ASIIN Seal & EQAS-Food Label

Accreditation Report

Bachelor's Degree Programmes

Food Technology

Agro-Industrial Technology

Master's Degree Programmes

Agro-Industrial Technology

Agriculture-Industrial Technology

Provided by

Universitas Padjadjaran (UNPAD) – Indonesia

Version: 25 March 2025

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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]
Sarjana Teknologi Pertanian	Bachelor Food Technology	ASIIN, EQAS Food Label	BAN-PT Grade A; valid until 25.11.2026	08, 01
Sarjana Teknologi Industri Pertanian	Bachelor Agro-Industrial Technology	ASIIN	BAN-PT Grade Excellent; valid until 06.02.2029	08, 01
Master Teknologi Agroindustri	Master Agro-Industrial Technology	ASIIN	BAN-PT Grade Excellent; valid until 20.04.2026	08, 01
Master Teknologi Industri Pertanian	Master Agriculture-Industrial Technology	ASIIN	BAN-PT Grade B; valid until 15.11.2028	08, 01
Date of the contract: 22.08.2023 **Submission of the final version of the Self-Assessment Report:** 09.09.2024 **Date of the audit:** 04.– 05.11.2024 **At:** Universitas Padjadjaran, Jatinangor Campus **Location:** Sumedang, Indonesia.				

[1] ASIIN Seal for degree programs

[2] TC: Technical Committee for the following subject areas: TC 08: Agriculture, Forestry and Food Sciences; TC 01: Mechanical Engineering/Process Engineering

Assessment panel: Prof. Dr. Matthias Kleinke, Rhine-Waal University of Applied Sciences Prof. Dr. Gerhard Schleining, University of Natural Resources and Life Sciences, Vienna Dr.-Ing. Mathis Wollny, Merck Electronics KGaA, Darmstadt Prof. Dr. Lilik Sutiarso, Universitas Gadjah Mada Mr. Aji Wikandaru, student, Master in Agro-Industrial Technology at Universitas Gadjah Mada	
Representative of the ASIIN headquarter: Dr. Emeline Jerez	
Responsible decision-making committee: Accreditation Commission for Degree Programs	
Criteria used: European Standards and Guidelines as of 15.05.2015 ASIIN General Criteria as of 28.03.2023 Subject-Specific Criteria of Technical Committee 08 – Agriculture, Forestry and Food Sciences as of 27.03.2015 Subject-Specific Criteria of the Technical Committee 01 – Mechanical Engineering/Process Engineering as of 16.03.2021	

B Characteristics of the Degree Program

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
Bachelor Food Technology	Sarjana Teknologi Pertanian (S.T.P.)		Level 6	Full time	No	8 semesters	145 credits equivalent to 232 ECTS	Annually, in August 1996
Bachelor Agro-Industrial Technology	Sarjana Teknologi Pertanian (S.T.P.)		Level 6	Full time	No	8 semesters	144 credits equivalent to 230.4 ECTS	Annually, in August 2014
Master Agro-Industrial Technology	Magister Teknologi Pertanian (M.T.P.)	1. Agricultural and Food Machinery 2. Soil and Water Engineering 3. Post-harvest Technology 4. Food Technology 5.Food Security	Level 7	Full time	Yes	4 semesters	36 credits equivalent to 57.6 ECTS	Twice a year, in August and February
Master Agriculture-Industrial Technology	Magister Teknologi Pertanian (M.T.P.)	1. Agricultural Industry Systems and Management 2. Process Engineering and Bioprocessing of Agricultural Industry	Level 7	Full time	No	4 semesters	36 credits equivalent to 57.6 ECTS	Twice a year, in August and February

[3] EQF = The European Qualifications Framework for Lifelong Learning

The ASIIN experts acknowledged and considered the contextual framework within which the Bachelor's and Master's programs under review are offered:

Universitas Padjadjaran (UNPAD) is a state university established in 1957. The university is located in the province of West Java, Indonesia, and its primary campus is Jatinangor in Sumedang. UNPAD's other campuses are Dipati Ukur in Bandung, Garut, and Pangandaran.

Accounting for over 38,000 enrolled students, the university offers 190 educational programs. These range from vocational and undergraduate to postgraduate programs, including specialist, professional, master's, and doctoral programs. The university comprises 16 faculties and a Postgraduate School that oversees the master's and doctoral programs in interdisciplinary science and carries out quality assurance duties for postgraduate programs organized by faculties.

As per its vision statement, the university aims to "become a world-renowned university bringing great impacts on society". In the 2025 QS World Universities Ranking, UNPAD is ranked 7th in Indonesia and 596th in the world.

The Faculty of Agro-Industrial Technology

Fakultas Teknologi Industri Pertanian (*FTIP*) traces its origins to the Department of Agricultural Technology within UNPAD's Faculty of Agriculture that was established in 1983. After a period of expansion, the department became an independent faculty in 2005. Currently, it offers six study programs: three at the undergraduate level, two at the master's level, and one at the doctoral level.

The FTIP's vision is "to become a higher education management institution that is committed to excellence in the field of agricultural industrial technology, both scientific and applied, capable of competing at national, regional, and international levels in 2024". In realizing this vision, the Faculty of Agro-Industrial Technology's mission is:

> "1. Carry out quality education in the agricultural and information technology industry (scientific and applied) to produce morally and academically competitive graduates who are beneficial to society.
>
> 2. Develop research and community service to support education and advances in science and technology for the academic community, government, industry, and society in general.

3. Implement education management by applying the principle of quality assurance. Implement a professional management system based on transparency and accountability to create effective and efficient institutional relationships.

4. Maintain cooperative relations at home and abroad on an ongoing basis by applying the principles of equality, partnership, and mutual trust.

5. Develop new study programs in agricultural industrial technology and other applied sciences".

As part of this procedure, the Faculty of Agro-Industrial Technology pursues ASIIN accreditation for the Bachelor Food Technology, Bachelor Agro-Industrial Technology, Master Agro-Industrial Technology and Master Agriculture-Industrial Technology, which the university refers as to BFT, BAIT, MAT and MAIT, respectively, within the provided documentation. The Faculty also pursues the award of the EQAS-Food Label for the study program in Food Technology.

Within the documentation, the programs are introduced with the following profile and education objectives (PEO):

i. Bachelor Food Technology

"Produce graduates who master the basics of science and technology in the field of food technology and can apply it to the community, and can compete at national, regional, and international levels"
"PEO 1: Have capability to use their knowledge and skills in food area related-practices
PEO 2: Display strong leadership having characters of creative, inovative, and critical thinking
PEO 3: Demonstrate high-level of professionalism, ethical and social responsibility and desire for independent life-long learning"

ii. Bachelor Agro-Industrial Technology

"Producing Agricultural Industrial Technology graduates who have the profiles of Design Thinkers, Creative Leaders, Local Enablers, and Technopreneurs, based on Agro-industrial Technology and possessing various soft-skills"
"PEO 1: Agro-industry-based business actors and technopreneur

PEO 2: Academia and researchers

PEO 3: The Local Enabler in Agroindustry Sector

PEO 4: Profesional Expert in Agroindustrial Technology

PEO 5: Government Employees."

iii. Master Agro-Industrial Technology

"The group of study materials includes Agricultural and Food Machine Tools; Soil and Water Engineering; Post Harvest Technology; Food Technology; Food security."

"PEO1: Entrepreneur

PEO2 : Manager

PEO3: Researcher

PEO4: Lecturer

PEO5 : Consultant

PEO6 : Bureaucrats in Agro-Industrial Technology

PEO7 : Analyst/Auditor

PEO8 :Private Worker"

iv. Master Agriculture-Industrial Technology

"The group of study materials includes Agricultural Industrial Planning and Policy; Agricultural Industry-Based Village Development Planning (PPDBIP); Agricultural Industry Management and Information System; Process Engineering and Bioprocess Industry Agriculture."

"PEO-1: Agro-industry-based business actors and technopreneurs

PEO-2: Academia and researchers

PEO-3 : The Local Enabler in the Agro- Industry Sector

PEO-4 : Professional Expert in Agro-industrial Technology

PEO-5 : Government Employees"

As discussed with representatives from the Rector's office, UNPAD's vision, as outlined in the 2020-2024 Strategic Plan, is to become a world-renowned university with significant societal impact. In this context, pursuing international accreditation is an institutional priority. The aim is to improve the excellence of the study programs through international recognition. The experts commend the university for its dedicated efforts and resources invested in improving its national ranking position and becoming internationally recognised. Furthermore, they emphasize the importance of sustaining the education system related to agro-industrial and food technology in Indonesia

C Accreditation Report for the ASIIN Seal

1. The Degree Program: Concept, content & implementation

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

Evidence:

- Self-assessment report
- Outcomes-Module-Matrices, as part of the self-assessment report
- Alignment Matrix of Programme Learning Outcomes EQAS-Food Award
- BFT website: https://ftip.unpad.ac.id/en/ft-about/
- BAIT website: https://ftip.unpad.ac.id/en/ait-about/
- MAT website: https://ftip.unpad.ac.id/en/m-at-about/
- MAIT website: https://ftip.unpad.ac.id/en/agricultural-industry-technology-ait/
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The experts refer to the Subject-Specific Criteria (SSC) of the Technical Committee Agriculture, Forestry and Food Sciences and general ASIIN Criteria for the Accreditation of Degree Programmes as a basis for judging whether the intended learning outcomes of the Bachelor's programs in Food Technology and Agro-Industrial Technology, and Master's programs in Agro-Industrial Technology and Agriculture-Industrial Technology, as defined by UNPAD, correspond with the competences as outlined in the SSC. They come to the following conclusions:

i. Learning Outcomes

As documented, Program Learning Outcomes (PLOs) are developed based on each program's Profile Education Objectives (PEOs). This process involves consultation with internal (students and lecturers) and external (alumni, government agencies, professional associations and industry) stakeholders, and benchmarking against pertinent national and international standards and references. PLOs align with the Indonesian National Qualification Framework, the National Higher Education Standards, UNPAD's vision and mission, and the mandates of the Faculty of Agro-Industrial Technology.

Based on the Indonesian National Qualification Framework (*Kerangka Kualifikasi Nasional Indonesia, KKNI*), PLOs are distinguished as aspects of Attitude (*sikap*), Knowledge (*pengetahuan*), General Skills (*kemampuan umum*), and Special Skills (*kemampuan khusus*). Each program's PLOs can be found in the Appendix.

UNPAD presents tables with the correlations between PEOs and PLOs, as well as PLOs and courses (modules). For the Bachelor Food Technology, the university also maps each PLO with the corresponding EQAS LO, type of assessment, teaching and learning activities and defines the extent of alignment with EQAS LO. The auditors also verified and confirmed that the program learning outcomes are published on the program websites, and thus accessible to all stakeholders.

At the module level, course learning outcomes (CLOs) are defined in the respective module description. Each course also has a Semester Learning Plan as a curriculum tool where the relationship between CLOs and PLOs is further documented.

During the audit, the experts focused particularly on the PLO of the Bachelor's programs related to attitude, specifically PLO1. In discussions with representatives from the Rector's Office, the experts inquired about how the programs are structured to ensure there is no discrimination based on religious background. The university representatives clarified that religious requirements do not apply to international students, citing examples such as the number of international students coming from Malaysia. However, as this distinction is not formally documented, the experts recommend rewording PLO1 to ensure it is inclusive and achievable for incoming international students.

Furthermore, upon reviewing the self-assessment report, appendices, and program websites, the experts observed significant differences in how the four programs are presented and documented. They recommend improved coordination at the faculty level. For instance, the presentation and documentation of the program objectives and learning outcomes should be harmonized to improve transparency across the programs, emphasizing the depth and comprehensiveness of the PLOs. A suggested good practice

would be to create a standardized reference document to be implemented by each department when preparing documents related to their department profiles. This is an example of how a controlled management system can be applied to streamline this process.

That said, the experts confirm that the learning outcomes of the programs correspond to level 6 (Bachelor Food Technology and Bachelor Agro-Industrial Technology) and level 7 (Master Agro-Industrial Technology and Master Agriculture-Industrial Technology) of the European Qualification Framework (EQF), respectively.

ii. Graduate Qualification Profiles

Graduates of the Bachelor Food Technology study program are expected to embark on diverse career paths, ranging from roles as food technologists, researchers, technopreneurs and academics.

Regarding those completing the Bachelor Agro-Industrial Technology study program, they are anticipated to pursue various careers, including positions as agro-industry-based business actors and technopreneurs, academics and researchers, local enablers in the agro-industry sector, professional experts in agro-industrial technology, and government employees.

In the Master Agro-Industrial Technology study program, graduates are expected to contribute with their expertise as entrepreneurs, managers, researchers, lecturers, consultants, bureaucrats in agro-industrial technology, analysts/auditors, and private sector workers.

The Master Agricultural-industrial Technology study program prepares students for careers as agro-industry-based business actors and technopreneurs, academics and researchers, local enablers in the agro-industry sector, professional experts in agro-industrial technology, and government employees.

Upon analyzing the documented graduate qualification profiles for the Master's programs, the experts observe no significant differences between the two programs. As a result, they recommend that a clear differentiation be made between the profiles of the MAT and MAIT study programs (program specifications).

Several lines of evidence indicate that students are well-prepared for entering the job market, and employers are generally satisfied with the knowledge and technical skills of the graduates. During the discussion with the experts, representatives from various institutions confirmed their willingness to take in student interns and graduates, highlighting their ability to adapt quickly to the workplace. **However, feedback from**

industry partners and alumni highlights the need for improvement in the development of general soft skills among graduates. Key areas identified include communication, presentation, problem-solving (with a focus on finding effective solutions) and creativity, due to the complexity and uniqueness of the challenges present in the workplace. Additionally, collaboration and teamwork are vital for success in a professional environment. The experts recommend that the university intensify its efforts to address these gaps, ensuring that students are better equipped with these essential skills for their professional careers.

Concerning the students, they were overall satisfied with the programs under review. They expressed general satisfaction with the learning experience, and future job and academic prospects.

The experts gained the overall impression that the imparted qualification profiles align with expectations from stakeholders, and allow the students to take up an occupation corresponding to their qualifications upon graduation.

iii. Review of Learning Outcomes

During the audit, the program coordinators informed the experts that learning outcomes and curricula undergo a comprehensive review every five years. These reviews are conducted with the involvement of both internal and external stakeholders to ensure the programs remain current and relevant. Additionally, minor revisions are made annually to address immediate needs without necessitating a complete restructuring.

When asked about recent changes to learning outcomes, the program coordinators explained that the PLOs have been adapted to align with the evolving needs of the labor market. One example is the inclusion of entrepreneurship as a newly introduced learning outcome.

Furthermore, industry representatives were asked if the university seeks feedback on the competencies of its graduates. They confirmed that feedback is gathered through dedicated surveys. They have also been invited to review the curriculum based on their industry expertise.

From the provided documentation, their exchanges during the audit, as well as the further discussion about the university's quality assurance mechanisms under Criterion 1.3 and Criterion 5, the experts gained the impression that appropriate, recurring review mechanisms concerning the learning outcomes of the programs under review are in place.

In summary, the assessment team believes that the degree programs are designed in such a way that they meet the objectives set for them and judge the objectives and learning

outcomes of the programs as suitable to reflect the intended level of academic qualification. They correspond with the ASIIN Subject-Specific-Criteria (SSC) of the Technical Committee 08 – Agriculture, Forestry and Food Sciences, Technical Committee 01 – Mechanical Engineering/Process Engineering and suffice the ASIIN Criteria for the Accreditation of Degree Programmes.

The Faculty of Agro-Industrial Technology is also applying to EQAS Food Label for the Bachelor's degree in Food Technology. After a thorough examination of the submitted documents and discussions during the audit, the experts conclude that the program also meets the criteria set by IFA (ISEKI-Food Association). As a result, the program qualifies for the corresponding award seal.

The Bachelor Food Technology study program covers the criteria areas outlined by IFA to a percentage of more than 80%, including food safety and microbiology, food chemistry and analysis, food processing and engineering, quality management and the law, as well as generic competences. These criteria areas ensure that students acquire knowledge and skills in ensuring the safety of food products, understanding food chemistry principles, utilising analytical techniques for food analysis, optimising food processing and engineering techniques, adhering to quality management practices and legal standards, and developing generic competences such as critical thinking, problem-solving, teamwork, communication, and ethical decision-making.

By incorporating the criteria set by IFA into the curriculum, the Bachelor Food Technology study program ensures that graduates are well-prepared to meet international standards in the field of food science and technology.

