



ASIIN Seal Accreditation Report

***Ba Pharmacy
Pharmacist Professional Programme
Ma Pharmacy
Ma Clinical Pharmacy
Doctoral Programme Pharmacy***

Provided by:
Faculty of Pharmacy, University Padjadjaran

Version: 17 March 2022

Table of Content

A About the Accreditation Process.....	3
B Characteristics of the Degree Programmes	5
C Peer Report for the ASIIN Seal	10
1. The Degree Programme: Concept, content & implementation	10
2. The degree programme: structures, methods and implementation.....	29
3. Exams: System, concept and organisation.....	37
4. Resources	39
5. Transparency and documentation.....	43
6. Quality management: quality assessment and development	45
D Additional ASIIN Criteria for structured Doctoral Programmes	49
E Additional Documents	56
F Comment of the Higher Education Institution (31.01.2022)	57
G Summary: Peer recommendations (15.02.2022)	64
H Comment of the Technical Committees (04.03.2022).....	67
Technical Committee 09 – Chemistry, Pharmacy (01.03.2022)	67
Technical Committee 10 – Life Sciences (04.03.2022)	68
I Decision of the Accreditation Commission (17.03.2022)	69
Appendix: Programme Learning Outcomes and Curricula	72

A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for ¹	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC) ²
Program Studi Sarjana Farmasi	Bachelor Programme in Pharmacy	ASIIN	LAM PTKes, valid until 09/2022	09, 10
Program Studi Profesi Apoteker	Pharmacist Professional Programme	ASIIN	LAM PTKes, valid until 07/2022	09, 10
Program Studi Magister Farmasi	Master Programme in Pharmacy	ASIIN	LAM PTKes, valid until 11/2022	09, 10
Program Studi Magister Farmasi Klinik	Master Programme in Clinical Pharmacy	ASIIN	LAM PTKes, valid until 12/2022	09, 10
Program Studi Doktor Farmasi	Doctoral Programme in Pharmacy	ASIIN	LAM PTKes, valid until: 12/2022	09, 10
<p>Date of the contract: 17.10.2020</p> <p>Submission of the final version of the self-assessment report: 30.09.2021</p> <p>Date of the online audit: 16. - 18.11.2021</p> <p>at: Faculty of Pharmacy, Universitas Padjadjaran, Bandung, Indonesia</p>				
<p>Peer panel:</p> <p>Prof. Dr. Gert Fricker, University of Heidelberg</p> <p>Prof. Dr. Helmy Yusuf, Universitas Airlangga</p>				

¹ ASIIN Seal for degree programmes

² TC: Technical Committee for the following subject areas: TC 09 – Chemistry, Pharmacy, TC 10 – Life Sciences

Istiffa Nurfauziah, Novartis Indonesia Angela Arkandhi, student, Universitas Gadjah Mada	
Representative of the ASIIN headquarter: Rainer Arnold	
Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used: European Standards and Guidelines as of 15.05.2015 ASIIN General Criteria, as of 10.12.2015	

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF ³	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Bachelor Programme in Pharmacy	Sarjana Farmasi / Bachelor in Pharmacy		Level 6	Full time	No	8 Semester	144 SKS / 247 ECTS	Fall Semester, 1959
Pharmacist Professional Programme	Apoteker / Pharmacist		Level 6	Full time	No	2 Semester	39 SKS / 59 ECTS	Fall Semester, 1959
Master Programme in Pharmacy	Magister Farmasi / Master in Pharmacy	Pharmaceutics and Pharmaceutical Technology Pharmaceutical Analysis and Medicinal Chemistry Pharmacology Pharmaceutical Biology	Level 7	Full time	No	4 Semester	42 SKS / 125 ECTS	Fall Semester, 2011

³ EQF = The European Qualifications Framework for lifelong learning

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF ³	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Master Programme in Clinical Pharmacy	Magister Farmasi Klinik / Master in Clinical Pharmacy	Clinical Pharmacy Clinical Biochemistry	Level 7	Full time	No	4 Semester	clinical pharmacy 44 SKS / 123 ECTS clinical biochemistry 47 SKS / 124 ECTS	Fall Semester, 2016
Doctoral Program in Pharmacy	Doktor Farmasi / Doctor in Pharmacy		Level 8	Full time	No	6 Semester	42 SKS / 187 ECTS	Fall Semester, 2016

For the Bachelor's programme Pharmacy, the Faculty of Pharmacy University of Padjadjaran has presented the following profile in their Self-Assessment Report:

The objectives of Bachelor's programme Pharmacy are to develop students who are able to:

1. Identify problems concerning drugs and its alternative solutions.
2. Carry out the pharmaceutical practice based on standard procedure.
3. Prepare the dispensing of pharmaceutical dosage forms based on standard procedure.
4. Apply pharmaceutical science and technology in preparing and assuring the quality of pharmaceutical dosage forms.
5. Search and provide the information on drug and medications.
6. Communicate and develop interpersonal relationships.
7. Develop the leadership and management.
8. Behave with responsibility in behavior according to law and pharmaceutical ethics.
9. Comprehend the application of research and technology, as well as ability in self-development.

For the Pharmacist Professional programme, the Faculty of Pharmacy University of Padjadjaran has presented the following profile in their Self-Assessment Report:

Objectives for Pharmacist Professional programme are:

1. Produce graduates who are capable of becoming professionals and in charge of production in the pharmaceutical industry by applying cGMP (current Good Manufacturing Product).
2. Produce graduates who are able to become professionals and those in charge of quality control in the pharmaceutical industry by applying cGMP.
3. Produce graduates who are able to become professionals and those who are responsible for quality assurance in the pharmaceutical industry by applying cGMP.
4. Produce graduates who are capable of becoming professional staff and in charge of distribution in PBF raw materials and pharmaceutical preparations by implementing good distribution practice (GDP).
5. Produce graduates who are able to carry out pharmaceutical practices and services based on patient-oriented principles according to service standards in pharmacist,

and are able to become managers / leaders and manage pharmacies in accordance with management and business principles.

6. Produce graduates who are able to practice and provide pharmaceutical services (care giver) based on patient-oriented principles according to hospital service standards, and are able to lead and manage according to the hospital's vision and mission.
7. Produce graduates who are able to work as health professionals / state apparatus in government (National Food and Drug Agency (BPOM) / Ministry of Health or Health Service).
8. Produce graduates capable of working in the field of Research and Development in the pharmaceutical industry, research institutes, testing laboratory and educational institutions.
9. Produce graduates who are able to interact and communicate with other health professionals in a professional manner in providing health services.

For the Master's programme Pharmacy, the Faculty of Pharmacy University of Padjadjaran has presented the following profile in their Self-Assessment Report:

The objectives consist of:

1. Creating competent academicians in the field of pharmacy with RESPECT characteristics (Responsible, Excellent, Scientific Rigor, Professional, Encouraging, Creative and Trust) and uphold the nobility of Sundanese culture and national culture in the diversity of world cultures. Realizing the management of the Master Program in Pharmacy, which is professional, accountable and has an excellent reputation in the region.
2. Increasing the capacity of excellent research and innovation in the pharmaceutical field based on the Principal Scientific Pattern (Pola Ilmiah Pokok (PIP)) of UNPAD.
3. Realizing service/community service by utilizing research results in the pharmaceutical field.
4. Realizing mutual benefit in the pharmaceutical field through the Penta helix concept.

For the Master's programme Clinical Pharmacy, the Faculty of Pharmacy University of Padjadjaran has presented the following profile in their Self-Assessment Report:

The objectives of this programme are:

1. Produce graduates that competence in clinical pharmacy with respect the characteristics of National culture in the world cultural diversity.
2. Increase the research-based learning quality according to Universitas Padjadjaran Principal Scientific Pattern (PIP) and local wisdom.
3. Increase the quality of scientific publication, innovative product and policy in the field of clinical pharmacy.
4. Able to conduct academic studies, research and innovation, and solving problems in the relevant community or pharmaceutical service through developing their knowledge and expertise, especially in the field of clinical pharmacy.
5. Enhance the role of clinical pharmacists in strategic collaboration (academic, investor, government, community and media) for better community wellness.

For the Doctoral programme Pharmacy, the Faculty of Pharmacy University of Padjadjaran has presented the following profile in their Self-Assessment Report:

The objectives consist of:

1. Produce doctoral graduates who are competent in the fields of pharmaceuticals and pharmaceutical technology, pharmaceutical analysis and medicinal chemistry, pharmaceutical biology, and pharmacology, with RESPECT (Responsible, Excellent, Scientific Rigor, Professional, Encouraging, Creative and Trust) characters and uphold the nobility of Sundanese culture and national culture in the world cultural diversity.
2. Realizing a professional, accountable and reputable Doctor of Pharmacy Study Program management in the region.
3. Increase the capacity for superior research and innovation in the pharmaceutical field based on the UNPAD Principal Scientific Pattern (PIP).
4. Realizing service/community service by utilizing the results of superior research and innovation in the pharmaceutical field.
5. Realizing the down streaming of superior research and innovation results in the pharmaceutical sector through Penta helix cooperation.

C Peer Report for the ASIIN Seal

1. The Degree Programme: Concept, content & implementation

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

Evidence:

- Self-Assessment Report
- Discussions during the audit
- Study plans
- Module descriptions
- Homepage UNPAD: <https://www.unpad.ac.id/en/>
- Homepage Faculty of Pharmacy: <https://farmasi.unpad.ac.id/en/home-2/>
- Homepage Bachelor's programme Pharmacy: <https://farmasi.unpad.ac.id/en/study-program/bachelor-program-in-pharmacy/>
- Homepage Pharmacist Professional programme: <https://farmasi.unpad.ac.id/en/study-program/pharmacy-professional-program/>
- Homepage Master's programme Pharmacy: <https://farmasi.unpad.ac.id/en/study-program/master-of-pharmacy/>
- Homepage Master's programme Clinical Pharmacy: <https://farmasi.unpad.ac.id/en/study-program/masters-in-clinical-pharmacy/>
- Homepage Doctoral programme Pharmacy: <https://farmasi.unpad.ac.id/en/study-program/doctor-of-pharmacy-2/>

Preliminary assessment and analysis of the peers:

According to the Self-Assessment Report, the objective of the Bachelor's programme Pharmacy is to impart the essential competencies in pharmaceutical sciences including physical, chemical, and biological pharmacy, and pharmaceutical technology, as well as pharmacology. This includes the acquisition of basic physical, chemical, biological, and mathematical skills. Moreover, students learn practical pharmaceutical work in the lab and the apothecary and should be familiar with the safe handling of chemicals and pharmaceuticals.

In addition to the subject-related qualification objectives, graduates should also be capable of working autonomously as well as in a team-oriented manner during their studies and be able to conduct research activities. Furthermore, they should be able to solve subject-relevant problems, to present the results, and have an awareness of possible social and ethical effects of their actions. During the course of their studies, the students should also acquire communicative skills, learn to work in a team and develop a strategy for life-long learning.

As such, graduates of the programme should be able to:

- Identify problems concerning drugs and its alternative solutions.
- Carry out the pharmaceutical practice based on standard procedures.
- Prepare the dispensing of pharmaceutical dosage forms based on standard procedures.
- Apply pharmaceutical science and technology in preparing and assuring the quality of pharmaceutical dosage forms.
- Search and provide the information on drug and medications.
- Communicate and develop interpersonal relationships.
- Develop the leadership and management skills.
- Behave with responsibility according to law and pharmaceutical ethics.
- Comprehend the application of research and technology.

The vast majority of the graduates directly continues their academic studies to obtain a professional degree as a pharmacist (apothecary) before applying for a job. Nevertheless, there are some job opportunities graduates of the Bachelor's programme. They can work in the pharmaceutical industry, biotechnology companies, hospitals and community pharmacies, as manager and analyst in medical laboratories or public institutions.

The overall goal of the Bachelor's programme Pharmacy is to educate general pharmacists that can work in different areas (hospitals, pharmacies, pharmaceutical companies, and health administration) after graduation.

Graduates of the Pharmacist Professional programme should acquire the necessary competencies as required by the "seven-star plus" role of the pharmacist as defined by the World Health Organisation (WHO) and the International Pharmaceutical Federation (FIP). The so called the "Seven-Star Pharmacist" should be able to work as a caregiver, communicator, decision-maker, teacher, lifelong learner, leader, manager, as well as researcher: and Teamwork abilities, personal/professional responsibilities. The

1. Caregiver: Pharmacists provide care services. They must assume that their practice is continuously integrated with the health care system and other health professionals. The service must be of the highest quality. Pharmacists in hospitals perform this role.
2. Communicator: Pharmacists are in an ideal position to explain prescriptions to patients, and to communicate information about health and medicines to the public. He or she must be knowledgeable and confident when interacting with other health professionals and the public. Communication involves verbal, non-verbal, listening, and writing skills. This role needs to be mastered by pharmacists who work in pharmacies and hospitals.
3. Decision-maker: The use of appropriate, efficacious, safe, and cost-effective resources (for example, labour, drugs, chemicals, equipment, procedures, practices) should form the basis of pharmacist work. At the local and national levels, pharmacists play a role in setting drug policies. Achieving this goal requires the ability to evaluate, collate data and information and decide on the most appropriate course of action.
4. Teacher: Pharmacists have a responsibility to assist in the education and training of future generations of pharmacists and the general public. Participating as a teacher not only imparts knowledge to others but also offers practitioners the opportunity to acquire new knowledge and to prepare existing skills.
5. Live long learner: In pharmacy school, it is not possible to acquire all the knowledge and experience necessary to pursue a lifetime career as a pharmacist. Concepts, principles, and a commitment to life-long learning must begin in pharmacy and should be supported throughout the pharmacist's career. Pharmacists must learn how to keep their knowledge and skills up to date.
6. Leader: In a multidisciplinary, caring area where healthcare providers are minimal or non-existent, pharmacists are required to position themselves as leaders in the well-being of all patients and society. This leadership includes compassion and empathy as well as the vision and ability to make decisions, communicate, and organize effectively. This profile can be applied in various fields where the pharmaceutical profession is carried out, such as government, pharmacies, hospitals, the pharmaceutical industry, distribution, and others.
7. Manager: Pharmacists must be able to manage resources (human, physical, and financial) and information effectively. They must also be willing to be managed by others, whether by an employer, a manager, or a health care team leader. More information and related technology will present challenges as pharmacists, taking greater responsibility to share information about medicines and related products and ensure their quality. This is done in all places of work of the pharmaceutical profession.

8. Researcher: Pharmacists must be able to use evidence base (e.g. science, pharmaceutical practice, health system) effectively to advice about the rational use of drugs. Pharmacists can also contribute to the evidence base to optimize patient care and outcomes. As researchers, pharmacists can improve health accessibility and provide drug information to the public and other health professionals.

There are four areas of specialisation (concentrations) in the Master's programme Pharmacy: Pharmaceutics and Pharmaceutical Technology, Pharmaceutical Analysis and Medicinal Chemistry, Pharmacology, and Pharmaceutical Biology. The objectives for each concentration are defined in the Self-Assessment Report.

Graduates of the Pharmaceutical Analysis and Medicinal Chemistry concentration should be able to:

- carry out drug research and development in the context of drug discovery and product development,
- list and explain the physicochemical properties of solute and solvent that affect solubility, stability, and other bio pharmaceutical properties in drug dosage forms development,
- explain important factors for design, development and evaluation of different dosage form and drug delivery system,
- present, interpret and analyse data,
- carry out quality assurance tests for drug dosage form,
- develop, validate, and apply different instrumental analytical technique in drug analysis on various drug dosage forms,
- characterise and evaluate the physicochemical properties of pharmaceutical ingredients,
- implement their knowledge in the teaching and learning process in higher education in the field of pharmaceutical analysis and medicinal chemistry,
- present information orally, persuasively yet in a logical manner using documentations and supporting tools,
- contribute in individual or group projects,
- communicate scientific information effectively both orally and in writing in seminars / conferences or scientific journals to inform and educate professional colleagues and peer reviews.

Graduates of the Pharmaceutics and Pharmaceutical Technology concentration should be able to:

- develop an understanding of knowledge about basic concepts in pharmaceutical science, especially in the manufacture of pharmaceutical products / industry,
- list and explain the physicochemical properties of solute and solvent that affect solubility, stability, and other bio-pharmaceutical properties in drug dosage forms development of drugs, herbal medicine & supplement, and cosmetics,
- explain important factors for design, development and evaluation of different dosage form and drug delivery system,
- develop, validate, and apply different instrumental analytical technique in drug analysis on various drug dosage forms,
- identify and elaborate drug absorption, distribution, metabolism and excretion principles along with factors that influence the process,
- integrate advanced knowledge and concepts in pharmaceutical science, especially pharmaceutics and pharmaceutical technology,
- analyse and interpret data,
- explain critical factors in designing, production and evaluation various drug dosage forms and other drug delivery systems,
- characterize and evaluate physicochemical properties of pharmaceutical ingredients,
- develop group dynamics and teamwork skills in the field of pharmaceutics and pharmaceutical technology,
- contribute in individual or group projects,
- summarise information and communicate its development obtained from group experience,
- communicate scientific information effectively both orally and in writing in seminars / conferences or scientific journals to inform and educate professional colleagues and peer reviews,
- collect, analyse, and interpret scientific literature and disseminated the information orally or in writing,
- present information orally, persuasively yet in a logical manner using documentations and supporting tools.

