrated pest management	3 (2-1)
6	PPT 37215	Biological control and habitat management	3 (2-1)
7	PPT 37315	Monitoring of pests and diseases	2 (1-1)
8	PPT 37415	Mushroom farming*	2 (1-1)
9	PPT 46315	Ornamental crop diseases*	2 (1-1)
10	PPT 46415	Pesticide and environment*	2 (2-0)
11	UNI 40115	Community service	4 (0-4)
Total credits of compulsory courses			20
Total credits of elective courses			11

Note: *elective course

Semester VII

No	Course Code	Course name	SCU
1	PER 49215	Field practice	3 (0-3)
2	PPT 46115	Seed and post-harvest disease	3 (2-1)
3	PPT 46215	Storage Pest*	2 (1-1)
4	PPT 47115	Pest forecasting system*	2 (2-0)
5	PPT 47215	Plant Clinique	2 (1-1)

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6	PPT 47315	Plant pest identification	2 (1-1)
7	PPT 47415	Plant disease identification	2 (1-1)
8	PPT 47515	Pesticide residue analysis and bioassay*	2 (2-0)
9	PTN 37315	Swamp Management*	2 (2-0)
10	PTN 47315	Land and agrarian law*	2 (2-0)
Total credits of compulsory courses			10
Total credits of elective courses			10

Note: *elective course

Semester VIII

No	Course code	Course name	SCU
1	PER 49315	Research Project	6 (0-6)
2	PER 49415	Seminar	1 (0-1)
Total credits of compulsory courses			9
Total credits of elective courses			0

Ba Soil Science

5.COMPETENCY

Main competencies (Learning Outcomes) of the Soil Science Study Program formulated on February 25, 2012 (meeting with HITI and Soil Science Study Programs throughout Indonesia).

Level 6 generic description (first paragraph)

Able to utilize science and technology in their field of expertise and able to adapt to situations encountered in solving problems.

Specific description

Able to describe soil properties, classify soil, choose the best alternative land use in agriculture, and maintain it for the sustainability of soil functions through field observations, laboratory and landscape analysis.

Level 6 generic description (second paragraph)

Mastering the theoretical concepts of specialist and in-depth knowledge in certain fields, and able to formulate procedural problem solving

Specific description

Mastering knowledge of Morphology and Soil Classification, Soil Survey and Mapping, Soil Physics, Soil Mineralogy, Soil Chemistry, Soil Biology, Soil Fertility and Plant Nutrition, Land Evaluation and Soil Management, Soil and Water Conservation, Fertilizer and Fertilizer to be used in the utilization and sustainable soil maintenance.

Level 6 generic description (third paragraph)

Able to make strategic decisions based on analysis of information and data, and provide guidance in choosing various alternative solutions:

Specific description

Able to determine the level of surveys in soil mapping, determine land use planning, determine the choice of types and doses of fertilizers, determine soil management and soil and water conservation actions, as well as determine ways to maintain, improve and improve soil quality.

Level 6 generic description (fourth paragraph)

Responsible for their own work and can be given responsibility for the achievement of the organization's work.

Specific description

Able to manage activities within the scope of his work and be responsible for the achievement of his work and open to interact scientifically for the achievement of organizational work.

The following **curriculum** is presented:

6. DISTRIBUTION OF COURSES EVERY SEMESTER

a. Semester 1

No	Code	Subject	Credits
1	PER 11108	Mathematics	3(3-0)
2	PER 11208	Agricultural Chemistry	3(2-1)
3	PER 12109	Botany	3(2-1)
4	PER 11508	Fundamental Physics	2(1-1)
5	UNI 10308	Indonesian	2(2-0)
6	UNI 10208	Civic	2(2-0)
7	UNI 17109	Pancasila	2(2-0)
8	PER 11209	Introduction to Agricultural Science	2(2-0)
		Amount	19-0 credits

b. Semester 2

No	Code	Subject	Credits
1	UNI 10108	Religion	2(2-0)
2	PTN 10215	Introduction to Environmental Science	2 (2-0)
3	UNI 10409	English	2(2-0)
4	ABI 11209	Introduction to Agricultural Economic*	3(2-1)
5	ABI 11109	Fundamentals of Management	2(2-0)
6	ABI 11309	Rural Sociology*	3(2-1)
7	PTN 10115	Introduction to Soil Science	3(2-1)
8	PTN 12115	Agrogeology	3(2-1)
9	PTN 12215	Floating Agriculture*	2(2-0)
		Amount	17-5 credits

c. Semester 3

No	Code	Subject	Credits
1	ABI 34409	Agricultural Extension	3(2-1)
2	AET 21509	Principles of Plant Protection	3(2-1)