The team appreciate that UNPAD aims to provide graduates from the programs under review with good chances on the national job markets, as well as the opportunity to transfer to other academic programs to complete a Master's or maybe even a PhD program. **While appreciating this positive outcome, the experts also believe there is an opportunity for the university and faculty leaders to enhance their collaboration with external stakeholders. They recommend fostering an academic atmosphere that actively encourages students to engage with alumni, industry professionals, and other relevant organizations, in order to enrich their learning experiences and career prospects.** Further discussion of the curricula will follow under Criterion 1.3.

Criterion 1.2 Name of the degree program

Evidence:

- Self-assessment report
- Curriculum Documents, all programs under review
- BFT website: https://ftip.unpad.ac.id/en/ft-about/
- BAIT website: https://ftip.unpad.ac.id/en/ait-about/
- MAT website: https://ftip.unpad.ac.id/en/m-at-about/
- MAIT website: https://ftip.unpad.ac.id/en/agricultural-industry-technology-ait/
- Sample Diploma Certificate, all programs under review

Preliminary assessment and analysis of the experts:

The naming of the degrees awarded follows the regulation of the Indonesian Minister of Research, Technology and Higher Education No. 163/E/KPT/2022 concerning the name of a study program in higher education.

Graduates of the Bachelor's programs Food Technology and Agro-Industrial Technology receive the title *Sarjana Teknologi Pertanian (S.TP.)* or Bachelor of Agriculture Technology.

Graduates of the Master's programs Agro-Industrial Technology and Agriculture-Industrial Technology are awarded the title *Magister Teknologi Pertanian (M.TP.)* or Master of Agriculture Technology.

The experts confirm that the English translation and the original Indonesian names of the Bachelor's degree programs correspond to the intended aims and learning outcomes.

Regarding the Master's programs, the experts discussed the differences in competencies and learning outcomes with the program coordinators. They expressed concerns about whether the program names clearly convey distinctions that prospective students and employers can identify.

The program coordinators explained that the Master of Agro-Industrial Technology study program originated from the Agricultural Technology concentration within the Master of Agriculture study program at the Faculty of Agriculture, providing a historical rationale for its naming. While the experts acknowledge the program's historical roots, they emphasize that the current names of both Master's programs might lead to confusion among stakeholders. To address this, they strongly believe that the names of the Master's programs, along with the graduate profiles and curriculum structure, need to better reflect the specific learning outcomes expected from each program.

Criterion 1.3 Curriculum

Evidence:

- Self-assessment report
- Curriculum Documents, all programs under review
- University website: https://www.unpad.ac.id/en/
- BFT website: https://ftip.unpad.ac.id/en/ft-about/
- BAIT website: https://ftip.unpad.ac.id/en/ait-about/
- MAT website: https://ftip.unpad.ac.id/en/m-at-about/
- MAIT website: https://ftip.unpad.ac.id/en/agricultural-industry-technology-ait/
- UNPAD Academic Calendar 2023/2024: https://www.unpad.ac.id/pengumuman/kalender-kegiatan-akademik-unpad-tahun-akademik-2023-2024/
- MBKM Program Guide as appendix to the self-assessment report
- Discussions during the audit

Preliminary assessment and analysis of the experts:

After analysing the module descriptions and the curriculum, the experts confirm that the four study programs under review are divided into modules and that each module is a sum of coherent teaching and learning units. All working practice intervals (community service and field training) are integrated into the curriculum, and the supervision by the University/Faculty of Agro-Industrial Technology/Department allows for their respective quality in terms of relevance, content, and structure. In addition, the experts gain the impression that the choice of modules and the structure of the curriculum ensure that the intended learning outcomes can be achieved.

i. Structure of the Programs

Each semester is equivalent to 16 weeks, including 14 weeks of learning activities and 2 weeks for midterm and final exams. The odd semester starts in August and ends in January, and the even semester lasts from February to July.

The Bachelor Food Technology and Agro-Industrial Technology study programs comprise 145 and 144 Indonesian credit points, respectively, and have a formal duration of 8 semesters. The bachelor's curriculum consists of a) compulsory university courses, b) prerequisites, c) core field of study courses, and d) areas of interest/electives courses. The study programs conclude with the writing of a bachelor's thesis and scientific publication.

The Master Agro-Industrial Technology and Agriculture-Industrial Technology study programs involve a minimum of 36 Indonesian credit points, with a duration of 4 semesters of study. It consists of compulsory courses, specialization and elective skills courses. Completing the Master's degree requires a publication and writing a final Master's thesis.

Further details regarding the Indonesian Credit System and its alignment with the European Credit Transfer and Accumulation System (ECTS) can be found under Criterion 1.5.

ii. Contents

Bachelor's programs:

At the beginning of the study programs, students are introduced to general education subjects such as Religion, Pancasila Education, Civic Education, Bahasa Indonesia, English, Cultivate Creativity and Entrepreneurship and Introduction to Agro-Industry. These courses help students understand socio-cultural aspects and foundational principles of their discipline.

As students advance through the programs, the courses become more focused and specific, allowing them to delve deeper into their field. Practical laboratory work is incorporated into the curricula, enabling students to gain hands-on experience.

In the later stages of the programs, the curricula further narrow their focus on advanced areas. Students take specialized subjects and engage in professional development activities. They also undertake a final-year project, which may involve research or an internship. These experiences provide students with opportunities to apply their knowledge in real-world scenarios and further refine their expertise.

Students are usually required to do community service in their final year. Program coordinators explain that community service is compulsory for all Indonesian students. It lasts a minimum of four weeks and usually takes place in villages or rural areas where students stay and live with the local people. The course is designed to enable students to apply their knowledge in their field of study in order to empower society.

Masters' programs

The study materials for the Master Agro-Industrial Technology are grouped into five specializations, namely:

1. Agricultural and Food Machinery
2. Soil and Water Engineering
3. Post-harvest Technology

4. Food Technology
5. Food Security

The study materials for the Master Agriculture-Industrial Technology program are organised into two specializations, namely:

1. Agricultural Industry Systems and Management
2. Process Engineering and Bioprocessing of Agricultural Industry

In the first semester of the study programs, students are introduced to foundational courses, alongside specialization and elective skills courses. In the second semester, students begin their research, progressing toward thesis submission in the third or fourth semester.

During the audit, the experts sought clarification on the actual duration of the Bachelor's and Master's programs. They observed that the curriculum outlines indicate seven semesters for the Bachelor's programs and three semesters for the Master's programs, prompting questions about the existence of an 8th and 4th semester, respectively.

For the Bachelor's programs, the program coordinators mentioned that the eighth semester, which does not include any formal coursework, can be an opportunity for students to participate in MBKM activities. These activities typically have a duration of 4 to 6 months. Regarding the Master's program, the program coordinators explained that students following the regular pathway can complete their studies in three semesters through a structured and focused approach. Additionally, students from the Fast-Track pathway can also finish within a minimum of three semesters, as their research is initiated during their undergraduate studies and continues into the Master's program. **The experts understand that some students may complete their Bachelor's and Master's programs one semester earlier, however, to ensure consistency, they believe that the curriculum should be adapted in a way that utilizes the full program length (eight/four semesters).**

The assessment team also examined the content of each program, noting that the curricula seem to not place enough emphasis on sustainability, environmental protection, and climate change issues. During the audit, when the experts inquired about these topics, the program coordinators explained that certain assessment subjects address climate change actions and that basic complementary modules include concepts of sustainability.

While the experts acknowledge these efforts, they emphasize the importance of incorporating up-to-date content to better prepare students for the labour market and the contemporary challenges in the agro-technology sector. A key recommendation is for

the university to consider the possibility of strengthening and increasing the visibility of these aspects.

The experts also offer specific advice regarding the following:

Bachelor Food Technology (BFT)

- **Module Plant Design should contain hygienic design.**
- **QM-tools, methods of defect detection, defect analysis, continuous improvement, preventive maintenance and test equipment management are currently missing.**

Bachelor Agro-Industrial Technology (BAIT)

- **Module Factory Layout Design or Industrial Environment Management should contain hygienic design, cleaning and disinfection.**

Master Agro-Industrial Technology (MAT)

- **Agro-Industrial Machinery and Equipment should include hygienic design.**
- **Laboratory management is missing.**
- **Food Safety Measurement and Concept should include risk management, auditing and crisis management.**

Apart from this, the experts confirm that the programs are overall suitable to adequately prepare students for the labour market.

iii. Internship

Internships are integrated into the Bachelor's programs through the Independent Learning - Independent Campus (MBKM) activities. These activities encompass eight components, representing a mode of autonomous and flexible learning:

1. Student exchange,
2. Internship/practical work in industry or other workplaces,
3. Teaching assistant in education units,
4. Research,
5. Humanitarian project,
6. Entrepreneurial activities,
7. Independent study/project, and
8. Village building/thematic community service.

Students taking part in the MBKM program must have activity outputs, consisting of a logbook, progress report and final report. During the audit, industry representatives

confirmed that their companies have received students as interns and expressed satisfaction with their competences and skills.

iv. Mobility

During the audit, students informed the experts that UNPAD actively promotes both domestic and international mobility opportunities throughout their academic journey. They noted the various opportunities and support available for personal development, particularly highlighting the assistance provided by the FTIP Information Office in helping them meet the requirements for studying abroad. For instance, one student reported to have received a full scholarship to study in Taiwan, focusing on advancing their knowledge in bioprocessing. The student highlighted the value of this experience and credited the support of lecturers who provided a recommendation letter to facilitate the opportunity.

The students confirmed that mechanisms are in place to recognize and convert academic credits earned abroad into the UNPAD's credit system. The "General Guidelines Implementation of Education at Universitas Padjadjaran" states the equivalency process as outlined further under criterion 1.5. This process is further facilitated through international and local agreements.

As for funding opportunities to support students' mobility abroad, students and program coordinators confirmed the availability of scholarships. These include the international student exchange program for undergraduate students called IISMA, established in 2022 by the Ministry of Education, Culture, Research and Technology to encourage more students to participate in international mobility.

During the on-site visit, the program coordinators, students, and teaching staff remarked upon the valuable collaborations established with international partners, including institutions in Japan, Malaysia, and Taiwan. **The experts commend FTIP for fostering these partnerships, which enhance mobility opportunities for both students and staff. However, they also encourage the faculty to further strengthen English language proficiency among students and teaching staff to expand internationalisation efforts and support greater participation in mobility programs. Together with this, the experts see room to have more courses in English, so incoming students have enough opportunities to spend one full semester at UNPAD.**

v. Curriculum review

As mentioned under Criterion 1.1, the learning outcomes and curricula of the programs under review are systematically evaluated and updated every five years. This process incorporates feedback from a range of stakeholders, including students, teaching staff,

alumni, and industry partners, to ensure the programs remain aligned with evolving needs and expectations.

An important aspect of this process is the role of the advisory board, which includes institutional staff, alumni, stakeholders, and students. This board is responsible for providing guidance to the program coordinators, ensuring that the study programs are continuously updated and aligned with the latest developments in the respective field.

The experts commend the strong commitment of students and industry partners to the continuous improvement of the programs. They also highly appreciate the dedication and active involvement of the teaching staff in this process.

Overall, the assessment team is satisfied with the information provided regarding the procedures for curricular review and acknowledges the efforts to ensure continuous alignment with academic, professional, and industry standards.

Criterion 1.4 Admission requirements

Evidence:

- Self-assessment report
- University website: https://www.unpad.ac.id/en/
- University admission website: http://smup.unpad.ac.id/
- UNPAD Academic Calendar 2023/2024: https://www.unpad.ac.id/pengumuman/kalender-kegiatan-akademik-unpad-tahun-akademik-2023-2024/
- Admission-related regulation as part of the self-assessment report
- Statistical data about the progress of studies, all programs under review
- Discussions during the audit

Preliminary assessment and analysis of the experts:

Bachelor's programs

Admission and selection of the prospective Bachelor's program students are delimited by the Minister of Education and Culture's regulation No. 6/2020 concerning Admission of New Students to Undergraduate Programs at State Universities.

UNPAD's student admission system is managed by the Student Admission Centre, PPMB. The admission requirements, schedule, registration venue, and selection test are announced through PPMB's website and thus accessible to all stakeholders.

Admission for undergraduate programs is carried out through a national selection process in the following forms:

1. SNBP - National Selection Based on Achievement: Selection mechanism Based on academic performance at high school.
2. SNBT - National Selection based on Tests: Selection mechanism based on a nationwide selection test held annually for university candidates.
3. SMUP - Local Selection is divided into four pathways: the test score pathway, the merit pathway, the applied undergraduate pathway, and the international undergraduate program (IUP).

The university has allocated quotas for SNBP, SNBT, and SMUP at 20%, 40%, and 40%, respectively. Regarding these quotas, the experts asked the program coordinators whether they are in alignment with the expected quality of incoming students. The program coordinators explained that the quality of the students may vary depending on whether the program is their first or second choice. However, they noted that SNBT is highly competitive, which helps maintain the quality of admitted students.

Admissions are conducted annually, with studies commencing in August. According to the self-assessment report, the intake capacity is set at 140 students for Food Technology and 80 students for Agro-Industrial Technology. The university also provided the following admission statistics:

Table 1: Number of applications and accepted students BFT and BAIT
Source: Appendix Self-Assessment Report, UNPAD.

Admission Pathway	2023						2024					
	Applicants		Admitted		Registration		Applicants		Admitted		Registrations	
	BFT	BAIT	BFT	BAIT	BFT	BAIT	BFT	BAIT	BFT	BAIT	BFT	BAIT
SNBP	747	329	31	18	30	18	957	330	64	36	64	36
SNBT	1037	381	63	36	59	31	1402	593	48	36	47	35
Local Admission	1053	178	91	54	32	15	2258	653	77	31	29	8
Total	**2837**	**888**	**185**	**108**	**121**	**64**	**4617**	**1576**	**189**	**103**	**140**	**79**

The experts have the general impression that the admission requirements support the Bachelor's students in achieving the intended learning outcomes.

Master's programs

As detailed in the self-assessment report, there are several pathways for admitting Master's program students. These include 1) Regular student candidate selection system, 2) Fast-Track from Bachelor's to Master's program, 3) Outstanding alumni track, 4) UNPAD scholarship, and 5) Admission through government scholarship programs.

Prospective students applying through the regular selection system must meet several requirements. These include holding a Bachelor's degree from an accredited university and

providing certificates for the Academic Ability Test (TKA) and an English Proficiency Test (TKBI). **During the on-site visit, the experts discussed with the program coordinators the requirement of holding a Bachelor's degree for admission to the Master's programs. Specifically, they sought clarification on whether applicants with any Bachelor's degree are eligible or if only those with degrees related to food or agro-industrial technology can apply. The program coordinators explained that there are specific requirements regarding the applicants' academic backgrounds. However, this information needs to be clearly articulated in the admission criteria, as it currently appears unclear based on the provided documentation.**

Admission is possible every semester, with studies starting in August and February. The university has provided the following application, admission and registration numbers as part of its self-assessment report:

Table 2: Number of applications and accepted students MAT and MAIT
Source: Appendix Self-assessment report, UNPAD.

Admission Pathway	2023						2024					
	Applicants		Admitted		Registration		Applicants		Admitted		Registrations	
	MAT	MAIT	MAT	MAIT	MAT	MAIT	MAT	MAIT	MAT	MAIT	MAT	MAIT
Local Admission	18	4	14	4	12	1	23	4	23	3	21	3

Another topic discussed with the program coordinators was the declining number of Master's students, particularly in the Master of Agriculture-Industrial Technology (MAIT). The coordinators acknowledged this issue and emphasised the need to develop strategies for more effective promotion among prospective students.

Apart from this, the experts are under the impression that admission for incoming Master's students shows positive outcomes. The selection process appears to have effectively identified candidates well-suited for the programs offered.

The tuition fee for the Bachelor's programs varies from 500,000 to 7,500,000 IDR (28 to 445 Euro) per semester depending on the parent's income. For the Master's programs, the tuition fee is 8,500,000 (500 Euro) per semester.

All in all, the experts conclude that prospective students are adequately informed about the requirements and steps needed to apply for admission to the programs under review. This information is accessible through a dedicated UNPAD admissions website. **However, the experts note that the admission details for the Master's programs require further supplementation to ensure transparency.**

The corresponding rules and regulations are binding and transparent and are based on decrees by the Ministry of Research, Technology and Higher Education and on the university's written regulations.

