ASIIN Seal

Accreditation Report

Bachelor's Degree Programmes
Medicine
Dentistry

Master's Degree Programme
Biomedical Science

PhD Programme
Medical Science

Provided by:
Universitas Brawijaya, Malang

Version: 23 June 2022

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 Studi Sarjana Kedokteran	Undergraduate Programme in Medicine	ASIIN	IAAHEH 2018 - 2023	14
Program Studi Sarjana Kedokteran Gigi	Undergraduate Programme in Dentistry	ASIIN	IAAHEH 2020 - 2021	14
Program Studi Magister Ilmu Biomedik	Master Programme in Biomedical Science	ASIIN	IAAHEH 2017 - 2022	14
Program Studi S3 Ilmu Kedokteran	PhD Programme in Medical Science	ASIIN	IAAHEH 2019 - 2024	14
Date of the contract: 27.04.2021 **Submission of the final version of the self-assessment report:** 23.03.2022 **Date of the onsite visit:** 12.02. – 14.10.2022 **at:** Malang, Indonesia				
Peer panel: Prof. Dr. Bernhard Fleischer, Bernhard-Nocht-Institute for Tropical Medicine Prof. Dr. Markus Schnare, University Marburg Dr. Ratri Maya Sitalaksmi, Universitas Airlangga Yudhistira Pradnyan Kloping, M.D., Universitas Airlangga, resident				
Representative of the ASIIN headquarter: Rainer Arnold				
Responsible decision-making committee:				

[1] ASIIN Seal for degree programmes;
[2] TC: Technical Committee for the following subject areas: TC 14 – Medicine

Accreditation Commission for Degree Programmes	
Criteria used: European Standards and Guidelines as of 15.05.2015 ASIIN General Criteria as of 28.03.2014 Subject-Specific Criteria of Technical Committee 14 – Medicine as of 20.09.2019	

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's Programme Medicine	S. Ked.(Sarjana Kedokteran / Bachelor of Medicine)		6	Full time	no	7 Semester	148 credits = 222 ECTS	August / 1975
Bachelor's Programme Dentistry	S.K.G. Sarjana Kedokteran Gigi / Bachelor of Dental Surgery		6	Full time	no	7 Semester	144 credits = 216 ECTS	August / 2008
Master's Programme Biomedical Science	M.Si. (Magister Sains Biomedik / Master of Biomedical Science)		7	Full time	no	4 Semester	38 credits = 57 ECTS	February + August / 1999
PhD Programme Medical Science	Dr. (Doktor) / Ph.D. (Doctor of Philosophy)	1) Biomedical Sciences 2) Reproductive Biology 3) Medical Technology 4) Social Medicine	8	Full time	no	6 Semester	50 credits = 128.6 ECTS	February + August / 2001

For the Bachelor's degree programme Medicine (BSPM), Universitas Brawijaya (UB) has presented the following profile in the Self-Assessment Report:

"Vision:

To become a leading undergraduate study program of medicine with international standard and excellency in biomedical skills; emergency medicine & disaster management; social entrepreneurship & collaborative leadership in order to improve quality of life of the community through continuous innovation in the fields of education, research and community service.

Missions:

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

1. Organizing an outstanding medical education institution with international standards to produce graduates who practice scientific culture and Pancasila.

2. Organizing medical education institutions that produce graduates as agents of development and dissemination regarding medical science and technology through research and community service with excellence in biomedical skills; emergency medicine & disaster management; social entrepreneurship and collaborative leadership to improve the quality of life of the community.

3. Performing excellent, equitable, and sustainable higher education management.

Objectives:

1. To produce graduates who are outstanding and professional with entrepreneurship spirit in order to be able to deal with the national and international competitive challenges

2. To produce and disseminate the latest research in the platform of national and international journals as well as Intellectual Property Rights in the medical field in order to be utilized for the development of medical science, education, and community services.

3. To perform community service activities in the medical field and disseminate the scientific results in order to improve the community health status.

4. To establish regional, national, and international collaboration for institutional, educational, research, and community services development purposes."