Graduates of the Pharmaceutical Biology concentration should be able to:

- carry out drug research and development in the context of drug discovery and product development,
- explain the physicochemical properties of solute and solvent that affect solubility, stability, and other bio-pharmaceutical properties in drug dosage forms development of herbal medicine,
- explain and apply mechanism of certain drug in molecular and cellular level,
- present, interpret, and analyse data,
- apply different instrumental analytical techniques in herbal drug analysis for drug's pharmacological effect evaluation,
- design, produce, and evaluate different herbal dosage forms and its delivery system,
- integrate advanced knowledge and concepts in pharmaceutical science, especially pharmacy biology,
- characterise and evaluate physicochemical properties of active compound from natural products,
- apply different separation techniques from natural products for isolation of marker and active compounds,
- develop group dynamics and teamwork skills in the field of pharmaceutical biology,
- contribute in individual or group projects,
- summarise information and communicate its development obtained from group experience,
- communicate scientific information effectively both orally and in writing in seminars / conferences or scientific journals to inform and educate professional colleagues and peer reviews,
- collect, analyse, and interpret scientific literature and disseminated the information orally or in writing,
- present information orally, persuasively yet in a logical manner using documentations and supporting tools.

Graduates of the Pharmacology concentration should be able to:

- carry out drug research and development in the context of drug discovery and product development,

- list and explain the psychochemical properties of solute and solvent that affect solubility, stability, and other bio pharmaceutical properties in drug dosage forms development,
- explain and apply mechanism of certain drug in molecular, cellular, and organ systems,
- analyse and interpret data,
- apply different instrumental analytical techniques in drug analysis for drug's pharmacological effect evaluation,
- asses and evaluate therapy outcome based on knowledge how drug enter to targeting receptors,
- apply pharmacokinetic knowledge and processes and principles of pharmacodynamics to discuss therapeutic and toxic outcomes of medicinal compounds,
- apply pharmacokinetic processes related to absorption, distribution, metabolism, and drug excretion,
- evaluate the impact of pharmacokinetic processes of drug action,
- use pharmacodynamics principles to discuss drug action mechanisms and clinical outcomes,
- analyse, interpret, and criticise scientific literature in the field of pharmacology,
- resent information orally, persuasively yet in a logical manner using documentation and supporting tools,
- contribute both in individual or group projects,
- do literature study independently using databases and publications related to pharmacology to solve problems in pharmacology,
- communicate scientific information effectively both orally and in writing in seminars / conferences or scientific journals to inform and educate professional colleagues and peer reviews,
- analyse, interpret, and criticise study design, data interpretation, and conclusions of scientific literature,
- collect, analyse, and interpret scientific literature and disseminate the information orally or in writing.

The qualification objectives of the Master's programme Clinical Pharmacy include the acquisition of advanced theoretical and practical pharmaceutical skills, especially an in-depth

knowledge of clinical pharmacy or clinical biochemistry. Students in this programme can choose between a specialisation either in clinical pharmacy or in clinical biochemistry. In addition, students should learn to apply their competences in hospitals and are able to carry out independent research activities. Graduates of the programme should be prepared to provide rational drug therapy, deliver patient-centred care, and be able to communicate professionally with patients. The latter is necessary for establishing an appropriate patient–pharmacist communication, which is essential for preventing misunderstandings and/or medication errors. According to the Self-Assessment Report, the Master’s programme Clinical Pharmacy to create graduates who are able to provide professional clinical pharmacy care in hospitals or other health care institutions by implementing the rational use of medicines.

To this end, graduates of the Clinical Pharmacy programme should be able to:

- develop logical, critical, systematic, and creative thinking in pharmaceutical science and technology through scientific research and compile scientific conceptions from the results of studies based on scientific principles, procedures and ethics in the form of theses that are disseminated in scientific meetings, both national and international and / or published at least in an accredited national journal or international journal,
- conduct academic studies or studies according to their field of expertise in the field of clinical pharmacy in solving problems in the relevant community or industry through developing their knowledge and expertise, especially in the field of clinical pharmacy/clinical biochemistry,
- compile and communicate ideas, results of thought and scientific arguments responsibly and based on academic ethics through the media to the academic community and the wider community,
- identify scientific fields that are the object of research and position them into a research map developed through an interdisciplinary or multidisciplinary approach, especially in clinical pharmacy/clinical biochemistry,
- make decisions in the context of solving problems of developing science, knowledge and technology, especially in the field of clinical pharmacy, based on analytical or experimental studies of information and data,
- manage, develop, and maintain a network of colleagues, colleagues within institutions and the broader research community,
- increase the capacity of learning independently, especially in the field of clinical pharmacy/clinical biochemistry,

- document, store, secure, and rediscover research data in order to ensure validity and prevent plagiarism.

In addition to the subject-related qualification objectives, students of both Master's programmes should be capable of working autonomously as well as in a team-oriented manner, and be able to conduct research activities. Furthermore, they should be able to solve subject-relevant problems, present their results, and have an awareness of possible social and ethical effects of their actions. During the course of their studies, the students should acquire communicative and language skills, and develop a strategy for life-long learning.

The primary goal of the Doctoral programme Pharmacy is to make students familiar with the newest findings in pharmaceutical sciences that are significant for independent scientific-research work and for further improvement in these areas. Students of the Doctoral programme should master experimental and analytical science methods and expand their knowledge in specific areas of pharmacy. The goals include gaining of scientific abilities and academic skills, development of creative and communicative skills and mastering specific practical skills that are needed for future development in the career.

Moreover, they should gain theoretical knowledge and skills that are necessary for independent scientific-research work. This includes participating in scientific-research projects, following and critically evaluating scientific literature and articles, communicating with researchers in the country and worldwide, and participating in the scientific-research processes.

The auditors hold the view that the objectives and intended learning outcomes of all degree programmes under review are reasonable and well founded. They are convinced that the intended profiles of all programmes allow students to take up an occupation that corresponds to their qualification. The degree programmes are designed in such a way that they meet the objectives set for them and the peers judge the objectives and learning outcomes of the degree programmes suitable to reflect the intended level of academic qualification.

Criterion 1.2 Name of the degree programme

Evidence:

- Self-Assessment Report
- Discussions during the audit
- Study plans

Preliminary assessment and analysis of the peers:

With regard to the title of all programmes under review, the auditors hold the opinion that the English translation and the original Indonesian names correspond with the intended aims and learning outcomes as well as the main course language.

The degree awarded for the Bachelor's programme is Bachelor of Science (Sarjana Farmasi, S.Farm.); for the Pharmacist Professional programme, the degree Pharmacist (Apoteker) is awarded.

The degrees awarded for the Master's and Doctoral programmes in Pharmacy are Master of Science (Magister Farmasi, M. Farm.) and respectively Doctor in Pharmacy (Doktor Farmasi).

Criterion 1.3 Curriculum

Evidence:

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

Preliminary assessment and analysis of the peers:

The curriculum of the Bachelor's programme Pharmacy is aligned with the National Standard for Higher Education (Standar Nasional Perguruan Tinggi, SNPT) and the Association of Indonesian Pharmacy Higher Education Institutions (APTFI). The pharmacy undergraduate programme, which is offered by the Faculty of Pharmacy, is a full-time programme and divided into two stages: Bachelor stage (four years) and Professional stage (one year). In order to be able to work as a pharmacist, it is necessary for Bachelor's graduates to continue their education in the Pharmacist Professional programme.

The Bachelor's programme Pharmacy comprises 100 courses and 144 Indonesian credit points (SKS), while the Pharmacist Professional programme comprises 12 courses with 39 SKS. The Bachelor's programme Pharmacy is designed for eight semester but can be completed in seven semesters and a maximum of fourteen semesters. The courses in the first two semesters convey basic knowledge of natural sciences, mathematics, and languages (Indonesian and English). Courses on the different pharmaceutical sciences are offered from the third to the sixth semester. During the sixth semester, students must complete

the Community Service and in the eighth semester the Bachelor's thesis. The thesis comprises 6 SKS and includes the Research Proposal Seminar (2 SKS), the Seminar on Thesis Result (2 SKS), and the Bachelor's defence (2 SKS).

Usually during the last year of studies, Bachelor's students must complete the community service. The peers discuss with the programme coordinators about the content and goal of this course. The programme coordinators explain that community service is compulsory for all Indonesian students. It has a minimum length of eight weeks and often take place in villages or rural areas where students stay and live together with the local people. The course is designed "to allow students to apply their knowledge based on their field in order to empower society." Since the community service usually takes place in remote areas, the students cannot attend any classes during this time. The students work in interdisciplinary teams during the community service in order to advance the society and bring further development about. This course was introduced at all Indonesian Universities in 1971. The assessment of the community service consists of a work plan, programme implementation, and activity report. The peers understand that students should work for the benefit of the community and the Indonesian society during the community service and support this concept.

The Pharmacist Professional programme is usually completed in one year or two semesters with a total of 39 SKS. Students attend classes with a specific relevance towards their career as apothecaries like accounting, management of quality and production and drugs and medical devices.

In addition, students are required to complete an internship in the ninth and tenth semester in government institutions, community pharmacies, hospitals, or pharmaceutical industries for two to three months. The Faculty of Pharmacy cooperates with companies, hospitals and apothecaries so that the students can find suitable places for their internship there. The internship must be done outside the university; the students are not paid for it.

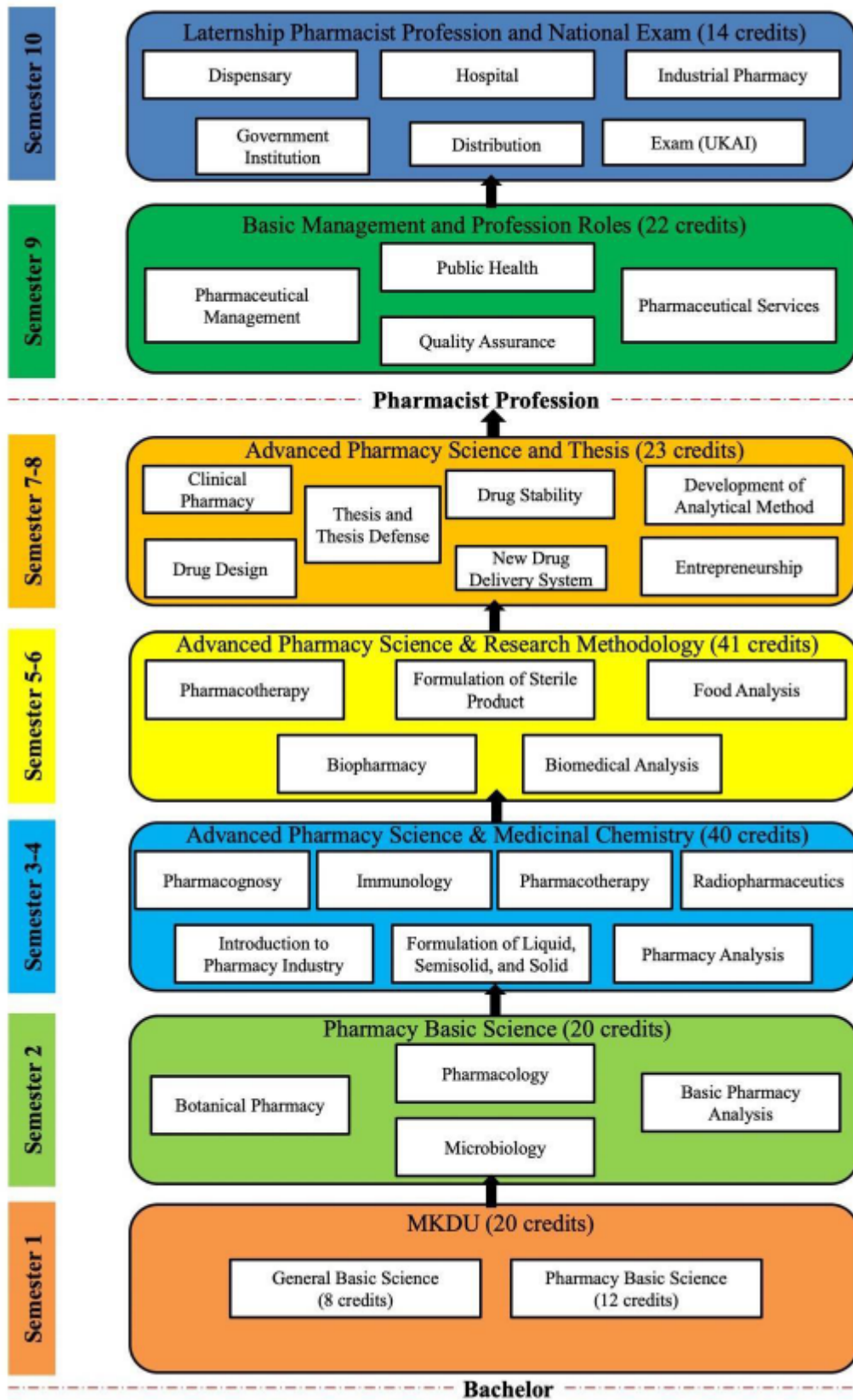
In 2021/22, a new curriculum was implemented for the Pharmacist Professional programme. The new curriculum refers to the adjusted competency standards of Indonesian pharmacists and their request to increase the amount and length of the internships. In the first semester, lectures in the form of case studies from academic lecturers and practitioners are offered (11 SKS). The internships take place in the second semester (24 SKS) and in addition, students have to take three exams at the end of their studies: "Computer Based Test" (1 SKS), "Laboratory Skill and OSCE" (2 SKS), and "Pharmacist Comprehension Exam" (1 SKS). In the new curriculum, the percentage of practical work is much higher than in the previous curriculum. However, the peers suggest to offering some common classes in the

Pharmacist Professional programme within the first month and then conduct the internships. The case studies could be combined with the internships.

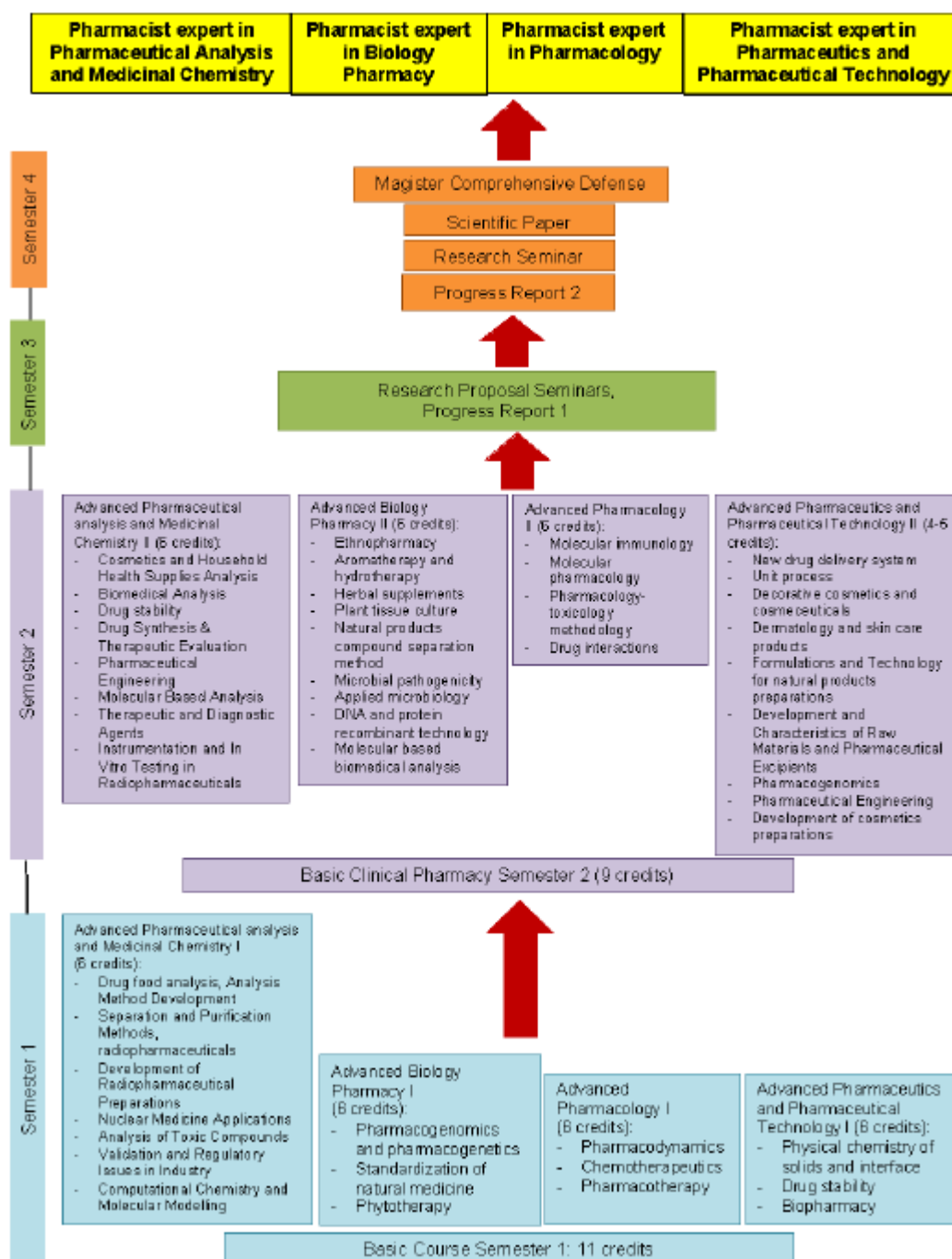
In addition, the employers point out that drug registration is the spearhead of new product launches. For this reason, they recommend including regulatory affairs (product registration and clinical trials) as a topic in the curriculum of the Pharmacist Professional programme. The peers strongly support this proposal.

The professional degree is awarded after passing the nationwide state exam for apothecaries. Without completing this final exam, the students are not allowed to work as apothecaries, which is a protected profession in Indonesia.