Criterion 1.5 Workload and Credits

Evidence:

- Self-assessment report
- Curriculum Documents, all programs under review
- Credit conversion tables, all programs under review
- Academic Guidelines, all programs under review
- Rector's decree No 46/2016 regarding the Implementation of Education at UNPAD
- Discussions during the audit.

Preliminary assessment and analysis of the experts:

Study programs at UNPAD must follow the Indonesian Credit System (SKS) regulations. Each credit point is distributed between guided and independent learning activities, as well as between face-to-face activities, laboratory activities/practicum, and project and field practice.

According to the National Standards for Higher Education (SNPT), the learning activities are lectures, responses and tutorials, seminars, and practicum. One credit of lecture and practicum is equivalent to 170 minutes per week per semester, with 50 minutes for a face-to-face activity, 60 minutes for structured assignments, and 60 minutes for individual study. According to the self-assessment report, 1 Indonesian credit is equivalent to 1.6 ECTS.

Bachelor's programs

The Bachelor Food Technology curriculum requires a minimum study load of 145 credits (232 ECTS). Students must complete 133 credits of compulsory courses (212.8 ETCs) and 12 credits of elective courses (19.2 ECTS).

Whereas, the Bachelor Agro-Industrial Technology curriculum requires a minimum study load of 144 credits (230.4 ECTS). Students must complete 128 credits of compulsory courses (204.8 ETCs) and 16 credits of elective courses (25.6 ECTS).

The total study load includes 6 credits allocated to the Bachelor's thesis and scientific publication (9.6 ECTS). During the sixth and seventh semesters, the Bachelor's programs offer students the option to participate in activities in the context of the MBKM Program. These activities have their own credit assessment and conversion procedure, with a maximum credit load of 20 credits every semester.

Regarding the MBKM program, the experts sought to gain a clearer understanding of how MBKM credits are converted into credits within the curriculum. Representatives from the

Rector's office explained that there are two types of credit conversions for students participating in MBKM. Not all MBKM credits are directly transferred as curricular credits. Instead, some activities are converted into open-structure courses that focus on recognizing the development of soft skills, such as leadership and communication.

The semester GPA determines the maximum number of credits students can take the following semester, with a maximum of 24 SKS if the GPA range is 3.00-4.00. Bachelor's students are required to attend their classes in accordance with established regulations. They must be present for at least 80% of theoretical courses and 100% of practical courses. If a student's attendance falls below these percentages, they are not allowed to attend the final examination. The maximum time to complete the Bachelor's program is 14 semesters.

During the discussion on workload and credits, the experts also focused on module N10C203121 "English Language (TOEFL)" which is included in the Bachelor Agro-Industrial Technology's Module Handbook. They specifically inquired with the program coordinators about the notation of 0 ECTS credits for this module. The coordinators explained that students are required to obtain an official TOEFL certificate with a minimum score of 450 as a main graduation requirement. While the experts support the requirement of English proficiency for graduation, they believe the program needs to either assign credit to this module or remove it from the Module Handbook altogether.

Master's programs

The Master's curriculum for Agro-Industrial Technology requires a minimum study load of 36 credits (57.6 ECTS). This includes 19 credits (30.4 ECTS) of required courses, 11 credits (17.6 ECTS) of elective courses, and 6 credits (9.6 ECTS) for the thesis.

Similarly, the Master's curriculum for Agricultural-Industrial Technology also requires a minimum study load of 36 credits (57.6 ECTS). Students must complete 22 credits (35.2 ECTS) of required courses, 8 credits (12.8 ECTS) of elective courses, and 6 credits (9.6 ECTS) for the thesis.

Both Master's programs are designed to be completed within the standard study period of 2 years, with a maximum allowable duration of 4 years.

All programs

During the discussions, concerns were raised about the uneven distribution of workload across individual semesters. For example, the credit points distribution for the BAIT program varies from 36.8 ECTS in one semester to 19.2 ECTS in another, while in the MAT program, there are only 9.6 credits allocated in the third semester. This issue is also present in the other programs. As noted under Criterion 1.3, the experts inquired about

the lack of allocated workload during the eighth semester for Bachelor's programs and the fourth semester for Master's programs, respectively. The program coordinators explained that they believe this design will allow students to complete their studies earlier. However, the assessment team is under the impression that the curriculum should be adapted in a way that the workload is evenly distributed.

In response to questions about the workload, the students did not highlight any significant imbalance or excessive workload during the audit. They reported having sufficient time to participate in other activities outside their study.

In its self-assessment report, the university provided key performance indicator data for the programs under review, including metrics such as the average study period. Inquired by the experts about the absence of dropouts, the program coordinators clarified that the university uses the concept of 'resignations'. These include students who transfer to other study programs, often after the third semester, as their program may have been a second choice while aiming for their preferred program. Additionally, some students face challenges in continuing their studies due to academic, financial, or personal difficulties. For instance, students with a GPA below 2.4 are required to resign.

In general, the data show that most students complete the study programs, although exceeding the expected duration (more in Criterion 2).

The experts confirm that regulations for the transfer of credits obtained outside of UNPAD exist (Rector's decree No 46/2016 regarding the Implementation of Education at UNPAD). The experts also attest that the program's module handbooks distinguish between credits given for various forms of supervised studies and self-study time.

All in all, the experts confirm that a credit system centred on student workload is in place, that this workload encompasses both contact hours and self-study time and that credits are granted in accordance with the associated workload.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-assessment report
- Educational Standards UNPAD
- Academic Guidelines, all programs under review
- Learning in Virtual Environment UNPAD (LIVE UNPAD): https://reguler.live.unpad.ac.id/
- Discussions during the audit.

Preliminary assessment and analysis of the experts:

In the self-assessment report, UNPAD records that appropriate didactical instruments and methods are implemented for the four programs under review. The variations in learning methods and tools are adjusted to the level of knowledge, skills, and competences set in each module. Learning methods are listed in each course's Semester Learning Plan (*RPS*), which serves as a roadmap for both lecturers and students during the learning process. The UNPAD e-learning platform facilitates the distribution of educational materials, and assignments, and supports blended learning.

FTIP has adopted Outcome Based Education (OBE) since 2022 with teaching methods that prioritize the student's involvement in the learning process. The MBKM program has been integrated into the Bachelor's curricula to give students more flexibility in achieving their goals. With MBKM, students can learn from different institutions and communities. Furthermore, the availability of laboratory facilities, including education, research, advanced labs, and field labs, enables students to conduct independent research.

During the audit, members of the teaching staff were asked to explain their experiences with OBE. They acknowledged that implementing OBE presented challenges, as it required a shift from focusing solely on outputs to emphasising broader outcomes, including competencies in knowledge, skills, and attitudes. They noted that students now demonstrate improved critical thinking abilities and are better prepared for employment aligned with their expertise.

Teaching staff also mentioned that UNPAD has developed the necessary tools and systems to facilitate this transition. Collaboration with industry partners ensures that courses are conducted not only within the faculty but also in real-world industrial settings. Additionally, the incorporation of community-based problem-solving enables students to address societal issues effectively. These measures are designed to ensure that OBE is integrated into the study programs.

According to the self-assessment report, the diverse array of teaching methods employed within each program, include but are not limited to lectures, student-centred learning, problem-based learning, project-based learning, practical work, field observation, seminars, presentations, group discussions, and paper writing. The module handbooks state the teaching methods applied in each learning unit, providing instructions for laboratory work, learning resources, and the learning plan and assessment. The medium of instruction is predominantly Bahasa Indonesia, although certain courses incorporate English and Bahasa Indonesia.

The four programs have courses on research methodology, which guide students in developing, writing, and publishing papers and theses. In the discussions with students, the experts learn that they are generally satisfied with the quality of teaching and learning in the programs under review.

In summary, the expert group considers the range of teaching methods and instruments suitable to support the students in achieving the intended learning outcomes. They confirm the study concepts of all programs under scrutiny comprise a variety of teaching and learning forms as well as practical parts adapted to the respective subject culture. Finally, they attest that the imparting of academic research skills is sufficiently ensured.

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

The experts thank UNPAD for the provided statements and additional documentation concerning criterion 1.

(ASIIN 1.1) Rewording of PLO1 – Both bachelor's programs

The experts acknowledge that UNPAD does not require religious preferences as part of the entry requirements for Bachelor programs, whether for local or international students. They also appreciate the plans to revise PLO1 to ensure it is inclusive and attainable for incoming international students. As no actions have been implemented yet—this will take place during the annual curriculum evaluation meeting—the experts maintain their recommendation.

***(ASIIN 1.1) Unified presentation and documentation standards* – All programs**

The experts note that UNPAD has utilized the standard reference for PLO documentation for each program, as required by SIAT CP. However, they suggest that additional efforts should be made to harmonize the presentation and documentation of program objectives and learning outcomes. This would enhance transparency between the programs.

(ASIIN 1.1) Distinctions in graduate qualification profile – Both Master's programs

The experts appreciate the efforts to make distinctions between the graduate profiles of the Master's programs during the annual curriculum evaluation. However, since this is a future action, the experts continue to uphold the recommendation in this regard.

(ASIIN 1.1) Enhancing students' soft skills – All programs

The experts acknowledge the various initiatives aimed at enhancing students' soft skills, such as organization activities like the Student Parliament Unit and Student Union, as well as project-based courses that promote public speaking and problem-solving. Additionally, professionals are invited to share their knowledge and provide feedback on the curriculum.

However, recognizing that this remains an ongoing challenge, they recommend pursuing further improvements in this area.

(ASIIN 1.1) Strengthened collaboration with external stakeholders – All programs

The experts appreciate that the faculty has established an academic environment that promotes student engagement with alumni and industry professionals through various activities, including alumni meetings, internships, expert lectures, research projects, and partnerships like the Double Degree program with Chiba University in Japan. However, the experts suggest that ongoing support and efforts should be reinforced in this area.

(ASIIN 1.2) Reconsidering study program names – Both Master's programs

The experts are pleased that the faculty is looking into proposing a name change for both master's programs (MAT and MAIT) to the Rector, along with updating the curriculum and Graduate profiles. Given that this change is expected to happen in the near future, they emphasize the importance of ensuring that the names of the master's programs accurately reflect the expected specific learning outcomes.

(ASIIN 1.3) Reevaluating workload distribution across the curriculum – All programs

Addressed under criterion 1.5

(ASIIN 1.3) More visibility of relevant aspects in the curriculum – All programs

The experts appreciate that their recommendations on specific aspects to be included in the curriculum will be taken into account and further discussed at the annual curriculum evaluation meeting. However, since no actions have been taken yet, the experts continue to stand by their recommendations in this regard.

(ASIIN 1.3) Enhancing English skills and course offerings – All programs

The experts take note of the various activities implemented to enhance mobility opportunities for both students and staff while improving English language skills. These activities include the IISMA (International Mobility Program for Students), Padjadjaran Academic Recharging for Staff, English courses for staff, a Virtual Mobility Program, adjunct professor positions, travel awards, and modules taught entirely in English. However, the experts recognize that developing English skills and promoting international engagement remain ongoing challenges. Therefore, they reaffirm their recommendation for further enhancements in this area.

(ASIIN 1.4) Transparency in admission criteria - Both Master's programs

The experts acknowledge that the admission requirements are based on the regulations governing postgraduate education at UNPAD, which have recently been amended. They also note that information about the admission requirements is available on a dedicated website (https://smup.unpad.ac.id/magister/). However, it appears that this information is not offered in English. Additionally, the program websites

(https://ftip.unpad.ac.id/en/agricultural-industry-technology-ait/#Admission; https://ftip.unpad.ac.id/en/m-at-about/#Admission) provide incorrect details regarding the admission requirements for prospective Master's students. The experts request the faculty to ensure that program-specific admission requirements are clearly published on the program websites to increase transparency and completeness of the available information to the stakeholders.

(ASIIN 1.5) Module N10C203121 "English Language (TOEFL) - Bachelor Agro-Industrial Technology

The experts are aware that the English Language Course (N10C203121) is included in the curriculum with 0 credits, and that completion of this course can be achieved by submitting proof of TOEFL, IELTS, or other equivalent certificates. While the experts reaffirm their support for the English proficiency requirement for graduation, they emphasize that the module handbook should include credited teaching and learning units. Therefore, they require that the program either assigns credits to this course or remove it from the module handbook altogether.

(ASIIN 1.5) Reevaluating workload distribution across the curriculum – All programs

The experts acknowledge the explanation provided by the university. However, since no actions are taken to address the uneven distribution of the workload, they maintain their recommendation. They also note the university's clarification regarding the difference between credits for lecture courses and credits for research activities. Nevertheless, since this distinction is not reflected in the curriculum, they request the university to verify the students' total workload and adjust the awarded ECTS points accordingly.

The experts consider criterion 1 to be partially fulfilled

2. Exams: System, Concept and Organization

Criterion 2 Exams: System, concept and organization

Evidence:

- Self-assessment report
- Module descriptions, all programs under review
- Academic Guidelines, all programs under review
- Guidelines for the Implementation of the Final Project of the Faculty of Agricultural Industrial Technology
- UNPAD Academic Calendar 2023/2024: https://www.unpad.ac.id/pengumuman/kalender-kegiatan-akademik-unpad-tahun-akademik-2023-2024/

- Examination-related procedures and regulations
- Samples of student's work (projects, exams and thesis)
- Discussions during the audit.

Preliminary assessment and analysis of the experts:

i. Forms of Examinations and Exam Schedule

Based on the self-assessment report, formative and summative assessments are used to evaluate students' academic performance. These assessments gauge student's learning outcomes, including their knowledge, attitude and skills, based on a predefined grading scale reference. The assessment methods encompass assignments on specific topics given by lecturers, quizzes to assess readiness and/or comprehension of specific learning outcomes, working reports submitted after completing a series of activities or practical work, seminars where students present their learning on specific topics and engage in discussions with peers, soft skills evaluations, practical exams, and mid-term and end-term examinations.

The Semester Learning Plan (*RPS*) specifies the course's intended learning outcomes (CLOs) and identifies the types of examinations used to assess achievement. This information is also available in the module description. The assessment procedure is communicated to students during the explanation of the RPS on the first day of class.

Based on the academic calendar, 14 weeks of the semester are dedicated to lectures, and there are two exam periods. The first half of the module is evaluated through the midterm exam, conducted in week 8th/9th, while the final half is evaluated on the final exam at the end of the semester.

All in all, the experts confirm the programs use various forms of examination, which are competence-oriented. Overall, these examinations are suitable for verifying the achievement of the intended learning outcomes as specified in the respective module descriptions. The examination form is determined individually for each course based on the main content and published in the respective module description.

ii. Grading and Graduation Requirements

The exam grade is presented in an absolute numeric value with a range of 0-100. The final grade of the course is given as a quality letter and quality score as follows: A (>=80); B (68-< 80); C (56-< 68); D (45-< 56); and E (<45, not passed). Each grade will be converted into a quality score: 4.00, 3.00, 2.00, 1.00, and 0.00, respectively.

Students with failing grades must take a remedial exam or course. Students with grades C, D, or E may also consider retaking the course in the next semester. The score used for students who take the remedial exam is considered the last final score. The conditions for re-sit exams and accommodations for students with disabilities are specified in the academic regulations.

Students are required to attend a minimum of 80% of lectures and 100% of practical sessions to be allowed to take the final examination. However, if students face exceptional circumstances, such as emergencies, hospitalization, or bereavement, which prevents them from sitting for midterms or final exams, they may be eligible to take a follow-up exam. The lecturer or faculty will determine the time for the makeup exam, and students must provide suitable evidence to support their request.

Final grades are available on students' academic accounts no later than 2 weeks after the last exams. When students have objections to their exam results, they have the chance to appeal directly to the concerned lecturer within two days after the time of announcement of the grade. The students confirmed that an appeal mechanism exists if they perceive their grades as unfair.

In order to graduate from the programs under review, students must have:

1. BFT and BAIT: completed the required 145/144 credits, a minimum GPA of 2.0 without any E grades, and a D mark not exceeding 20% of the total credits taken.
2. **MAT and MAIT: graduation requirements must be clearly outlined in the documentation, as this information is currently missing.**

UNPAD has a policy on academic integrity in all student activity, including examinations and assignments. According to FTIP academic guidelines, if students engage in plagiarism, they will face sanctions that correspond to the severity of their actions. To help prevent plagiarism, the university offers teachers and students access to anti-plagiarism software, which can be used to check for similarities in written work.

iii. Thesis

Bachelor's programs

In accordance with academic guidelines, Bachelor's students are required to complete a research project as their final assignment before graduation. This project involves creating and presenting a research proposal, conducting research, analysing and interpreting data, and writing a thesis. After finishing the research and thesis writing, students must defend

their thesis in front of a panel of examiners, which includes their supervisor, co-supervisors and nominated lecturers related to the field of science of the research topic.