For the Bachelor's degree programme Dentistry (BSPD), Universitas Brawijaya (UB) has presented the following profile in the Self-Assessment Report:

"Missions:

1. Organizing educational learning in the field of dentistry that adapts the competency-based curriculum with nanotechnology as specific local content, has excellent clinical and professional skills, as well as an entrepreneurial spirit.

2. Developing research related to nanotechnology in dentistry that is outstanding and internationally standard.

3. Aspiring to create ideas and produce innovative products that can be useful for the nation.

4. Organizing community service in order to apply research and disseminate dental sciences and technology (IPTEK) to improve oral health status in the community.

5. Establishing networking and cooperation with the national and international dental educational institution to develop education, research, and community service.

Objectives:

1. Producing graduates with excellent quality, devoted to God the Almighty, capable of self-education, open-minded, disciplined, and possess excellent working ethics, entrepreneurial spirit, and able to compete at national and international levels.

2. Increasing research in the field of nanotechnology to produce superior research in the form of Scientific Publications and Intellectual Property Rights (IPR).

3. Increasing community service activities by disseminating dental science and technology (IPTEK) to improve public dental health."

For the Master's degree programme Biomedical Science (MPBS), Universitas Brawijaya (UB) has presented the following profile in the Self-Assessment Report:

"Missions:

1. Organizing international standard education, research, and community service in the field of Biomedical (Anatomy-Histology, Molecular of Pharmacology-Toxicology, Molecular Physiology, Immunology, Microbiology-Parasitology) with the uniqueness of Molecular Pharmacology-Toxicology that produces achievements that believe and fear God the Almighty, and has innovation, independent, professional, and noble morals and character.

2. Organizing study programs as agents of development and dissemination of science and technology in the field of biomedicine based on the value of noble local wisdom to improve the quality of life.

3. Organizing superior, equitable, and sustainable study program governance.

Objectives:

1. Produce graduates who have academic ability, have the intellectual integrity to apply and develop the field of Biomedical (Anatomy-Histology, Molecular of Pharmacology-Toxicology, Molecular Physiology, Immunology, Microbiology-Parasitology), pioneer spirit, reformer, professional, independent, work ethic, disciplined, a virtuous character so that they are able to compete, excel, at the national and international levels.

2. Produce tested and innovative works through an inter- and multidisciplinary approach in the field of Biomedicine (Anatomy-Histology, Molecular of Pharmacology-Toxicology, Molecular Physiology, Immunology, Microbiology-Parasitology), with the uniqueness of

Molecular of Pharmacology-Toxicology that is able to play a role in nation-building, build independence, based on noble cultural values and excel at national and international levels.

3. Realizing an academic culture that is integrated, globally competitive, superior, high-tech so that graduates are expected to have a career in education and research in the field of Biomedical, (Anatomy-Histology, Molecular of Pharmacology-Toxicology, Molecular Physiology, Immunology, Microbiology-Parasitology), with the uniqueness of Molecular of Pharmacology-toxicology and able to develop themselves in their profession.

4. Realizing the management of study programs that are accountable, effective, efficient, up-to-date, synergized, and sustainable so that they are able to compete at national and international levels.

For the PhD degree programme Medical Science (DPMS), Universitas Brawijaya (UB) has presented the following profile in the Self-Assessment Report:

"Missions:

1. Organizing the high quality of education, research, and community service in the fields of Biomedical Sciences, Reproductive Biology, Medical Technology, and Social Medicine in achieving the highest academic competence to produce graduates who have intellectual integrity and professional attitudes.

2. Carrying out the role of the study program as an agent of renewal, a pioneer, and disseminator of science and technology in the fields of medicine and health based on the values of local wisdom to improve the quality of life.

3. Organizing superior, equitable, and sustainable study program governance.

The description and scope of the fields of interest in Biomedical Sciences, Reproductive Biology, Medical Technology, and Social Medicine are as follows:

Biomedical Science concentration studies in the field of science, especially Biology, Biochemistry, Pharmacology, Physiology, Parasitology, Microbiology, Pathology and Immunology regarding life processes, prevention and treatment of disease, and genetic factors related to disease and health to explain life phenomena from the molecular level to the organism level as well as to generate theories regarding new mechanisms and/or products in the form of diagnostic and therapeutic biomarkers.

