ASIIN Seal

Accreditation Report

Bachelor's Degree Programme
Pharmacy

Master's Degree Programme
Clinical Pharmacy

Provided by
Universitas Gadjah Mada, Yogyakarta

Version: 26 June 2020

Table of Content

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 Sarjana Program Studi Farmasi	Bachelor in Pharmacy	ASIIN	-	09, 10
Program Magister Farmasi Klinik	Master in Clinical Pharmacy	ASIIN	-	09, 10
Date of the contract: 23.09.2019 **Submission of the final version of the self-assessment report:** 29.11.2019 **Date of the onsite visit:** 21.01. – 23.01.2020 **at:** Yogyakarta, Indonesia				
Peer panel: Prof. Dr. Michael Keusgen, Philipps-University Marburg Prof. Dr. Gerhard Scriba, Friedrich-Schiller-University Jena Dr. Regina Holzhauser, St.Ingbert Istiffa Nurfauziah Soeparmono, Student, Bandung Institute of Technology				
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				

[1] ASIIN Seal for degree programmes;
[2] TC: Technical Committee for the following subject areas: TC 09 – Chemistry; TC 10 – Life Sciences

ASIIN General Criteria as of 28.03.2014 Subject-Specific Criteria of Technical Committee 09 – Chemistry as of 29.03.2019 Subject-Specific Criteria of Technical Committee 10 – Life Sciences as of 28.06.2019	

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 in Pharmacy	Sarjana Farmasi / Bachelor in Pharmacy	-	6	Full time	no	8 Semester	145 CSU / 246.5 ECTS	1947, Once a year (July)
Master in Clinical Pharmacy	Magister Farmasi / Master in Clinical Pharmacy	-	7	Full time	no	4 Semester	43 CSU / 73.1 ECTS	2004, Once a year (August)

[3] EQF = The European Qualifications Framework for lifelong learning

For the Bachelor's degree programme Pharmacy (BP programme) Universitas Gadjah Mada UGM has presented the following profile in the Self-Assessment Report:

„**Vision**

The vision of the Bachelor in Pharmacy Program is to be a pioneer in pharmacy under graduate education, which excels at the national level and international level as well as serves the interests of the nation and humanity imbued with Pancasila.

Mission

1. Provide an undergraduate pharmacy education that receives national and international recognition.

2. Conduct research in the field of pharmacy based on science and technology to solve health and humanitarian problems.

3. Perform community service that benefits community welfare.

Objectives

1. To have leading knowledge in the pharmaceutical manufacturing process, including production, quality control and assurance, inventory control, and distribution.

2. To have essential knowledge and skills in pharmaceutical care to collaborate with fellow health personnel in clinics and community.

3. To have excellent managerial skills to conduct pharmacy practices.

4. To engage in lifelong learning, especially to pursue higher degree including the pharmacist professional degree."

For the Master's degree programme Clinical Pharmacy (MCP programme) UGM has presented the following profile in the Self-Assessment Report:

„**Vision**

The vision of Master of Clinical Pharmacy is to be a pioneer of master's education in clinical pharmacy that is internationally recognized, excellent, leading, and professional in clinical pharmacy services based on ethics and moral culture of the nation

Mission

The missions of Master of Clinical Pharmacy are to:

1. Organize research-based master's education in clinical pharmacy in order to educate and empower the nation, maintain national integrity and have international perspective.

2. Increase the quantity and quality of research in the field of clinical pharmacy with global perspective to support education, development of science and technology, and its application in society, and respond to the problems of society, nation and state.

3. Increase the quantity and quality of community service, especially in the health sector and expand networking with strategic partners at home and abroad.

4. Increase national and international recognition of Master of Clinical Pharmacy as an excellent institution of clinical pharmacy education.

Objectives

1. To establish professionalism to practice in clinical pharmacy services or education based on the research results and/or the development of the latest science.

2. To have leadership qualities and can collaborate in an integrated manner with other health workers involved in health services.

3. To be able to formulate approaches to solving various health problems of national and global society through scientific reasoning.

4. To be able to pursue higher education."

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
- Study plans of the degree programmes
- Module descriptions
- Webpage Ba Pharmacy: http://programsarjana.farmasi.ugm.ac.id/home/
- Webpage Ma Clinical Pharmacy: http://mfk.farmasi.ugm.ac.id/home
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The peers refer to the Subject-Specific Criteria (SSC) of the Technical Committee Life Sciences and the SSC of the Technical Committee Chemistry as a basis for judging whether the intended learning outcomes of the Bachelor's degree programme Pharmacy and the Master's degree programme Clinical Pharmacy, as defined by UGM, correspond with the competences as outlined by the SSC. They come to the following conclusions:

The qualification objectives of the BP programme include acquiring sound fundamental knowledge of biology and chemistry. The graduates should gain methodological competences in the pharmaceutical sciences, should be able to carry out practical work in laboratories and be able to handle samples and organisms. In addition, students should be familiar with the safe handling of chemicals and pharmaceuticals and have knowledge of safety and environmental issues as well as the associated legal regulations.

The vast majority of BP 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 in drug stores, and analyst in medical laboratories or public institutions.

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

The qualification objectives of the MCP Programme include the acquisition of advanced theoretical and practical pharmaceutical skills, especially an in-depth knowledge of clinical pharmacy. In addition, students learn to apply their competences in hospitals and are able to carry out advanced research activities. Graduates of the MCP 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 MCP programme aims 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.

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

The auditors hold the view that the objectives and intended learning outcomes of both degree programmes under review are reasonable and well founded.

In summary, the auditors are convinced that the intended qualification profiles of the BP as well as the MCP programme allow students to take up an occupation, which corresponds to their qualification. The degree programmes are designed in such a way that they meet the goals set for them. The peers judge that the objectives and intended learning outcomes of the degree programmes adequately reflect the intended level of academic qualification and to correspond sufficiently with the ASIIN Subject-Specific-Criteria (SSC) of the Technical Committee 10 – Life Sciences and the SSC of the Technical Committee 09 - Chemistry.

The peers appreciate that UGM aims for high standards as to give their graduates good chances in the national job market as well as a good starting point to transfer to other academic programmes to complete a Master and maybe even a PhD-programme. The employers (from hospitals, pharmacies, pharmaceutical companies, and health administration) confirm during the discussion with the peers, that there is a high demand for the graduates of both degree programmes. Furthermore, they emphasise that graduates from UGM

are their first choice because they are in general better qualified than graduates from other Indonesian universities are. The excellent and manifold job opportunities are one of the strong points of the pharmacy programmes at UGM.

Criterion 1.2 Name of the degree programme

Evidence:

- Self-Assessment Report

Preliminary assessment and analysis of the peers:
The auditors confirm that the English translation and the original Indonesian names of the Bachelor's degree programme Pharmacy and the Master's degree programme Clinical Pharmacy correspond with the intended aims and learning outcomes as well as the main course language.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Study plans of the degree programmes
- Module descriptions
- Webpage Ba Pharmacy: http://programsarjana.farmasi.ugm.ac.id/home/
- Webpage Ma Clinical Pharmacy: http://mfk.farmasi.ugm.ac.id/home
- Discussions during the audit

Preliminary assessment and analysis of the peers:
Both pharmacy programmes are offered by the Faculty of Pharmacy of UGM. The Faculty of Pharmacy has four departments: Pharmaceutical Biology, Pharmaceutics, Pharmaceutical Chemistry, and Pharmacology and Clinical Pharmacy. The BP programme is designed for four years and at least 145 credit semester units (CSU) need to be achieved by the students. The courses in the first two semesters convey basic knowledge of natural sciences and languages (Indonesian and English). Courses on the different pharmaceutical sciences are offered from the third to the seventh semester. During the eight semesters, students must complete the community service and the undergraduate thesis. After graduation, graduates are eligible for the pharmacist professional degree programme (1-year programme) to obtain an apothecary (pharmacist) license.

Usually during the last year of studies, 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 Master's degree programme Clinical Pharmacy encompasses 43 CSU, consisting of lectures (25 CSU), clinical internships (10 CSU) and Master's thesis (8 CSU). The first semester includes lectures, the second semester lectures and clinical internships, while the third and fourth semesters cover several clinical internships and thesis writing. The students select the elective courses and clinical internships based on their interests and after consulting with their academic advisor.

Since UGM has the goal to become internationally more visible and wants to further internationalise its degree programmes, the peers discuss with the programme coordinators and students if any classes are taught in English. Both programme coordinators explain that the course descriptions and the necessary documents are all available in English, but no classes are taught in English. Furthermore, students are encouraged to attend summer courses that are held in English with international students and guest lecturers. In addition, the thesis can be written in English. The students confirm that some presentations are done in English, and English textbooks are used but the peers are convinced that more active English speaking would be useful.

The students express their sincere wish to have more subject-specific elements taught in English. This could for example be achieved by offering a journal club, where the students read, discuss, and present current international papers or seminars in English. The students suggest offering an English course for pharmacists. In addition, the peers recommend doing optional poster presentations and oral presentations in English, which will also improve the communication skills of the students.

The members of the teaching staff explain on demand of the peers that they offer possible topics for the Bachelor's or Master's thesis according to their own research projects. All

members of the teaching staff supervise theses. The students have to design a research proposal with a time schedule for the project, which is discussed with the academic advisor. If they agree, the students apply formally for being allowed to work on the suggested topic.