The assessment rubric evaluates writing skills, presentation, scientific comprehension, thesis understanding, and related knowledge. Students who fail to meet the minimum standard are given one more chance. To earn a cum laude distinction, students are required to have submitted a research article or have published it through national or international seminars.

Master's programs

To complete the thesis, students are directed to make a research plan from semester 1 and present it in the research proposal seminar. Research can be carried out in the field and/or campus laboratories depending on the research topic. For the thesis exam, students must have scientific publications as a prerequisite and can take the exam through seminars or pitching with agro-industry practitioners.

All programs

During the audit, the experts examined a selection of final theses and determined that they were of an appropriate academic level. To better understand the process, the experts asked the students how they choose topics for their final projects. The students explained that the study programs allow them to select a topic that aligns with their interests and passions. Elective courses play a key role in guiding students through the process of selecting topics for their final projects. Based on their chosen topics, students also have the opportunity to select their thesis supervisors. Lecturers sometimes offer research projects that students can join, using these as the basis for their final projects.

The involvement of students in the research grant was confirmed by the teaching staff. In their funding, they involve students to do their research and collaborate with them. According to the policy at UNPAD, it is mandatory to involve students. Every scheme is mandatory to involve 2 to 3 students.

To facilitate supervisor selection, the teaching staff explained that a questionnaire is distributed, allowing students to indicate their first and second choices for a supervisor. The Bachelor's programs organize workshops at the beginning of the 3rd semester. These workshops provide information about the available laboratories, faculty members, and guidance on how students can align their research interests with the resources and expertise available. Additionally, lecturers are invited to present their research projects, helping students gain insight into potential supervisors and their areas of focus. Each faculty member can supervise a maximum of six students.

During the discussions, the experts also learned that some students face challenges completing their thesis, including frequent changes to their topics, which can lead to delays and difficulties in finalising their work. This issue is reflected in Criterion 1.5, where it was noted that many students do not complete their programs within the expected timeframe. According to the self-assessment report, the average time required to complete studies exceeds the standard duration:

Bachelor Food Technology: 4 years, 7 months

Bachelor Agro-Industrial Technology: 4 years, 6 months

Master Agro-Industrial Technology: 2 years, 4 months

Master Agriculture-Industrial Technology: 2 years, 8 months

To address this, the experts strongly believe that the faculty must actively monitor the reasons behind students exceeding the foreseen time for the final thesis. They also believe that the faculty needs to implement measures to support timely thesis completion within the program's prescribed duration.

Apart from this, the expert group finds that, overall, appropriate university-wide and FTIP-specific rules and procedures govern the examination systems. These rules and procedures are adequately communicated and transparently published. The students in the interviews confirmed that they were aware of all necessary information regarding examination schedules, forms, and grading rules. They are reportedly given sufficient time to prepare for the exams.

Lecturers in the discussion report that a variety of exam forms are used to check the attainment of the respective learning outcomes, including a mix of oral and written exams. The experts acknowledge that forms and assessment rubrics to assess the quality of the student's work are available for the programs.

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

The experts thank UNPAD for the provided statements and additional documentation concerning criterion 2.

(ASIIN 2) Transparency in graduation requirements – Both Master's programs

The experts appreciate the additional information regarding the graduation requirements for Master's students. To graduate, students must successfully complete all courses as outlined in the curriculum and pass the Master's thesis defense without any objections from the thesis committee.

(ASIIN 2) Monitoring reasons for delays in thesis completion – All programs

The experts appreciate that the faculty agrees with their assessment regarding a bottleneck affecting students who are unable to complete their thesis within the expected timeframe. They note that the faculty has identified limited laboratory resources as the primary reason for these delays. While the experts value these insights, they expect a structured monitoring process based on the student experience.

(ASIIN 2) Addressing challenges in completing the final thesis – All programs

The experts take note of the faculty's final assignment guideline allowing students to complete their thesis based on laboratory activities but also through options such as a review journal, capstone project, or industrial problem-solving. However, given that the outcomes of these initiatives are anticipated in the near future, the experts maintain their initial requirement in this regard.

The experts consider criterion 2 to be mostly fulfilled

3. Resources

Criterion 3.1 HR Resources, Staff Development and Student Support

Evidence:

- Self-assessment report
- Staff handbooks and lecturer profiles, all programs under review
- UNPAD recruitment website: https://recruitment.unpad.ac.id/
- Discussions during the audit

Preliminary assessment and analysis of the experts:

i. Staff

The programs are facilitated by a team comprising teaching and educational support staff. Academic positions within the university encompass professors, associate professors, assistant professors, and lecturers. The specific responsibilities and duties in teaching, research, and supervision vary according to the academic position.

Based on the information provided on lecturer qualification, the Bachelor Food Technology study program has a total of 28 teaching staff members: 2 full professors (7%), 7 associate professors (25%), 16 assistant professors (57%), and 3 entry-level lecturers (11%). 89% hold a doctoral qualification and 11% a master's degree.

The Bachelor Agro-Industrial Technology study program has 15 teaching staff members: 1 full professor (7%), 3 associate professors (20%), 10 assistant professors (66%) and 1 lecturer (7%). 53% hold a doctoral and 47% a master's degree.

The university also provides information on the academic staff for the Mater Agro-Industrial Technology and Master Agriculture-Industrial Technology study programs, which consist of 17 and 23 teaching staff members, respectively. All hold a doctoral degree qualification.

The Indonesian government has set specific staff-student ratios for universities, which are outlined in the Ministry of Education, Culture, Research and Higher Education's regulation. The ideal ratio of staff to active students is 1:20 - 1:30. Currently, the BFT has a ratio of 1:18, while the BAIT has a ratio of 1:15. The ratio at the MAT stands at 1:2, whereas at the MAIT, it is 1:1. The expert team confirms that the ratio of lecturers to students for the study programs is appropriate to fulfil their current needs.

When asked how lecturers are appointed to teach subjects and the criteria involved, representatives from the Rector's Office explained during the audit that the academic staff at UNPAD primarily consists of permanent full-time civil servants appointed by the Ministry of Education and Culture. However, to address needs related to adequacy, workload, and faculty development, the university may also appoint individuals as non-civil servant permanent staff. Additionally, opportunities exist for foreign lecturers to join as adjunct professors or through the High-Quality Talent program. Experts from the industry are regularly invited as guest lecturers, with some modules incorporating 2–3 industrial professionals who collaborate with university staff to deliver the course content.

The recruitment process is centralised at the university level. Minimum academic requirements include a Doctoral degree for lecturer positions and a Bachelor's degree for administrative staff roles. The expert panel appreciates the university's approach to attracting new academic staff.

Regarding promotion, lecturers who are public servants must follow the system regulated by the government. The teaching staff's promotion to a higher academic position is based on several factors, such as achievement in teaching, research, and community service activities (*Tri Dharma Perguruan Tinggi*). In order to be promoted to the position of a full professor, the applicant must hold a doctoral degree and demonstrate robust scientific production.

ii. Job Conditions and Performance Review of Staff

According to the university's relevant policy, lecturers are required to sign a Lecturer Individual Performance Contract (KKID) at the beginning of each semester, which states work goals and performance achievement in the so-called *Tri Dharma* (teaching, research and community service). As discussed with the teaching staff, the standard workload is 12 to 16 credits every semester.

UNPAD has established evaluation methods based on staff performance targets in the three *Tri Dharma* categories. Every semester, the university staff are required to report on the Realization of Individual Staff Performance (RKID) via their account on the staff portal (https://staff.unpad.ac.id).

Additionally, the department's quality assurance team evaluates the staff every semester regarding subject-specific qualifications and didactics. These evaluations focus on the alignment of learning outcomes and course objectives with the examination methods. As outlined under Criterion 5, compulsory course evaluations are submitted by the students for each course.

In terms of research, teaching staff conduct their research projects collaboratively in research groups. Most research projects are supported by grants from the university, the government, private companies, and international institutions. The students are reportedly involved in research activities in order to support the completion of their final projects. Some researchers are also engaged in collaboration with other domestic and overseas universities as well as research centres and other institutions specifically for industry-related research. Staff is requested to disseminate research results at national and international conferences and publish them in reputable national and international journals.

When asked, during the audit, about the impact of administrative tasks on their workload, the teaching staff explained to the experts that they are required to support administrative work. While they acknowledged that the administrative burden is significant, they noted that administrative staff are available to assist. Regarding overall workload, they emphasised that it largely depends on how effectively they manage their time while balancing the *Tri Dharma* responsibilities.

The teaching staff further elaborated that their responsibilities are structured around the *Tri Dharma* activities. The workload distribution among these activities varies depending on the type of lecturer and is directly linked to the university's incentive system. They explained that incentives are performance-based, with additional rewards specifically for

staff who achieve strong research outputs, such as high-quality publications. The experts appreciate that there is a performance-based incentive system currently in place.

iii. Staff Development

The formal recognition of the quality of academic staff within the study programs is achieved through the 'Certification of Lecturers', which is a process overseen by the government in accordance with Regulation No. 37/2009 on Lecturers.

To support this process, UNPAD offers a range of training opportunities. The annual programs offered comprise research-oriented training, as well as programs designed to enhance pedagogic skills, such as Basic Technical Instructional Skills Training (PEKERTI) for junior lecturers and the Applied Approach (AA). Additionally, academic staff can improve their skills through degree and non-degree training programs from Indonesian universities and abroad.

During the audit, members of the teaching staff outlined the development opportunities available to them. Junior lecturers are required to attend mandatory didactic skills courses to ensure they are equipped with standardised teaching methodologies. These courses provide essential training, such as creating a semester learning plan and developing learning outcomes.

For senior lecturers, opportunities include the possibility of taking sabbaticals of two to three months at partner universities, such as those in the United States. Currently, 3–4 staff members participate in such programs annually. Additionally, there are various other opportunities, including attending conferences and building collaborations with international partners. Lecturers must apply for funding, which is made available at the beginning of the year. As part of these programs, participants are expected to produce outputs such as international journal articles indexed by Scopus.

In their appreciation of this criterion, the experts come to the following conclusions:

In the experts' opinion, the teaching staff's composition, scientific orientation and qualification are suitable for successfully implementing and sustaining the programs under review.

The teaching staff seemed satisfied with the working conditions, and professional development opportunities and exhibited a strong commitment to their students.

Criterion 3.2 Funds and equipment

Evidence:

- Self-assessment report
- University website: https://www.unpad.ac.id/
- List of cooperation agreements, all programs under review
- Visitation of participating institutes and laboratories at the Jatinangor campus
- Discussions during the audit.

Preliminary assessment and analysis of the experts:

i. Funds

According to the self-assessment report, the Faculty of Agro-Industrial Technology secures funding from two primary sources: the Indonesian government, which provides allocations for salaries and general assistance, and other sources such as student tuition fees, research grants, *Tri Dharma* collaborations, and income from business units.

During the discussion, representatives from the Rector's Office provided further details on the distribution of funding. Approximately 30% of the budget is sourced from government allocations, 20% from industry contributions, and the remaining portion is funded through student tuition fees and other activities. Basic funding for operational activities, including teaching, laboratory work, research, community service, and other routine tasks, is secured through these diverse funding sources.

ii. Collaborations

As part of its self-assessment report, a list of local and international partners was presented. The faculty collaborates with universities, government agencies, industries, non-governmental organisations, and businesses through the implementation of cooperation agreements to support the implementation of the curriculum and *Tri Dharma* activities. One notable collaboration is with the Biomass and Bioproduct Research Center, which provides FTIP staff and students access to its facilities.

The collaborators attending the discussion during the on-site visit expressed satisfaction with their partnership with the university. This was further demonstrated by their willingness to participate in the accreditation meeting.

iii. Infrastructure and technical equipment

During the audit, the expert group visited the listed facilities in order to evaluate whether the four programs under review are committed to supporting both practical work and

research, with well-equipped facilities designed for extensive laboratory and field activities. After touring the shared facilities, the expert group divided into two teams to visit program-specific facilities due to time constraints:

• Central Library • Central labs • Hospital (external observation only) • Sports facilities (external observation only) • Psychological clinic (external observation only)	
Group 1	Group 2
Labs at the Faculty of Agro-Industrial Technology for BFT and MAT study programs	Labs at the Faculty of Agro-Industrial Technology for BAIT and MAIT study programs

In their appreciation of the quality of infrastructure and equipment, the experts come to the following conclusions:

The central library offers services to UNPAD faculty members, administrative staff, and students. Operating hours are from 8:00 am to 4:00 pm on weekdays, with continuous access to online resources. The services encompass lending physical and e-books, as well as access to diverse scientific databases. During the audit, students expressed general satisfaction with the library's collection available for consultation. They highlighted their access to journals and their ability to access library resources for free through their university email accounts.

The central UNPAD infrastructure includes analytical equipment in the central laboratories, which is partly state-of-the-art and well-maintained. Additionally, the laboratory and pilot equipment, while standard and covering only a limited range of technologies, effectively complement the capacities and capabilities of FTIP.

Regarding the lab infrastructure and equipment for the Food Technology part at FTIP (BFT and MAT), it is basic and old, yet it remains functional and supports the teaching requirements of the programs. However, laboratory capacities are limited, and expansion may become necessary if student numbers continue to rise. This is particularly relevant given the increase in incoming students in 2024 (140 in the Bachelor Food Technology). The existing laboratory instruments, their quantity, condition, and the arrangement of student groups for laboratory activities should be carefully evaluated to ensure service satisfaction levels are maintained.

While the equipment for teaching and research is generally basic and mostly old, it is overall functional and acceptable for teaching. Proper maintenance and organisation offer room

for improvement. Analytical equipment is partially outdated, with only a few state-of-the-art instruments available, but it still adequately supports teaching activities. Additionally, the pilot-scale equipment used in the teaching factory, though basic, is functional and reflects a well-conceived concept.

Positively noted is that the laboratories have successfully implemented Good Laboratory Practices (GLP), including the use of standard operating procedures (SOPs), instrument logbooks, and other essential protocols, which are crucial for both maintaining quality standards and supporting education.

Regarding the laboratory infrastructure and equipment for BAIT and MAIT, the experts share a similar assessment. While the facilities are equipped with basic and older instruments, they remain functional and adequately support teaching activities.

Overall, the experts believe that the faculty should put more effort into the maintenance and modernisation of laboratory facilities and equipment. Given the old condition of many tools and instruments, it is recommended that the faculty implement a formal maintenance schedule for lab equipment. This schedule would help ensure that proper care and upkeep are consistently prioritised.

Furthermore, according to the Rector's Regulation, laboratories are classified into three categories: (i) educational (basic) laboratories, (ii) research laboratories, and (iii) integrated laboratories. Proper consideration should be given to laboratory management, particularly regarding the utilisation and scheduling of these facilities for both undergraduate and graduate students.

iv. Supporting resources for staff

Lecturers can apply for staff exchange abroad involving research and publication, being a guest lecturer or reviewer. Lecturers usually go to partner universities in countries such as Japan, South Korea, Italy, Turkey, and Thailand, among others. In terms of research, funding is obtainable through various sources, including the university, government, and national and international institutions.

The university provides support for joint publications and dissemination of research findings through the Directorate of Research and Community Services.

v. Supporting resources for students

As mentioned previously, UNPAD utilizes a learning management system called “LIVE UNPAD,” providing students access to lectures, course materials, and interactions with lecturers. Additionally, UNPAD employs an integrated academic information system called

"SIAT," which allows students to access all their academic information, including course contracts, schedules, scholarships, and academic performance. During the auditors' interactions with students on-site, the students expressed their satisfaction with these online platforms.

Every student is assigned to an academic advisor lecturer who is responsible for student activities from beginning to end. The academic advisors can monitor students' performance online through the academic portal SIAT. The students confirmed during the discussion with the expert group that they all have an academic advisor, that they meet regularly, and that they can always contact their advisor personally and ask for help or advice.

Besides the above, students can rely on an early introductory program at the start of their studies, as well as on several dedicated support units, such as the Library, Dental Hospital, Teaching Hospital, E-learning Center, Language Center and Career Development Center. Additionally, there are various events and developmental programs available for students to participate in outside of the classroom, including student organisations and clubs.