The curricular structure of the Bachelor's and the subsequent Professional stage are depicted in the following diagram:



The Master's programme Pharmacy encompasses 42 SKS and offers four areas of specialisation: Pharmaceutics and Pharmaceutical Technology, Pharmaceutical Analysis and Medicinal Chemistry, Pharmacology, and Pharmaceutical Biology. The curricular structure is depicted in the following diagram:



Students have to complete 42-43 SKS for each field, divided into compulsory courses (30 SKS) and elective courses (12-13 SKS). To finish the Master' programme in Pharmacy, students must take courses in basic sciences in the first semester (11 SKS), practicing basic

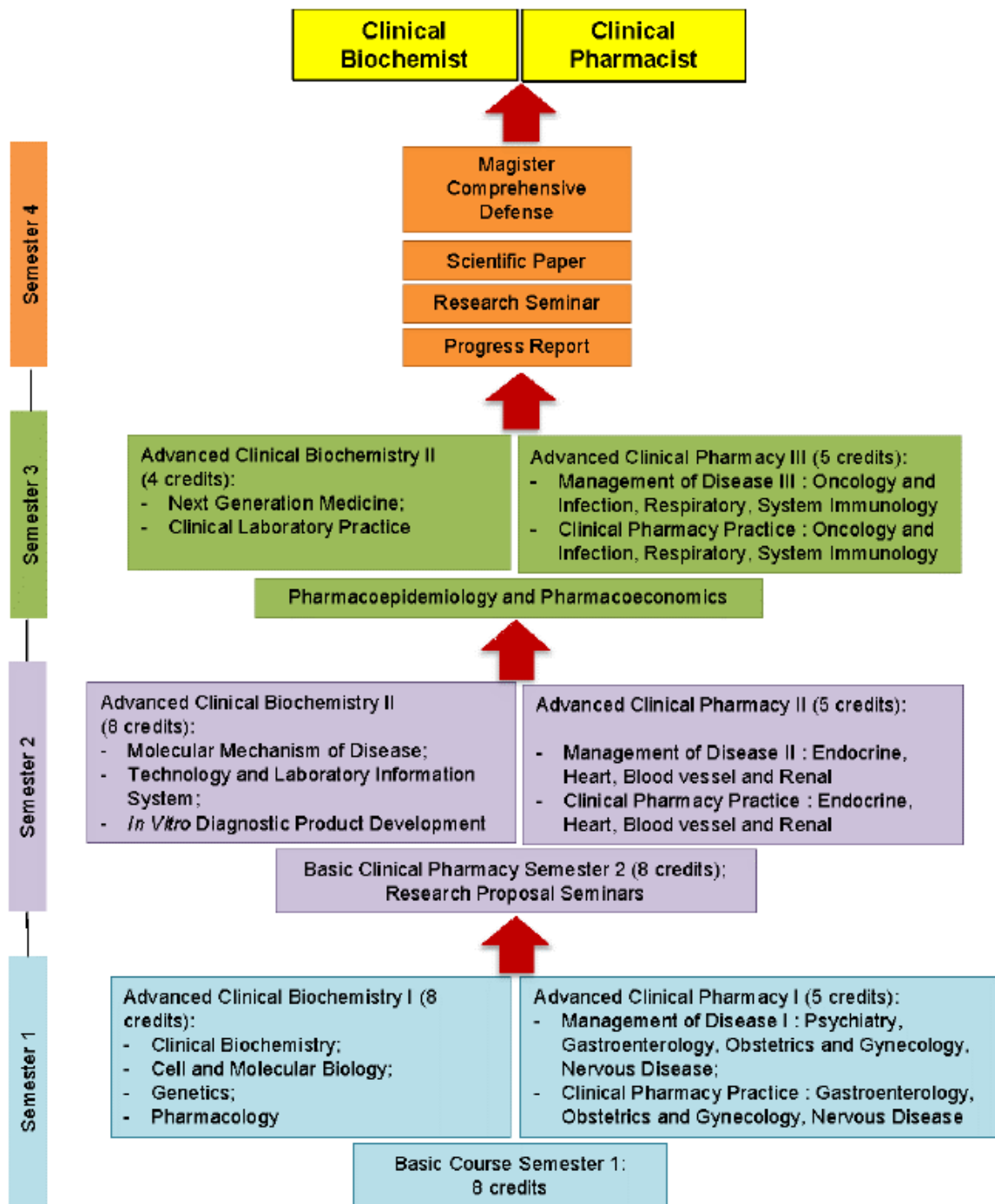
pharmaceutical sciences through case-based learning in the second semester (9 SKS). Besides that, students are free to choose additional courses in advanced pharmaceutical sciences related to each concentration. In the third and fourth semester, students will have to conduct their research activities, while guided by an advisor. Finally, they will have to pass the “Magister Comprehensive Defense”.

The Master’s programme Clinical Pharmacy encompasses two areas of specialisation: Clinical Pharmacy (44 SKS) and Clinical Biochemistry (47 SKS). The curriculum includes 18 - 20 SKS for compulsory courses, 15 - 16 SKS for elective courses, and 11 SKS for the Master’s thesis (research proposal seminar, progress report, research result seminar, comprehensive defence, and scientific paper).

Courses in the concentration of Clinical Pharmacy focus on treatment of patients and interaction with other medical professionals in hospitals, while courses in the Clinical Biochemistry concentration focus on laboratory work.

It is also worth mentioning that the Faculty of Pharmacy has a collaboration with PT. Prodia Widyahusada (a private clinical laboratory company). Employees from PT Prodia join UNPAD to receive their Master’s or PhD degree and students from UNPAD can use the laboratory facilities of PT Prodia e.g. for conducting their research activities. Until last year, the Master’s programme Clinical Pharmacy was open exclusively for employees of PT Prodia, but now it is open for all applicants. PT Prodia provides scholarships for their staff to receive Master's and Doctoral degrees at UNPAD.

The curricular structure is depicted in the following diagram:



With regard to the structure of the Master's programmes, the peers see that it is unusual and also disadvantageous for students if they have to decide on a specific concentration and enrol for it before they start their studies.

Usually, general in-depth or broadening courses are offered in the first semester of a Master's programme. In the second and third semesters, the focus is then on the respective

specialisations, which could be offered as elective blocks, for example. The last semester should then be reserved for the completion of the Master's thesis.

During the audit, the peers learn that UNPAD will offer 10 concentrations in the Master's programme Pharmacy from next semester. They hope to attract more students by a more specialised curriculum. The Faculty of Pharmacy also talked to their partners from the industry about these plans, who stated that there is demand for graduates from the new concentrations. However, with only 20 new students in the Master's programme Pharmacy, it is very ambitious offering so many concentrations. This will result in a high teaching load and only a few students in each concentration. The peers consider it much more useful to offer electives courses from different areas and to leave it to the students to decide what focus they prefer.

In addition, the peers point out that it is very unusual to award different SKS and ECTS points for different concentrations in the same degree programme. This issue refers to the Master's programme Clinical Pharmacy, where students in the clinical concentration have to take 44 SKS (123 ECTS) and in the biochemistry concentration 47 SKS (124 ECTS). Therefore, the peers suggest awarding the same amount of credits for all concentrations.

The Doctoral programme lasts for three years, and students gain 42 SKS. The study programme includes compulsory theoretical subjects, and elective subjects in the area of the doctoral thesis to be completed, as well as scientific research in scientific areas of the studies. The doctoral thesis is the final part of the study programme.

The peers gain the impression that the graduates of all degree programmes under review are well prepared for entering the labour market and can find adequate jobs in Indonesia. During the discussion with the peers, UNPAD's partner from the industry/public sector confirm that the graduates have a broad scientific education, are very adaptable, and have manifold competences which allow them to find adequate jobs.

In summary, the auditors are convinced that the intended qualifications profiles of all degree programmes under review allow the students to take up an occupation that corresponds to their qualification profile.

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Report
- UNPAD Admission Guide
- Homepage UNPAD: <https://www.unpad.ac.id/en/>

- Discussions during the audit

Preliminary assessment and analysis of the peers:

According to the Self-Assessment Report, the admission procedures and policies for new students follow the National Regulation No.5, 2020. The requirements, schedule, registration venue, and selection test are announced on UNPAD's webpage and thus accessible for all stakeholders.

There are three different ways by which students can be admitted to a Bachelor's programme at UNPAD:

1. National Entrance Selection of State Universities (Seleksi Nasional Masuk Perguruan Tinggi Negeri, SNMPTN), a national admission system, which is based on the academic performance during the high school (20 % of the students at UNPAD are admitted through this selection system).
2. Joint Entrance Selection of State Universities (Seleksi Bersama Masuk Perguruan Tinggi Negeri, SBMPTN). This national selection test is held every year for university candidates. It is a nationwide written test (subjects: mathematics, Bahasa Indonesia, English, physics, chemistry, biology, economics, history, sociology, and geography). It accounts for 30 % of the admitted students at UNPAD.
3. Written Test (Ujian Tulis), students are selected based on a written test (similar to SBMPTN) specifically held by UNPAD (50 % of the students at UNPAD are admitted through this test).

For enrolling in the Pharmacist Professional programme, students need to have an undergraduate degree in pharmacy. After registration, applicants have to pass an admission exam conducted by UNPAD. The admission is granted based on the results in the entrance exam.

Students can apply online at UNPAD for admission to the Master's programmes. Candidates are required to have a pharmacist license or a Bachelor's degree in pharmacy, with a GPA of ≥ 2.75 , and to go through an interview process at UNPAD.

In addition, applicants need to submit a verification of English proficiency (e.g. TOEFL score ≥ 450) and of sufficient academic ability (e.g. Academic Potential Test (TKA) score ≥ 450).

For enrolling in the Doctoral programme, students need to have Master's degree and have to go through an interview process at UNPAD. In addition, applicants need to submit a verification of English proficiency (e.g. TOEFL score ≥ 500) and of sufficient academic ability (e.g. Academic Potential Test (TKA) score ≥ 500).

For the Master's programmes and the Doctoral programme, the applicants have to explain about their background, interests, and reasons for continuing their studies at UNPAD. In addition, they have to state their motivation and demonstrate their ability for time management, critical thinking, independence, and communication. Candidates with research experience have to provide samples of their research activities, while practitioners or professionals can describe their achievements in their field of occupation.

UNPAD has a guideline for conducting the admission interviews and the underlying criteria. The interviews are conducted by two persons. For the Master's programmes, one is the Head of the Department where the candidate applied and one is a lecturer with a minimum qualification of associate professor. For the Doctoral programme, one is the Head of the Department, where the candidate will do the research, and one is the prospective supervisor.

The schedule of admission, the requirements, and the procedures are published and can be accessed via UNPAD's homepage.

The peers see that the pharmacy programmes are very popular because the job perspectives are very good. In addition, there are a great many high school graduates in Indonesia and UNPAD is one of the most prestigious universities in the country. Consequently, UNPAD is able to only accept the very best candidates. From their discussion with the students, the peers gain the impression that the admission system is very effective and only very motivated and high-performing candidates are admitted. The peers consider the highly selected and dedicated students to be one of the strong points of the degree programmes under review.

In summary, the auditors find the terms of admission to be binding and transparent. They confirm that the admission requirements support the students in achieving the intended learning outcomes.

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

The peers thank UNPAD for explaining that in the first year of the Pharmacist Professional programme, there are two months of standard classes conducted in the form of case studies before students start the internships. However, the peers still think that it would be useful to offer some common classes (no case studies) in the professional programme within the first month and then conduct the internships. The case studies could be combined with the internships. In addition, UNPAD should think about teaching additional soft skills.

The peers acknowledge that regulatory affairs (product registration and clinical trials) are already included as a chapter in the industrial pharmacy course at weeks 14 and 15. In addition, regulatory affairs is taught by guest lectures from the practise. The peers are not convinced that this is sufficient. From their point of view it would be better to put even more emphasis on this subject, because the employers see that graduates have some deficits in this area. Moreover, the respective module description should make clear, that regulatory affairs is part of the course.

The peers understand that in the Master's programme, there are some general courses such as Philosophy of Science, Cell and Molecular Biology, Research Methodology, Biostatistics, for students of all concentrations besides specific courses related to their concentration in the first and second semester. Nevertheless, the peers are convinced that it would be more suitable to offer all the general courses in the first semester, before students decide on a specific concentration. This would also avoid the necessity to repeat some concentration-specific classes from the first or second semester if students change their concentration.

The peers consider criterion 1 to be mostly fulfilled.

2. The degree programme: structures, methods and implementation

Criterion 2.1 Structure and modules

Evidence:

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

Preliminary assessment and analysis of the peers:

The Bachelor's programme Pharmacy encompasses eight semesters with compulsory (including Community Service and Bachelor's thesis) and elective courses. Most of the Bachelor's students do not finish their academic education with the Bachelor's degree but continue to complete the Pharmacist Professional programme, which is designed for two se-

mesters. As a requirement for graduation, students must pass a national pharmacist competency exam in the form of an exit exam and are also obliged to take the formative national OSCE (Objective Structured Clinical Examination).

Students must complete at least 42 SKS for the Master programmes Pharmacy, which offers four areas of specialisation: pharmaceutical analysis and medicinal chemistry, pharmacology, pharmaceuticals and pharmaceutical technology, and pharmaceutical biology. All fields are divided into general and/or field compulsory courses and elective courses. In the first and second semester, students take courses relevant to their thesis subject and their concentration. In the third and fourth semester, students have to finish all courses related to their Master's thesis and have at least one scientific publication (accepted in national or international journal).

UNPAD should think about offering a curriculum where students register for the Master's programme Pharmacy and then decide after the first semester on a concentration, in the second and third semester it would be possible to offer electives according to the chosen concentration, the fourth semester should be dedicated to the Master's thesis

The Master's programme Clinical Pharmacy consists of two areas of specialisation: clinical pharmacy (44 SKS) and clinical biochemistry (47 SKS). Both fields are divided into general compulsory and elective courses. In the clinical pharmacy field, there are practical works in hospitals for three semesters that are divided into 13 stages. Practical work in clinical biochemistry is only in one semester and is divided into 3 topics. The students must complete all the courses and have at least one scientific publication (accepted in national or international journal) in order to graduate.

The curriculum of the Doctoral programme Pharmacy encompasses 42 SKS in the form of non-lecturing courses. It is mainly related to the student's research activities. The programme is designed for six semesters and must not take longer than a maximum of fourteen semesters. Doctoral students are not required to take a specific number of credits for certain courses, but are advised to take courses deemed necessary for completing their research activities in other programmes at or outside UNPAD. Students can graduate after finishing all credits and having at least one article published in a reputable international journal.

All courses taught in the pharmacy programmes are delivered in Bahasa Indonesia (Indonesian language) with the exception of the international class in the Bachelor's programme. The regular class of the Bachelor's programme Pharmacy is conducted in Indonesian, in addition an English class is offered. The courses for this class are conducted in English, and are offered for foreign students or Indonesian students who wish to attend the courses in English. However, most of the teaching materials (teaching slides) are provided in English

also in the regular classes. Sometimes parts of a lecture are held in English, for example if there is an international guest lecturer. Sometimes, even the whole course is offered in English in order for international student to attend the classes. Information about the curriculum is available for students in the digital academic information system and on the programme's homepage. The students confirm that some presentations are done in English, and English textbooks are used.

After analysing the module descriptions and the study plans the peers confirm that both degree programmes under review are divided into modules and that each module is a sum of coherent teaching and learning units. All working practice intervals (Community Service) and clinical internships are well integrated into the curriculum and the supervision by the Faculty of Pharmacy guarantees for their respective quality in terms of relevance, content, and structure.

In addition, the peers gain the impression that the choice of modules and the structure of the curriculum ensures that the intended learning outcomes of the respective degree programme can be achieved.

International Mobility

According to the opinion of the peer group, a critical aspect of the degree programmes under review is the limited academic mobility of the students. For example, only 4 – 5 Bachelor's or Master's students spend some time abroad each year, and only one doctoral student did so within the last three years. The programme coordinators admit that the number of students who participate in international exchange programmes is still low, despite students' high interest.

The peers discuss with UNPAD's management if there is a strategic concept to increase the international mobility of students and teachers. They learn that UNPAD supports students' academic mobility via the International Office Universitas Padjadjaran and the International Unit of the Faculty of Pharmacy. UNPAD offers scholarship for stays in the Europe (Erasmus Mundus, IFI-Campus France, and AMINEF/Fulbright).

In addition, the Indonesian government offers since 2021 the IISMA (International Student Mobility Awards) for students to study abroad, Moreover, two Bachelor's students from the pharmacy programme received this year scholarship for studying at University of Strathclyde, Glasgow and National Taiwan Normal University.

With respect to the Master's programmes, UNPAD had a double degree programme agreement with Rutgers University, New Jersey but the programme ended in April 2021 and the Faculty is in progress of re-establishing it.

For doctoral students, the Indonesian government offers grants for student mobility through the PKPI scholarship. This programme started in 2021. In addition, UNPAD has an internal grant for students to conduct research activities abroad.

As the students point out during the discussion with the peers, the International Pharmaceutical Students' Federation (IPSF) helps students to conduct their internships abroad. IPSF offers a students' exchange programme and gives students the opportunity to experience the field of pharmacy in different countries.

The students confirm during the discussion with the peers that some opportunities for international academic mobility exist. However, they also point out that they wish for more places, more exchange programmes and more scholarships. In addition, students should improve their English proficiency in order to increase their international job perspectives and their chances for receiving a scholarship for continuing their academic education at an international university. For example, it would be possible to offer a journal club, where students present and discuss current scientific papers. In addition, it would be useful to better promote the international class in the Bachelor's programme. The international class was re-opened in 2019. Due to the COVID-Pandemic, only few international students applied and UNPAD should better promote the programme, so that more Indonesian and international students join the international class. Moreover, for graduate students it is essential to become proficient in English. Therefore, in both Master's programmes and the Doctoral programme, there should be some courses taught in English.

The alumni consider completing a clinical internship in foreign country to be very beneficial. It widens the insight about clinical pharmacy practice, as they learn many new things, which are not experienced in Indonesian hospitals. However, the number of available places is still limited and there are restrictions due to missing financial support. The Faculty of Pharmacy and UNPAD can only provide limited travel grants, while the demand from students is rising.

When students take credit from other universities, they discuss it with the coordinator program and head of the international unit in the Faculty of Pharmacy so when they finish their studies abroad, UNPAD will recognise the acquired credits.

The peers recommend increasing the effort to further internationalise UNPAD by inviting more international guest lecturers, conducting summer schools, establishing more international cooperations and exchange programmes, and offering more and better endowed scholarships.