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3	AET 11409	Principles of Agronomy	3(2-1)
4	PER 21109	Statistics	3(2-1)
5	PTN 23115	Soil Biology	3(2-1)
6	PTN 23215	Soil Chemistry	3(2-1)
7	PTN 23315	Soil Physics	3(2-1)
		Amount	21-0 credits

d. Semester 4

No	Code	Subject	Credits
1	AET 11509	Agroclimatology	2(2-0)
2	PTN 20115	Soil Fertility	3(2-1)
3	PTN 24115	Soil and Water Conservation	3(2-1)
4	PTN 24215	Soil Morphology and Classification	3(2-1)
5	PTN 24315	Geodetic Surveying and Cartography	3(2-1)
6	PTN 24415	Soil and Water Quality	3(2-1)
7	PTN 24515	Land Ecology*	3(2-1)
8	PTN 23415	Soil Microbiology*	3(2-1)
		<i>Options outside the Soil Science PS</i>	
9	ABI 24209	Farm Management*	3(2-1)
10	ABI 24319	Agribusiness Marketing Management	3(2-1)
11	PBA 24208	Water Quality Management*	3(2-1)
		Amount	17-6 credits

e. Semester 5

No	Code	Subject	Credits
1	AET 21309	Fundamentals of Plant Physiology	3(2-1)
2	PTN 35615	Agricultural Waste Management	3(2-1)
3	PER 24109	Experimental Design	3(2-1)
4	PTN 35115	Agrohydrology	3(2-1)
5	PTN 35215	Soil Biotechnology	3(2-1)
6	PTN 35315	Land Survey and Evaluation	3(2-1)
7	PTN 35415	Soil, Water and Plant Analysis	3(1-2)
8	PTN 35515	Soil Amendments	3(2-1)
		<i>Options outside the Soil Science PS</i>	
9	PAG xxxxx	Plantation Crops Production (Rubber and Oil Palm)**	3(2-1)
10	PAG xxxxx	Vegetable Crops Production**	3(2-1)
11	PBA 34108	Aquaculture Engineering*	3(2-1)
12	ABI 31209	Natural Resource Economic	2(2-0)
		Amount	18-6 credits

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f. Semester 6

No	Code	Subject	Credits
1	PAG xxxxx	Food Crops Production (Paddy, Corn, Soybean)**	3(2-1)
2	AAG 32509	Management of Perennial Crops in Low land**	3(2-1)
3	PER 31109	Research Methods	2(2-0)
4	PTN 36115	Landscape Analysis	3(2-1)
5	PTN 36215	Fertilizer and Fertilization Technology	3(2-1)
6	PTN 36315	Land Resource Information System	3(2-1)
7	PTN 36415	Soil and Water Management	3(2-1)
8	PTN 36515	Irrigation and Drainage	3(2-1)
9	PTN 36615	Organic Farming System*	2(2-0)
10	PTN 36715	Lowland Management	2(2-0)
11	PTN 36815	Practical of Lowland Management	2(0-2)
		Amount	21-2/3 credits

g. Semester 7

No	Code	Subject	Credits
1	PER 37109	Entrepreneurships	2(2-0)
2	PTN 47115	Regional Planning and Development	3(2-1)
3	PTN 47215	Watershed Management	2(2-0)
4	PTN 47315	Spatial and Land use Planning*	2(2-0)
5	PTN 47415	Land Degradation and Reclamation*	2(2-0)
6	PTN 47515	Land and Agrarian Law*	2(2-0)
7	PTN 47615	Organic Matter Management*	2(2-0)
8	PTN 47715	Land Resource and Environmental Managment	2(2-0)
		Amount	9+8 credits

h. Semester 8

No	Code	Subject	Credits
1	UNI 40109	Community Service Program	4(0-4)
2	PER 49209	Field Practice	3(0-3)
3	PER 49309	Research Project	6(0-6)
4	PER 49409	Seminar	1(0-1)
5	PER 47108	Internship*	3(0-3)
		Amount	14-3 credits