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

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Report
- Academic Guidelines
- Decree of Minister of Research, Technology and Higher Education No. 2, 2015
- UGM webpage: https://www.ugm.ac.id/en/pendaftaran
- 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.2, 2015. The requirements, schedule, registration venue, and selection test are announced on UGM'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 UGM:

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 (40 % of the students at UGM 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 UGM.

3. Written Test (Ujian Tulis), students are selected based on a written test (similar to SBMPTN) specifically held by UGM (30 % of the students at UGM are admitted through this test).

The annual intake quota of the BP programme is 240 students, with a maximum positive deviation of 10 % to outbalance possible withdrawals. The number of applicants exceeds by far the number of available places. For example, in 2019/20, there were 4660 students applying for admission to the BP programme and only 253 new students were accepted. This is equivalent to an admission rate of only 5.4 %. The numbers in former years are similar. There is a tuition fee for the BP programme with eight different levels (from 0 to 17.5 Mill IDR~ 500€ per Semester) depending on the economic background of the students.

The details of the application process at UGM and further information on admissions criteria and deadlines can be found in the National Regulation No. 2, 2015 and the Academic Guidelines, which is also published on the university's webpage.

The peers inquire of the programme coordinators, why there are so many students applying for studying at UGM. They learn that pharmacy is very popular subject because the job perspectives are very good. In addition, there are many high school graduates in Indonesia and UGM is one of the most prestigious universities in the country. Consequently, UGM 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 motivated students to be one of the strong points of the BP programme.

Students can apply online at UGM for admission to the MCP programme. Candidates are required to have a pharmacist license, with a GPA of ≥ 3.00, and to go through an interview process at UGM. During the discussion with the peers, the programme coordinators explain that the applicants are asked about their commitment and motivation for applying for the MCP programme, about their academic and professional background as well as their social activities. The result of the interview is documented in an official report sheet. The peers notice that the interview is currently conducted by just one teacher and that it would be useful to have two interviewers for each applicant. This way, the outcome of the interview will be more impartial.

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 (TPA) score ≥ 500). The programme's capacity is 40 students per academic year. The schedule of admission, the requirements, and the procedures are published and can be accessed via UGM's homepage.

As described in the Self-Assessment Report, the number of applications and of accepted students has slowly decreased within the last years. In 2016/17, there were 63 applications, of which 43 were accepted. In 2019/20, only 41 students applied and 36 of them were admitted. The programme coordinators explain that other Indonesian Universities now offer more similar programmes with lower tuition fees (the tuition fee for the MCP programme is IDR 17.000.000 ~ € 1105 per semester) and acceptance criteria. For this reason, is has become more competitive for UGM to attract highly qualified students for the MCP programme.

Students receiving a scholarship for the MCP programme only need to fulfil the university requirements for admission, which are lower that the programme specific requirements with respect to the TOEFL and TPA score. The number of students receiving a scholarship has decreased from 7 in 2016/17 to 1 in 2019/20. The programme coordinators explain that this drop is due to a new government regulation. The Indonesian government has changed the regulations and only Bachelor's students are supported now. It is still possible to receive a scholarship from UGM. However, the number of available scholarships is much smaller than before.

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 UGM for clarifying that the Community Service should be carried out during the semester break so that there is no conflict with attending classes.

With respect to further improving students' English proficiency, it is of course useful offering additional courses such as "English for Communication Skill" and "English for Pharmacy". However, these classes are optional co-curricular activities and not all students will attend them. For this reason, the peers still think it would be very useful to have more English elements in the mandatory classes. The peers support UGM's plan to do so and to offer incentives for teachers for delivering classes in English.

The peers appreciate that the programme management will provide two interviewers for each applicant during the selection process for the Master's programme and will implement this change in the upcoming students' entry.

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 of the degree programmes
- Module descriptions
- Webpage Ba Pharmacy: http://programsarjana.farmasi.ugm.ac.id/home/
- Webpage Ma Clinical Pharmacy: http://mfk.farmasi.ugm.ac.id/home
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The curriculum of the BP programme is aligned with the national standards in Indonesia. It encompasses 145 CSU and is divided into university courses (11 CSU), general pharmacy courses (110 CSU), pharmacy elective courses (9 CSU), soft skills courses (4 CSU), interdisciplinary courses (4 CSU), Community Service (3 CSU), and thesis (4 CSU).

The curriculum is designed for eight semesters. Nevertheless, it also possible for excellent students to complete the degree in only seven semesters. Students cannot cover more than 24 CSU per semester. The students' individual study plans are different from each other, but have to be approved by their academic advisors and the Vice Dean of Academic and Student Affairs.

There is an introduction to scientific writing and research methods; this class is offered in the first semester of the BP programme. This class was previously offered in the third semester but was shifted after feedback from the students. They prefer to have the class already in the first semester, because in every semester students will have to prepare some presentations and thus will gradually be acquainted with scientific writing and methods.

The peers notice that most of the modules in the BP programme are rather small and encompass only between 1 and 3 CSU. To reach the usual workload, students have to attend on average 8 courses per semester, each with a mid-term and a final exam. Consequently, there are many small exams during the semester. The peers are convinced that it would be useful to combine related courses into larger modules. This would reduce the number of exams, strengthen the inner coherence of the degree programme, and offer more flexibility in introducing new and current topics without having to change the study plan. In addition, the peers point out that there are some redundancies in curriculum of the BP programme.

For example, there is some overlap between the modules “Pharmaceutical Biotechnology” and “Process Technology in Industrial Pharmacy” as well as between the modules “Cell Biology-Microbiology” and “Molecular Biology”. The students confirm this impression during the discussion with the peers and point out that in these courses even the same material is used. For this reason, the peers recommend to check the content of the mentioned modules and to eliminate the redundancies.

The MCP programme encompasses 14 compulsory modules and 4 elective modules. Students are expected to complete the degree programme within 4 semesters. In the first semester, students will attend lectures that support clinical pharmacy practice. In the second semester, the theoretical education in advanced pharmaceutical sciences is combined with practical work in clinics. In the third semester, students will take a clinical internship in several hospitals and start their thesis, which is finished in the fourth semester. The programme includes mostly mandatory lectures but also one elective course in the second semester, a mandatory clinical internship in internal medicine, and three elective clinical internships.

The elective modules, especially the clinical internships, allow the students to define an individual focus and course of study (including student mobility, work experience etc.), Students can choose from a list of 8 different clinical internships and 7 elective courses. By choosing certain courses, students can achieve their specific intended competence profile. For instance, those who want to work in a psychiatric hospital can choose the clinical internship in the psychiatric field.

The clinical internships are integrated into the curriculum and the Faculty of Pharmacy vouches for the adequate implementation in the different hospitals. Since 2018, the content and structure of the clinical internships are standardized and thus meet the requirements of the degree programme. Before 2018, there was a big disparity between the hospitals with respect to the quality and assessment process of the clinical internships. For this reason, the Faculty of Pharmacy has prepared the Clinical Internship Guideline and Assessment Form, which guides the students and preceptors in conducting the internship to ensure that the learning outcomes are achieved as expected.

All courses taught in both pharmacy programmes are delivered in Bahasa Indonesia (Indonesian language) but some reading lists include English textbooks. Information about the curriculum is available for students in the Academic Guidelines as well as in the SIMASTER online academic management system and on the programme’s homepage.

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, especially in the BP programme. The programme coordinators admit that the number of Bachelor's students who participate in international exchange programmes is still low, despite students' high interest.

According to the Self-Assessment Report, the Faculty of Pharmacy has several agreements with international universities in Japan, Malaysia, South Korea and Thailand. In addition, there are visiting lecturers from international universities to UGM. Since 2016, 36 students from the BP programme have spent some time abroad, but most of these stay where short time visits, e.g. for attending symposiums or conferences. Three students conducted internships in Turkey and Malaysia, one student took part at a student exchange programme with Japan, and ten students conducted a research project abroad. The peers see that some international co-operations exist, but especially the number of Indonesian Bachelor's students spending some time abroad is rather low.

On the other hand, the students' academic mobility in the MCP programme is significantly higher, because the Faculty of Pharmacy has established several international cooperations that allow students to conduct clinical internships abroad. So far, there are collaborations with three hospitals/medical institutions in Malaysia for clinical internships in geriatrics, internal medicine, and drug administration. In addition, there is one collaboration with a hospital in Bangkok, Thailand in the area of cardiology. Since 2016, 8 students have completed a clinical internship in Thailand, and 31 students in Malaysia.

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 would like to 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.

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. Because of the very positive feedback of the students, the Faculty of Pharmacy tries to offer more possibilities for conducting clinical internships abroad. In 2016, UGM started with only partners in Malaysia and one in Thailand. In 2018 and 2019, two more cooperations were signed with two other institutions in Malaysia. However, the number of available places is still limited and there are restrictions due to missing financial support. The Faculty of Pharmacy can only provide limited travel grants, while the demand from students is rising.

The peers discuss with UGM's management if there is a strategic concept to increase the international mobility of students and teachers. They learn that UGM has many international partners, has developed a fellowship programme, and provides scholarships for foreign students that what to study at UGM. Moreover, international guest lecturers are invited, and a cooperation with agreement with the German Academic Exchange Service (DAAD) and the similar Dutch organisation exists for senior Professors that are invited to teach for some time at UGM. Finally, summer courses are conducted with international participants and double degree and exchange programmes are established with different countries. The peers support these measures; however, they recommend increasing the effort to further internationalise UGM by establishing more international cooperations and exchange programmes and offering more and better endowed scholarships.