The experts noted a strong and trustful relationship between the students and the teaching staff; characterised by good communication. Enough resources are available to provide individual assistance, advice and support for all students. The support system helps students adjust to the university environment, achieve the intended learning outcomes and complete their studies successfully. The students are well-informed about the services available to them and identify themselves with the university.

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

The experts thank UNPAD for the provided statements and additional documentation concerning criterion 3.

(ASIIN 3.2) Maintenance and modernisation of laboratories – All programs

The experts appreciate the distinction in maintenance responsibilities for laboratory equipment, with advanced equipment supported by the university and basic equipment handled by the faculty. They note that modernization of lab facilities is pursued through submissions to the university and collaborations with various institutions, including KOICA, JICA, IsDB, and BI. Advanced analyses benefit from research partnerships with BRIN, as evidenced by the BAIT and BFT study programs. The experts support these initiatives and encourage ongoing efforts to enhance lab facility development through these cooperation schemes.

The experts consider criterion 3 to be mostly fulfilled

4. Transparency and documentation

Criterion 4.1 Module descriptions

Evidence:

- Self-assessment report
- University website: www.unpad.ac.id
- Faculty Agro-Industrial Technology website: https://ftip.unpad.ac.id/en/
- Module descriptions, all programs under review

Preliminary assessment and analysis of the experts:

After studying the module descriptions the experts confirm that they include information about the persons responsible for each module, the teaching methods and workload, the awarded credit points, the intended learning outcomes, the content, the applicability, the admission and examination requirements, and the forms of assessment and details explaining how the final grade is calculated. However, the experts identified several areas for improvement. **Specifically, they noted that some course learning outcomes (CLOs) are too general and not aligned with the specific content of the modules. Additionally, some descriptions either lack relevant or up-to-date literature or contain outdated references, and there is a lack of consistency in the module descriptions across the programs. Therefore, they request a revision and harmonization of the module descriptions to address these issues.**

These module description files are stored on a digital platform to which students have access. The module description is explained to class participants during the first week of lectures. **However, the experts noted that the module descriptions are not available on the respective program's websites, limiting access for other interested stakeholders. Therefore, they request that the faculty make the latest version of the module handbooks publicly accessible to ensure transparency and broader access for all relevant stakeholders.**

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Self-assessment report
- Sample Transcript of Records, all programs under review
- Sample Diploma/Degree Certificate, all programs under review
- Sample Diploma supplements, Bachelor's study programs only

Preliminary assessment and analysis of the experts:

According to the information provided in the self-assessment report, students from the programs under review receive after graduation a Diploma Certificate, accompanied by an Academic Transcript. The issuance of Diploma certificates is the university's authority and is signed by the Rector and Dean of the Faculty of Agro-Industrial Technology.

Together with the Diploma Certificate, the graduates receive a Transcript of Records. This document lists all the courses the graduate has completed, the achieved credits, grades, cumulative GPA, and the seminar and thesis title.

Along with these documents, the Bachelor's program graduates receive a Diploma Supplement, which is an official statement letter issued by the Faculty of Agro-Industrial Technology. It contains information about the degree program, including learning outcomes, acquired soft skills and student achievement in academic, co-curricular, extracurricular, or non-formal education.

The ASIIN experts were provided with samples of the relevant documentation and observed that a Diploma Supplement is not currently available for the Master's programs. The experts emphasize that, in line with international best practices, a Diploma Supplement needs to be issued to students upon graduation from these programs.

Criterion 4.3 Relevant rules

Evidence:

- Self-assessment report
- All relevant regulations as presented in the self-assessment report

Preliminary assessment and analysis of the experts:

The relevant rules and regulations were provided as appendices to the self-assessment report. Based on that and the information stated in the self-assessment report, the assessment team confirms that the rights and duties of both UNPAD and the students are defined clearly and bindingly.

In addition, the students confirmed during the audit that they receive relevant course information at the beginning of each semester.

However, the experts note that the rules and regulations provided seem to be inaccessible through the UNPAD or FTIP websites, thereby rendering them unavailable to relevant stakeholders. The experts highlight the importance of publishing relevant rules and regulations to ensure accessibility for all interested stakeholders.

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

The experts thank UNPAD for the provided statements and additional documentation concerning criterion 4.

(ASIIN 4.1) Revision and correction of module handbooks - All programs

The assessment team acknowledges the university's plan to revise and update the module handbooks. However, recognizing that actions have not yet been taken, the team emphasizes the need to thoroughly revise aspects, such as CLOs, suggested literature, and the lack of harmonization across the programs.

(ASIIN 4.1) Access to module descriptions - All programs

The experts commend the efforts to update the faculty website, including the module descriptions. They appreciate that these documents will be uploaded to the faculty website for stakeholders' access in the near future. However, the experts reiterate the requirement since no actions have been implemented so far.

(ASIIN 4.2) Diploma Supplement - Both Master's programs

The experts appreciate the university's decision to provide a Diploma Supplement for the master's programs and ensure it is delivered to students upon graduation. However, since this is a plan without a specific timeline, the experts reiterate the requirement.

(ASIIN 4.3) Transparency and accessibility of rules and regulations– All programs

The experts have reviewed the link provided by the University and confirmed that the relevant rules are accessible to all interested stakeholders. The assessment team believe that there is no need to issue a recommendation in this regard.

The experts consider criterion 4 to be not fulfilled

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-assessment report
- BAN-PT Accreditation Certificates, all programs under review
- Tracer study reports, 2021-2023, all programs under review
- Discussions during the audit.

Preliminary assessment and analysis of the experts:

UNPAD quality management system has been institutionalised in compliance with government regulations and undergoes regular evaluation and updating. The self-assessment report indicates that quality is overseen internally by dedicated quality assurance teams/units across the faculty (UPM) and university levels (SPM).

Based on the UNPAD Quality Policy, the study programs undergo internal screening processes employing student surveys, lecturer performance assessments and data obtained from external stakeholders through tracer studies and labour market observations.

According to the self-assessment report, students offer input on the teaching and learning process, lecturers' qualifications and competency, and teaching facilities through the Integrated Academic and Information System (SIAT). This is end-of-semester feedback that the students must submit in order to access their final grades. In case the satisfaction of the students with staff members is deficient, the matter will be discussed in the annual semester meeting of the department. The Head of the Study Program will contact the respective teacher, discuss the issue and propose solutions. The self-assessment report presents Student Satisfaction Survey data for 2022.

However, based on the discussions during the audit, it appeared that a summary of the results had not been provided to the students. The experts emphasize that student feedback is essential for the continuous improvement of the program, but it is equally important to inform students about the results and any potential improvements. A more transparent and collaborative approach could be instrumental in achieving the expected learning outcomes. Therefore, the experts ask the faculty to ensure that the results of the evaluation are informed to students to close the feedback loop.

In addition, annual tracer studies are conducted to gather information about graduates, utilising the university's Career Development Centre system (https://karier.unpad.ac.id/site/index). Lecturers and supporting staff also complete a questionnaire on SIAT at the start of each semester. The insights from these surveys are utilised to drive continuous improvement at both the departmental and program levels.

The existence of such evaluation instruments was confirmed by program coordinators, students and lecturers of the respective programs during the audit. Reportedly, the faculty also consistently holds meetings with students every semester to directly gather their feedback.

In the discussion with the experts, the alumni confirmed that tracer studies exist, and the industry representatives also confirmed that the university is open to receiving feedback about new developments and trends that could enhance the employability of its graduates.

Aside from such internal quality assurance mechanisms, recurring external quality assurance exercises at UNPAD and FTIP are related to the legal obligation to submit every degree program for national accreditation in addition to the compulsory institutional accreditation. The Bachelor Food Technology and Bachelor Agro-Industrial Technology have attained accreditation “A” and “Excellent”, respectively, by the National Accreditation Board for Higher Education (BAN-PT). The Master Agro-Industrial Technology has also achieved accreditation "Excellent" while the Master Agriculture-Industrial Technology has received “B” accreditation by the same national agency.

Overall, the expert panel holds a positive view of the quality assurance system currently in place. Quality management is a priority at the university, and several structures have been established to support it. The panel notes that UNPAD and the Faculty of Agro-Industrial Technology regularly conduct surveys to gather feedback from students, stakeholders, and staff. The program coordinators and lecturers are highly motivated and put a great deal of effort into the optimisation of the programs. There is a positive, open culture that embraces change and strives for continuous improvement.

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

The experts thank UNPAD for the provided statements and additional documentation concerning criterion 5.

(ASIIN 5) Feedback cycles – All programs

After reviewing the provided link, the experts noted that the document includes data on the satisfaction levels of educational staff, cooperation partners, and users. While they appreciate this information, they find that there are no results regarding feedback from students. Therefore, the expert panel maintains its requirement regarding the need to close the feedback loop.

The experts also request that the programs improve their reporting practices to ensure clarity about the process and the data collected (e.g., the document lacks information on the number of respondents, and the colours assigned to the categories do not correspond with the bars in the charts).

The experts consider criterion 5 to be partially fulfilled

D Additional Documents

Before preparing their final assessment, the panel asks 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:

None

E Comment of the Higher Education Institution (06.01.2025)

The institution provided the following additional documents:

No	Comments from ASIIN experts	Programme	Explanations from the University to clarify the ASIIN comments
1	During the audit, the experts focused particularly on the PLO of the Bachelor's programs related to attitude, specifically PLO1. In discussions with representatives from the Rector's Office, the experts inquired about how the programs are structured to ensure there is no discrimination based on religious background. The university representatives clarified that religious requirements do not apply to international students, citing examples such as the number of international students coming from Malaysia. However, as this distinction is not formally documented, the experts recommend rewording PLO1 to ensure it is inclusive and achievable for incoming international students. Furthermore, upon reviewing the self-assessment report, appendices, and program websites, the experts observed significant differences in how the four programs are presented and documented. They recommend improved	Rectorate/Preliminary assessment and analysis	Unpad doesn't consider religious preferences as the entry requirements either for local or international students. Rewording PLO1 to ensure it is inclusive and achievable for incoming international students will be done in the annual meeting of curriculum evaluation Unpad has applied the standard reference PLO document for each program as regulated in SIAT CP.

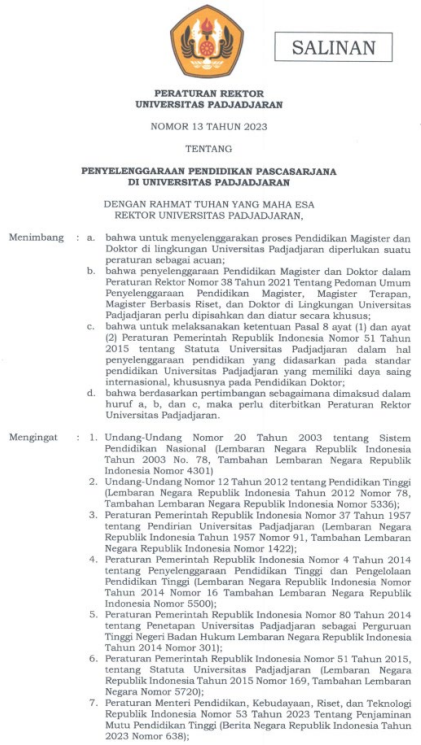
	coordination at the faculty level. For instance, the presentation and documentation of the program objectives and learning outcomes should be harmonized to improve transparency across the programs, emphasizing the depth and comprehensiveness of the PLOs. A suggested good practice would be to create a standardized reference document to be implemented by each department when preparing documents related to their department profiles. This is an example of how a controlled management system can be applied to streamline this process.		
2	Upon analysing the documented graduate qualification profiles for the Master's programs, the experts observe no significant differences between the two programs. As a result, they recommend that a clear differentiation be made between the profiles of the MAT and MAIT study programs (program specifications).	Faculty/Graduate Qualification Profiles --> Kaprodi Pasca	The curriculum structure and concentration of the two master's programs are different and the differences in PLO in the two master's programs result in different graduate profiles. The sharpening of the graduate profile will be carried out during the annual curriculum evaluation
3	Industry partners and alumni highlights the need for improvement in the development of general soft skills among graduates. Key areas identified include communication, presentation, problem-solving (with a focus on finding effective solutions) and creativity, due to the complexity and uniqueness of	Faculty/Graduate Qualification Profiles	To equip graduates with a proper soft skill, Faculty has given facilities for students to improve their soft skill through providing students organization activities such as Student Parlement Unit, Students Executive Board, Students Union, Rejanawana etc. Furthermore, some of the courses conducted project and student presentation which give the opportunity for students to improve

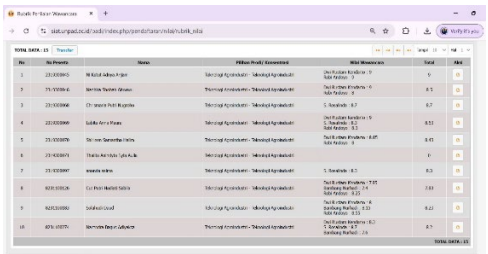
	the challenges present in the workplace. Additionally, collaboration and teamwork are vital for success in a professional environment. The experts recommend that the university intensify its efforts to address these gaps, ensuring that students are better equipped with these essential skills for their professional careers.		their public speaking and problem solving. Inviting professional experts / Praktisi mengajar also conducted at some courses in order to improve knowledge of the students concerning the recent issues in their related field of study and they also invited to address suggestion or idea to the existing curriculum
4	appreciating this positive outcome, the experts also believe there is an opportunity for the university and faculty leaders to enhance their collaboration with external stakeholders. They recommend fostering an academic atmosphere that actively encourages students to engage with alumni, industry professionals, and other relevant organizations, in order to enrich their learning experiences and career prospects	Faculty/Review LOs	Faculty has created academic atmosphere that actively encourages students to engage with alumni, industry professionals, and other relevant organizations through some activities such as : - Annual alumni meeting - Certified internship/Magang MSIB - Internship/Praktek Kerja Lapangan - Expert lecture / Praktisi mengajar - Adjunct Professor - Research Project - Research assistant (BRIN) - Double Degree with Chiba University Japan - Alumni engagement - Carrier Development through Student Assessment test
5	Regarding the Master's programs, the experts discussed the differences in competencies and learning outcomes with the program coordinators. They expressed concerns about whether the program names clearly convey distinctions that prospective students and employers can	Faculty/Name of the degree program	Faculty will propose a name change to the Rector of the University for both Master Programs (MAT and MAIT) as well as the update of the curriculum and Graduate profiles.

	identify. The program coordinators explained that the Master of Agro-Industrial Technology study program originated from the Agricultural Technology concentration within the Master of Agriculture study program at the Faculty of Agriculture, providing a historical rationale for its naming. While the experts acknowledge the program's historical roots, they emphasize that the current names of both Master's programs might lead to confusion among stakeholders. To address this, they strongly believe that the names of the Master's programs, along with the graduate profiles and curriculum structure, need to better reflect the specific learning outcomes expected from each program.		
6	The experts understand that some students may complete their Bachelor's and Master's programs one semester earlier, however, to ensure consistency, they believe that the curriculum should be adapted in a way that utilizes the full program length (eight/four semesters). The assessment team also examined the content of each program, noting that the curricula seem to not place enough emphasis on sustainability, environmental protection, and climate change issues. During the	All programs	Advice from the expert regarding specific aspect that should be covered in the curriculum will be consider and further discussed in the annual meeting for curriculum evaluation. However, emphasis on sustainability, environmental protection, and climate change issues have been delivered in some courses for bachelor and master program such as Matriculation Modules for bachelor conducted by using SDGs indicators as the references for assignment materials. Program learning outcome for the course Industrial Design (BAIT): Students being able to design products, processes, equipment and waste handling systems in the Agroindustry. Hygiene aspects are

	audit, when the experts inquired about these topics, the program coordinators explained that certain assessment subjects address climate change actions and that basic complementary modules include concepts of sustainability. While the experts acknowledge these efforts, they emphasize the importance of incorporating up-to-date content to better prepare students for the labour market and the contemporary challenges in the agro-technology sector. A key recommendation is for the university to consider the possibility of strengthening and increasing the visibility of these aspects. The experts also offer specific advice regarding the following: Bachelor Food Technology (BFT) • Module Plant Design should contain hygienic design. • QM-tools, methods of defect detection, defect analysis, continuous improvement, preventive maintenance and test equipment management are currently missing. Bachelor Agro-Industrial Technology (BAIT) • Module Factory Layout Design or Industrial Environment Management should contain hygienic		studied in the process and equipment design as the subtopic. Sanitation is studied in the waste handling system as the subtopic of this course. For Master Program (MAT), study on sustainability, environmental protection, and climate change issues have been included in the thesis.