Rules for recognising achievements and competences acquired outside UNPAD exist, but only very few students attend classes at international universities.

In summary, the peers appreciate the effort to foster international mobility and encourage both the Faculty of Pharmacy and UNPAD to further pursuing this path.

Criterion 2.2 Work load and credits

Evidence:

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

Preliminary assessment and analysis of the peers:

Based on the National Standards for Higher Education of Indonesia (SNPT), all programmes use a credit point system called SKS (or CSU), which is regulated as follows:

Type of activity	Definition of 1 CSU/week/semester	Duration (min)	TOTAL (min)
Classroom course	Classroom meeting	50	170
	Structured task	60	
	Independent work	60	
Practical course	Practical work	170	170
Seminar	Seminar meeting	100	170
	Independent work	70	

In comparison to ECTS credit system, wherein 1 ECTS equals 25-30 hours of students' workload per semester, it is determined that 1 SKS is awarded for 170 minutes of workload per week and the relation between the different kind of learning (contact hours, self-studies) is fixed.

The students' total workload (contact hours and self-studies) of the Bachelor's programme Pharmacy is 144 credits, which is evenly distributed in 8 semesters. On average, 19 - 21 credits are taken per semester, which equals 247 ECTS points for 4 years. One ECTS point is awarded for 30 hours of students' total workload. To complete the degree programme in time, Bachelor students need to take on average of 18 SKS per semester excluding co-curricular contents. However, the regular schedule usually covers 19 - 21 SKS per semester to give more space in the last semesters for resits, or more electives. If a student is not satisfied with his GPA, she or he can repeat the classes, but this will lead to a prolongation of the study time.

The Pharmacist Professional programme requires students to complete 39 credits, which can be achieved in one year or two semesters. In the first Semester, it consists of 21 credits and 18 credits in the second semester. This is equivalent to 59 ECTS points.

The Master's programme Pharmacy requires students to complete 42 credits (3735 hours, 125 ECTS) for all concentrations.

The Master's programme Clinical Pharmacy requires students to complete 44 credits (3708 hours, 124 ECTS) for the concentration in clinical pharmacy or 47 credits (3651 hours, 123 ECTS) for the concentration in clinical biochemistry field.

The doctoral students' total workload is 42 credits, which equals 181 ECTS points (5436 hours) for 3 years in the old curriculum and 187 ECTS points in the new curriculum, which was introduced in 2021/22.

The yearly intake of new students is depicted in the following table:

	Ba Pharmacy	Professional programme	Ma Pharmacy	Ma Clinical Pharmacy	Doctoral programme
2019/20	135	170	23	8	52
2018/19	163	176	26	23	19
2017/18	162	215	33	22	7
2016/17	160	227	25	14	13

According to the data provided by UNPAD, the average length of studies in the Bachelor' programme Pharmacy is 3.7 years, for the Pharmacist Professional programme one year, for the Master's programme Pharmacy between 4.27 semesters (2016/2017) and 3.67 semesters (2018/2019), for the Master's programme Clinical Pharmacy two years, and for the Doctoral programme Pharmacy between 3.5 years (2016/2017) and 2.9 years (2017/2018).

This verifies that almost all students finish their degree programme within or even in a shorter period than the expected length of studies.

The peers discuss with the programme coordinators about the different numbers of new students in the Doctoral programme. They are wondering, why as many as 52 new doctoral students were admitted in 2019/20 and only seven in 2017/18. They learn that the number of available places in the Doctoral programme depends on the number of already enrolled students and the number of possible supervisors. According to UNPAD's regulation a supervisor for the Doctoral programme needs to be at least an associate professor. Since the Faculty of Pharmacy has 18 associate professors and 12 full professors, there are in total 30 lecturers that can be supervisors. Based on this and the number of enrolled students

and theses that need to be supervised in the other degree programmes, the number of available places in the Doctoral programme is around 20 per year. The programme is offered since 2016/17 and in the beginning there were not many applications. The number of students admitted to the Doctoral programme in 2020/2021 was 22 and 18 in 2021/2022. The peers can follow the argumentation and agree with the number of available places, because an intake of 52 new doctoral students is not sustainable for a Doctoral programme. It is much more useful to have a constant intake per year.

Criterion 2.3 Teaching methodology

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions

Preliminary assessment and analysis of the peers:

The degree programmes under review make use of several different educational methods for each module such as active instruction (lectures, exercises, practical laboratory work, seminars, etc.), independent work, field studies, exams, writing of final papers, internships, and Community Service.

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

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

Criterion 2.4 Support and assistance

Evidence:

- Self-Assessment Report

- Discussions during the audit

Preliminary assessment and analysis of the peers:

All teachers at

UNPAD offers a comprehensive advisory system for all undergraduate students. At the start of the first semester, every student is assigned to an academic advisor. Each academic advisor is a member of the academic staff and is responsible for approximately 20 students (BP programme) or 10 students (MCP programme) from his classes. He is a student's first port of call for advice or support on academic or personal matters.

The role of the academic advisor is to help the students with the process of orientation during the first semesters, the introduction to academic life and the university's community, and to respond promptly to any questions. They also offer general academic advice, make suggestions regarding relevant careers and skills development and help if there are problems with other teachers. The students confirm during the discussion with the peers that they all have an academic advisor. In addition, UNPAD provides each student with a thesis supervisor, who is assigned based on the research topics. The thesis supervisor assists the students in conducting research, monitors the progress, and evaluates the performance.

In the Doctoral programme, mentors are available to students for all types of assistance, including introduction to laboratory work, involvement in research and use of literature, preparation of seminars and professional papers and participation in the preparation of scientific papers.

Mentors supervise and direct the student's work during the preparation of the doctoral dissertation, monitor the quality of the student's research work, encourage participation in scientific projects and the publication of student's work. Mentors make sure that the research goes according to plan, so that all necessary research for the preparation of the doctoral dissertation is done within the prescribed time and evaluate whether the research has reached the necessary level for the doctoral dissertation, in terms of scope and quality. Mentors give a written opinion on the conducted research and the achieved scientific contribution of the doctoral dissertation.

All students at UNPAD have access to the Integrated Information System of Universitas Padjadjaran (SIAT). The students' profiles (student history, study plan, academic transcript and grade point average/GPA, lecturer evaluation, and course lists) are available via SIAT.

Furthermore, UNPAD offers licensed psychologists to students if they need experts to help them with personal or mental problems. Finally, there are several student organizations at UNPAD; they include student's activity clubs, which are divided into arts, sports, religious and other non-curricular activities.

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

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

The peers appreciate that UNPAD intends to increase the number of courses taught in English and that students are encouraged to improve their English proficiency by reading scientific articles in English. They also appreciate that UNPAD has started to conduct virtual courses in Business Management and Entrepreneurship in Healthcare with international lecturers. In addition, the peers think that it is a good idea to offer grants to lecturers for establishing international co-operations and sending their postgraduate students abroad.

The peers consider criterion 2 to be mostly fulfilled.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation
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Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions
- Academic Guidelines

Preliminary assessment and analysis of the peers:

According to the Self-Assessment Report, the students' academic performance is evaluated based on their attendance and participation in class, their laboratory works and reports, assignments, homework, presentations, mid-term exam, and the final exam at the end of each semester. The form and length of each exam is mentioned in the module descriptions that are available to the students via UNPAD's homepage and the digital platform SIAT.

Grading of students is done by continuous monitoring and is based on the points earned in the different exams and assignments. The final grade is the result of the different activities

in the course, which may include practical and clinical exercises, oral exams, seminar papers, professional practise, mid-term and final exam, graduation thesis and colloquium.

The examination system for the Pharmacist Professional programme is designed to measure the capacity of candidates in fulfilling the academic standards, professional skill and their behavior as healthcare professionals. Hence, this programme applies computer-based tests (CBT) and Objective Structured Clinical Examinations (OSCE), which cover several major areas, such as regulations, internships (in pharmacies, primary healthcare centres, companies, and hospitals), and drug distribution.

If a student fails, he has to repeat the entire module in the following semesters; it is not possible to retake just parts of the course or to just retake the final exam. The further details are described the Academic Guidelines.

There is an additional graduation requirement for Master's and Doctoral students. Master's students have to publish a scientific article in a national scientific journal.

The Doctoral programme is successfully completed with passing all exams, preparation and defence of the doctoral dissertation. Doctoral students have acquired the right to defend their doctoral dissertation after having passed all exams and if she or he is the first author of at least one paper published in an appropriate scientific journal. For doctoral students, there are two dissertation defences: closed and public defences.

As the peers learn during the audit, UNPAD does not offer a summer semester. As a result, the students cannot use this short semester to make up on missed classes or failed exams. However, UNPAD gives students the opportunity to re-sit their final exams at the end of each semester. Usually students who failed an exam or received a grade below B will take part at the re-examination.

At UNPAD, students have the chance to examine, discuss, and appeal their final grade results. First, students should address the teacher of the respective course and if there is still disagreement, they can appeal to the programme coordinator who will review the grade.

The students confirm that they are well informed about the examination schedule, the examination forms and the rules for grading. The peers confirm that there is a form of assessment for each course and that all students are well informed about the form of assessment and the details of what is required to pass the module. The rules for re-sits, disability compensation, illness and other circumstances are detailed in the rulebook on examination and assessment, which can be assessed online, and are therefore transparent to all stakeholders.

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

The peers conclude that the criteria regarding the examination system, concept, and organization are fulfilled and that the examinations are suitable to verify whether the intended learning outcomes are achieved or not.

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

UNPAD does not comment on this criterion.

The peers consider criterion 3 to be fulfilled.

4. Resources

Criterion 4.1 Staff

Evidence:

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

Preliminary assessment and analysis of the peers:

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

According to the Self-Assessment Report, the teaching staff at the Faculty of Pharmacy consists of 67 full-time teachers (12 professors, 18 associate professors, 25 assistant professors, and 12 lecturers). 42 academic staff members hold PhD degrees and 25 a Master's degree.

All members of the teaching staff are obliged to be involved in (1) teaching/advising, (2) research, and (3) community service. As the peers learn during the audit, all teachers have a workload between 12 and 16 credits per semester (one credit equals 170 minutes of activities per week). However, the workload can be distributed differently between the three areas from teacher to teacher.

The peers discuss with UNPAD's management, how new staff members are recruited. They learn that every year the faculties and departments announce their vacancies to UNPAD's management, which subsequently announces the vacancies on UNPAD's webpage and in different media. Since UNPAD is semi-autonomous, they can decide themselves what staff members to hire. One way to recruit new teachers is to send promising Master's students from UNPAD abroad to complete their PhD and then to hire them as teachers when they are finished. UNPAD also hires graduates from other universities, but it is hard to attract them, because if they are young and promising, their own university will probably already have hired them. UNPAD is also looking actively for qualified teachers for filling certain positions (headhunting).

The ratio between lecturer to active students for each degree programme under review are 1 : 27 (Ba programme), 1 : 6 (Professional programme), 1 : 4 (Ma Clinical Pharmacy), 1 : 3 (Ma Pharmacy), and 1 : 9 (Doctoral programme). The peers consider this ratio sufficient.

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

The auditors are impressed by the excellent and open-minded atmosphere among the students and the staff members. This atmosphere of understanding and support is one of the strong points of the degree programmes.

Criterion 4.2 Staff development

Evidence:

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

Preliminary assessment and analysis of the peers:

UNPAD encourages the training and further development of its staff members and has established the Learning Innovation Center (Pusat Inovasi pengajaran dan pembelajaran).

Lecturers are provided with pedagogical training and development programmes such as PEKERTI, particularly for junior lecturers, and Applied Approach (AA) for both junior and senior lecturers. Those programs are organised by the Teaching and Learning Innovation Center, which also provides training for e-learning and new teaching and learning methods.

The professional development of academic staff members by supporting their scientific career by sending them abroad for following a PhD programme and by offering English language classes. In addition, senior teachers mentor and train the newly recruited staff members in three aspects: teaching, research, and community services. On the other hand, junior teachers have to assist senior teachers as lecturers for a minimum of one semester.

There are financial resources available for academic staff members to go abroad for a limited time and to take part at conferences or other events in order to stay up to date with the scientific development in their area of expertise.

The peers discuss with the members of the teaching staff the opportunities to develop their personal skills and learn that the teachers are satisfied with the internal qualification programme at UNPAD, their opportunities to further improve their didactic abilities and to spend some time abroad to attend conferences, workshops or seminars; even a sabbatical leave is possible.

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

Criterion 4.3 Funds and equipment

Evidence:

- Self-Assessment Report
- Video of the facilities
- Discussion during the audit

Preliminary assessment and analysis of the peers:

There are nine laboratories in the Faculty of Pharmacy, which can be accessed by all students, with 12 laboratories: pharmacology and toxicology, pharmaceuticals, pharmaceutical technology, pharmaceutical analysis, and physiochemistry, medicinal chemistry-synthesis, microbiology-biotechnology, natural product, clinical biochemistry and cell biology-molecular. All these facilities are used for practical laboratory work in the Bachelor's programme as well as for research activities for Master's and doctoral students.

In addition, there is central laboratory at UNPAD which can be used by all staff members. More sophisticated instruments than in the laboratories of the Faculty of Pharmacy are available there. Moreover, the manifold partners from the industry and governmental institutions also provide teachers and advanced students (e.g. in the course of their thesis work) to use their laboratories and their advanced technical equipment.

Basic funding of the programmes and the facilities is provided by UNPAD and the Faculty of Pharmacy. Additional funds for research activities can be provided by UNPAD or the Indonesian government (Bantuan Pendanaan Perguruan Tinggi Nasional, BPPTN), but the teachers have to apply for them. In addition, there are several co-operations with industrial partners. As the rector explains during the audit, 39.4 % of the funds derive from tuitions fees, 36.2% from the Indonesian government, and 24.4% from other sources (including university business units and cooperations with companies).

The provided budget allows the Faculty of Pharmacy and its four departments to conduct the study programmes as well as some specific activities, including student exchange programmes, student financial assistance for research, and participation in international conferences.

The programme coordinators emphasise that from their point of view, all programmes under review receive sufficient funding for teaching and learning activities. Hence, the Departments do not face any financial shortages. Of course, there is limited funding to modernize or add laboratory equipment, but there are sufficient resources for adequately teaching the classes.

From the provided documents and videos of the laboratories, the peers deduct that there seem to be no severe bottlenecks due to missing equipment or a lacking infrastructure. The basic technical equipment for teaching the students is available, although it is not state of the art in all cases. The students confirm during the discussion with the peers that, in general, they are satisfied with the available equipment, but several instruments are outdated. Moreover, the peers learn during the audit that students can use and operate the instruments in the laboratories by themselves after being trained and instructed by either senior students or lab technicians. Each laboratory has a lab supervisor; in addition, there are several senior students, which work as lab assistants. In addition, teachers and students can use the facilities of UNPAD's central laboratory. Here, more sophisticated instruments are available and lab technicians are present to operate them. Teachers have to apply for using the facilities and are charged for the provided services.

The peers emphasise that all students need to have the opportunity to get hands on experience with instruments and carrying out laboratory experiments. For this reason, the number of students conducting one experiment should be reduced. In order to gain sufficient practical experience in the laboratories, groups conducting one experiment should be limited to two to three students.

The students also express their satisfaction with the library and the available literature, journals (e.g. SAGE Journals, Cambridge Core, Clinical Key, Ebsco Host, Emerald Insight, Oxford, SAGE research Methods, E-Journal Springer, Springer Nature Experiments, Nature, and Thom-son Reuters Westwals), and scientific databases (e.g. Science Direct).

In summary, the peer group judges the available funds, the technical equipment, and the infrastructure (laboratories, library, seminar rooms etc.) to comply – besides the mentioned small restrictions - with the requirements for adequately sustaining the degree programmes.

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

The peers appreciate that UNPAD will allocate more financial funds for lab equipment.

The peers consider criterion 4 to be mostly fulfilled.

5. Transparency and documentation

Criterion 5.1 Module descriptions
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Evidence:

- Self-Assessment Report
- Module descriptions
- Homepage Bachelor's programme Pharmacy: <https://farmasi.unpad.ac.id/en/study-program/bachelor-program-in-pharmacy/>
- Homepage Pharmacist Professional programme: <https://farmasi.unpad.ac.id/en/study-program/pharmacy-professional-program/>
- Homepage Master's programme Pharmacy: <https://farmasi.unpad.ac.id/en/study-program/master-of-pharmacy/>
- Homepage Master's programme Clinical Pharmacy: <https://farmasi.unpad.ac.id/en/study-program/masters-in-clinical-pharmacy/>
- Homepage Doctoral programme Pharmacy: <https://farmasi.unpad.ac.id/en/study-program/doctor-of-pharmacy-2/>

Preliminary assessment and analysis of the peers:

After studying the module descriptions, the peers see that the information about the students' total workload and the awarded ECTS points is not included in all cases. In addition, the peers point that the literature references should be updated.

Finally, the peers notice that the title of the course semester plan does not always fit the described content. For example, this is the case for the course "Fundamentals of Quality assurance".

For this reason, the peers expect UNPAD to update the module descriptions, to check for inconsistencies and to include the information about the students' total workload and the awarded ECTS points. Best would be to use a standardised template for the module descriptions of all degree programmes.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report
- Sample Diploma Supplement for each degree programme
- Sample Diploma for each degree programme
- Sample Transcript of Records

Preliminary assessment and analysis of the peers:

The peers confirm that the students of all degree programmes are awarded a Diploma and a Diploma Supplement after graduation. However, the provided sample Diploma Supplements for the two Master's programmes are incomplete and do not include all necessary information about the degree programme.

In addition, the peers point out that the Transcript of Records needs to list all courses that the graduate has completed, the achieved credits, grades, and cumulative GPA.