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

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

Criterion 2.2 Work load and credits

Evidence:

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

Preliminary assessment and analysis of the peers:

Based on the National Standards for Higher Education of Indonesia (SNPT), both programmes use a credit point system called 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 CSU is awarded for 170 minutes of workload per week and the relation between the different kind of learning (contact hours, self-studies) is fixed.

To complete the degree programme in time, Bachelor students need to take on average of 18 CSU per semester excluding co-curricular contents. However, the regular schedule usually covers 20-21 CSU 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.

According to the Self-Assessment Report, most of the students can complete their degree without exceeding the expected period. For example, in the BP programme between 93 % and 86 % of the students (years 2015/2016 to 2017/18) have graduated within four years.

The number of students completing the MCP programme within the expected two years has decreased within the last three years from 84.2 % for the intake year 2015/16 to 68.3 % for the intake year 2017/18. The programme coordinators explain that this is mostly caused by the extension of the duration of clinical internships. They have become twice as long as before. This was recommended by the stakeholders in the hospital in order to improve the practical competence in clinical pharmacy care.

The peers perceive that the underlying credit hour system used for assigning credit points makes use of a fixed amount of contact hours and hours required for self-studies. This results in a conversion rate of 1 to 1.7 between CSU and ECTS credits. However, workload

indicates the time students typically need to complete all learning activities (such as lectures, seminars, projects, practical work, self-study, and examinations) and needs to be ascribed separately to each component of the curriculum.

As described in the ECTS users' guide, the estimation of students' workload should include all learning activities. In other words, a seminar and a lecture may require the same number of contact hours, but one may require significantly greater workload than the other because of differing amounts of independent preparation by students.

The peers discuss with the programme coordinators and the students about the scope of the Bachelor's and Master's thesis, the related workload, and the awarded credit points. They gain the impression that the students regularly spent more time on the theses than anticipated by the programme coordinators and the teachers. The same problem is relevant for the clinical internships in the MCP programme. One clinical internships takes four weeks and the students confirm towards the peers that they work for 8 hours per day in the hospital. This results a workload of at least 160 hours, which would be equivalent to 6.4 (25 hours per ECTS credit) to 5.3 (30 hours per ECTS credit) ECTS credits.

Since the workload of the students was only estimated by the programme coordinators and seems to be too low in comparison to the actual time needed by the students, the peers suggest re-evaluating the calculation of ECTS and engaging the students in verifying the weight of each module. This could e.g. be done by including a respective question in the course evaluations. In any case, UGM must make sure that the actual workload of the students and the awarded ECTS credits correspond with each other.

In addition, the peers point out that the MCP programme encompasses only 73,1 ECTS credits, which is very low for a four semester long Master's programme. By European standards, 30 ECTS should be awarded per semester. Since the actual workload of the students seems to be adequate, the ECTS credits need to be adjusted. By correctly displaying students' workload in ECTS credits, UGM would facilitate academic mobility and better support their graduates if they apply for international programmes.

Criterion 2.3 Teaching methodology

Evidence:

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

Preliminary assessment and analysis of the peers:
UGM has the goal to support the transition from a teacher-centered to a student-oriented teaching method, in order to involve all students in the learning process and to develop their thinking and analytical skills. In addition, blended learning is introduced as a modern way of teaching. The use of e-learning elements in the learning process allows for class activity without physical attendance. At UGM, it is possible to use e-learning for a maximum of 30 % of the course. To provide support and guidance to the teachers in utilizing these instruments, all members of teaching staff attended workshops on blended learning. To facilitate the use of blended learning, UGM has developed a moodle-based e-learning system (eLok) and has subscribed for using the webinar platform Cisco Webex.

The BP programme makes use of several different educational methods for each course such as practical laboratory work, field studies, lectures, Community Service, and Bachelor's thesis.

During the classes, active and interactive teaching methods (e.g. lectures, discussions, reports, presentations, and group work) are applied. UGM 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 the MCP programme, also guest lectures from practitioners, case-based studies, small group discussions, clinical internships and independent academic research activities are conducted. In addition, students attend workshops for scientific writing, good clinical practice and biostatistics. Almost all courses include student-centred/active learning in the form of case-based lectures, small group discussion and presentations, practice-based learning like counselling simulation, and clinical internship. However, not all lectures use such didactic instruments or learning methods, due to the nature of the topic. For example, in modules like "Pathophysiology" and "Interpretation of Clinical Data" the content is delivered via a classic classroom lecture, with the teacher-centred learning method.

To help the students to achieve the intended learning outcome and to facilitate adequate learning and teaching methods UGM has developed eLisa (eLearning System for Academic Community). It is a learning management system, designed as a digital platform, where students and teachers can interact.

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
- Academic Guidelines
- Discussions during the audit

Preliminary assessment and analysis of the peers:
UGM 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. The Bachelor's students criticize during the discussion with the peers that some academic advisors are not easily contacted and that they are not readily available to the students for advice and support.

The reason for this deficit lies in the high number of Bachelor's students, which results in a 1:20 ratio for academic advisor. In addition, each student is assigned to an undergraduate thesis supervisor; he supervises up to eight students every semester and helps them to find a suitable topic for the Bachelor's thesis, to prepare the research proposal, and ensures the successful completion of the thesis. As the peers consider the advisory system an essential part of the degree programme, they expect the Faculty of Pharmacy to analyse the availability of the academic advisors in the BP programme and to make sure that all students can easily contact their academic advisor.

On the other hand, the Master's students confirm that the advisory system works very well and that they meet their academic advisors regularly, and that they can always contact

them personally and ask for help or advice (there is 1:10 ratio for academic advisors in the MCP programme).

In general, students stress that the teachers are open minded and communicate well with them and take their opinions and suggestions into account and changes are implemented if necessary (e.g. shifting the class on scientific writing to the first semester).

All students at UGM have access to the digital academic portal (SIMASTER) which is integrated with the Registration Information System, the Academic Information System, the Library Information System, and the Scholarship Information System. The students' profiles (student history, study plan, academic transcript and grade point average/GPA, lecturer evaluation, course list) are available via SIMASTER.

There is also medical, social, and psychological support for students at UGM (Gadjah Mada Medical Center/GMC and UGM Hospital). Furthermore, there is the alumni and career center that gives advice to students how to start and run a business.

Finally, there are several student organizations at UGM; 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 support the plan of offering larger modules by combining related subjects. As soon as the international discussions and arrangements are finished, these changes should be implemented.

As the Faculty of Pharmacy points out, there are some overlaps between some modules. The peers appreciate that these redundancies will be eliminated by rearranging the respective modules.

The peers laude the efforts of further promoting the students' academic mobility by initiating new collaborations with universities from ASEAN countries. In addition, it is very commendable that the financial support will be increased by finding new sponsors.

With respect to students' workload and awarded credits, the peers see that the faculty of Pharmacy has recalculated the workload for the Master's programme, which now encompasses 125 ECTS. On the other hand, a verification of the students' total workload, including attendance based hours and time for self-studies still needs to be done for each single course. The tables provided in the annexes 12 and 13 are fine but need to verified and differentiated between attendance based hours and time for self-studies. The peers expect the Faculty of Pharmacy to provide this information in the course of the fulfilment of the requirements.

The peers appreciate that a workshop was held in order to improve the academic advisory system and that a students' questionnaire will be drafted and distributed to this effect. They expect that these measures will be implemented in time and that students' satisfaction with the advisory system will increase. The Faculty of Pharmacy should submit suitable documents for verification.

The peers consider criterion 2 to be mostly fulfilled.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation

Evidence:

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

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. Clinical internships in the MCP programme are assessed by practical exams and case-based presentation. The form and length of each exam is mentioned in the module descriptions that are available to the students via UGM's homepage and the digital platform SIMASTER.

The written exams can be multiple choice, quizzes, or essays. In addition, there are oral exams, especially for assessing the laboratory work. The students are informed about mid-

term and final exams via the Academic Calendar. The final grade is the result of the different activities in the course (e.g. laboratory work, mid-term exam, the final exam, quizzes or other given assignments).

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.

The peers discuss with the students how many and what kind of exams they have to take each semester. They learn that for each course there is one mid-term exam and one final exam in every semester. Usually, there are additional practical assignments or oral tests. The final grade is the sum of the sub-exams. The students appreciate that there are a several short exams instead of one big exam and confirm that they are well informed about the examination schedule, the examination form, and the rules for grading.

Because of the small size of the modules, the peers point out that the students have only to learn rather small portions for each exam. In addition, the content of the mid-term exams is not repeated in the final exams. The result of this system is a rather fragmented knowledge about the different subjects. For this reason, larger modules would be favourable.

However, during the discussion with the peers the students point out that they are only informed about the result of the exams and the end of the semester and not directly after the exam has taken place. As a result, they do not know how they performed during the ongoing assessments and the mid-term exams. The teachers explain that this is due to the electronic platform where all the grades can only be registered at the end of the semester after the final exams have been completed. The peers insist that this situation needs to be improved and students need to be informed about their grade as soon as possible after the exam has been conducted. It should not be a problem to adjust the electronic platform accordingly.