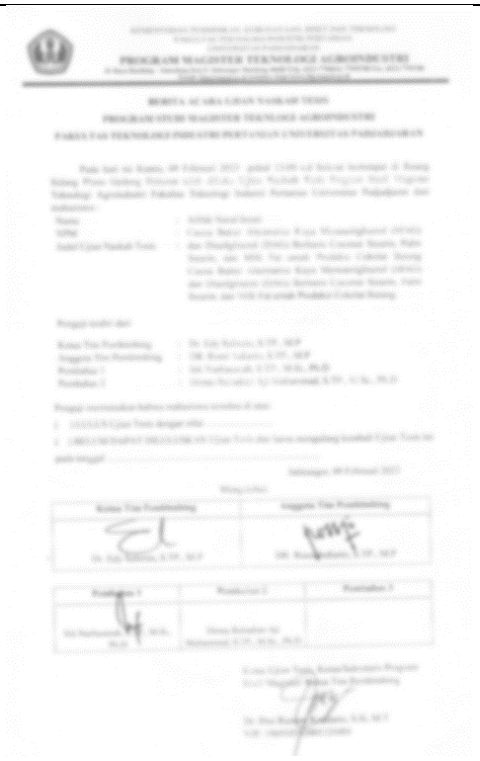
	design, cleaning and disinfection. Master Agro-Industrial Technology (MAT) • Agro-Industrial Machinery and Equipment should include hygienic design. • Laboratory management is missing. • Food Safety Measurement and Concept should include risk management, auditing and crisis management. Apart from this, the experts confirm that the programs are overall suitable to adequately prepare students for the labour market.		
7	The experts commend FTIP for fostering these partnerships, which enhance mobility opportunities for both students and staff. However, they also encourage the faculty to further strengthen English language proficiency among students and teaching staff to expand internationalisation efforts and support greater participation in mobility programs. Together with this, the experts see room to have more courses in English, so incoming students have enough opportunities to spend one full semester at UNPAD.	Faculty/Mobility	To foster partnerships, which enhance mobility opportunities for both students and staff and improve English language, faculty has supported some activities as follow: - IISMA (International Mobility Program for Students) - Padjadjaran Academic Recharging for Staffs - English course for staffs - Virtual Mobility Program - Adjunct Professor - Travel award - Module fully thought in English
8	During the on-site visit, the experts discussed with the program coordinators the requirement of holding a	Prodi/Admission requirements	Admission requirement follow the Rector Regulation of Universitas Padjadjaran Number 13 of 2023 concerning the Implementation of

	Bachelor's degree for admission to the Master's programs. Specifically, they sought clarification on whether applicants with any Bachelor's degree are eligible or if only those with degrees related to food or agro-industrial technology can apply. The program coordinators explained that there are specific requirements regarding the applicants' academic backgrounds. However, this information needs to be clearly articulated in the admission criteria, as it currently appears unclear based on the provided documentation.		Postgraduate Education at Universitas Padjadjaran along with Rector Regulation of Universitas Padjadjaran Number 24 of 2023 concerning Amendments to the Rector Regulation of Universitas Padjadjaran Number 13 of 2023 concerning the Implementation of Postgraduate Education at Universitas Padjadjaran.  SALINAN PERATURAN REKTOR UNIVERSITAS PADJADJARAN NOMOR 13 TAHUN 2023 TENTANG PENYELENGGARAAN PENDIDIKAN PASCASARJANA DI UNIVERSITAS PADJADJARAN DENGAN RAHMAT TUHAN YANG MAHA ESA REKTOR UNIVERSITAS PADJADJARAN, Menimbang : a. bahwa untuk menyelenggarakan proses Pendidikan Magister dan Doktor di lingkungan Universitas Padjadjaran diperlukan suatu peraturan sebagai acuan; b. bahwa penyelenggaraan Pendidikan Magister dan Doktor dalam Peraturan Rektor Nomor 38 Tahun 2021 Tentang Pedoman Umum Penyelenggaraan Pendidikan Magister, Magister Terapan, Magister Berbasis Riset, dan Doktor di Lingkungan Universitas Padjadjaran perlu dipisahkan dan diatur secara khusus; c. bahwa untuk melaksanakan ketentuan Pasal 8 ayat (1) dan ayat (2) Peraturan Pemerintah Republik Indonesia Nomor 51 Tahun 2015 tentang Statuta Universitas Padjadjaran dalam hal penyelenggaraan pendidikan yang didasarkan pada standar pendidikan Universitas Padjadjaran yang memiliki daya saing internasional, khususnya pada Pendidikan Doktor; d. bahwa berdasarkan pertimbangan sebagaimana dimaksud dalam huruf a, b, dan c, maka perlu diterbitkan Peraturan Rektor Universitas Padjadjaran. Mengingat : 1. Undang-Undang Nomor 20 Tahun 2003 tentang Sistem Pendidikan Nasional (Lembaran Negara Republik Indonesia Tahun 2003 No. 78, Tambahan Lembaran Negara Republik Indonesia Nomor 4301) 2. Undang-Undang Nomor 12 Tahun 2012 tentang Pendidikan Tinggi (Lembaran Negara Republik Indonesia Tahun 2012 Nomor 78, Tambahan Lembaran Negara Republik Indonesia Nomor 5336); 3. Peraturan Pemerintah Republik Indonesia Nomor 37 Tahun 1957 tentang Pendirian Universitas Padjadjaran (Lembaran Negara Republik Indonesia Tahun 1957 Nomor 91, Tambahan Lembaran Negara Republik Indonesia Nomor 1422); 4. Peraturan Pemerintah Republik Indonesia Nomor 4 Tahun 2014 tentang Penyelenggaraan Pendidikan Tinggi dan Pengelolaan Pendidikan Tinggi (Lembaran Negara Republik Indonesia Nomor Tahun 2014 Nomor 16 Tambahan Lembaran Negara Republik Indonesia Nomor 5500); 5. Peraturan Pemerintah Republik Indonesia Nomor 80 Tahun 2014 tentang Penetapan Universitas Padjadjaran sebagai Perguruan Tinggi Negeri Badan Hukum Lembaran Negara Republik Indonesia Tahun 2014 Nomor 301); 6. Peraturan Pemerintah Republik Indonesia Nomor 51 Tahun 2015, tentang Statuta Universitas Padjadjaran (Lembaran Negara Republik Indonesia Tahun 2015 Nomor 169, Tambahan Lembaran Negara Nomor 5720); 7. Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi Republik Indonesia Nomor 53 Tahun 2023 Tentang Penjaminan Mutu Pendidikan Tinggi (Berita Negara Republik Indonesia Tahun 2023 Nomor 638); Detail information regarding admission requirement could be found in this link : https://smup.unpad.ac.id/magister/ If eligible, an interview is conducted.

			KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI **UNIVERSITAS PADJADJARAN** Jalan Dipati Ukur No. 35 Bandung 40132 Jalan Ir. Soekarno Km. 21 Jatinangor, Sumedang 45363 Telepon (022) 84288888 Laman: www.unpad.ac.id, *Email*: humas@unpad.ac.id Nomor : 6570/UN6.WR1/TM.00.07/2024 17 Oktober 2024 Lampiran : - Hal : Pemberitahuan Yth. Para Dekan Fakultas/Sekolah Pascasarjana di Lingkungan Universitas Padjadjaran Berkenaan dengan akan dilaksanakannya Penetapan Kelulusan Tahap 1 Seleksi Masuk Universitas Padjadjaran (SMUP) Pascasarjana Program Profesi, Magister, Doktor, Spesialis, dan Subspesialis, maka dengan ini kami sampaikan beberapa hal sebagai berikut: 1. **Data Eligible Peserta Wawancara** Bagi Prodi dan Fakultas yang akan mengikuti Penetapan Kelulusan Tahap 1, data eligible peserta wawancara sudah dapat dilihat di laman https://siat.unpad.ac.id/padi/index.php/login -> Login Menggunakan PassS ID -> Lihat menu Pendaftaran & Ujian -> Dokumen -> Daftar Hadir Ujian pada tanggal 19 Oktober 2024. 2. **Batas Waktu Input Nilai Wawancara dan Rekomendasi** Penetapan Kelulusan Tahap 1 akan dilaksanakan pada 31 Oktober 2024, maka dari itu dimohon bagi Prodi dan Fakultas sudah melakukan input nilai wawancara dan rekomendasi Prodi & Dekan paling lambat tanggal **27 Oktober 2024**. Pelaksanaan Wawancara dilakukan pada rentang waktu 19 – 27 Oktober 2024 yang tanggal pelaksanaannya ditetapkan oleh Fakultas/Prodi. Peserta yang diumumkan pada Tahap 1 merupakan peserta yang nilai rekomendasi Prodi dan Dekannya sudah lengkap. 3. **Penetapan Kelulusan Tahap 2** Bagi pendaftar yang melakukan finalisasi pendaftaran lebih dari tanggal 18 Oktober 2024 maka untuk penetapan kelulusannya akan diikutkan pada Penetapan Kelulusan Tahap 2 (Berikutnya) yang akan kami informasikan kemudian. Demikian informasi ini kami sampaikan. Atas perhatian dan kerja sama yang baik, kami ucapkan terima kasih. Plt. Wakil Rektor Bidang Akademik dan Kemahasiswaan, Rektor, ARIEF S. KARTASASMITA NIP. 197007272000031007 Catatan : 1. **UU ITE No. 11 Tahun 2008 Pasal 5 Ayat 1 "Informasi Elektronik dan/atau Dokumen Elektronik dan/atau hasil cetakannya merupakan alat bukti yang sah."** 2. **Dokumen ini telah ditandatangani secara elektronik menggunakan sertifikat elektroniyang diterbitkan oleh BSrE**
9	the experts note that the admission details for the Master's programs require further supplementation to ensure transparency.	Prodi/Admission requirements	Bellows is the example of interview form and recapitulation, taken from SIAT Unpad. Master candidate can download the results of the interview from their account. Example of interview form at SIAT Unpad.  

10	During the discussion on workload and credits, the experts also focused on module N10C203121 "English Language (TOEFL)" which is included in the Bachelor Agro-Industrial Technology's Module Handbook. They specifically inquired with the program coordinators about the notation of 0 ECTS credits for this module. The coordinators explained that students are required to obtain an official TOEFL certificate with a minimum score of 450 as a main graduation requirement. While the experts support the requirement of English proficiency for graduation, they believe the program needs to either assign credit to this module or remove it from the Module Handbook altogether.	Prodi/Workload and Credits/Bachelor program	The name of the English Language Course (N10C203121) is still included in the curriculum with 0 credits but the fulfillment of this course can be done through submitting proof of TOEFL/IELT/TOEFL certificates.
11	During the discussions, concerns were raised about the uneven distribution of workload across individual semesters. For example, the credit points distribution for the BAIT program varies from 36.8 ECTS in one semester to 19.2 ECTS in another, while in the MAT program, there are only 9.6 credits allocated in the third semester. This issue is also present in the other programs. As noted under Criterion 1.3, the experts inquired about the lack of allocated workload during the eighth semester for Bachelor's programs and the fourth	Prodi/Workload and Credits / All programs	Number of credits for the eighth semester for Bachelor's programs and the fourth semester for Master's programs designed less than credits at the other semester. The credits at the last semester mainly consist of research and field activities (Thesis). The reason for this arrangement is that there is a difference in definition between credits for lecture and credits for research activity. 1 Credits for lecture consist of attending 50 minutes per week in the class, while 1 credit for research and field activities consists of 150 minutes per week in Laboratory or activity out of the campus.

	semester for Master's programs, respectively. The program coordinators explained that they believe this design will allow students to complete their studies earlier. However, the assessment team is under the impression that the curriculum should be adapted in a way that the workload is evenly distributed.		
12	MAT and MAIT: graduation requirements must be clearly outlined in the documentation, as this information is currently missing.	Prodi/Criterion 2 Exams: System, concept and organization/ Grading and Graduation Requirements	Graduation requirements for Master students: 1. Students must be passed all the courses according to the curriculum offered 2. Students must be passed the Master thesis vival without any objection from the thesis committee Documentation regarding graduation requirements can be seen as follow: **MAT**

			  **MAIT**

			
13	During the discussions, the experts also learned that some students face challenges completing their thesis, including frequent changes to their topics, which can lead to delays and difficulties in finalising their work. This issue is reflected in Criterion 1.5,	Prodi/Criterion 2 Exams: System, concept and organization/ Thesis	The curriculum is designed to be completed in 4 semesters for Masters and 8 semesters for Bachelors. Faculty monitoring has been carried out regularly per semester. The average is calculated by including students who graduated more than 6 years which makes the average high

	where it was noted that many students do not complete their programs within the expected timeframe. According to the self-assessment report, the average time required to complete studies exceeds the standard duration: • Bachelor Food Technology: 4 years, 7 months • Bachelor Agro-Industrial Technology: 4 years, 6 months • Master Agro-Industrial Technology: 2 years, 4 months • Master Agriculture-Industrial Technology: 2 years, 8 months To address this, the experts strongly believe that the faculty must actively monitor the reasons behind students exceeding the foreseen time for the final thesis. They also believe that the faculty needs to implement measures to support timely thesis completion within the program's prescribed duration.		Bottleneck of this problem is in completing the final assignment, where laboratory facilities are limited. The faculty has created a final assignment guideline that allows students to complete a thesis not only based on activities in the lab, but they can also choose a Review journal, capstone project and industrial problem solving. This policy allows students to finish their thesis earlier.
	Overall, the experts believe that the faculty should put more effort into the maintenance and modernisation of laboratory facilities and equipment. Given the old condition of many tools and instruments, it is recommended that the faculty implement a formal maintenance schedule for lab equipment. This schedule	Faculty/Infrastructure and technical equipment	Maintenance for the advance equipment is carried out by the University while for the small and basic equipment carried out by the faculty. Modernization of laboratory equipment is carried out through submissions to the University and cooperation programs with various institutions such as KOICA, JICA, IsDB, BI, etc. For advanced analysis can be carried out through a research cooperation scheme

	would help ensure that proper care and upkeep are consistently prioritised. Furthermore, according to the Rector's Regulation, laboratories are classified into three categories: (i) educational (basic) laboratories, (ii) research laboratories, and (iii) integrated laboratories. Proper consideration should be given to laboratory management, particularly regarding the utilisation and scheduling of these facilities for both undergraduate and graduate students.		with BRIN as performed by BAIT and BFT study programs. The cooperation scheme with various institutions for the lab facility development program is currently being supported so that it can be realized in the near future.
14	Specifically, they noted that some course learning outcomes (CLOs) are too general and not aligned with the specific content of the modules. Additionally, some descriptions either lack relevant or up-to-date literature or contain outdated references, and there is a lack of consistency in the module descriptions across the programs. Therefore, they request a revision and harmonization of the module descriptions to address these issues.	Prodi/Criterion 4.1 Module descriptions / Module descriptions	CLOs will be revised according to the module specifications and References will be updated according to scientific knowledge developments.
15	However, the experts noted that the module descriptions are not available on the respective program's websites, limiting access for other interested stakeholders. Therefore, they request that the faculty make the latest	Prodi/Criterion 4.1 Module descriptions / Module descriptions	The faculty website is in the process of being updated, including the Module description which will be uploaded to the FTIP website and can be accessed by stakeholders in the near future.

	version of the module handbooks publicly accessible to ensure transparency and broader access for all relevant stakeholders.		
16	The ASIIN experts were provided with samples of the relevant documentation and observed that a Diploma Supplement is not currently available for the Master's programs. The experts emphasize that, in line with international best practices, a Diploma Supplement needs to be issued to students upon graduation from these programs.	Prodi/Diploma and Diploma Supplement	Diploma supplement will be available for master program and deliver to the students upon graduation.
17	However, the experts note that the rules and regulations provided seem to be inaccessible through the UNPAD or FTIP websites, thereby rendering them unavailable to relevant stakeholders. The experts highlight the importance of publishing relevant rules and regulations to ensure accessibility for all interested stakeholders.	SPM/Relevant rules	Rules, guidelines and regulation can be assessed through these links: https://www.unpad.ac.id/arsip-unpad/ https://jdih.unpad.ac.id/
18	However, based on the discussions during the audit, it appeared that a summary of the results had not been provided to the students. The experts emphasize that student feedback is essential for the continuous improvement of the program, but it is equally important to inform students about the results and any potential improvements. A more	SPM/5. Quality management: quality assessment and development	results of the evaluation can be accessed through this link: https://ftip.unpad.ac.id/wp-content/uploads/2024/11/Evaluasi-Tingkat-Kepuasan-FTIP-tahun-2023-en-ok.pdf

	transparent and collaborative approach could be instrumental in achieving the expected learning outcomes. Therefore, the experts ask the faculty to ensure that the results of the evaluation are informed to students to close the feedback loop.		