Criterion 5.3 Relevant rules

Evidence:

- Self-Assessment Report
- Homepage UNPAD: <https://www.unpad.ac.id/en/>
- Homepage Faculty of Pharmacy: <https://farmasi.unpad.ac.id/en/home-2/>

The auditors confirm that the rights and duties of both UNPAD and the students are clearly defined and binding. All rules and regulations are published on UNPAD's website and hence available to all relevant stakeholders.

A deficit the peers notice is the fact that not all relevant information about the degree programmes (e.g. intended learning outcomes, profile, curriculum, module descriptions, and academic guideline) is available on the English homepage of the programmes. For this reason, the peers expect UNPAD to publish all relevant information on the programme's English homepage. This way, it is ensured that all stakeholders are well informed about the programmes.

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

The peers acknowledge that UNPAD has updated the module descriptions. However, the information about the awarded ECTS points is still not included.

The peers see that the Diploma Supplement for the Master's programme is now similar to the one from the other degree programmes. However, the peers suggest that the common format should follow the internationally accepted European template.

Since the peers cannot access the homepages of the degree programmes (server failure) they still require UNPAD to provide all relevant information about the degree programme (intended learning outcomes, profile, curriculum, module description, academic guideline) on the English webpage of the respective programme.

The peers consider criterion 5 to be partly fulfilled.

6. Quality management: quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report
- Quality Policy UNPAD
- Book of Quality Assurance Standard, Faculty of Pharmacy
- Discussions during the audit

Preliminary assessment and analysis of the peers:

The peers discuss the quality management system at UNPAD with the programme coordinators and the students. They learn that there is a continuous process in order to improve the quality of the degree programmes and it is carried out through internal and external evaluation. The quality assurance system at UNPAD is conducted by the Office of Quality Assurance (SPM), which is supported by the Quality Assurance Unit (UPM) at faculty level.

Internal evaluation of the quality of the degree programmes is mainly provided through student and alumni surveys (annual tracer study conducted by the university). The students give their feedback on the courses by filling out the questionnaire online. Giving feedback on the classes is compulsory for the students; otherwise, they cannot access their account on the digital platform SIAT. The course evaluations are held during the final exam week. A compilation of the students' feedback is sent to the respective lecturers. As the students point out during the discussion with the peers, there is also the possibility to give a direct and informal feedback to the teacher. However, it would be useful to institutionalise this process and to have regular meetings at faculty level, which include students' representatives from all programmes.

External quality assessment of the degree programmes is provided by the Board of National Accreditation (BAN-PT) and LAM PTKes (Indonesian Accreditation Agency for Higher Education in Health).

The auditors gain the impression that the Faculty of Pharmacy takes the students' feedback seriously and changes are made if necessary. Nevertheless, the peers see that the results of the course questionnaires are not discussed directly with the students. Consequently, the peers expect UNPAD to inform students about the results of the questionnaires and the teachers should discuss with them about possible improvements in the respective course. The feedback loops need to be closed.

Moreover, students confirm during the audit that they are not represented in the boards of the Faculty of Pharmacy and, thus, are not directly involved in the decision-making processes. There is a Board of Trustees at UNPAD on university level. This board has a student member (and one alumni), who is elected by his/her fellow Bachelor's students. The peers are convinced that it would be very useful to have student members from all degree programmes in the different boards, e.g. the Quality Assurance Units. For this reason, they recommend that student representatives should be members of boards at UNPAD at department or faculty level and be actively involved in the decision-making processes for further developing the degree programmes.

UNPAD regularly conducts an alumni tracer study. By taking part at this survey, alumni can comment on their educational experiences at UNPAD, the waiting period for employment

after graduation, their professional career, and they can give suggestions how to improve the programme. Moreover, the employers are asked to give feedback to UNPAD on employability and acquired competencies of UNPAD's graduates. During the audit, the employers express their general satisfaction with the qualification profile. They just recommend including regulatory affairs (product registration and clinical trials) as a topic in the curriculum of the Pharmacist Professional programme and for all students to be more familiar with new pharmaceutical technologies. This is also discussed under criteria 2.1.

In addition, they would like students to have a better knowledge of new technologies. In this respect, UNPAD's partners suggest to more involve students in best practice activities in the industry and to increase the collaborations with stakeholders in order to conduct more joint research activities that will result in better publications

The peers discuss with the representatives of UNPAD's partners from public institutions and private companies if there are regular meetings with the partners on faculty or department level, where they discuss the needs and requirements of the employers and possible changes to the degree programmes. They learn that some employers and alumni are invited to give their feedback on the content of the degree programmes. The peers appreciate that UNPAD stays in contact with its alumni and has a close relation with its partners from the industry. However, no Academic Advisory Board exists. As the peers consider the input of the employers to be very important for the further improvement of the degree programmes, they appreciate the existing culture of quality assurance with the involvement of employers in the quality assurance process. Nevertheless, they recommend establishing an Academic Advisory Boards at the Faculty of Pharmacy. The advisory board should consist of a group of professionals, employers, and experts of the relevant fields from outside the university (e.g. companies, hospitals, and governmental institutions).

In summary, the peer group confirms that the quality management system at UNPAD is, besides the mentioned deficits, suitable to identify weaknesses and to improve the degree programmes.

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

The peers thank UNPAD for explaining that formal feedback from students to the lecturers is organised once a year by the students' representative body (Badan Perwakilan Mahasiswa, BPM) in the form of a meeting. During this meeting, the Vice Dean, Study Programme Coordinator, and the Manager of Learning and Students Affairs meet with the students' representatives to discuss with about their suggestions. The peers think that such meetings

are very helpful, but cannot replace the feedback with respect to the questionnaires or their direct involvement in the equality assurance processes.

The peers consider criterion 6 to be partly fulfilled.

D Additional ASIIN Criteria for structured Doctoral Programmes

Criterion D 1 Research

Evidence:

- Self-Assessment Report
- Academic Guideline
- Discussions during the audit
- List of research projects

Preliminary assessment and analysis of the peers:

As detailed in the Self-Assessment Report, the goal of the Doctoral programme is to verify that the doctoral candidates are able to conduct original and scientifically relevant research activities in the area of pharmacy. In addition, they should be able to independently analyse and interpret results of their original research activities and should have obtained the latest knowledge in pharmaceutical sciences. This includes scientific and academic skills as well as creative abilities and practical skills.

Conducting research activities means getting familiar with laboratory work, involvement in research work, use of literature, preparation of seminars, and participation in publishing scientific papers.

The Head of the degree programme monitors the research activities and students have to submit their progress reports a minimum three times in each semester. The progress report includes the courses the students have taken during the ongoing semester, the attendance in the workshop/seminar, and the updated data of their research.

As a requirement for completing the Doctoral programme, students have an obligation to publish their research in an accepted international journal. In summary, after being established for five years, 61 scientific papers have been published by the students of the Doctoral programme in Pharmacy.

Criterion D 2 Duration and Credits

Evidence:

- Self-Assessment Report
- Academic Guideline

- Discussions during the audit
- Study plan
- Module descriptions
- Statistical data

Preliminary assessment and analysis of the peers:

The curriculum of the Doctoral programme Pharmacy encompasses a work load of at least 42 SKS. Since it is a research-based curriculum, one SKS for seminar courses is equivalent to 100 minutes face-to-face lecture and 70 minutes of independent study time, while one SKS for scientific work is equivalent to 170 minutes of independent study time.

All courses have ECTS points assigned and at the end, doctoral students obtain 187 ECTS points. UNPAD applies the European Credit Transfer System and awards the ECTS according to the students' total workload.

As stated in Academic Guidelines, doctoral students should attend general lectures for new students, public or guest lectures in each semester, additional lectures with the aim of enriching their knowledge relevant to the dissertation topic, and the internal seminar, which is held every week in the Faculty of Pharmacy. In addition, they should get involved in other academic activities, such as trainings, seminars and workshops as well as community service.

Based on the provided statistical data, the time span between the start of the programme to the time of publication varies for every single class. The average length of study for the class of 2016 was 3.71 years, while that of 2017 was 2.82 years, and for the class of 2018 was 2.33 years. Publication in an accepted scientific journal is the requirement for students to perform the final defence as completion of their studies.

On average, students attend their Research Proposal Seminar (SUR) 6.08 months after being accepted in the Doctoral programme. Students need an average 26.58 months to publish their first scientific paper and 40.42 months to finish their research projects and defend it.

Starting the odd semester of the academic year 2020/2021, UNPAD has implemented a new curriculum for the Doctoral programme Pharmacy with a study load of 42 SKS, which is equal to 187 ECTS.

The additional courses in the new curriculum of the Doctoral programme are based on regulation and policy changes in UNPAD as well as the curriculum evaluation results which showed that the students need to improve some competencies with regard to the intended learning outcomes of the programme, such as:

- Ability to design and perform structured research activities by applying analytical and critical thinking
- Ability to defend and disseminate the results in the oral seminar
- Ability to transfer the knowledge and technology to the community, fellow students, and colleagues

In order to better achieving these goals, UNPAD has re-designed the curriculum and introduced some compulsory courses:

1. Philosophy of Science
2. Research Methodology
3. Elective based on research topic
4. Teaching Method and Practice in Education
5. Journal and Reading Review

Currently, the students, who study with the new curriculum, are in the first semester. Therefore, there are no graduate from this batch yet and the data presented in this report (average length of studies etc.) refers to the old curriculum.

The peers support the changes in the Doctoral programme Pharmacy, but point out that there are some critical issues. First, it obvious from the submitted study plan that the work load is not distributed evenly across the semesters. For example, in the second semester doctoral students only have to attend the compulsory course “Journal and Reading Review” (2 SKS) and do literature study (1 SKS) to prepare their research work. Only 3 SKS are awarded in this semester, which is supposed to be equivalent to 35 ECTS point, which is more than the regular work load of one semester. In the third semester, even 68 ECTS points are awarded while the first semester has a supposed work load of only 15 ECTS.

Secondly, the peers cannot follow the calculation behind the awarded ECTS points. UNPAD needs to verify with the students, how much time they spent on the different courses and then award the ECTS points accordingly.

Thirdly, the course “Publication in Reputable International Journal” in the Doctoral programme should not be placed in the third semester but later, because the paper should be the conclusion of the research work and not only the presentation of some intermediate results.

Finally, several small courses such as “Literature Study 1” (1 SKS), “Literature Study 2” (1 SKS), and “Presentation in UNPAD Internal Seminar/National/International” are part of the

curriculum. From the peers' point of view, it is not useful to offer so many small course, it would be better to combine them in larger modules.

In summary, the peers expect UNPAD to verify the students' workload and to make sure that it is evenly distributed across the semesters. In addition, the publication should be placed at the end of the studies and small courses should be combined to larger modules.

Criterion D 3 Soft Skills and Mobility

Evidence:

- Self-Assessment Report
- Academic Guideline
- Discussions during the audit
- Study plan
- Module descriptions

Preliminary assessment and analysis of the peers:

The Faculty of Pharmacy supports its doctoral students' personal and professional development by inviting guest lecturers to give seminars for doctoral students with different topics from philosophy of science in pharmacy to tips and tricks in writing a scientific article. Doctoral students should also attend the internal seminar at the Faculty of Pharmacy. In these meetings, doctoral students have to present their research results or a scientific paper with a relation to their research topic.

UNPAD offers several supporting programmes for all doctoral students. This includes the Career Development Centre Universitas and offers scholarships to conduct research activities abroad. In addition, doctoral students can receive grant from RDDU (Dissertation Research Grant for UNPAD Lecturer) and from the Indonesian government.

As described in the Self-Assessment Report, one doctoral student from batch 2019 has conducted part of her research at Gunma University Japan. In 2020, three other students should have taken the opportunity to perform their research abroad but due to the pandemic situation, it had been cancelled. In 2021, one student is planning to do part of her research in Japan.

To further promoting their professional and didactic skills in preparation for the career as a lecturer, doctoral students are recommended to become co-supervisors for Bachelor's theses and/or work as lab assistants.

Criterion D 4 Supervision and Assessment

Evidence:

- Self-Assessment Report
- Academic Guideline
- Discussions during the audit
- Module descriptions

Preliminary assessment and analysis of the peers:

Each doctoral student is assigned a supervisor at the beginning of her/his studies. The appointment of the supervisor is carried out through a KPPS (Postgraduate Monitoring Committee) meeting. The co-supervisor is proposed by the supervisor, in coordination with the Head of the doctoral programme and the KPPS team.

The supervisor mentors and guides the student's work during the preparation of the doctoral dissertation, monitors the quality of the student's research work, encourages participation in scientific projects and the publication of the results. The mentor makes sure that the research goes according to plan, so that all research necessary for the preparation of the doctoral dissertation is done within the planned period.

The Doctoral programme is completed with passing all scheduled exams, preparation and defence of the doctoral dissertation. Students have acquired right to defend the doctoral dissertation if they have published at least one paper or if it has been accepted for publication in a reputable journal (with a minimum impact factor).

Criterion D 5 Infrastructure

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

Doctoral students usually perform their research activities in the laboratories at the Faculty of Pharmacy, in the UNPAD Teaching Hospital, at associated research centres, or at companies. UNPAD provides the necessary equipment for scientific research, including the equipment provided by the institutions that UNPAD cooperates with.

While conducting their research activities, the doctoral students also have access to the UNPAD central laboratory and the Finder Laboratory.

Criterion D 6 Funding

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

Students of the Doctoral programme Pharmacy have the opportunity to receive scholarships or research grants from the Indonesian Ministry of Monetary and Funds or from the Ministry of Education, Culture, Research and Technology. In addition, they can receive scholarships and research grants from the regional government of West Java and grants for doctoral students as a lecturer of UNPAD (RDDU, Dissertation Research for UNPAD Lecturer). Finally, students can also apply to receive financial support from different companies.

Criterion D 7 Quality Assurance

Evidence:

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

Preliminary assessment and analysis of the peers:

The Academic Guideline of the Doctoral programme Pharmacy specifies the conditions and procedures of admission, purpose, objectives and learning outcomes, the curriculum, organization of the degree programme, and the rules of doctoral academic studies.

Rules of good scientific practice are followed according to the code of conduct on scientific research work and monitored by external examiners who check for plagiarism and review the dissertation manuscript.

To improve the quality of the Doctoral programme, tracer studies and career tracking are conducted and the results are analysed. According to the study, 100 % of the stakeholders agreed that graduates have very good scientific knowledge and integrity. Results of career tracking shows that more than 80% of the graduates found an occupation in less than 3 months.

Doctoral students are encouraged to actively joining national and international seminars for dissemination of their research. On average, one student joins 1.59 seminars (calculated based on students who attended the seminar).

Doctoral program in pharmacy, Faculty of Pharmacy, Universitas Padjadjaran had been accredited nationally by LAM PTKes and awarded the rating B (good) in 2017.

Final assessment of the peers after the comment of the Higher Education Institution regarding the additional ASIIN criteria:

The peers appreciate that UNPAD support their suggestion to have constant intake per year and will have a maximum of 25 new students in the Doctoral programme per year.

The peers confirm that the calculation behind awarded ECTS points was based on a students' survey with 72 respondents out of 115 students of the Doctoral programme. However, this survey should be repeated every semester, because students and lecturers may change. In addition, UNPAD should make sure that the students' workload is distributed evenly across the semesters.

With respect to the satisfaction survey's UNPA should make clear to the students that their feedback is important and that answering the questions and giving suggestions should not be a burden to them.

The peers consider the additional criteria for structured doctoral programmes to be mostly fulfilled.

E Additional Documents

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

- none

F Comment of the Higher Education Institution (31.01.2022)

The Faculty of Pharmacy, Universitas Padjadjaran provides the following documents:

- Updated course semester plan
- Diploma supplement master program
- Example of formal feedback meeting
- Module description
- Dean decree of advisory board

The Faculty of Pharmacy, Universitas Padjadjaran provides the following statement:

1. The Degree Programme: Concept, Content, and Implementation

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

We confirm with all reports on this part.

Criterion 1.2 Name of the degree programme

We confirm with all reports on this part.

Criterion 1.3 Curriculum

a) Pharmacist Professional Study Programme

In the first year of Pharmacist Professional Programme curriculum, there are two months of standard classes conducted in the form of case studies before continuing to an internship. There are 50% theoretical reviews in the courses before proceeding to case studies for each class meeting in one semester (16 times meeting). There is one general lecturer without credit recognition in the second semester to remind students about pharmacist authority.

Regulatory affairs (product registration and clinical trials) are already included as a chapter in the industrial pharmacy course at weeks 14 and 15; the semester learning plan can be found at the link [Course Semester Plan Industrial Pharmacy.pdf](#). Besides being included as a chapter in the course, regulatory affairs were given in the form of guest lectures from

practitioners, as can be seen on the link: [example Guest Lecturer on Drug Registration.docx](#)

b) Master's Program in Pharmacy

In the Master's program in pharmacy, as the requirement of prospective students is the same for all concentrations, students are allowed to change the concentration after they enrol in their chosen concentration. There are general courses for all concentrations besides specific courses related to the concentration major in the first and second semesters. Examples of general courses are Philosophy of Science, Cell and Molecular Biology, Research Methodology, Biostatistics, etc. In the case of students who decide to change their concentration after enrolling on the program, they have to take the specific courses related to the new concentration and no need to retake general courses.

Regarding the suggestion of the Peers to offer elective courses from different areas rather than offer many concentrations, the Faculty will be considering it and evaluate the proposal with the stakeholders in the curriculum evaluation that is held annually.

c) Master's Program in Clinical Pharmacy

Different semester credits (SKS) and ECTS awarded to the Master's Program in Clinical Pharmacy and Clinical Biochemistry concentration were based on different graduates' concentration profiles. Faculty see the Peers' suggestions as input to be discussed with the stakeholders in the curriculum evaluation this year.

Criterion 1.4 Admission requirements

We confirm with all reports on this part.