As stipulated in the Academic Guidelines, every student is required to do a final thesis. Prior to the actual research work, students need to prepare a research proposal, which is submitted to the Thesis Advisory Committee. Students are asked to find a suitable topic by discussing with the lecturers, developing own ideas, or joining a lecturer's research project. The student can propose the name of the thesis supervisor and submit the thesis proposal to the Thesis Committee. The Thesis Committee will review the proposal and decide about the supervisor.

After completing the work on the thesis students have to defend the thesis in front of the Thesis Defence Committee; it consists of a minimum of 3 lecturers (1 advisor and 2 examiners) and will determine whether the thesis qualifies for graduation. In the BP programme there is only a closed oral presentation of the thesis (just in front of the Thesis Committee), where as in the MCP programme there is also a thesis seminar, which is open for all interested persons.

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

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

The peers laude that SIMASTER has already been adjusted so that exercises, quizzes, assignments, and mid-term exam results can now be accessed two weeks after the exam has taken place. All teachers have been informed accordingly. For this reason, the peers abstain from issuing a requirement to this effect.

The peers consider criterion 3 to be fulfilled.

4. Resources

Criterion 4.1 Staff

Evidence:

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

Preliminary assessment and analysis of the peers:

At UGM, 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 82 full-time teachers (21 professors, 17 associate professors, 15 assistant professors, 11 lecturers, and 18 assistant lecturers).

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 UGM's management, how new staff members are recruited. They learn that every year the faculties and departments announce their vacancies to UGM's management. Since UGM 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 UGM abroad to complete their PhD and then to hire them as teachers when they are finished. In addition, part time lecturers are hired from the pharmaceutical industry to give lectures on specialised topics. UGM 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.

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:

UGM encourages the training of its academic and technical staff, so it has developed a programme for improving the didactic abilities and teaching methods. One part of the capacity-building programme focuses on subject-specific skills (to keep up with current developments and trends in pharmaceutical sciences), whereas other training courses are intended

to further improve the teachers' didactic skills and to introduce new teaching methods (e.g. blended learning). The professional and scientific development of the staff members is coordinated by the Vice Dean for Finance, Administration and Human Resources and the Vice Dean for Academic and Student Affairs. There are financial resources available for staff members to go abroad for a limited time and to take part at conferences or other events in order to stay up to date with the scientific development in their area of expertise. In addition, the Faculty of Pharmacy wants to promote the process of internationalisation at UGM by hosting international scientific events, facilitating sabbatical leaves, and inviting international professors.

The peers discuss with the members of the teaching staff the opportunities to develop their personal skills and learn that the teachers are satisfied with the internal qualification programme at UGM, 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 UGM 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
- On-site visit of the facilities
- Discussions during the audit

Preliminary assessment and analysis of the peers:
Basic funding of the degree programmes and the facilities is provided by UGM and the Faculty of Pharmacy. Additional funds for research activities can be provided by UGM or the Indonesian government (Bantuan Pendanaan Perguruan Tinggi Nasional, BPPTN), but the teachers have to apply for them. In addition, there are several cooperations with industrial partners.

During the audit, the peer group also visits the laboratories, the classrooms and the central library in order to assess the quality of infrastructure and technical equipment. They notice that there are no severe bottlenecks due to missing equipment or a lacking infrastructure. The basic technical equipment for teaching the students on a Bachelor's level is available, although it is not state of the art. The students confirm during the discussion with the peers

that in general, they are satisfied with the available equipment only some instruments are outdated.

The peers perceive that the technical equipment is very basic and needs to be improved so that the students and the teaching staff can conduct their research activities in their own labs. So far, the members of the teaching staff and the advanced students need to use the much better equipped central laboratory for conduct their experiments.

Since the central laboratory is used by staff members from all faculties, the advanced equipment there is in high demand, which leads to bottlenecks and causes delays. Therefore, the peers expect that UGM as well as the Faculty of Pharmacy will invest more money and resources in the laboratories. This will make the faculties more independent from the central laboratory and will increase the possibilities for the staff members to conduct their research activities and for students to prepare high quality theses. For example, there is a 500 MHz nuclear magnetic resonance spectrometer (NMR) available in the central laboratory, but it takes 3 to 4 weeks to get the results if samples are sent there. This is a bottleneck and significantly slows down the research activities. Therefore, it would be useful to provide some advanced instruments in the new laboratories so that the teaching staff has direct access to them. The peers are convinced that this will significantly foster the scientific output of the Faculty of Pharmacy.

The peer group understands that modern equipment for sophisticated laboratory work, sufficient in terms of quality and quantity, is not readily available and that the funds are restricted. Although, all students have the opportunity to carry out laboratory experiments, compared to international standards the number of students conducting one experiment should be reduced. In order to gain sufficient hands on experience in the laboratories, groups conducting one experiment should be limited to 2 to 4 students.

Consequently, the auditors expect UGM to provide a concept, a reliable financial plan, and a timetable for stepwise increasing and upgrading the technical equipment used for teaching and research in the laboratories. This should be no problem, because the peers see during the on-site visit, that UGM is constructing a new 8-storey building for the Faculty of Pharmacy. It is planned to finish the construction by the end of 2020 and the Dean explains that around 17 billion IDR (~ 1.1 million €) will be available for technical equipment. The peers appreciate these efforts and assume that the laboratories in the new building will be sufficiently equipped with modern instruments and that this will be adequately documented.

The students also express their satisfaction with the library and the available literature. The central library that offers direct access to international literature, scientific journals, and

publications e.g. via SpringerLink. From the students' point of view, there is sufficient access to current international literature and databases and a remote access is possible.

Besides the already mentioned restrictions, the auditors judge the available funds, the technical equipment, and the infrastructure (laboratories, library, seminar rooms etc.) to comply with the requirements for sustaining the degree programmes.

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

The peers support the plan of procuring more financial means by increasing the funding from alumni and industrial partners. They hope that these efforts will be successful so that the additional funds can be used for updating the technical equipment in the laboratories. The respective concept and first results should be submitted in the course of the procedure for fulfilling the requirements.

The peers consider criterion 4 to be mostly fulfilled.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Self-Assessment Report
- Module descriptions
- UGM's webpage: www.ugm.ac.id

Preliminary assessment and analysis of the peers:
The students, as all other stakeholders, have access to the module descriptions via UGM's homepage. The more detailed syllabus (RPKPS) is handed out to the students by the lecturers at the beginning of the semester. The RPKPS includes a practical guideline and detailed description of the practical parts of each course.

After studying the module descriptions, the peers confirm that they include all necessary information about the persons responsible for each module, the teaching methods and work load, the awarded credit points, the intended learning outcomes, the content, the applicability, the admission and examination requirements, and the forms of assessment and details explaining how the final grade is calculated.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

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

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

Criterion 5.3 Relevant rules

Evidence:

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

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

The only deficit the peers notice is the lack of a specific regulation for disability compensation. Since such a regulation does not yet exist, the peers expect UGM to draft a regulation for disability compensation of handicapped students.

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

The peers confirm that UGM's Strategic Plan (2017-2022) includes the availability of proper facilities for disabled students as one of the key performance indicators and has formed the Disability Care Working Group with the goal of formulating the respective university guideline. The peers support these efforts and expect that this guideline will be drafted and

implemented in due time for verifying the fulfilment of this requirement. However, they point out that entrances should be wheelchair accessible, i.e. avoid thresholds and create ramps; where possible. In addition, simple rules should be established on how students with walking disabilities can be helped by fellow students.

The peers consider criterion 5 to be mostly fulfilled.

6. Quality management: quality assessment and development

Evidence:

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

Preliminary assessment and analysis of the peers:
The auditors discuss the quality management system at UGM 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 UGM is conducted by the Office of Quality Assurance (KJM), which is supported by the Quality Assurance Unit (K3A) at faculty level and the Semester Coordination Team (TKS) at department 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 (EDOM). Giving feedback on the classes is compulsory for the students; otherwise, they cannot access their account on the digital platform SIMASTER. There are 12 categories in the questionnaire (e.g. schedule, course materials, workload, and motivation). 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.

In addition to the surveys, there is an annual Internal Quality Audit (AMI) in order to evaluate whether the general learning objectives have been achieved. AMI is held annually, assessing all aspects of the educational process conducted by the degree programme. The assessment is carried out by two auditors, which are appointed by KJM. In the course of

the AMI, lecturers, students, administrative staff, and degree programme management are interviewed by the auditors.

Students are also involved in the quality assurance system. Besides the EDOM questionnaires and informal feedback, there is a students' coordinator for each entrance year in both programmes; the coordinator is appointed by the Faculty of Pharmacy. Moreover, each TKS has a student member and students receive a questionnaire from each laboratory to evaluate the performance and technical equipment.

The results of internal quality assessments are evaluated on faculty level during the Management Review Meetings (RTM), attended by the dean, vice deans, heads of departments, heads of laboratories, degree programme managements and the Quality Assurance Unit. The RTM takes the final decision on all audit findings and initiates corrective actions if necessary.

During the audit, the peers learn that the results of the surveys are accessible by the students and the members of the teaching staff. If there is negative feedback, the Dean talks to the respective teacher, analyses the problem, and offers guidance. Furthermore, there is a complain box for the students that can be used for suggestions or criticism. The auditors gain the impression that the students' feedback is taken seriously by the faculties and changes are made if there is negative feedback.

External quality assessment of the degree programmes is provided by the Board of National Accreditation (BAN-PT) and LAMPT-Kes (Independent Accreditation Institute for Health Sciences Higher Education of Indonesia). In addition, both degree programmes have been accredited by the ASEAN University Network Quality Assurance (AUN-QA).