F Summary: Expert recommendations (21.01.2025)

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

Degree Programme	**ASIIN Seal**	**Maximum duration of accreditation**	**Subject-specific label**	**Maximum duration of accreditation**
Bachelor Food Technology	With requirements for one year	30.09.2030	EQAS-Food	30.09.2030
Bachelor Agro-Industrial Technology	With requirements for one year	30.09.2030		
Master Agro-Industrial Technology	With requirements for one year	30.09.2030		
Master Agriculture-Industrial Technology	With requirements for one year	30.09.2030		

Requirements

For all degree programmes

A 1. (ASIIN 1.5) Verify the students' total workload and adjust the awarded ECTS points accordingly.

A 2. (ASIIN 2) Monitor the reasons for students exceeding the foreseen time for the final thesis.

A 3. (ASIIN 2) Ensure the students’ ability to finalize the thesis within the study programme timeframe.

A 4. (ASIIN 4.1) Revise and correct the module handbook (e.g., in some cases the CLOs are too general and not related to the specific content, none or outdated literature, and not harmonized across the programmes)

A 5. (ASIIN 4.1) Make the latest version of the module handbooks publicly accessible to interested stakeholders.

A 6. (ASIIN 5) Ensure that the results of the evaluation are informed to students to close the feedback loop.

For the Bachelor Agro-Industrial Technology

A 7. (ASIIN 1.5) Ensure that module N10C203121, which has no credit assigned, is either given credits or removed from the module handbook. However, the experts support the requirement of English proficiency for graduation.

For both Master's degree programmes

A 8. (ASIIN 1.2) Ensure that the names of the master's programmes reflect the expected specific learning outcomes.

A 9. (ASIIN 1.4) Ensure that programme-specific admission requirements are published on the program websites to increase transparency and completeness of the available information to the stakeholders.

A 10. (ASIIN 4.2) Provide a diploma supplement to students upon graduation.

Recommendations

For all degree programmes

E 1. (ASIIN 1.1) It is recommended that the presentation and documentation of the programme objectives and learning outcomes be harmonised to improve transparency across the programmes.

E 2. (ASIIN 1.1) It is recommended, based on feedback from industry partners and alumni, that the faculty strengthen efforts to enhance students' soft skills.

E 3. (ASIIN 1.1) It is recommended to further enhance collaboration with external stakeholders.

E 4. (ASIIN 1.3, 1.5) It is recommended that the curriculum be adapted in a way that the workload is evenly distributed and utilizes the full programme length (eight/four semesters).

E 5. (ASIIN 1.3) It is recommended that the programmes strengthen and increase the visibility of aspects of sustainability, environmental protection and climate change in the curriculum.

E 6. (ASIIN 1.3, 3.1) It is recommended that the faculty keep on improving the English language skills of students and teaching staff to drive internationalization and student mobility.

E 7. (ASIIN 1.3) It is recommended to have more courses in English, so incoming students have enough opportunities to spend one full semester at UNPAD.

E 8. (ASIIN 3.2) It is recommended that the faculty put more effort into the maintenance and modernization of laboratory facilities and equipment.

For both Master's degree programmes

E 9. (ASIIN 1.1) It is recommended that a clear differentiation be made between the profiles of the Master's programmes (programme specifications).

For both Bachelor's degree programmes

E 10. (ASIIN 1.1) It is recommended that the learning outcome PLO1 be reworded in a way that the incoming foreign students can achieve it.

G Comments of the Technical Committes*:*

Technical Committee 08 – Agriculture, Forestry and Food Sciences (17.03.2025)

Assessment and analysis for the award of the ASIIN seal:

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

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

Degree Programme	**ASIIN Seal**	**Maximum duration of accreditation**	**Subject-specific label**	**Maximum duration of accreditation**
Bachelor Food Technology	With requirements for one year	30.09.2030	EQAS-Food	30.09.2030
Bachelor Agro-Industrial Technology	With requirements for one year	30.09.2030		
Master Agro-Industrial Technology	With requirements for one year	30.09.2030		
Master Agriculture-Industrial Technology	With requirements for one year	30.09.2030		

Technical Committee 01 – Mechanical Engineering/Process Engineering (03.2025)

Assessment and analysis for the award of the ASIIN seal:

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

The Technical Committee 01 – Mechanical Engineering/Process Engineering recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Bachelor Food Technology	With requirements for one year	30.09.2030	EQAS-Food	30.09.2030
Bachelor Agro-Industrial Technology	With requirements for one year	30.09.2030		
Master Agro-Industrial Technology	With requirements for one year	30.09.2030		
Master Agriculture-Industrial Technology	With requirements for one year	30.09.2030		

Requirements

For all degree programmes

A 1. (ASIIN 1.5) Verify the students' total workload and adjust the awarded ECTS points accordingly.

A 2. (ASIIN 2) Monitor the reasons for students exceeding the foreseen time for the final thesis.

A 3. (ASIIN 2) Ensure the students' ability to finalize the thesis within the study programme timeframe.

A 4. (ASIIN 4.1) Revise and correct the module handbook (e.g., in some cases the CLOs are too general and not related to the specific content, none or outdated literature, and not harmonized across the programmes)

A 5. (ASIIN 4.1) Make the latest version of the module handbooks publicly accessible to interested stakeholders.

A 6. (ASIIN 5) Ensure that the results of the evaluation are informed to students to close the feedback loop.

For the Bachelor Agro-Industrial Technology

A 7. (ASIIN 1.5) Ensure that module N10C203121, which has no credit assigned, is either given credits or removed from the module handbook. However, the experts support the requirement of English proficiency for graduation.

For both Master's degree programmes

A 8. (ASIIN 1.2) Ensure that the names of the master's programmes reflect the expected specific learning outcomes.

A 9. (ASIIN 1.4) Ensure that programme-specific admission requirements are published on the program websites to increase transparency and completeness of the available information to the stakeholders.

A 10. (ASIIN 4.2) Provide a diploma supplement to students upon graduation.

Recommendations

For all degree programmes

E 1. (ASIIN 1.1) It is recommended that the presentation and documentation of the programme objectives and learning outcomes be harmonised to improve transparency across the programmes.

E 2. (ASIIN 1.1) It is recommended, based on feedback from industry partners and alumni, that the faculty strengthen efforts to enhance students' soft skills.

E 3. (ASIIN 1.1) It is recommended to further enhance collaboration with external stakeholders.

E 4. (ASIIN 1.3, 1.5) It is recommended that the curriculum be adapted in a way that the workload is evenly distributed and utilizes the full programme length (eight/four semesters).

E 5. (ASIIN 1.3) It is recommended that the programmes strengthen and increase the visibility of aspects of sustainability, environmental protection and climate change in the curriculum.

E 6. (ASIIN 1.3, 3.1) It is recommended that the faculty keep on improving the English language skills of students and teaching staff to drive internationalization and student mobility.

E 7. (ASIIN 1.3) It is recommended to have more courses in English, so incoming students have enough opportunities to spend one full semester at UNPAD.

E 8. (ASIIN 3.2) It is recommended that the faculty put more effort into the maintenance and modernization of laboratory facilities and equipment.

For both Master's degree programmes

E 9. (ASIIN 1.1) It is recommended that a clear differentiation be made between the profiles of the Master's programmes (programme specifications).

For both Bachelor's degree programmes

E 10. (ASIIN 1.1) It is recommended that the learning outcome PLO1 be reworded in a way that the incoming foreign students can achieve it.

H Decision of the Accreditation Commission (25.03.2025)

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

The Accreditation Commission discusses the procedure and follows the assessment of the experts and Technical Committees, with one minor adjustment made to requirement A 6. This change is to stress that the central focus is on the students who need to be informed about the results of the evaluation to close the feedback loop.

The Accreditation Commission decides to award the following seals:

Degree Programme	**ASIIN Seal**	**Maximum duration of accreditation**	**Subject-specific label**	**Maximum duration of accreditation**
Bachelor Food Technology	With requirements for one year	30.09.2030	EQAS-Food	30.09.2030
Bachelor Agro-Industrial Technology	With requirements for one year	30.09.2030		
Master Agro-Industrial Technology	With requirements for one year	30.09.2030		
Master Agriculture-Industrial Technology	With requirements for one year	30.09.2030		

Requirements

For all degree programmes

A 1. (ASIIN 1.5) Verify the students' total workload and adjust the awarded ECTS points accordingly.

A 2. (ASIIN 2) Monitor the reasons for students exceeding the foreseen time for the final thesis.

A 3. (ASIIN 2) Ensure the students' ability to finalize the thesis within the study programme timeframe.

A 4. (ASIIN 4.1) Revise and correct the module handbook (e.g., in some cases the CLOs are too general and not related to the specific content, none or outdated literature, and not harmonized across the programmes)

A 5. (ASIIN 4.1) Make the latest version of the module handbooks publicly accessible to interested stakeholders.

A 6. (ASIIN 5) Ensure that the students are informed about the results of the evaluation to close the feedback loop.

For the Bachelor Agro-Industrial Technology

A 7. (ASIIN 1.5) Ensure that module N10C203121, which has no credit assigned, is either given credits or removed from the module handbook. However, the experts support the requirement of English proficiency for graduation.

For both Master's degree programmes

A 8. (ASIIN 1.2) Ensure that the names of the master's programmes reflect the expected specific learning outcomes.

A 9. (ASIIN 1.4) Ensure that programme-specific admission requirements are published on the program websites to increase transparency and completeness of the available information to the stakeholders.

A 10. (ASIIN 4.2) Provide a diploma supplement to students upon graduation.

Recommendations

For all degree programmes

E 1. (ASIIN 1.1) It is recommended that the presentation and documentation of the programme objectives and learning outcomes be harmonised to improve transparency across the programmes.

E 2. (ASIIN 1.1) It is recommended, based on feedback from industry partners and alumni, that the faculty strengthen efforts to enhance students' soft skills.

E 3. (ASIIN 1.1) It is recommended to further enhance collaboration with external stakeholders.

E 4. (ASIIN 1.3, 1.5) It is recommended that the curriculum be adapted in a way that the workload is evenly distributed and utilizes the full programme length (eight/four semesters).

E 5. (ASIIN 1.3) It is recommended that the programmes strengthen and increase the visibility of aspects of sustainability, environmental protection and climate change in the curriculum.

E 6. (ASIIN 1.3, 3.1) It is recommended that the faculty keep on improving the English language skills of students and teaching staff to drive internationalization and student mobility.

E 7. (ASIIN 1.3) It is recommended to have more courses in English, so incoming students have enough opportunities to spend one full semester at UNPAD.

E 8. (ASIIN 3.2) It is recommended that the faculty put more effort into the maintenance and modernization of laboratory facilities and equipment.

For both Master's degree programmes

E 9. (ASIIN 1.1) It is recommended that a clear differentiation be made between the profiles of the Master's programmes (programme specifications).

For both Bachelor's degree programmes

E 10. (ASIIN 1.1) It is recommended that the learning outcome PLO1 be reworded in a way that the incoming foreign students can achieve it.

Appendix: Program Intended Learning Outcomes and Curricula

According to the provided "Curriculum Documents", the following intended learning outcomes shall be achieved:

Bachelor Food Technology

PROGRAM LEARNING OUTCOMES		
1. Attitude (S)	**S1**	Fear Almighty God, Possess nationalism, and is committed to professionalism and ethical values based on Pancasila
2. Knowledge Mastery (PP)	**PP1**	Know and understand the principles of basic science that support expertise in the field of food
	PP2	Know the relationship between the discipline of food science and other related disciplines
3. General Skills (KK)	**KU1**	Able to work independently or in a team, build a network, be adaptive and responsible for completing work by supervising and evaluating
	KU2	Able to apply logical, critical, systematic, and innovative thinking in making the right decisions based on data and information in the context of science and technology development
	KU3	Able to communicate effectively both orally and in writing in the scientific community and society in general
4. Special Skills (SS)	**KK1**	Able to master the principles of food science and technology (food chemistry and analysis, food microbiology, food safety, food regulation, food engineering and processing, food biochemistry, nutrition and health, and applied food science)
	KK2	Able to produce safe and quality food products on an industrial scale through the integrated application of the principles of food science and technology, including with other scientific disciplines
	KK3	Able to formulate the impact of implementation or development of food science and technology from social, cultural, legal, religious and environmental aspects

The following curriculum is presented for the Bachelor Food Technology:

SEMESTER	No	Subject Code	Subjects	Credits (SKS)	ECTS
I	1	UNX01-007	National Ideology Pancasila	2 (2-0)	3.2
	2	UNX01-004	Indonesian Language	2 (2-0)	3.2
	3	UNX01-008	Civic Education	2 (2-0)	3.2
	4	UNX01-001	Religion	2 (2-0)	3.2
	5	UNX01-006	Creativity and Entrepreneurship	3 (0-3)	4.8
	6	N10N1110	Introduction to Agro-Industry	3 (3-0)	4.8
	7	N10B181101	Calculus	3 (2-1)	4.8
	8	N10B181102	Biology	3 (3-0)	4.8
	9	N10B181103	Introduction to Basic Chemistry	3 (2-1)	4.8
			Total Credits	**23**	**36.8**
SEMESTER	**No**	**Subject Code**		**Credits**	
II	1	N10B181204	Basic Physics	3 (2-1)	4.8
	2	N10B181205	Organic Chemistry	3 (2-1)	4.8
	3	N10B181206	Basic Microbiology	3 (2-1)	4.8
	4	N10B181207	Applied Computer in Food Technology	3 (2-1)	4.8
	5	N10B181208	Principles of Food Technology	3 (3-0)	4.8
	6	N10B181209	Principles of Food Process Engineering	3 (2-1)	4.8
	7	N10B181210	Statistics	3 (2-1)	4.8
			Total Credits	**21**	**33.6**
SEMESTER	**No**	**Subject Code**		**Credits**	
III	1	N10B182111	Food Biochemistry	3 (2-1)	4.8
	2	N10B182112	Physical and Analytical Chemistry	3 (2-1)	4.8
	3	N10B182113	Engineering Economics and Food Industry Manage	3 (3-0)	4.8
	4	N10B182114	Food Chemistry	4(3-1)	6.4
	5	N10B182115	Postharvest Handling of Plant and Animal Products	4 (3-1)	6.4
	6	N10B182116	Heat Transfer and Thermal Process	3 (2-1)	4.8
	7	N10B182117	Food Microbiology	3 (2-1)	4.8
			Total Credits	**23**	**36.8**
SEMESTER	**No**	**Subject Code**		**Credits**	
IV	1	N10B182218	Food analysis	4 (3-1)	6.4
	2	N10B182219	Nutrition sciences	3 (3-0)	4.8
	3	N10B182220	Food Waste Handling	3 (2-1)	4.8
	4	N10B182221	Form Conversion and Separation Engineering	3 (2-1)	4.8
	5	N10B182222	Food Processing Technology	4 (3-1)	6.4
	6	N10B182223	Food Fermentation Technology	3 (2-1)	4.8
	7	N10B182224	Methods of Research and Thesis Writing	3 (2-1)	4.8
			Total Credits	**23**	**36.8**
SEMESTER	**No**	**Subject Code**		**Credits**	
V	1	N10B183125	Biological Evaluation of Food components	3 (2-1)	4.8
	2	N10B183126	Sensory Evaluation	3 (2-1)	4.8
	3	N10B183127	Starch and Flour Technology	3 (2-1)	4.8
	4	N10N3111	Students Community Service	3 (0-3)	4.8
	5	N10B183128	Sanitation and Food Safety	3 (2-1)	4.8
	6	N10B183129	Preservation and Emerging Processing Techniques in Food Processing	3 (2-1)	4.8
	7		Elective Courses*	6	9.6
			Total Credits	**24**	**38.4**
SEMESTER	**No**	**Subject Code**		**Credits**	
VI	1	N10B183239	Functional Food	3 (2-1)	4.8
	2	N10B183240	Food Packaging and Storage	3 (2-1)	4.8
	3	N10B183241	Plant Design	3 (2-1)	4.8
	4	N10B183242	Quality Control, HACCP and Food Regulation	4 (3-1)	6.4
	5	N10B183243	New Product Development	3 (2-1)	4.8
	6		Elective Courses*	6	9.6
			Total Credits	22	35.2
SEMESTER	**No**	**Subject Code**		**Credits**	
VII	1	N10N4213	Field Work Practices	3 (0-3)	4.8
	2	N10N4111	Undergraduate Thesis and Scientific Publication	6 (0-6)	9.6
			Total Credits	**9**	**14.4**
			Total Credits for Graduation	**145**	**232**