2. The Degree Programme: Structures, Methods, and Implementation

Criterion 2.1 Structure and Modules

Students in the Master's Program need to decide the concentration they want to take at the admission stage. The Faculty allows the students to change their concentration after enrolling on the program and take other courses besides their compulsory concentration courses. Students only have to take their new concentration compulsory courses (around 6 – 7 credits or 9.06 ECTS in the first and second semesters) and do not have to retake general courses. General courses are approximately 70 - 80% (33 – 34 credits or 45.3 ECTS) from all total compulsory credits. Therefore, if students want to change their concentration, they can still finish the study on time (4 semesters). Until now, after ten years of es-

establishment of Master's Program in Pharmacy and five years for Master's Program in Clinical Pharmacy, no students are recorded change their concentration after enrolling on the program.

Faculty sees the Peer's recommendation to increase courses taught in English as a good recommendation and already embedded in the Faculty programs. Last year we added another course to be taught in English besides Drug Development and Cell and Molecular Biology courses. We also encourage students to read updated knowledge, research, and methods from international scientific articles and continue with the discussion. This way, students will increase their ability in English. Another effort to improve students' fluency in English is by an obligation of postgraduate students to deliver progress reports of their research in English.

As the Peers suggested, to further internationalize Unpad, we have started to conduct international virtual courses in Business Management and Entrepreneurship in Healthcare, with seven lecturers abroad joining the course. Our University is also beginning to start giving grants to some lecturers in postgraduate programs who are available to guide postgraduates. The selected lecturers are obliged to have international collaborative partners, and selected students are obliged to perform their research in collaborative partners. These grants are called Padjadjaran Excellent Postgraduate Scholarship (BUPP) and Padjadjaran Doctoral Scholarships.

Criterion 2.2 Work Load and Credits

Doctoral Programme in Pharmacy

The Faculty agrees with the reviewer's suggestion to have constant intake per year. We already make maximum student intake per year based on ratio lecture:students and prospective students selection, and the maximum intake per year are 25.

Criterion 2.3 Teaching Methodology

We confirm with all reports on this part.

Criterion 2.4 Support and Assistance

We confirm with all reports on this part.

3. Exams: System, Concept, and Organization

We confirm with all reports on this part.

4. Resources

Criterion 4.1 Staff

We confirm with all reports on this part.

Criterion 4.2 Staff Development

We confirm with all reports on this part.

Criterion 4.3 Funds and Equipment

Bachelor's Programme in Pharmacy

All students have the same opportunity to have hands-on experience with instruments and carry out laboratory experiments as the Peers suggested in the Project-Based Learning (PBL) format. Nevertheless, the Faculty agreed on Peers' suggestions for optimum learning outcome achievement. We will allocate more financial funds for lab equipment.

5. Transparency and Documentation

Criterion 5.1 Module Description

We have updated the module description and used the same template for all degree programs as suggested by Peers. The awarded ECTS points and total workload have already been included in chapter 3 of the module description. Literature references are already updated as suggested by peers and module description is already available on the Faculty website, also can be accessed from: [Module Description](#)

Regarding the course semester plan title that Peers noticed does not fit with the described content, we have checked the document mentioned and found a mistake in putting the fundamentals of quality assurance cover. The correct course semester plan can be found at the link [course semester plan fundamental of quality assurance.pdf](#). We have attached the new document right after Peer's visit. The link for the updated course semester plan can be accessed from [Course Semester Plan](#)

Criterion 5.2 Diploma and Diploma Supplement

The transcript records from all study programmes had included all information needed

about the graduates, including a list of courses they have completed, the achieved credits and grades, and cumulative GPA.

We have provided diploma supplements for the two Master's programmes, which included all necessary information about the degree programme at the link: ([diploma supplement master program in pharmacy agus rusdin \(1\).pdf](#)) and ([Diploma supplement master program in clinical pharmacy irma rahayu \(1\).pdf](#)). All diploma supplements have the same format as other degree programmes.

Criterion 5.3 Relevant Rules

We have included all the relevant information on the English homepage, such as intended learning outcomes/competence, the objective of the study program, profile, curriculum, module descriptions, and academic guideline at the Faculty website <https://farmasi.unpad.ac.id/en/study-program/bachelor-program-in-pharmacy/> for Bachelor's Degree, <https://farmasi.unpad.ac.id/en/study-program/pharmacy-professional-program/> for Pharmacist Professional Program, <https://farmasi.unpad.ac.id/en/study-program/master-of-pharmacy/> for Master's Program in Pharmacy, <https://farmasi.unpad.ac.id/en/study-program/masters-in-clinical-pharmacy/> for Master's Program in Clinical Pharmacy, and <https://farmasi.unpad.ac.id/en/study-program/doctor-of-pharmacy-2/> for Doctoral Program in Pharmacy.

6. Quality management: quality assessment and development

Formal feedback from students to the lecturers was institutionalized once a year organized by the students' representative body/*Badan Perwakilan Mahasiswa* (BPM) in the form of a regular meeting. The Vice Dean of the Faculty, Study Programme Coordinator and the Manager of Learning and Students Affairs met with the student representatives to hear the feedback from students and respond by giving a direct answer. An example of the meeting that had been held is attached at the link: [example of formal feedback meeting](#)

The Faculty agrees with suggestions from the Peers regarding the need to add an academic advisory board as it is a good thing to improve the quality of the educational process. Therefore, based on the Peer's suggestion, an advisory board was made in accordance with the Dean's Decree no. 10/UN6.O/Kep/2022, which is attached in the link [[Dean Decree Advisory Board](#)] [10 UN6.O Kep 2022 SK pemangku kepentingan Fakultas Farmasi.docx](#)

[\(1\).pdf](#). This also involves stakeholders and experts of the relevant fields from outside the University (e.g., companies, hospitals, and government institutions).

Regulatory affairs (product registration and clinical trials) have already been included as a chapter in the industrial pharmacy course at weeks 14 and 15; the semester learning plan can be accessed at the link [Course Semester Plan Industrial Pharmacy.pdf](#). Not only included as a chapter in the course plan, the chapter of regulatory affairs are also given in the form of guest lectures from practitioners, as we attached under criterion 1.3.

Additional ASIIN Criteria for structured Doctoral Programmes

Criterion D 1 Research

We confirm with all reports on this part.

Criterion D 2 Duration and Credits

The calculation behind awarded ECTS points was based on students' survey combined with National standard for Higher Education (SNPT) regulation for time spent on one course per credit. Students' surveys were done with 72 respondents out of 115 students on the Doctoral Program in Pharmacy. We believe this mechanism can confirm and verify the calculation for awarded ECTS points.

According to regulation by Rector's Decree no 555 of 2020, publication in a reputable international journal for Doctoral Students can be taken from part of their research result, not necessarily as a conclusion of the whole research work. Based on that regulation, in the new curriculum of the Doctoral Program, publication in a reputable international journal is placed in the third semester with the assumption that students have already conducted part of their research in the first and second semesters. We believe that they have enough time to publish their results by the end of the third semester. If students cannot achieve the requirement in the third semester accordingly, they can retake the credits in the following semester.

Regarding the suggestion of the Peers to combine the small courses to larger modules, we will discuss it in our curriculum evaluation which has always been conducted annually for Doctoral Program evaluation.

Criterion D 3 Soft Skills and Mobility

Recommendations from the Peers for doctoral students to become co-supervisors for Bachelor's theses and/or work as lab assistants had already been conducted. We put the data on the table of Doctoral students who became lab assistants and co-supervisors on the additional criterion for the Doctoral program, criterion 3 page...Table...

Criterion D 4 Supervision and Assessment

We confirm with all reports on this part.

Criterion D 5 Infrastructure

We confirm with all reports on this part.

Criterion D 6 Funding

We confirm with all reports on this part.

G Summary: Peer recommendations (15.02.2022)

Taking into account the additional information and the comments given by UNPAD, the peers summarise their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Pharmacy	With requirements for one year	-	30.09.2027
Pharmacist Professional Programme	With requirements for one year	-	30.09.2027
Ma Pharmacy	With requirements for one year	-	30.09.2027
Ma Clinical Pharmacy	With requirements for one year	-	30.09.2027
Doctoral Programme Pharmacy	With requirements for one year	-	30.09.2027

Requirements

For all degree programmes

- A 1. (ASIIN 4.1) Provide enough technical equipment and instruments so that the experiments can be conducted by groups of two to three students.
- A 2. (ASIIN 5.1) The module descriptions need to include the information about the students' total workload and the awarded ECTS points. Make sure that the title fits to the content of the module.
- A 3. (ASIIN 5.2) The transcript of records needs to list all courses with their credits (SKS and ECTS) and needs to include information about the final grade.
- A 4. (ASIIN 5.3) Provide all relevant information about the degree programme (intended learning outcomes, profile, curriculum, module description, academic guideline) on the English webpage of the programme.
- A 5. (ASIIN 6) Close the feedback cycles by informing students directly about the results of the questionnaires.
- A 6. (ASIIN 6) Directly involve students in the quality assurance processes.

For the Doctoral programme

- A 7. (ASIIN D 2) It is necessary to verify the students' workload and the awarded ECTS and to distribute the students' workload evenly across the semesters.

Recommendations

For all degree programmes

- E 1. (ASIIN 2.1) It is recommended to further promote the academic mobility of the students.
- E 2. (ASIIN 2.1) It is recommended to offer more courses in English and better support students in improving their English proficiency.
- E 3. (ASIIN 5.1) It is recommended to update the literature references in the module descriptions.
- E 4. (ASIIN 5.2) It is recommended that the Diploma Supplement follows the European template.
- E 5. (ASIIN 6) It is recommended to establish an advisory board with external stakeholders as members at the Faculty of Pharmacy.

For the Pharmacist Professional programme

- E 6. (ASIIN 1.3) It is recommended to put a stronger emphasis on regulatory affairs (product registration and clinical trials).
- E 7. (ASIIN 1.3) It is recommended to offer some common classes in the professional programme within the first month and then conduct the internships. The case studies could be combined with the internships.

For the Master's programmes

- E 8. (ASIIN 1.3) It is recommended that students decide on a specific concentration after the first semester and then chose electives according to their chosen field. All concentrations should have the same amount of credits.

For the Doctoral programme

- E 9. (ASIIN D 2) It is recommended to place the course "Presentation in UNPAD Internal Seminar/National/International" at the end of the studies.

E 10. (ASIIN D 2) It is recommended to combine the small courses in the Doctoral programme to larger modules.

H Comment of the Technical Committees (04.03.2022)

Technical Committee 09 – Chemistry, Pharmacy (01.03.2022)

Assessment and analysis for the award of the ASIIN seal:

The TC discusses why the technical equipment for the Bachelor's degree programmes has been made subject to a requirement, but not for the PhD programme. The reason for this is that the technical equipment is good overall and is also suitable for carrying out research projects and PhD theses. However, the number of instruments available in the teaching laboratories is quite low and need to be increased. In addition, the TC notes that in the PhD programme, the equal distribution of the workload is not decisive. It makes a lot of sense to offer all lectures in the first semesters in order to have more freedom to carry out research activities in the following semesters.

The Technical Committee 09 – Chemistry, Pharmacy recommends the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Pharmacy	With requirements for one year	-	30.09.2027
Pharmacist Professional Programme	With requirements for one year	-	30.09.2027
Ma Pharmacy	With requirements for one year	-	30.09.2027
Ma Clinical Pharmacy	With requirements for one year	-	30.09.2027
Doctoral Programme Pharmacy	With requirements for one year	-	30.09.2027

Technical Committee 10 – Life Sciences (04.03.2022)

Assessment and analysis for the award of the ASIIN seal:

The TC discusses the PhD programme and critically questions the scope of the actual scientific doctoral thesis. Mr Arnold explains that the PhD students still attend courses in the first two semesters and then concentrate on the doctoral thesis and also regularly report on their progress in seminars. However, the TC criticises that this structure is not clear from either the curriculum or the module descriptions and that it is not clear what the overall scope of the scientific-experimental work is. The TC therefore proposes that an additional requirement be imposed in this regard. Furthermore, the TC makes it clear that the quality of the doctoral thesis can also be proven by publishing the results in a reputable scientific journal with peer review. An additional recommendation is proposed for this.

The Technical Committee 10 – Life Sciences recommends the award of the seals as follows:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Pharmacy	With requirements for one year	-	30.09.2027
Pharmacist Professional Programme	With requirements for one year	-	30.09.2027
Ma Pharmacy	With requirements for one year	-	30.09.2027
Ma Clinical Pharmacy	With requirements for one year	-	30.09.2027
Doctoral Programme Pharmacy	With requirements for one year	-	30.09.2027

Requirements

For the Doctoral programme

(ASIIN D 2) The study plan and the module descriptions need to make transparent what the overall scope of the scientific-experimental work is.

Recommendations

For the Doctoral programme

(ASIIN D2) It is recommend to publish the results of the doctoral thesis in a reputable scientific journal with peer review.

I Decision of the Accreditation Commission (17.03.2022)

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

The AC discusses the procedure and decides that the requirement with respect to the technical equipment and instruments is just relevant for the Bachelor's degree programme. In addition, the TC follows the suggestions of TC 09 and TC 10 with respect to the requirements and recommendations for the PhD programme.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Pharmacy	With requirements for one year	-	30.09.2027
Pharmacist Professional Programme	With requirements for one year	-	30.09.2027
Ma Pharmacy	With requirements for one year	-	30.09.2027
Ma Clinical Pharmacy	With requirements for one year	-	30.09.2027
Doctoral Programme Pharmacy	With requirements for one year	-	30.09.2027

Requirements

For all degree programmes

- A 1. (ASIIN 5.1) The module descriptions need to include the information about the students' total workload and the awarded ECTS points. Make sure that the title fits to the content of the module.
- A 2. (ASIIN 5.2) The transcript of records needs to list all courses with their credits (SKS and ECTS) and needs to include information about the final grade.
- A 3. (ASIIN 5.3) Provide all relevant information about the degree programme (intended learning outcomes, profile, curriculum, module description, academic guideline) on the English webpage of the programme.

A 4. (ASIIN 6) Close the feedback cycles by informing students directly about the results of the questionnaires.

A 5. (ASIIN 6) Directly involve students in the quality assurance processes.

For the Bachelor's degree programme Pharmacy

A 6. (ASIIN 4.1) Provide enough technical equipment and instruments so that the experiments can be conducted by groups of two to three students.

For the Doctoral programme

A 7. (ASIIN D 2) It is necessary to verify the students' workload and the awarded ECTS points.

A 8. (ASIIN D 2) The study plan and the module descriptions need to make transparent what the overall scope of the scientific-experimental work is.

Recommendations

For all degree programmes

E 1. (ASIIN 2.1) It is recommended to further promote the academic mobility of the students.

E 2. (ASIIN 2.1) It is recommended to offer more courses in English and better support students in improving their English proficiency.

E 3. (ASIIN 5.1) It is recommended to update the literature references in the module descriptions.

E 4. (ASIIN 5.2) It is recommended that the Diploma Supplement follows the European template.

E 5. (ASIIN 6) It is recommended to establish an advisory board with external stakeholders as members at the Faculty of Pharmacy.

For the Pharmacist Professional programme

E 6. (ASIIN 1.3) It is recommended to put a stronger emphasis on regulatory affairs (product registration and clinical trials).

E 7. (ASIIN 1.3) It is recommended to offer some common classes in the professional programme within the first month and then conduct the internships. The case studies could be combined with the internships.

For the Master's programmes

- E 8. (ASIIN 1.3) It is recommended that students decide on a specific concentration after the first semester and then choose electives according to their chosen field. All concentrations should have the same amount of credits.

For the Doctoral programme

- E 9. (ASIIN D 2) It is recommended to place the course "Presentation in UNPAD Internal Seminar/National/International" at the end of the studies.
- E 10. (ASIIN D 2) It is recommended to combine the small courses in the Doctoral programme to larger modules.
- E 11. (ASIIN D2) It is recommended to publish the results of the doctoral thesis in a reputable scientific journal with peer review.

Appendix: Programme Learning Outcomes and Curricula

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's programme Pharmacy:

Competencies and Learning objectives of the Bachelor's programme are defined based on Indonesian Standard of Apothecary competences (SKAI) as follows:

1. Obeying the law and discipline in social and state life.
2. Internalize academic values, norms, and ethics, and show an independent attitude of responsibility for pharmaceutical work.
3. Internalize independent attitude and entrepreneurship in pharmaceutical field
4. Apply the logical, critical, systematic, and innovative thinking in the context of developing or implementing pharmaceutical science and technology
5. Compile a scientific description of the results of the study in the form of a final assignment and upload it on the university webpage.
6. Able to make correct decisions in the context of problem solving in the pharmaceutical sector, based on the results of information and data analysis.
7. Able to be responsible for work in the pharmaceutical field in accordance with the pharmaceutical code of ethics.
8. Able to perform pharmaceutical practices supervised by pharmacists in accordance with regulatory provisions.
9. Able to optimize the use of rational pharmaceutical dosage forms based on scientific considerations, guidelines and evidence-based to optimize the success of therapy under pharmacist supervision
10. Able to perform dispensing of pharmaceutical dosage forms and medical devices based on regulatory and standard under supervision of pharmacist
11. Able to search, analyze, and organize information about pharmaceutical preparations and medical devices that are precise, accurate, relevant and communicate effectively with patients according to their needs under the supervision of pharmacists.
12. Able to formulate and produce appropriate pharmaceutical preparations, according to standards and statutory provisions under the supervision of pharmacists.

13. Able to search, analyze, and organize information about pharmaceutical preparations and communicate those information effectively as preventive and promotive public health efforts under the supervision of pharmacists
14. Able to manage the design, selection, procurement, storage, distribution, destruction and withdrawal of pharmaceutical preparations and medical devices in an effective and efficient manner under the supervision of pharmacists.
15. Able to demonstrate effective communication skills with patients and health workers through verbal and non-verbal techniques under the supervision of a pharmacist.
16. Able to demonstrate managerial skills and interpersonal relationships in conducting pharmaceutical works under the supervision of a pharmacist.