The peers discuss with the representatives of UGM's partners from public institutions and private companies that there are regular meetings with the partners on faculty level, where they discuss the needs and requirements of the employers and possible changes to the degree programmes. Besides this informal feedback, there is also advisory board. The peers see that due to the feedback from the employers, changes in the curriculum are implemented (e.g. prolongation of the clinical internships from two to four weeks in the MCP programme and the introduction of pharmacy management into the curriculum of the BP programme).

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 all stakeholders in the quality assurance process. Moreover, UGM and the Faculty of Pharmacy stay in close contact with their alumni who also support the Faculty by raising funds.

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

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

The Faculty of Pharmacy does not comment on this criterion in its statement.

The peers consider criterion 6 to be fulfilled.

D Additional Documents

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

- none

E Comment of the Higher Education Institution (30.03.2020)

UGM provides annexes 1 to 18 and the following statement:

No.	Criterion	Feedback	Corrective Action
1	1.3 (Curriculum), p.11	Since the community service usually takes place in remote areas, the students cannot attend any classes during this time.	Based on the guideline of the Community Service (CS) issued by the University, the CS should not be taken in the semester which students still taking any classroom-based module. The guideline can be seen in the guideline book, as well as in the website: kkn.ugm.ac.id (translated: **Annex FB01**).
2	1.3 (Curriculum), p.11	The students confirm that some presentations are done in English, and English textbooks are used but the peers are convinced that more active English speaking would be useful. The students express their sincere wish to have more subject-specific elements taught in English. This could for example be achieved by offering a journal club, where the students read, discuss, and present current international papers or seminars in English.	**BP:** In the 2017 curriculum, Enhanced Studium Generale courses have been implemented as co-curricular activities. Two of the courses are "English for Communication Skill" (at the 2nd semester) and "English for Pharmacy" (at the 3rd semester). In both courses, students are by default encouraged to practice communication in English. Based on the feedback evaluation by the students, 66.9% out of 142 responses agreed (score 4/5 and 5/5) that the courses help them to improve their English communication proficiency, with 68.3% agreed (score 4/5 and 5/5) that the methods used in the course were suitable to achieve the intended course learning outcomes. Complete results can be seen in **Annex FB02**. **MCP:** The MCP has already provided programmes such as English Discussion Forum to encourage students to speak English more actively, as well as a model course where the class is conducted in English (Module: Pharmacitherapy II). The

No.	Criterion	Feedback	Corrective Action
			evaluation has been done from the students' feedback and the result can be seen in **Annex FB03**. Moreover, more classes taught in English, including those for case study presentations will be scheduled. To endorse more English utilisation for teaching and learning, the faculty will offer a new scheme of teaching grants for module(s) conducted and delivered in English, for 4 proposals can be accepted a year. The grant is going to be offered this year (2020), and so is the implementation. The announcement can be seen in **Annex FB04**.
3	1.3 (Curriculum), p.11-12	The peers recommend doing optional poster presentations and oral presentations in English, which will also improve the communication skills of the students.	**BP:** Before graduation, bachelor students have to do a poster presentation of their thesis work. Currently, this poster is presented in Bahasa Indonesia. For next semester, a new rule will be implemented where students have to provide their posters in English. The programme management has been offering an allowance to attend international conference/seminar. Furthermore, the university and faculty management organise regularly (annually for university and biennially for faculty) international scientific conferences of which the students can participate for free as a presenter. Conferences held by UGM through a year are announced in the website: https://publikasi.ugm.ac.id/id/conferences. As for the faculty of pharmacy, the ICPAPS was held in November 2019 (http://conference.farmasi.ugm.ac.id)
4	1.4 (admission	The peers notice that the interview is currently conducted by just one teacher and that it would be useful to have two interviewers for each applicant. This way, the	The program management will provide two interviewers for each applicant during the selection process. It will be implemented in the upcoming students' entry in 2020. The implementation has been

No.	Criterion	Feedback	Corrective Action
	requirements), p.13-14	outcome of the interview will be more impartial.	validated by the Dean's Letter of Assignment for appointment of the interviewers prior to the registration session in 2020, as can be seen on **Annex FB05**.
5	2.1 (structure and modules), p.15	The peers notice that most of the modules in the BP programme are rather small and encompass only between 1 and 3 CSU. To reach the usual workload, students have to attend on average 8 courses per semester, each with a mid-term and final exam. Consequently, there are many small exams during the semester. **The peers are convinced that it would be useful to combine related courses into larger modules.** This would reduce the number of exams, strengthen the inner coherence of the degree programme, and offer more flexibility in introducing new and current topics without having to change the study plan.	Larger modules have been a consideration during the development of curriculum, recently the revision into the 2017 curriculum. Some modules have been merged into larger modules, i.e. (1) Cell Biology-Microbiology-Parasitology from the 2011 curriculum merged into Cell Biology-Microbiology (4 CSU); (2) Natural Products Chemistry and Pharmacognosy into Pharmacophytochemistry (3 CSU); and (3) Elective Course Packages (7 CSU each) designed from compilations of modules derived from Interest-relevant modules (22 CSU each) (see page 25 of SAR). A more comprehensive implementation is still facing some technical problems, i.e. laboratory arrangements and dissenting opinions among teaching staffs regarding modules workload. However, the programme management and the university have made a commitment to improving the quality of curriculum structure, including by the construction of larger modules. This effort needs further evaluation of the curriculum to create a more effective system. The implementation needs to be thoroughly discussed among teaching staffs and can be implemented when all corresponding teaching staffs reach an agreement. This will be achieved by organising serial workshops on curriculum review. The nearest one will be held in June 2020. Timeline can be seen in **Annex FB06**. The university will issue an official letter to endorse the implementation of larger modules to offer more flexibility in the

No.	Crite-rion	Feedback	Corrective Action
			curriculum. Curriculum development will also be discussed with the curriculum committee consisting members from companies and government organization (**Annex FB07**) to make sure the curriculum will fulfil the need for the graduates.
6	2.1 (structure and modules), p.15-16	**The peers point out that there are some redundancies in curriculum of the BP programme.** For example, there is some overlap between the modules "Pharmaceutical Biotechnology" and "Process Technology in Industrial Pharmacy" as well as between the modules "Cell Biology-Microbiology" and "Molecular Biology". The students confirm this impression during the discussion with the peers and point out that in these courses even the same material is used. For this reason, the peers recommend to check the content of the mentioned modules and to eliminate the redundancies.	(A) After re-evaluation of the addressed modules: 1. Pharmaceutical Biotechnology (offered in 2011 and 2017), 2. Process Technology and Bioprocess (offered only in 2011), 3. Process Technology in Industrial Pharmacy (offered only in 2017, elective). we come into conclusion that: Module 1 and 2 were indeed overlapping. However, module 2 has been evaluated and dropped for the 2017 curriculum. While module 3 will be held for the first time in the next semester and we find no overlap with module 1 and others. The module documents can be seen in **Annex FB08/SAR 1.9 Module Handbook of Bachelor in Pharmacy Programme, p.60 (Pharmaceutical Biology) and p.113 (Process Technology In Industrial Pharmacy)**. (B) There are some parts of the **Cell Biology-Microbiology** and the **Molecular Biology modules** contents were overlapping with each other, which have been identified and revised in the module evaluation workshop in 2019. The revision covers different depth of modules delivery, of which the **Cell Biology-Microbiology** (given in the 1st semester) explains topics in the cellular level, while the **Molecular Biology** (given in the 3rd semester) in the molecular level. Some overlaps are designed to bridge the delivery of the topics in the subjects. The module documents

No.	Criterion	Feedback	Corrective Action
			can be seen in **Annex FB08/SAR 1.9 Module Handbook of Bachelor in Pharmacy Programme, p.60 (Pharmaceutical Biology) and p.113 (Process Technology in Industrial Pharmacy)**.
7	2.1 (structure and modules), p.17-18	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, especially in the BP programme.** The programme coordinators admit that the number of Bachelor's students who participate in international exchange programmes is still low, despite students' high interest. However, the number of available places is still limited and there are restrictions due to missing financial support. The Faculty of Pharmacy can only provide limited travel grants, while the demand from students is rising.	The faculty commits to increasing allocation to support student mobility and to expand collaboration with the higher institutions within ASEAN countries. Several new collaborations have already been initiated for student exchanges: Puthisastra University (Cambodia), NUS (Singapore), Ng An Polytechnics (Singapore() and MSU (Malaysia). The documents are presented in **Annex FB09**. The faculty has been initiating other sponsorship schemes by gaining sponsors from stakeholders (government and non-government organisations). Five-year budget planning including for the support for student mobility can be seen in **Annex FB10**. The effort to increase financial support for the activities and the plan to expand overseas clinical sites for internship are as aforementioned (in point 7).
8	2.2 (workload and credits), p.19	The peers perceive that the underlying credit hour system used for assigning credit points makes use of a fixed amount of contact hours and hours required for self-studies. This results in a conversion rate of 1 to 1.7 between CSU and ECTS credits. However, workload indicates the time students typically need to complete all learning activities (such as lectures, seminars, projects, practical work, self-study, and examinations) and needs to be ascribed separately to each component of the curriculum.	We have provided the document as an attachment to describe the ECTS calculation based on the real student workload (**Annex FB11, FB12, FB13**).