Source: CURRICULUM OF UNDERGRADUATE IN FOOD TECHNOLOGY STUDY PROGRAMME, as part of the Self-Assessment Report

Bachelor Agro-Industrial Technology

PROGRAM LEARNING OUTCOMES		
1. Attitude (S)	**S1**	Devotion to God Almighty and able to show a religious attitude; upholding human values in carrying out duties based on religion, morals, and ethics.
	S2	Contribute and comply with the law in improving the quality of life in the community, nation, state and progress of civilization based on Pancasila.
2. Knowledge Mastery (PP)	**PP1**	Understanding the challenges and opportunities in agro-industrial product development and have the ability to innovate as a provision to develop agro-Industrial start-ups.
	PP2	Mastering agroindustry knowledge with various methods,including the process technology and bioprocess of agricultural products and knowledge of materials and environmental aspects.
3. General Skills (KK)	**KU1**	Able to identify, analyze, and solve agro-industry problems and also able to compile scientific descriptions of the results of agroindustry studies scientific papers equipped with soft skills such as communication, collaboration, presentation, and literacy
	KU2	Skilled in exploring the potential of agro materials as agro-industry raw materials and developing the spirit of technopreneurship in the field of agroindustry by applying the principles of mathematics, science, engineering, technology, and management in the field of agroindustry
	KU3	Able to identify the sustainability needs and adapt to novelty in the field of agro-industry
4. Special Skills (SS)	**KK1**	Able to develop the value added of agricultural products through the terms of process technology and bioprocesses, as well as systems and management.
	KK2	Able to design an agro-industry completely which cover the production aspects (products, processes, facilities,and waste management) and business (strategy, supply chain, resources, finance, marketing, manufacturing and business information systems)

The following curriculum is presented for the Bachelor Agro-Industrial Technology:

SEMESTER	No	Subject Code	Subjects	Credits (SKS)	ECTS
I	1	UNX01-007	Pancasila	2 (2-0)	3.2
	2	UNX01-001	Religion	2 (2-0)	3.2
	3	UNX01-008	Civic Education	2 (2-0)	3.2
	4	UNX01-004	Indonesian Language	2 (2-0)	3.2
	5	N10N1110	Introduction to Agroindustry	2 (2-0)	3.2
	6	UNX01-006	Exercises for Creativity and Entrepreneurship	2 (2-0)	4.8
	7	N10C201111	The Basics of Physics	2 (2-0)	3.2
	8	N10C201112	The Basics of Chemistry	3 (2-1)	4.8(3.2-1.6)
	9	N10C201113	The Basics of Microbiology	3 (2-1)	4.8(3.2-1.6)
			Total Credits	**21**	**33.6**
SEMESTER	**No**	**Subject Code**		**Credits (SKS)**	**ECTS**
II	1	N10C201114	The Basics of System Theory	2 (2-0)	3.2
	2	N10C201115	The Basics of Economics and Management	2 (2-0)	3.2
	3	N10C201116	The Basics of Process Engineering Calculations	2 (2-0)	3.2
	4	N10C201117	Industrial Microbiology	3 (3-0)	4.8(3.2-1.6)
	5	N10C201118	Technical Drawings, Schematics and Models	3 (2-1)	4.8(3.2-1.6)
	7	N10C201120	Computer Programming	3 (3-0)	4.8(3.2-1.6)
	8	N10C201121	Industrial Mathematics	2 (2-0)	3.2
	9	N10C201122	Engineering Economics	2 (2-0)	3.2
	10	N10C201123	Financial Management	2 (2-0)	3.2
	11	N10C201124	Unit Processes	2 (2-0)	3.2
			Total Credits	**23**	**36.8**
SEMESTER	**No**	**Subject Code**		**Credits (SKS)**	**ECTS**
III	1	N10C201140	Industrial Statistics	2 (2-0)	3.2
	2	N10C202116	Control and Instrumentation Systems	2 (2-0)	3.2
	3	N10C202117	Operations Research 1	2 (2-0)	3.2
	4	N10C202118	Supply Chain, Logistics, and Transport.	2 (2-0)	3.2
	5	N10C201150	Knowledge and Analysis of Natural Materials	3 (2-1)	4.8(3.2-1.6)
	6	N10C2105	Industrial Unit Operation	2 (2-0)	3.2
	7	N10C202119	The Basics of Bioprocess Engineering	2 (2-0)	3.2
	8	N10C202120	Agro-Industrial Equipment	2 (2-0)	3.2
	9	N10C201119	Computer-based Information System	2 (2-0)	3.2
	10	N10C201151	Material Handling	2 (2-0)	3.2
			Total Credits	**21**	**33.6**
SEMESTER	**No**	**Subject Code**		**Credits (SKS)**	**ECTS**
IV	1	N10C202121	Oil, Emulsion and Oleochemical Technology	3 (2-1)	4.8(3.2-1.6)
	2	N10C202122	Fiber, Rubber and Resin Technology	3 (2-1)	4.8(3.2-1.6)
	3	N10C202123	Small and Medium Enterprise Development	2 (2-0)	3.2
	4	N10C202124	Ergonomics	2 (2-0)	3.2
	5	N10C202125	Factory Layout	2 (2-0)	3.2
	6	N10C202126	Biorefinery and Bioeconomy	2 (2-0)	3.2
	7	N10C202127	Industrial Environmental Management	2 (2-0)	3.2
	8	N10C202128	Refreshments and Essential Oils Technology	3 (2-1)	4.8(3.2-1.6)
	9	N10C202129	Operations Management in Agro-industry	2 (2-0)	3.2
	10	N10C202130	Assessment 1	1	1.6
	11	N10C204119	Operations Research 2	2 (2-0)	3.2
			Total Credits	**1**	**24**
SEMESTER	**No**	**Subject Code**		**Credits (SKS)**	**ECTS**
V	1	N10C203119	Quality Management	2 (2-0)	3.2
	2	N10C203121	Quality Control Engineering	2 (2-0)	3.2
	3	N10C203122	Technopreneurship	2 (2-0)	3.2
	4	N10C203123	Packaging and Storage in Agro-industry	3 (2-1)	4.8(3.2-1.6)
	5	N10C203124	Starch and Sugar Technology	2 (2-0)	3.2
	6	N10C203125	Scientific Method	2 (2-0)	3.2
	7		Elective Courses of Process Technology	2 (2-0)	3.2
	8		Elective Courses of Bioprocess Technology	2 (2-0)	3.2
	9		Elective Courses of Systems	2 (2-0)	3.2
	10		Elective Courses of Management	2 (2-0)	3.2
			Total Credits	**21**	**33.6**

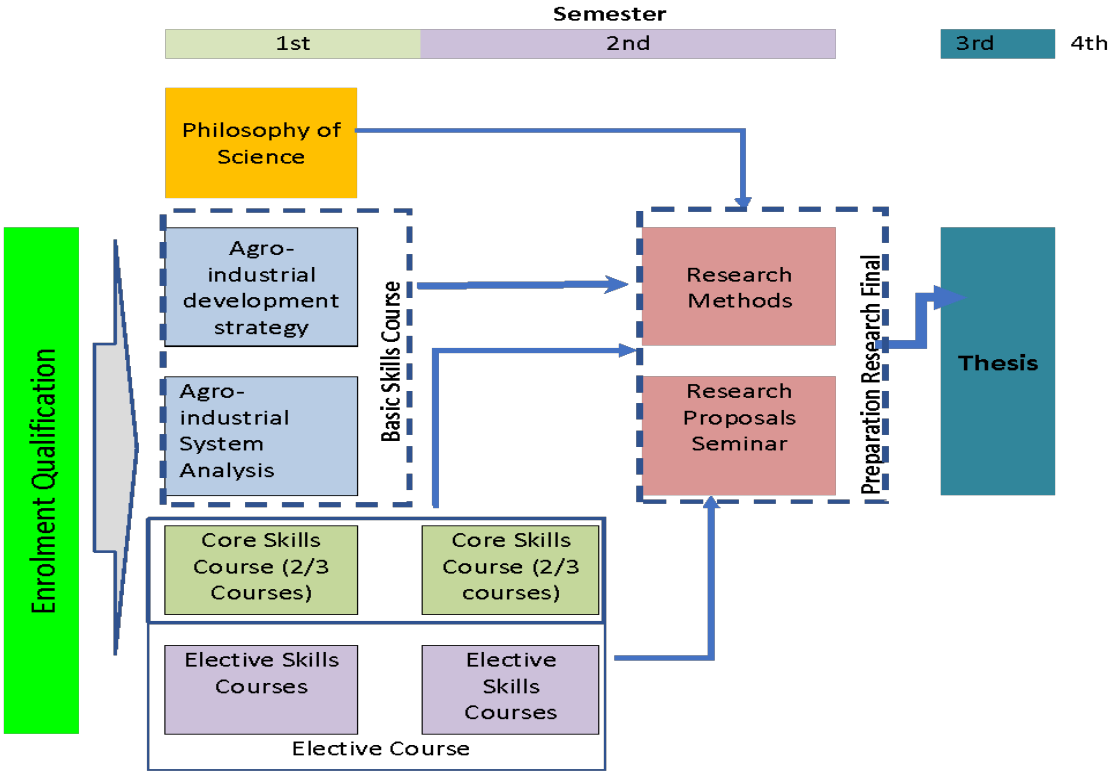
SEMESTER	No	Subject Code		Credits (SKS)	ECTS
VI	1	N10C204117	Agro-industrial Wastes Technology	3 (2-1)	4.8(3.2-1.6)
	2	N10C204118	The Change Management	3 (2-1)	4.8(3.2-1.6)
	3	N10C204119	The Agro-industrial Process Design	3 (2-1)	4.8(3.2-1.6)
	4	N10C204112	Project Design and Agribusiness	3 (2-1)	4.8(3.2-1.6)
	5		Elective Courses of Process Technology	2 (2-0)	3.2
	6		Elective Courses of Bioprocess Technology	2 (2-0)	3.2
	7		Elective Courses of Systems	2 (2-0)	3.2
	8		Elective Courses of Management	2 (2-0)	3.2
	9	N10C203121	English Language (TOEFL)	0	0
	10	N10C203120	Assessment 2	2 (2-0)	3.2
			Total Credits	**22**	**35.2**
SEMESTER	**No**	**Subject Code**		**Credits (SKS)**	**ECTS**
VII	1	N10C204114	Field Practice	3-0	4.8(3.2-1.6)
	2	N10C204115	Student Work and Lecture	3-0	4.8(3.2-1.6)
	3	N10C204116	Thesis and Scientific Publication	6-0	9.6
			Total Credits	**12**	**19.2**
SEMESTER	**No**	**Subject Code**		**Credits (SKS)**	**ECTS**
VIII					
			Total Credits for Graduation	**144**	**230.4**

Source: CURRICULUM OF UNDERGRADUATE AGRO-INDUSTRIAL TECHNOLOGY STUDY PROGRAMME, as part of the Self-Assessment Report

Master Agro-Industrial Technology

PROGRAM LEARNING OUTCOMES		
1. Attitude (S)	**S1**	Have communication, collaboration, and publication skills towards society and the environment
2. Knowledge Mastery (PP)	**PP1**	Knowledge and understanding of Agro-industrial technology concepts, theories, and scientific developments through academic ethics
	PP2	Mastering engineering theory, scientific development, and optimization of technology application according to scientific policies and ethics in Agro-industrial technology
3. General Skills (KK)	**KU1**	Can formulate, recognize, and provide alternative solutions through appropriate methods related to problems in the scientific field of agro-industry technology
	KU2	Graduates of MAT can understand concepts and theories to design, implement, and evaluate scientifically and communicate academically
4. Special Skills (SS)	**KK1**	Graduates of MAT can explore the roots of problems through the research process to formulate appropriate methods and approaches independently
	KK2	Graduates of MAT can analyze, conclude, and formulate integrated problem-solving in agro-industry technology
	KK3	Graduates of MAT can integrate theory and practice based on theory, models, and methods for effectively implementing problems in society

The following curriculum is presented for the study program in Master Agro-Industrial Technology:

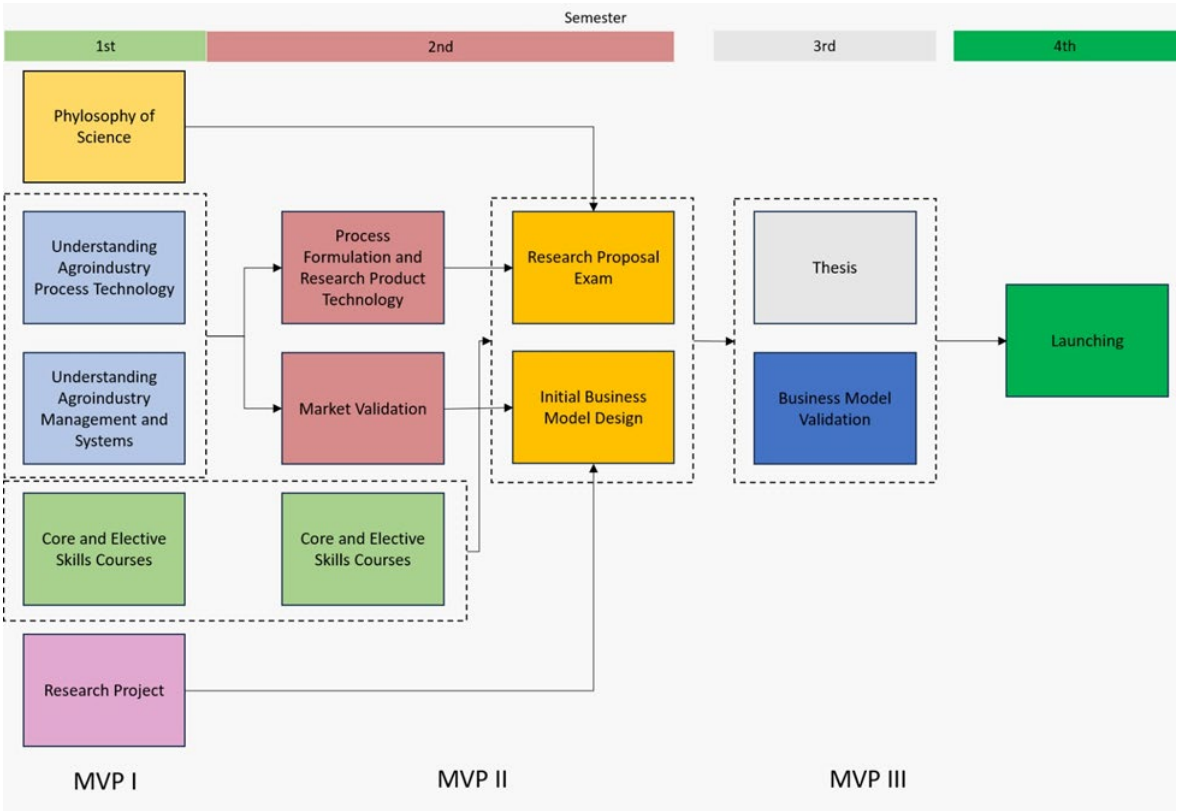


Source: UNPAD Self-Assessment Report

Master Agriculture-Industrial Technology

PROGRAM LEARNING OUTCOMES		
1. Attitude (S)	**S1**	Having a Digital Mindset in product and business development that has an impact and is sustainable in the form of a sustainable business model
2. Knowledge Mastery (PP)	**PP1**	Understand process technology in creating agro-industrial products and/or systems as products that are accepted by the market and able to design innovative business models
3. General Skills (KK)	**KU1**	Able to develop agro-industrial products based on validated market research
4. Special Skills (SS)	**KK1**	Able to design and validate agro-industrial products needed by consumers as a solution to consumer problems
	KK2	Able to perform market validation on the design of Agro-industry products to be launched
	KK3	Able to design a business model that accompanies product innovation to ensure that the business runs and or is commercialized with industry or investors

The following curriculum is presented for the study program in Master Agriculture-Industrial Technology**:**



Source: UNPAD Self-Assessment Report