The following **curriculum** is presented:

No	Courses code	Courses Name	Credits	ECTS point
SEMESTER 1				
Compulsory				
1	P10A.1403	Introduction to Pharmaceutical Science and Ethics	2(2-0)	3
2	P10A.1404	Physical Chemistry	2(2-0)	3
3	P10A.1405	Physical Chemistry Practice	1(0-1)	2
4	P10A.1406	Introduction to Medicinal Chemistry	1(1-0)	2
5	P10A.1423	Introduction of Medicinal Chemistry Practice	1(0-1)	2
6	P10A.1407	Cell and Molecular Biology	2(2-0)	3
7	P10A.1421	Introduction of Pharmaceutical Chemistry	2(2-0)	3
8	P10A.1411	Introduction to Pharmaceutical Chemistry Practice	1(0-1)	2
9	UNX10.1007	English language	2(2-0)	3
10	UNX10.1006	Indonesian language	2(2-0)	3
11	UNX10.1002	Religion	2(2-0)	3
12	UNX10.1009	Civics	2(2-0)	3
		Total	20	30

SEMESTER 2				
Compulsory				
1	P10A.2421	Botanical Pharmacy	2(2-0)	3
2	P10A.2428	Botanical Pharmacy Practice	1(0-1)	2
3	P10A.2422	Pharmaceutics	2(2-0)	3
4	P10A.2429	Pharmaceutics Practice	1(0-1)	2
5	P10A.2423	Physical pharmacy	2(2-0)	3
6	P10A.2430	Physical pharmacy practice	1(0-1)	2
7	P10A.2424	Instrumental Analysis	2(2-0)	3
8	P10A.2431	Instrumental Analysis practice	1(0-1)	2
9	P10A.2425	Biochemistry	2(2-0)	3
10	P10A.2432	Biochemistry practice	1(0-1)	2
11	P10A.2426	Pharmacology	2(2-0)	3
12	P10A.2427	Pharmacology practice	1(0-1)	2
13	P10A.2431	Microbiology	2(2-0)	3
		Total	20	30

SEMESTER 3				
compulsory				
1	P10A.3401	Microbiology and Immunology	3(3-0)	5
2	P10A.3402	Pharmacotherapy of Infectious Disease	2(2-0)	3
3	P10A.3403	Pharmacotherapy of Immunology and Oncology	2(2-0)	3
4	P10A.3404	Pharmacognosy and Natural Product Pharmacy of Liquid and Semisolid dosage form	2(2-0)	3
5	P10A.3405	Introduction to Industrial pharmacy	2 (2-0)	3
6	P10A.3406	Preformulation of Liquid and Semisolid dosage forms	1(0-1)	2
7	P10A.3407	Formulation and Technology of Liquid and Semisolid dosage forms	1(1-0)	2
8	P10A.3408	Pharmaceutical Analysis of Liquid and Semisolid dosage forms	1(1-0)	2
9	P10A.3409	Medicinal chemistry	2(2-0)	3
10	P10A.3410	Pharmacotherapy of Infectious Diseases, Immunologic disorders and oncology practice	1(0-1)	2
11	P10A.3411	Pharmacognosy and Natural Product of Liquid and Semisolid dosage forms practice	1(0-1)	2
12	P10A.3412	Formulation and Technology of Liquid and Semisolid dosage forms Practice	1(0-1)	2
13	P10A.3413	Pharmacy Analysis of Liquid and Semisolid dosage forms Practice	1(0-1)	2
		Total	20	30

SEMESTER 4				
	Compulsory			
1	P10A.4401	Pharmacotherapy Skin Disorders, Bone and Joints, Eye, Nerves and Psychiatry	2(2-0)	3
2	P10A.4402	Pharmacotherapy of Neurological Disorders and Psychiatry	2(2-0)	3
3	P10A.4403	Pharmacotherapy of respiratory disorder	2(2-0)	3
4	P10A.4404	Pharmacotherapy Skin Disorders, Bone and Joints, Eye, Nerves and Psychiatry Practice	1(0-1)	2
5	P10A.4405	Pharmacognosy of Natural Pharmaceutical Ingredients	1(1-0)	2
6	P10A.4406	Pharmacognosy of Natural pharmaceuticals Practice	1(0-1)	0
7	P10A.4407	Preformulation of Solid Dosage Form	1(1-0)	2
8	P10A.4408	Formulation and technology of Solid dosage forms	2(2-0)	3
9	P10A.4409	Formulation and technology of Solid dosage forms practice	1(0-1)	2
10	P10A.4410	Pharmaceutical Analysis of Solid dosage forms and Cosmetic	1(1-0)	2
11	P10A.4411	Pharmaceutical Analysis of Solid dosage forms and Cosmetic Practice	1(0-1)	2
12	P10A.4412	Theory and Synthesis of Radiopharmaceuticals	2(2-0)	3
13	P10A.4413	Phytochemistry	1(1-0)	2
	Elective 1:			
14	P10A.4414	Toxicology	2(2-0)	3
	P10A.4415	Pharmaceutical excipients		
	P10A.4416	Ethnopharmacy		
	P10A.4417	Electrochemical Application in the Field of Pharmacy		
		Total	20	29

SEMESTER 5				
Compulsory				
1	P10A.5401	Pharmacotherapy of Gastrointestinal Disorders and Nutrition	2(2-0)	3
2	P10A.5402	Pharmacotherapy of Endocrine Disorders	2(2-0)	3
3	P10A.5403	Pharmacotherapy of Gynaecology Disorders	2(2-0)	3
4	P10A.5404	Pharmacotherapy of gastrointestinal, nutrition, endocrine and Gynaecology disorders practice	1(0-1)	2
5	P10A.5405	Cosmetics and cosmeceuticals	2(2-0)	3
6	P10A.5406	Formulation and technology of sterile preparations	2(2-0)	3
7	P10A.5407	Formulation and technology of sterile preparations practice	1(0-1)	2
8	P10A.5408	Food and contaminant analysis	2(2-0)	3
9	P10A.5409	Community service	3(0-3)	8
10	P10A.5415	Phytochemistry Practice	1(0-1)	2
Elective 2:				
11	P10A.5410	Nutraceuticals and Therapeutic Nutrition	2(2-0)	3
	P10A.5411	Marine pharmacy		
	P10A.5412	Pharmaceutical engineering		
	P10A.5413	Analysis of chemicals in herbal medicines		
		Total	20	34

SEMESTER 6				
	Compulsory			
1	P10A.6401	Pharmacotherapy of Hematology, Vascular and Cardiovascular disorder	3(3-0)	5
2	P10A.6402	Pharmacotherapy of Kidney and Urinary Tract Disorders	2(2-0)	3
3	P10A.6403	Biotechnology pharmacy	2(2-0)	3
4	P10A.6404	Pharmacotherapy of Hematology, Vascular and Cardiovascular, kidney and urinary disorder and biotechnology Practice	1(0-1)	2
5	P10A.6405	Pharmacokinetics	2(2-0)	3
6	P10A.6406	Biopharmacy	2(2-0)	3
7	P10A.6407	Biopharmacy practice	1(0-1)	2
8	P10A.6408	Analysis of biomedics and forensic	2(2-0)	3
9	P10A.6409	Analysis of biomedics and forensic practice	1(0-1)	2
10	P10A.6410	Research Methodology and Biostatistics	3(3-0)	5
	Elective 3:			
11	P10A.6411 P10A.6412 P10A.6413 P10A.6414	Pharmacoepidemiology and Pharmacovigilance Aromatherapy and hydrotherapy Pharmaceutical Environment Pharmaceutical practice	2(2-0)	3
		Total	21	32

SEMESTER 7				
	Compulsory			
1	P10A.7401	Clinical pharmacy	3(3-0)	3
2	P10A.7402	Clinical pharmacy practice	1(0-1)	2
3	P10A.7403	Drug stability	2(2-0)	3
4	P10A.7404	New drug delivery system	2(2-0)	3
5	P10A.7405	Development of analytical method	1(1-0)	2
6	P10A.7406	Development of analytical method practice	1(0-1)	2
7	P10A.7407	Drug design and development	2(2-0)	3
8	P10A.7408	Drug design and development practice	1(0-1)	2
9	P10A.7409	Research proposal Seminar	2(0-2)	16
10	P10A.7410	Field study	1(0-1)	1
11	P10A.7411	Pharmaceutical management, Regulation and entrepreneurship	2(2-0)	3
	Elective 4:			
12	P10A.7412	Pharmacoeconomic	2(2-0)	3
	P10A.7413	Herbal Medicine		
	P10A.7414	Management of supply chain		
	P10A.7415	Fundamental of quality assurance		
		Total	19	41

SEMESTER 8				
1	P10A.8401	Seminar on thesis result	2(2-0)	18
2	P10A.8402	Bachelor's defense	2(2-0)	3
		Total	4	20
Total credit of bachelor programme			144	247

According to the Self-Assessment Report, the following **objectives and learning outcomes (intended qualifications profile)** shall be achieved by the Pharmacist Professional programme:

No.	Learning Outcomes for Pharmacist professional program
1.	Able to identify and solve drug-related problems using an evidence-based approach in the design, manufacture / preparation, including quality control, security, procurement, storage and distribution, management of raw materials, pharmaceutical preparations and medical devices and / or clinical pharmacy services to optimize the success of therapy.
2.	Able to search, analyze critically, and organize information about pharmaceutical preparations, communicate and disseminate them effectively to ensure the efficient use of pharmaceutical preparations to individuals, the general public and the health profession.
3.	Able to carry out professional and responsible pharmaceutical practice in accordance with the provisions and pharmacist code of ethics.
4.	Able to carry out counseling services, compile information / ideas / thoughts and communicate effectively in various forms of media, to other health professionals and / or the general public.
5.	Able to self-evaluate and manage self-learning in an effort to improve the pharmacist's professional practice skills.
6.	Able to make decisions in strategic matters in the field of pharmacy in their professional work independently, to lead and manage group work, and to be responsible for the achievement of group work.
7.	Able to identify, understand, analyze and find solutions to conflicts with appropriate methods.
8.	Able to communicate, develop networks and collaborate with teams, other health workers and clients in order to provide optimal patient service
9.	Able to critically evaluate pharmaceutical work problems and be able to provide appropriate solutions.
10.	Able to self-evaluate and manage self-learning in an effort to improve the pharmacist's professional practice skills.
11.	Able to implement pharmaceutical science, pharmaceutical methods and technology, including the ability to design, manufacture and guarantee the quality of pharmaceutical preparations by paying attention to statutory regulations
12.	Able to apply the concepts of pharmacotherapy, pharmaceutical care, pharmacy practice, as well as the principles of epidemiology, evidence-based medicine, pharmacovigilance and Pharmacoeconomics, to ensure service quality and patient safety.
13.	Able to apply knowledge of pharmaceutical management, socio-pharmacy, pharmaceutical law and ethics, communication techniques, and occupational safety comprehensively.

The following curriculum is presented:

First Semester

No	Code	Courses	Credit	ECTs
1	P12A.0112	Case Study of Pharmacy Management and Regulation	3	4.53
2	P12A.0113	Case study of Pharmaceutical Services	2	3.02
3	P12A.0114	Case Study of Communication and Counselling	2	3.02
4	P12A.0115	Case study of Quality Control and Quality Assurance	2	3.02
5	P12A.0116	Case Study of Pharmaceutical Industry	2	3.02
6	P12A.0117	Internship of Community and Entrepreneurship	5	7.55
		Internship of Elective (One Choice)		
7	P12A.0208	Internship of Management and Government *	5	7.55
8	P12A.0213	Internship of Pharmacy Distribution *	5	7.55
		Total	21	31.71

Second Semester

No	Code	Courses	Credit	ECTs
1	P12A.0209	Internship of Pharmaceutical Industry	8	12.09
2	P12A.0118	Internship of Pharmaceutical Services (in Hospital)	6	9.07
3	P12A.0210	Computer Based Test	1	1.51
4	P12A.0211	Laboratory Skill and OSCE	2	3.02
5	P12A.0212	Pharmacist Comprehension Exam	1	1.51
		Total	18	27.2
		Credit Total	39	58.91

*Choose one course

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Master's programme Pharmacy:

Pharmaceutical Biology	Pharmaceutical Analysis and Medicinal Chemistry	Pharmaceutics and Pharmaceutical Technology	Pharmacology
Able to carry out drug research and development in the context of drug discovery and product development	Able to carry out drug research and development in the context of drug discovery and product development	Able to develop an understanding of knowledge about basic concepts in pharmaceutical science, especially in the manufacture of pharmaceutical products / industry	Able to carry out drug research and development in the context of drug discovery and product development
Integrating advanced knowledge and concepts in pharmaceutical science, especially pharmacy biology	Able to carry out quality assurance tests for drug dosage form	Integrating advanced knowledge and concepts in pharmaceutical science, especially Pharmaceutics and pharmaceutical technology	Able to apply pharmacokinetic knowledge and processes and principles of pharmacodynamics to discuss therapeutic and toxic outcomes of medicinal compounds
Able to develop group dynamics and teamwork skills in the field of pharmaceutical biology	Able to implement their knowledge in the teaching and learning process in higher education in the field of pharmaceutical analysis and medicinal chemistry	Able to develop group dynamics and teamwork skills in the field of pharmaceutics and pharmaceutical technology	Able to implement their knowledge in analyzing, interpreting and criticizing scientific literature in the field of pharmacology
Communicate scientific information effectively both orally and in writing in seminars / conferences or scientific journals to inform and educate professional colleagues and peer reviews	Communicate scientific information effectively both orally and in writing in seminars / conferences or scientific journals to inform and educate professional colleagues and peer reviews	Communicate scientific information effectively both orally and in writing in seminars / conferences or scientific journals to inform and educate professional colleagues and peer reviews	Communicate scientific information effectively both orally and in writing in seminars / conferences or scientific journals to inform and educate professional colleagues and peer reviews

The following curriculum is presented:

Pharmaceutics and Pharmaceutical Technology Concentration

0 Appendix: Programme Learning Outcomes and Curricula

No	Subjects		No. Module	Studi Load on Activities (ECTS)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practice	Tot		
1	2	3	4	5,00	6,00	7,00	8,00	9	10
Semester 1 : Basic Course			1						
1	P20.01001	Philosophy of Science		3,02	-	-	3,02	MPK	Main
2	P20.01002	Research Methodology		3,02	-	-	3,02	MKK	Main
3	P20.01003	Biostatistics		3,02	-	-	3,02	MKK	Main
4	P20.01004	Physicochemical Analysis		3,02	-	-	3,02	MKK	Main
5	P20.01005	Cell and Molecular Biology		4,53	-	-	4,53	MKK	Main
6	P20.01006	Physical chemistry of solids and interfaces		3,02	-	-	3,02	MKK	Support
7	P20.01007	Drug Stability		3,02	-	-	3,02	MKK	Support
8	P20.01008	Biopharmacy		3,02	-	-	3,02	MKK	Support
Burden Studies in Semester 1				25,67			25,67		
Semester 2:			2						
7	P20.02001	Development of Pharmaceutical Dosage Forms		3,02	-	-	3,02	MKK	Main
8	P20.02002	Pharmacokinetics		3,02	-	-	3,02	MKK	Main
9	P20.02003	Drug Discovery and Development		4,53	-	-	4,53	MKK	Main
10	P20.02004	Journal Reading and Review		1,51	-	1,51	3,02	MKK, MKB	Main
11	P20.02005	New Drug Delivery System		3,02	-	-	7,55	MKK	Support
12	P20.02006	Unit Process		3,02	-	-		MKK	Support
13	P20.02007	Decorative Cosmetics and Cosmeceuticals		3,02	-	-		MKK	Support
14	P20.02008	Dermatology and Skin Care Products		4,53	-	-		MKK	Support
15	P20.02009	Formulations and Technology for natural products preparations		3,02			3,02	MKK	Support
16	P20.02010	Development and Characteristics of Raw Materials and Pharmaceutical Excipients		3,02				MKK	Support
17	P20.02011	Pharmacogenomics		3,02				MKK	Support
18	P20.02012	Pharmaceutical Engineering		3,02				MKK	Support
19	P20.02013	Development of cosmetic preparations		3,02				MKK	Support

0 Appendix: Programme Learning **Outcomes and Curricula**

No	Subjects		No. Module	Studi Load on Activities (ECTS)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practice	Tot		
	Burden Studies in Semester 2			21.14-22,65	0,00	1,51	22.65-24,16		
Semester 3			3						
20	P20.03001	Research Proposal Seminars			3,02		3,02	MKK, MKB	Main
21	P20.03002	Progress Report 1			1,51		1,51	MKK, MKB	Main
	Burden Studies in Semeseter 3			0,00	4,53	0,00	4,53		
Semester 4			4						
22	P20B.04033	Progress Report 2		-	1,51		1,51	MKK, MKB	Main
23	P20B.04034	Research Seminar		-	3,02		3,02	MKK, MKB	Main
24	P20B.04003	Magister Comprehensive Defense		-	4,53		4,53	MKK, MKB	Main
25	P20B.04035	Scientific Paper		-		1,51	1,51	MKK, MKB	Main
	Burden Studies in Semester 4				9,06	1,51	10,57		