E **Comment of the Higher Education Institution (30.03.2020)**

No.	Crite-rion	Feedback	Corrective Action
9	2.2 (work-load and credits), p.20	The peers discuss with the programme co-ordinators and the students about the scope of the Bachelor's and Master's thesis, the related workload, and the awarded credit points. **They gain the impression that the students regularly spent more time on the theses than anticipated by the programme coordinators and the teachers. The same problem is relevant for the clinical internships in the MCP programme.** One clinical internships takes four weeks and the students confirm towards the peers that they work for 8 hours per day in the hospital. This results a workload of at least 160 hours, which would be equivalent to 6.4 (25 hours per ECTS credit) to 5.3 (30 hours per ECTS credit) ECTS credits. In addition, the peers point out that the MCP programme encompasses only 73,1 ECTS credits, which is very low for a four semester long Master's programme. By European standards, 30 ECTS should be awarded per semester. **Since the actual workload of the students seems to be adequate, the ECTS credits need to be adjusted.** By correctly displaying students' workload in ECTS credits, UGM would facilitate academic mobility and better support their graduates if they apply for international programmes.	We have already scheduled in April 2020 to have a workshop on final thesis implementation to reach consensus regarding the depth and coverage of the final thesis suitable for 4 CSU (BP) and 8 CSU (MCP). **MCP:** We convert the workload of 25 hours to 1 ECTS credit. After recalculation, we found that compulsory clinical internship (4 CSU) takes 320 hours (12.8 ECTS), while the elective internship takes 160 hours (6.4 ECTS). Therefore, the total clinical internship workload is 800 hours (32 ECTS). Other activity i.e. classroom course takes totally 1133 hours (45 ECTS), and the thesis work spends 1200 hours to complete, which is equal to 48 ETCS. Therefore, the total workload of our programme is 3133 hours which is equivalent to 125 ECTS. The workload is distributed almost equally in 4 semesters. Semester 1 is 32.4 ECTS, Semester 2 is 24,6 ECTS, Semester 3 is 32 ECTS, and Semester 4 is 36 ECTS (**Annex FB11, FB13**).
10	2.2 (work-load and credits), p.20	Since the workload of the students was only estimated by the programme coordinators and seems to be too low in comparison to the actual time needed by the students, the peers suggest re-evaluating the calculation of ECTS and engaging the students in verifying the weight of each module. This could e.g. be done by including a respective question in the course evaluations. In any case, **UGM must make sure that the actual workload of the students and the awarded ECTS credits correspond with each other.**	The government has introduced the new "2020 Higher Education National Standard" (SNPT) (the decree of Minister of Education and Culture no. 3/2020) in which CSU calculation is based on the total student activities including all activities outside the classroom. The university has been evaluating for adjustment accordingly.

E **Comment of the Higher Education Institution (30.03.2020)**

No.	Criterion	Feedback	Corrective Action
11	2.4 (support and assistance), p.22	The Bachelor's students criticise during the discussion with the peers that some academic advisors are not easily contacted and that they are not readily available to the students for advice and support. The reason for this deficit lies in the high number of Bachelor's students, which results in a 1:20 ratio for academic advisor. In addition, each student is assigned to an undergraduate thesis supervisor; he supervises up to eight students every semester and helps them to find a suitable topic for the Bachelor's thesis, to prepare the research proposal, and ensures the successful completion of the thesis. As the peers consider the advisory system an essential part of the degree programme, **they expect the Faculty of Pharmacy to analyse the availability of the academic advisors in the BP programme and to make sure that all students can easily contact their academic advisor.**	Strengthening the student advisory program is one of the Faculty strategy to support the students' academic performances. The program managements have already evaluated students' complaints regarding particular student advisors and have already made necessary adjustments by directly shift the advisory function to the program managements. As a general response to avoid such issue in the future, the Faculty has held a workshop aiming on increasing the effectively of academic supervising which was conducted in February 2020, involving all academic advisors. The detail about the event can be seen in **Annex FB14**. Furthermore, The programme management will evaluate through a questionnaire to the students about the performance of the academic advisory. Our preliminary questionnaire has resulted positive feedbacks from the students of which 85.6% agreed that the student advisors are available for them; 87.4% agreed that the student advisors are informative in providing solution; and 83.9% agreed that the solution are accurate; the student advisors are communicative (90.85) **(Annex FB15)**.The result will be brought to a workshop by the end of the even semester of 2020
12	3 (exam), p.24	Because of the small size of the modules, the peers point out that the students have only to learn rather small portions for each exam. In addition, the content of the midterm exams is not repeated in the final exams. **The result of this system is a rather fragmented knowledge about the different subjects. For this reason, larger modules would be favourable.**	The response is as mentioned in point 5.

No.	Crite-rion	Feedback	Corrective Action
13	3 (exam), p.24	However, during the discussion with the peers the students point out that they are only informed about the result of the exams and the end of the semester and not directly after the exam has taken place. As a result, they do not know how they performed during the ongoing assessments and the mid-term exams. The teachers explain that this is due to the electronic platform where all the grades can only be registered at the end of the semester after the final exams have been completed**. The peers insist that this situation needs to be improved and students need to be informed about their grade as soon as possible after the exam has been conducted.** It should not be a problem to adjust the electronic platform accordingly.	A system has been established by adjusting the SIMASTER, that now exercises, quizzes, assignments, and mid-term exam results can be accessed through the SIMASTER by the students **(Annex FB16)**. A letter from the management has been generated for teachers to inform all scores and marks of activities up to the mid-term exam two weeks after the mid-term exam has been conducted **(Annex FB17)**.
14	4.3 (facility and equipments), p.27-28	The basic technical equipment for teaching the students on a Bachelor's level is available, although it is not state of the art. The students confirm during the discussion with the peers that in general, they are satisfied with the available equipment **only some instruments are out-dated**.	The university will raise third party sponsorship (cooperation, philanthropy, and alumni) with the target of extra 65 billion rupiahs a year at the university level to accelerate facilities essential to drive laboratories and research developments. The faculty has also planned to intensify creative funding by benefitting from the extensive alumni networking and collaborative partners **(Annex FB10)**.
15	4.3 (facility and equipments), p.28	The peers perceive that the technical equipment is very basic and needs to be improved so that the students and the teaching staff can conduct their research activities in their own labs. So far, **the members of the teaching staff and the advanced students need to use the much better equipped central laboratory for conduct their experiments.** Since the central laboratory is used by staff members from all faculties, the advanced equipment there is in high demand, which leads to bottlenecks and causes delays. Therefore, the peers expect that UGM as	The response is as mentioned in point 15.

No.	Crite-rion	Feedback	Corrective Action
		well as the Faculty of Pharmacy will invest more money and resources in the laboratories. This will make the faculties more independent from the central laboratory and will increase the possibilities for the staff members to conduct their research activities and for students to prepare high quality theses. For example, there is a 500 MHz nuclear magnetic resonance spectrometer (NMR) available in the central laboratory, but it takes 3 to 4 weeks to get the results if samples are sent there**. This is a bottleneck and significantly slows down the research activities.** Therefore, **it would be useful to provide some advanced instruments in the new laboratories so that the teaching staff has direct access to them. The peers are convinced that this will significantly foster the scientific output of the Faculty of Pharmacy.**	
16	5.3 (relevant rules), p.30	The only deficit the peers notice is the lack of a specific regulation for disability compensation. Since such a regulation does not yet exist, the peers expect UGM to draft a regulation for disability compensation of handicapped students.	As a public institution, UGM has to abide the Indonesian Law no. 8/2016 about the inclusion to the disabled people. Therefore, in 2017, UGM declared the commitment to becoming an inclusive campus to disabilities, which was stated in the University Strategic Plan. As a consequence, the university regulates the mandatory aspects of all faculties to: (1) Accommodate special needs of disabilities, and to (2) include the message of inclusiveness into the curriculum. The University Strategic Plan (2017-2022) (http://renbang.ugm .ac.id/id/renstra-2017-2022/) has included the availability of proper facilities for disabled students as one of the key performance indicators and it also mentioned at UGM Academic Standard (can be accessed at this **link** page 26. The university has already formed the Disability Care Working

No.	Crite-rion	Feedback	Corrective Action
			Group, of which one of the priority targets is to formulate the university guideline for the aforementioned issue. The university has also already established the Disability Care Student Activity Unit, which is bridging the students with disabilities' special needs for facilities with the Study Programme Management. To comply with the aforementioned policy, the faculty has already included disability-friendly infrastructure in the new building's construction plan **(Annex FB18)**. The faculty has also established a system to support teaching and learning for the academic community with disabilities. The Programme Management, together with the Student Executive Body, will identify cases and propose suitable alternative solutions which will be discussed in the Faculty Management meetings. The examples for alternative solutions covers adjustment of classroom arrangement, providing an alternative mode of assessment, formed peer group support, etc. Since April 2020, the Faculty has already provided a psychologist as a counsellor which will be helping students having difficulties adjusting themselves for academic performances' related issues

F Summary: Peer recommendations (15.04.2020)

Taking into account the additional information and the comments given by UGM, the peers summarize 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	-	30.09.2025
Ma Clinical Pharmacy	With requirements for one year	-	30.09.2025

Requirements

For all degree programmes

A 1. (ASIIN 4.3) Provide a concept how the technical equipment in the laboratories of the Faculty of Pharmacy will be updated and increased.

A 2. (ASIIN 2.2) Make sure that the actual workload of the students is consistent with the awarded ECTS credits.

A 3. (ASIIN 5.3) Issue a regulation on disability compensation.

For the Bachelor's programme Pharmacy

A 4. (ASIIN 2.4) Make sure that all academic advisors are easily available to the students.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to further improve the English proficiency of the students by introducing more English taught subject-specific elements into the curriculum.

For the Bachelor's programme Pharmacy

E 2. (ASIIN 2.1) It is recommended to further promote the academic mobility of the students.

E 3. (ASIIN 2.1) It is recommended to combine related subjects to create larger modules.

G Comment of the Technical Committees (12.06.2020)

Technical Committee 09 - Chemistry (12.06.2020)

Assessment and analysis for the award of the ASIIN seal:

In the course of the audit, the expert group mainly dealt with the discussion points typical for procedures in Indonesia (technical equipment of the laboratories, infrastructure, workload of the students, and final thesis). The experts expect that the technical equipment of the laboratories of the Faculty of Pharmacy will be modernized and extended, so that research and teaching can be carried out better there. The awarded ECTS credits and the students' workload needs to be reviewed and harmonized. Furthermore, the expert group notes that the academic mobility of Bachelor's students is rather low and should be promoted by increasing the number of available places and scholarships, by setting up more exchange programmes and by including more English language elements in the curricula. The Technical Committee agrees with this assessment and supports the requirements and recommendations as proposed by the expert group.

The Technical Committee 09 – Chemistry 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	-	30.09.2025
Ma Clinical Pharmacy	With requirements for one year	-	30.09.2025

Technical Committee 10 – Life Sciences (04.06.2020)

Assessment and analysis for the award of the ASIIN seal:

In the course of the audit, the expert group mainly dealt with the discussion points typical for procedures in Indonesia (technical equipment of the laboratories, infrastructure, workload of the students, and final thesis). The experts expect that the technical equipment of the laboratories of the Faculty of Pharmacy will be modernized and extended, so that research and teaching can be carried out better there. The awarded ECTS credits and the

students' workload needs to be reviewed and harmonized. Furthermore, the expert group notes that the academic mobility of Bachelor's students is rather low and should be promoted by increasing the number of available places and scholarships, by setting up more exchange programmes and by including more English language elements in the curricula. The Technical Committee agrees with this assessment and supports the requirements and recommendations as proposed by the expert group.

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	-	30.09.2025
Ma Clinical Pharmacy	With requirements for one year	-	30.09.2025

H Decision of the Accreditation Commission (26.06.2020)

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

The Accreditation Commission discusses about the procedure and decides to follow the proposal of the peers and the TCs. The AC only wants to replace the term “concept” by “investment plan” in requirement A 1.

The Accreditation Commission for Degree Programmes decides to award the following seals:

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditation
Ba Pharmacy	With requirements for one year	-	30.09.2025
Ma Clinical Pharmacy	With requirements for one year	-	30.09.2025

Requirements

For all degree programmes

A 1. (ASIIN 4.3) Provide an investment plan how the technical equipment in the laboratories of the Faculty of Pharmacy will be updated and increased.

A 2. (ASIIN 2.2) Make sure that the actual workload of the students is consistent with the awarded ECTS credits.

A 3. (ASIIN 5.3) Issue a regulation on disability compensation.

For the Bachelor’s programme Pharmacy

A 4. (ASIIN 2.4) Make sure that all academic advisors are easily available to the students.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to further improve the English proficiency of the students by introducing more English taught subject-specific elements into the curriculum.

For the Bachelor's programme Pharmacy

E 2. (ASIIN 2.1) It is recommended to further promote the academic mobility of the students.

E 3. (ASIIN 2.1) It is recommended to combine related subjects to create larger modules.

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 degree programme Pharmacy:

Table 1.1.2. *The PEOs of the BP programme*

PEO 1	To have leading knowledge in the pharmaceutical manufacturing process, including production, quality control and assurance, inventory control, and distribution.
PEO 2	To have essential knowledge and skills in pharmaceutical care to collaborate with fellow health personnel in clinics and the community.
PEO 3	To have excellent managerial skills to conduct pharmacy practices.
PEO 4	To engage in lifelong learning, especially to pursue higher degree including the pharmacist professional degree.

Table 1.1.3. *The PLOs of the BP programme*

1	A1	To demonstrate Pancasila's values and awareness of the interest of the nation and the state.
2	A2	To demonstrate honesty, responsibility, confidence, emotional maturity, ethics, and awareness of being a lifelong learner.
3	K1	To master the concept of academic integrity in the field of pharmacy in general and the concept of plagiarism in particular, in terms of the type of plagiarism, the consequences of the offence and its prevention efforts.
4	K2	To master the communication principles and techniques, adapting to new environments and cutting-edge technology, and building interpersonal and interprofessional relationships.
5	K3	To master the principles of leadership and management, which are effective and efficient in performing tasks.
6	K4	To seek, evaluate, and provide information about pharmaceutical products, additives and medical devices, and their rational use.
7	K5	To be able to perform professionally and responsibly in accordance with statutory provisions, pharmaceutical norms and ethics.
8	S1	To be able to identify and resolve problems related to the efficacy and safety of pharmaceutical products based on the latest scientific principles to optimize therapy.
9	S2	To be able to implement the latest scientific and pharmaceutical technologies in the design, manufacture, quality assurance, and distribution of pharmaceutical products.
10	S3	To be able to perform services (preparing, compounding, dispensing, and providing information and education) on pharmaceutical products according to the procedure (according to the patient's needs along with pharmaceutical products' quality assurance).
11	S4	To master the science and technology for development and research in the field of pharmacy, especially those based on Indonesian natural wealth and local wisdom in resolving global health issues, and developing themselves sustainably.
12	G1	To be able to apply logical, critical, systematic and innovative thinking by utilising information technology to produce solutions realised in scientific documents and implementation of areas of expertise with integrity.
13	G2	To be able to develop networks, be adaptive, creative and contributive, provide supervision, evaluate and make decisions in order to show independent and group performance to apply knowledge to community life.

The following **curriculum** is presented:

Code	Course name	CSU	ECTS	PLO	PEO
	SEMESTER I				
FAU 1071	Pancasila	2(0)	3,4	A1 K5	PEO2
FAD 1071	Human Anatomy and Physiology	3(1)	5.1	S4	PEO1 PEO3
FAF 1371	Pharmaceutics I	2(0)	3.4	S3	PEO3
FAF 1471	Physical Pharmacy I	2(0)	3.4	S2	PEO1
FAF 1671	Basic Pharmaceutical Chemistry	3(1)	5.1	S4	PEO1
FAF 1771	Organic Chemistry I	3(0)	5.1	S4	PEO1
FAF 1171	Cell Biology-Microbiology	4(1)	6.8	S4	PEO1
FAF 2072	Bahasa Indonesia and Scientific Writing	2(0)	3.4	A2 K2 K4	PEO1 PEO4
	SEMESTER II				
FAU 1072	Civics	2(0)	3.4	A1 K5	PEO2
FAF 1372	Pharmaceutics II	2(1)	3.4	S3	PEO3
FAF 1472	Physical Pharmacy II	2(1)	3.4	S2	PEO1
FAF 1071	Religion	2(0)	3.4	A1	PEO2
FAF 1672	Analytical Chemistry I	2(1)	3.4	S4	PEO1
FAF 1772	Organic Chemistry II	3(1)	5.1	S4	PEO1
FAF 1773	Pharmaceutical Biochemistry	3(1)	5.1	S4	PEO1
FAF 1373	Social Behavioural Sciences for Pharmacy	2(0)	3.4	K2 K3	PEO2 PEO3
	Interdisciplinary elective course I	2(0)	3.4		

SEMESTER III					
FAF 2871	Pharmacology	2(0)	3.4	S1	PEO1 PEO3
FAF 2771	Molecular Biology	3(1)	5.1	S4	PEO1
FAF 2571	Formulation and Technology: Solid Dosage Form	3(1)	5.1	S2	PEO1
FAF 2671	Analytical Chemistry II	3(1)	5.1	S4	PEO1
FAF 2772	Medicinal Chemistry	2(0)	3.4	S4	PEO1
FAF 2371	Pharmacy Retail Management	2(0)	3.4	K2 K3 G1	PEO2
FAF 2071	Research Methodology and Pharmaceutical Statistics	3(0)	5.1	A2 K1 G1	PEO1 PEO4
FAF 2872	Pharmacokinetics	2(0)	3.4	S1	PEO1 PEO3
SEMESTER IV					
FAF 2971	Pharmacotherapy I	2(0)	3.4	S1	PEO1 PEO3
FAF 2873	Experimental Pharmacology and Toxicology I	1(1)	1.7	S1	PEO1 PEO3
FAF 2874	Toxicology	2(0)	3.4	S1	PEO1 PEO3
FAF 2875	Pharmacology II	2(0)	3.4	S1	PEO1 PEO3
FAF 2572	Formulation and Technology: Liquid and Semisolid Dosage Form	3(1)	5.1	S2	PEO1
FAF 2672	Chromatography	3(1)	5.1	S4	PEO1
FAF 2573	Pharmaceutical Product Stability	2(0)	3.4	S2	PEO1 PEO3
FAF 2271	Pharmacognosy-Phytochemistry	3(1)	5.1	S4	PEO1
FAF 2773	Pharmaceutical Immunology	2(1)	3.4	S4	PEO1