Pharmacology Concentration

No	Subjects		No. Module	Studi Load on Activities (ECTs)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practice	Tot		
1	2	3	4	5,00	6,00	7,00	8,00	9	10
Semester 1 : Basic Course			1						
1	P20.01001	Philosophy of Science		3,02	-	-	3,02	MPK	Main
2	P20.01002	Research Methodology		3,02	-	-	3,02	MKK	Main
3	P20.01003	Biostatistics		3,02	-	-	3,02	MKK	Main
4	P20.01004	Physicochemical Analysis		3,02	-	-	3,02	MKK	Main
5	P20.01005	Cell and Molecular Biology		4,53	-	-	4,53	MKK	Main
6	P20.01021	Pharmacodynamics		3,02			3,02	MKK	Support
7	P20.01022	Chemotherapeutics		3,02			3,02	MKK	Support
8	P20.01023	Pharmacotherapy		3,02			3,02	MKK	Support
Burden Studies in Semester 1				25.67	-	-	25.67		
Semester 2			2						
9	P20.02001	Development of Pharmaceutical Dosage Forms		3,02	-	-	3,02	MKK	Main
10	P20.02002	Pharmacokinetics		3,02	-	-	3,02	MKK	Main
11	P20.02003	Drug Discovery and Development		4,53	-	-	4,53	MKK	Main
12	P20.02004	Journal Reading and Review		1,51	-	1,51	3,02	MKK	Main
13	P20.02031	Molecular Immunology		4,53	-	-	10,57	MKK	Support
14	P20.02034	Molecular Pharmacology		3,02	-	-		MKK	Support
15	P20.02032	Pharmacology-Toxicology Methodology		3,02	-	-		MKK	Support
16	P20.02033	Drug Interactions		3,02				MKK	Support
Burden Studies in Semester 2				21.14-22.65		1,51	22.65-24,16		
Semester 3			3						
14	P20.03001	Research Proposal Seminars			3,02		3,02	MKK, MKB	Main
15	P20.03002	Progress Report 1			1,51		1,51	MKK, MKB	Main
Burden Studies in Semester 3					4,53		4,53		
Semester 4			4						
17	P20B.04033	Progress Report 2		-	1,51	-	1,51	MKK, MKB	Main
18	P20B.04034	Research Seminar		-	3,02	-	3,02	MKK, MKB	Main
19	P20B.04003	Magister Comprehensive Defense		-	4,53	-	4,53	MKK, MKB	Main
20	P20B.04035	Scientific Paper		-	-	1,51	1,51	MKK, MKB	Main
Burden Studies in Semester 4					9,06	1,51	10,57		

Pharmaceutical Analysis and Medicinal Chemistry Concentration

No.	Subjects		No. Module	Studi Load on Activities (ECTs)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practic	Tot		
1	2	3	4	5	6	7	8	9	10
Semester 1 : Basic Course			1						
1	P20.01001	Philosophy of Science		3,02	-	-	3,02	MPK	Main
2	P20.01002	Research Methodology		3,02	-	-	3,02	MKK	Main
3	P20.01003	Biostatistics		3,02	-	-	3,02	MKK	Main
4	P20.01004	Physicochemical Analysis		3,02	-	-	3,02	MKK	Main
5	P20.01005	Cell and Molecular Biology		4,53	-	-	4,53	MKK	Main
6	P20.01012	Drug and Food Analysis		3,02				MKK	Support
7	P20.01013	Analysis Method Development		3,02				MKK	Support
8	P20.01014	Separation and Purification Methods		3,02				MKK	Support
9	P20.01015	Radiopharmaceuticals		3,02					Support
10	P20.01016	Development of Radiopharmaceutical Preparations		3,02			9,06		Support
11	P20.01017	Nuclear Medicine Applications		3,02					Support
12	P20.01018	Analysis of Toxic Compounds		3,02					Support
13	P20.01019	Validation and Regulatory Issues in Industry		3,02					Support
14	P20.01020	Computational Chemistry and Molecular Modeling		3,02					Support
Burden Studies in Semester 1				25,67	-	-	25,67		
Semester 2			2						
15	P20.02001	Development of Pharmaceutical Dosage Forms		3,02	-	-	3,02	MKK	Main
16	P20.02002	Pharmacokinetics		3,02	-	-	3,02	MKK	Main
17	P20.02003	Drug Discovery and Development		4,53	-	-	4,53	MKK	Main
18	P20.02004	Journal Reading and Review		1,51	-	1,51	3,02	MKK	Main
19	P20.02023	Cosmetics and household health supplies analysis		3,02	-	-	9,06	MKK	Support

0 Appendix: Programme Learning **Outcomes and Curricula**

No.	Subjects		No. Module	Studi Load on Activities (ECTs)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practise	Tot		
20	P20.02024	Biomedical Analysis		3,02	-	-	22,65-24.16	MKK	Support
21	P20.02025	Drug Stability		4,53				MKK	Support
22	P20.02026	Drug Synthesis & Therapeutic Evaluation		3,02				MKK	Support
23	P20.02027	Pharmaceutical Engineering		3,02				MKK	Support
24	P20.02028	Molecular Based Analysis		4,53	-	-		MKK	Support
25	P20.02029	Therapeutic and Diagnostic Agents		3,02				MKK	
26	P20.02030	Instrumentation and In Vitro Testing in Radiopharmaceuticals		3,02				MKK	Support
	Burden Studies in Semester 2			21,14-22.65		1,51			
	Semester 3		3						
27	P20.03001	Research Proposal Seminars			3,02		3,02	MKK, MKB	Main
28	P20.03002	Progress Report 1			1,51		1,51	MKK, MKB	Main
	Burden Studies in Semeseter 3				4,53		4,53		
	Semester 4		4						
29	P20B.04033	Progress Report 2		-	1,51	-	1,51	MKK, MKB	Main
30	P20B.04034	Research Seminar		-	3,02	-	3,02	MKK, MKB	Main
31	P20B.04003	Magister Comprehensive Defense		-	4,53	-	4,53	MKK, MKB	Main
32	P20B.04035	Scientific Paper		-	-	1,51	1,51	MKK, MKB	Main
	Burden Studies in Semester 4				9,06	1,51	10,57		

Pharmaceutical Biology Concentration

No.	Subjects		No. Module	Studi Load on Activities (ECTs)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practice	Tot		
1	2	3	4	5,00	6,00	7,00	8,00	9	10
Semester 1 : Basic Course			1						
1	P20.01001	Philosophy of Science		3,02	-	-	3,02	MPK	Main
2	P20.01002	Research Methodology		3,02	-	-	3,02	MKK	Main
3	P20.01003	Biostatistics		3,02	-	-	3,02	MKK	Main
4	P20.01004	Physicochemical Analysis		3,02	-	-	3,02	MKK	Main
5	P20.01005	Cell and Molecular Biology		4,53	-	-	4,53	MKK	Main
6	P20.01009	Pharmacogenomics and Pharmacogenetics		3,02			3,02	MKK	Support
7	P20.01010	Standardization of Natural Medicine		3,02			3,02	MKK	Support
8	P20.01011	Phytotherapy		3,02			3,02	MKK	Support
Burden Studies in Semester 1				25,67	-	-	25,67		
Semester 2:			2						
9	P20.02001	Development of Pharmaceutical Dosage Forms		3,02	-	-	3,02	MKK	Main
10	P20.02002	Pharmacokinetics		3,02	-	-	3,02	MKK	Main
11	P20.02003	Drug Discovery and Development		4,53	-	-	4,53	MKK	Main
12	P20.02004	Journal Reading and Review		1,51	-	1,51	3,02	MKK	Main
13	P20.02014	Ethnopharmacy		3,02	-	-	10,57	MKK	Support
14	P20.02015	Aromatherapy and Hydrotherapy		3,02	-	-		MKK	Support
15	P20.02016	Herbal Supplements		3,02	-	-		MKK	Support
16	P20.02017	Plant Tissue Culture		3,02				MKK	Support
17	P20.02018	Natural Product Compound Separation Methods		3,02				MKK	Support
18	P20.02019	Microbial Pathogenicity		3,02				MKK	Support
19	P20.02020	Applied Microbiology		3,02				MKK	Support
20	P20.02021	DNA and Protein Recombinant Technology		4,53				MKK	Support
21	P20.02022	Molecular Based Biomedical Analysis		3,02				MKK	Support
Burden Studies in Semester 2				21,14-22,65		1,51		22,65-24,16	
Semester 3			3						
14	P20.03001	Research Proposal Seminars			3,02		3,02	MKK, MKB	Main
15	P20.03002	Progress Report 1			1,51		1,51	MKK, MKB	Main
Burden Studies in Semeseter 3					4,53		4,53		
Semester 4			4						
17	P20B.04033	Progress Report 2		-	1,51	-	1,51	MKK, MKB	Main
18	P20B.04034	Research Seminar		-	3,02	-	3,02	MKK, MKB	Main
19	P20B.04003	Magister Comprehensive Defense		-	4,53	-	4,53	MKK, MKB	Main
20	P20B.04035	Scientific Paper		-	-	1,51	1,51	MKK, MKB	Main
Burden Studies in Semester 4					9,06	1,51	10,57		

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Master's programme Clinical Pharmacy:

No.	Clinical Pharmacy	Clinical Biochemistry
1.	Able to develop logical, critical, systematic, and creative thinking in pharmaceutical science and technology through scientific research and compile scientific conceptions from the results of studies based on scientific principles, procedures and ethics in the form of theses that are disseminated in scientific meetings, both national and international and / or published at least in an accredited national journal or international journal.	Able to develop logical, critical, systematic, and creative thinking in pharmaceutical science and technology through scientific research and compile scientific conceptions from the results of studies based on scientific principles, procedures and ethics in the form of theses that are disseminated in scientific meetings, both national and international and / or published at least in an accredited national journal or international journal.
2.	Able to conduct academic studies or studies according to their field of expertise in the field of clinical pharmacy in solving problems in the relevant community or industry through developing their knowledge and expertise	Able to conduct academic studies or studies according to their field of expertise in the field of clinical biochemistry in solving problems in the relevant community or industry through developing their knowledge and expertise
3.	Able to compile and communicate ideas, results of thought and scientific arguments responsibly and based on academic ethics through the media to the academic community and the wider community.	Able to compile and communicate ideas, results of thought and scientific arguments responsibly and based on academic ethics through the media to the academic community and the wider community.
4.	Able to identify scientific fields that are the object of research and position them into a research map developed through an interdisciplinary or multidisciplinary approach, especially in clinical pharmacy	Able to identify scientific fields that are the object of research and position them into a research map developed through an interdisciplinary or multidisciplinary approach, especially in clinical biochemistry
5.	Able to make decisions in the context of solving problems of developing science, knowledge and technology, especially in the field of clinical pharmacy, based on analytical or experimental studies of information and data.	Able to make decisions in the context of solving problems of developing science, knowledge and technology, especially in the field of clinical biochemistry, based on analytical or experimental studies of information and data.
6.	Able to manage, develop and maintain a network of colleagues, colleagues within institutions and the broader research community	Able to manage, develop and maintain a network of colleagues, colleagues within institutions and the broader research community
7.	Able to increase the capacity of learning independently, especially in the field of clinical pharmacy	Able to increase the capacity of learning independently, especially in the field of clinical biochemistry
8.	Able to document, store, secure, and rediscover research data in order to ensure validity and prevent plagiarism.	Able to document, store, secure, and rediscover research data in order to ensure validity and prevent plagiarism.

The following curriculum is presented:

Clinical Pharmacy concentration

No.	Subjects		No. Module	Study Load on Activities (ECTs)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practice	Tot		
1	2	3	4	5	6	7	8	9	10
Semester 1 : Basic Course			1						
1	P20B.01001	Philosophy of Science		3.02	-	-	3.02	MPK	Support
2	P20B.01002	Research Methodology		3.02	-	-	3.02	MKK	Support
3	P20B.01003	Biostatistics		3.02	-	-	3.02	MKK	Support
4	P20B.01004	Introduction to Clinical Pharmacy and Community		3.02	-	-	3.02	MKK	Support
5	P20B.01005	Management of Disease I : Psychiatry, Gastroenterology, Obstetrics and Gynecology, Nervous Disease		3.02	-	-	3.02	MKK	Main
6	P20B.01006	Clinical Pharmacy Practice I: Gastroenterology, Obstetrics and Gynecology, Nervous Disease		-	2.27	2.27	4.53	MKK, MKB	Main
Burden Studies in Semester 1				15.10	2.27	2.27	19.63		
Semester 2:			2						
7	P20B.02014	Clinical Toxicology		3.02	-	-	3.02	MKK	Support
8	P20B.02015	Clinical Pharmacokinetics		3.02	-	-	3.02	MKK	Support
9	P20B.02016	Drugs information, Counselling, and Evidence Based Medicine		3.02	-	-	3.02	MKK	Support
10	P20B.02017	Aseptic Techniques		3.02	-	-	3.02	MKK	Support
11	P20B.02020	Research Proposal Seminars		-	3.02	-	3.02	MKK, MKB	Main
12	P20B.02018	Management of Disease II: Endocrine, Heart, Blood vessel and Renal		3.02	-	-	3.02	MKK	Main
No.	Subjects		No. Module	Study Load on Activities (ECTs)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practice	Tot		
13	P20B.02019	Clinical Pharmacy Practice II: Endocrine, Heart, Blood vessel and Renal		-	2.27	2.27	4.53	MKK, MKB	Main
Burden Studies in Semester 2				15.10	3.27	4.29	22.65		

0 Appendix: Programme Learning Outcomes and Curricula

Semester 3			3						
14	P20B.03026	Pharmacoepidemiology and Pharmacoeconomics		3.02	-	-	3.02	MKK	Main
15	P20B.03027	Management of Disease III: Oncology, Infection, Respiratory, System Immunology		3.02	-	-	3.02	MKK	Main
16	P20B.03028	Clinical Pharmacy Practice III : Oncology, Infection, Respiratory, System Immunology		-	2.27	2.27	4.53	MKK, MKB	Main
Burden Studies in Semeseter 3				6.04	2.27	2.27	10.57		
Semester 4			4						
17	P20B.04033	Progress Report		-	3.02	-	3.02	MKK, MKB	Main
18	P20B.04034	Research Seminar		-	4.53	-	4.53	MKK, MKB	Main
19	P20B.04003	Magister Comprehensive Defense		-	4.53	-	4.53	MKK, MKB	Main
20	P20B.04035	Scientific Paper		-	-	1.51	1.51	MKK, MKB	Main
Burden Studies in Semester 4				-	12.08	1.51	13.59		

Clinical Biochemistry concentration

No.	Subjects		No. Module	Studi Load on Activities (ECTs)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practice	Tot		
1	2	3	4	5	6	7	8	9	10
Semester 1 : Basic Course			1						
1	P20B.01001	Philosophy of Science		3.02	-	-	3.02	MPK	Support
2	P20B.01002	Research Methodology		3.02	-	-	3.02	MKK	Support
3	P20B.01003	Biostatistics		3.02	-	-	3.02	MKK	Support
4	P20B.01004	Introduction to Clinical Pharmacy and Community		3.02	-	-	3.02	MKK	Support
5	P20B.01010	Clinical Biochemistry		3.02	-	-	3.02	MKK	Main
6	P20B.01011	Cell and Molecular Biology		3.02	-	-	3.02	MKK	Main
7	P20B.01012	Genetics		3.02	-	-	3.02	MKK	Support
8	P20B.01013	Pharmacology		3.02	-	-	3.02	MKK	Support
Burden Studies in Semester 1				24.16	-	-	24.16		
Semester 2:			2						
7	P20B.02014	Clinical Toxicology		3.02	-	-	3.02	MKK	Support
No.	Subjects		No. Module	Studi Load on Activities (ECTs)				Elements of Competence	Type Competence
	Code	Name		Lecture	Tutorial	Practice	Tot		
8	P20B.02015	Clinical Pharmacokinetics		3.02	-	-	3.02	MKK	Support
9	P20B.02016	Drugs information, Counselling, and Evidence Based Medicine		3.02	-	-	3.02	MKK	Support
10	P20B.02017	Aseptic Techniques		3.02	-	-	3.02	MKK	Support
11	P20B.02020	Research Proposal Seminars			3,02	-	3.02	MKK, MKB	Main
12	P20B.02023	Molecular Mechanism of Disease		4.53	-	-	4.53	MKK	Main
13	P20B.02024	Technology and Laboratory Information System		4.53	-	-	4.53	MKK	Main
14	P20B.02025	In Vitro Diagnostic Product Development		3.02	-	-	3.02	MKK	Main
Burden Studies in Semester 2				24.16	3.02	-	27.18		

0 Appendix: Programme Learning Outcomes and Curricula

Semester 3			3						
14	P20B.03031	<i>Next Generation Medicine</i>		3.02	-	-	3.02	MKK	Main
15	P20B.03032	Clinical Laboratory Practice		-	-	3.02	3.02	MKK, MKB	Main
Burden Studies in Semester 3				3.02	-	3.02	6.04		
Semester 4			4						
17	P20B.04033	Progress Report		-	3.02	-	3.02	MKK, MKB	Main
18	P20B.04034	Research Seminar		-	4.53	-	4.53	MKK, MKB	Main
19	P20B.04003	Magister Comprehensive Defense		-	4.53	-	4.53	MKK, MKB	Main
20	P20B.04035	Scientific Paper		-	-	1.51	1.51	MKK, MKB	Main
Burden Studies in Semester 4					12.08	1.51	13.59		

According to the Self-Assessment Report, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Doctoral Programme Pharmacy:

Learning outcome Doctor Program in Pharmacy
Finding a knowledge of basic concepts in pharmaceutical science in one's area of expertise
Integrating science, knowledge, technology and advanced concepts in pharmaceutical sciences
Design, conduct and maintain original research in one's area of expertise through international publication and research dissemination through seminars
Successfully perform analysis, synthesis and antithesis by applying analytical and critical thinking in reviewing scientific literature and evaluating research findings

The following curriculum is presented:

Semester	Courses	Credit	ECTS
1	Phylosophy of Science	2	3
	Research Methodology	2	3
	Elective Course based on research theme	2	3
	Research Proposal	5	4
	Teaching practice and method in education	1	2
Credit on semester 1		12	15
2	Journal Reading and Review	2	16
	Literature Study 1	1	19
Credit on Semester 2		3	35
3	Publication in Reputable International Journal	9	30,8
	Presentation in Unpad Internal Seminar/National/International	1	18,6
	Literature Study 2	1	18,6
Credit of Semester 3		11	68
4	Seminar of Research Result	5	23
	Credit on Semester 4		5
5	Dissertation manuscript review	6	24
	Credit on Semester 5		6
6	Doctoral Promotion Session	5	23
	Credit on Semester 6		5
Total Credit		42	187