SEMESTER V					
FAF 3471	Biopharmaceutics	3(1)	5.1	S1	PEO1 PEO3
FAF 3371	Drug Education and Information	2(0)	3.4	K4	PEO2 PEO3
FAF 3971	Pharmacoepidemiology	2(0)	3.4	K4 S1	PEO1 PEO3
FAF 3372	Pharmaceutical Care	3(0)	5.1	S3	PEO2 PEO3
FAF 3671	Drugs, Cosmetics, and Food Analysis	3(1)	5.1	S2	PEO1
FAF 3971	Pharmacotherapy II	2(0)	3.4	K4 S1	PEO1 PEO3
FAF 3871	Experimental Pharmacology and Toxicology I	1(1)	1.7	S1	PEO1 PEO3
FAF 3972	Therapeutic Drug Monitoring/Clinical Pharmacokinetic	2(0)	3.4	S1	PEO1 PEO3
FAF 3271	Technology of Natural Resources Extraction	3(1)	5.1	S2	PEO1
SEMESTER VI					
FAF 3571	Formulation and Technology: Sterile Dosage Form	2(1)	3.4	S2	PEO1
FAF 3975	Phytotherapy	2(0)	3.4	S1	PEO1
FAF 3973	Pharmacotherapy III	2(0)	3.4	S1	PEO1 PEO3
FAF 3472	Drug Delivery System	2(0)	3.4	S2	PEO1
FAF 3572	Good Manufacturing Practice	2(0)	3.4	S2	PEO1 PEO2
FAF 3373	Pharmacoeconomics	2(0)	3.4	S1	PEO2 PEO3
FAF 3974	Clinical Pharmacy I	1(1)	1.7	S1	PEO3
FAF 3374	Compounding and Dispensing	2(1)	3.4	S3	PEO3
FAF 3071	Radiopharmaceutical and Chemotherapy	2(0)	3.4	S1	PEO1
FAF 3772	Pharmaceutical Biotechnology	2(0)	3.4	S1	PEO1

SEMESTER VII					
	Elective Course Packages	7 (0)	11.9		
	Elective	2 (0)	3.4		
FAF 4971	Clinical Pharmacy II	1 (1)	1.7	S1	PEO3
FAF 4371	National Health System	2 (0)	3.4	S1	PEO2
	Interdisciplinary elective course II	2 (0)	3.4		
SEMESTER VIII					
FAF 4071	Thesis Writing	4 (4)	6.8	A2 K1 K2 G2	PEO1 PEO4
FAU 4071	Community Service Project	3 (3)	5.1	A2 K1 K2 G2	PEO2 PEO3
	Soft Skills	4(0)	6.8		
	TOTAL	145	246.5		

ELECTIVE COURSE PACKAGES					
FAK 4071	Research and Drug Invention	7 (0)	11.9	S2	PEO1 PEO4
FAK 4072	Social Pharmacy and Regulation	7 (0)	11.9	S3	PEO2 PEO3
FAK 4073	Herbal Medicine	7 (0)	11.9	S2	PEO1
FAK 4074	Industrial Pharmacy	7 (0)	11.9	S2 K5	PEO1
FAK 4075	Hospital Pharmacy	7 (0)	11.9	K3	PEO3
FAK 4076	Foods and Cosmetics	7 (0)	11.9	S2	PEO1
FAK 4077	Management of Distribution and Marketing	7 (0)	11.9	K2 K5 G1	PEO2
ELECTIVE COURSES					
FAP 0271	Marine Pharmacy	2 (0)	3.4	S1	PEO1
FAP 0171	Natural Corrigen	2 (0)	3.4	S1	PEO1
FAP 0971	Clinical Toxicology	2 (0)	3.4	S1	PEO1 PEO3
FAP 0871	Drug Interaction	2 (0)	3.4	S4	PEO1 PEO3
FAP 0371	Pharmacy Service	2 (0)	3.4	K3	PEO3
FAP 0571	Process Technology in Industrial Pharmacy	2 (0)	3.4	S2 K5	PEO1 PEO2
FAP 0671	Capita Selecta of Analytical Pharmacy	2 (0)	3.4	S4	PEO1
FAP 0771	Pharmaceutical Ingredients Synthesis	2 (0)	3.4	S4	PEO1

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

Table 1.1.5. *The PEOs of the MCP programme*

PEO 1	To establish professionalism to practice in clinical pharmacy services or education, based on the research results and/or the development of the latest science.
PEO 2	To have leadership qualities and can collaborate in an integrated manner with other health workers involved in health services.
PEO 3	To be able to formulate approaches to solving various health problems of national and global society through scientific reasoning.
PEO 4	To be able to pursue higher education.

Table 1.1.6. *PLOs of the MCP Programme*

ATTITUDE (A)	
A1	To demonstrate Pancasila's values and awareness of the interest of the nation and the state.
A2	To demonstrate honesty, responsibility, confidence, emotional maturity, ethics, and awareness of being a lifelong learner.
MASTERY OF KNOWLEDGE (K)	
K1	To master the pathophysiology and pharmacotherapy concept to evaluate the management of drug therapy in the commonly encountered diseases.
K2	To master the theoretical concept which supports the assessment of therapeutics outcomes taking into account of pharmacokinetics and pharmacodynamics.
K3	To design the drug dosage regimens based on the individual patient conditions.
K4	To develop and implement drug therapy monitoring strategies for patients individually.
K5	To master the counselling concept and to prepare materials to carry out counselling to patients and/or their family regarding the treatment to get optimal therapeutic results.
K6	To master the Evidence-based Medicine (EBM) principles and to examine drug information sources to be able to provide the latest scientific proof based on evidence.
K7	To master the principle of preparing parenteral nutrition formulas and mixing intravenous medicine.
K8	To master the concept of academic integrity in general and the concept of plagiarism in particular, in terms of plagiarism, violation consequences, and preventive action.
K9	To master the principle of legality, social aspect, science and technology underlying the application of the research result to pharmaceutical services to the public.

SPECIFIC SKILLS (S)	
S1	To sharpen and to expand further pharmaceutical science for the development of the research and the research application for the development of pharmaceutical science and clinical pharmacy services to the public.
S2	To solve the drug-related problem in the hospital and other health care facilities through the development and the implementation of pharmacotherapy.
S3	To formulate new ideas in the development and the application of clinical pharmacy service practices by collecting data, processing and analysing data, and making interpretations qualitatively and quantitatively.
S4	To solve problems through effective communication and to create an effective network through an inter- or a multidisciplinary approach.
S5	To develop and to implement the results of the evaluation of drug information source and to provide drug information services.
GENERAL SKILLS (G)	
G1	To be able to apply logical, critical, systematic and innovative thinking by utilising information technology to produce solutions realised in scientific documents and implementation of areas of expertise with integrity.
G2	To be able to develop networks, be adaptive, creative and contributive, provide supervision, evaluate and make decisions in order to show independent and group performance to apply knowledge to community life.

The following **curriculum** is presented:

No.	Code	Course	Credit Hours
Semester I			
1	MFK 601	Research Methodology and Biostatistics	2
2	MFK 623	Pathophysiology	2
3	MFK 602	Clinical Data Interpretation	2
4	MFK 607	Clinical Pharmacokinetics and Therapeutic Drug Monitoring (TDM)	2
5	MFK 630	Total Parenteral Nutrition and IV Admixture	2
6	MFK 603	Pharmacotherapy I	2
7	MFK 604	Pharmacotherapy II	2
8	MFK 605	Pharmacotherapy III	2
9	MFK 606	Pharmacotherapy IV	2
		Subtotal	**18**
Semester II			
1	MFK 637	Drug Information Services and Counseling	2
2	MFK 613	Integrated Clinical Pharmacy Case Studies	3
3	MFK 647	Thesis 1	2
4		Elective course	2
5	MFK 645	Clinical Internship for Internal Medicine (compulsory)	4
6		Elective Clinical Internship	6
		Subtotal	**18**
Semester III and IV			
1	MFK 648	Thesis 2	6
		Total	**43**

The list of Elective Clinical Internship

No.	Code	Course	Credit Hours
1	MFK 617	Clinical Internship in Geriatric	2
2	MFK 620	Clinical Internship in Pediatric	2
3	MFK 616	Clinical Internship in Oncology	2
4	MFK 635	Clinical Internship in Cardiology	2
5	MFK 636	Clinical Internship in Neurology	2
6	MFK 639	Clinical Internship in ICU	2
7	MFK 650	Clinical Internship in Surgery and Infection	2
8	MFK 650	Clinical Internship in Psychiatric	2
9	MFK 649	Clinical Internship in Drug Information Service	2

ELECTIVE COURSES

Semester II			
No.	**Code**	**Course**	**Credit Hours**
Elective Courses offered in Clinical Pharmacy Concentration			
1	MFK 632	Pharmacogenetics and Pharmacogenomics	2
2	MFK 633	Phytotherapy	2
3	MFK 612	Clinical Toxicology	2
4	MFK 640	Pharmacotherapy of Specific and Degenerative Diseases	2
5	MFK 641	Pharmacology of Cardiovascular and Renal Drugs	2
6	MFK 642	Pharmacology of Infectious and Inflammatory Drugs	2
7	MFK 643	Oncology and Chemotherapy	2
8	MFK 644	Interaction and Adverse Drug Reaction	2
9	MFK 650	Pharmacoeconomics and Pharmacoepidemiology	2