Reproductive Biology concentration is a study related to the reproductive process from the beginning of conception to birth that involves normal and abnormal reproductive mechanisms and physiology to produce new mechanism theories and/or products in the form of diagnostic and therapeutic biomarkers.

Medical Technology concentration is an innovative study in Biotechnology, Pharmacy, and Medical Information Technology to produce new applications and/or products in the form of screening test, diagnostic test, drugs, biosensors, and medical/health devices.

Social Medicine concentration is a medical science that unites clinical and community fields by applying social, cultural, economic, environmental aspects that affect epidemiology of diseases to produce new theories and policies in solving health problems through information technology in the health sector.

Objectives:

1. To produce graduates who can be a pioneer and a reformer, are academically capable, professional, independent, disciplined, virtuous, with good work ethics, insights into the latest technology, and managerial skills to be able to compete and excel at national and international levels;

2. To develop research roadmaps, especially in the fields of Biomedical Science, Reproductive Biology, Medical Technology, and Social Medicine with an multidisciplinary, trans disciplinary and interdisciplinary approach;

3. To produce innovative works as a novelty in the fields of medicine and health that are beneficial to society through technology transfer;

4. To develop academic culture and potential based on concepts, principles, or theories that can be scientifically, academically, and ethically justified and communicate them to the public."

C Analysis and Findings of Peers

1. Mission and Outcomes

Criterion 1.1 Statements of purpose and outcome

Evidence:

- Self-Assessment Report
- Webpage Ba Medicine: http://pd.fk.ub.ac.id/en/jadwal-kuliah/buku-mkk-2/
- Webpage Ba Dentistry: https://fkg.ub.ac.id/en/program-studi-sarjana-kedokteran-gigi/
- Webpage Ma Biomedical Science: http://biomedical.fk.ub.ac.id/en/
- Webpage PhD Medical Science: http://pdik.fk.ub.ac.id/en/
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The Intended Learning Outcomes (ILO) and Programme Educational Objectives (PEO) of all four degree programmes under review are mentioned in the Self-Assessment Report. While the PEO are rather general and refer to the vision and mission of the Faculty of Medicine (FMUB) and the Faculty of Dentistry (FDUB), the ILO cover several specific competences students should acquire in their respective degree programme. Both PEO and ILO of each degree programme are published on the programme's website.

The goal of the Bachelor's degree programme Medicine is to prepare the students for participating in medical care of patients. This includes implementing disease prevention measures, diagnosing and treating common diseases, providing emergency medical care, and following medical ethics and national laws. The programme wants to lay a solid foundation consisting of medical professionalism, medical science, self-awareness and self-development, and effective communication in order to enable the graduates for working effectively in a clinical environment and for managing health problems.

The Bachelor's degree programme Dentistry is designed to provide a significant contribution in oral health education, patient-centred clinical care, dental public health care, and evidence-based research in dentistry that will improve the local, national, and global oral health care system. The Faculty of Dentistry is dedicated to providing academic excellence through competency-based dental education, which will create graduates with critical

thinking capacity, problem-solving attitudes, interpersonal skills and the necessary professional dental competencies.

As described in the Self-Assessment Report, the goal of the Master's degree programme Biomedical Science is to produce graduates who have the academic ability and intellectual capacity to apply and develop their skills and knowledge in the field of Biomedical Science (Anatomy-Histology, Pharmacology-Molecular Toxicology, Molecular Physiology, Immunology, Microbiology -Parasitology). In addition, graduates should have a "pioneer spirit and virtuous character" and should be able to work professionally and independently in Biomedical Sciences on a national and international level.

Graduates of the PhD programme Medical Science should have the ability to create and develop innovations in medical science and contribute to technology transfer to society. In addition, they should acquire the necessary theoretical, practical, and managerial skills for conducting research activities through an inter-, trans-, and multidisciplinary approach. Finally, students should improve their scientific and research skills by actively participating in seminar presentations and workshops, by writing scientific papers and by journal reading in order to be able to gain scientific recognition by communicating and publishing their research findings to the academic society.

In general, the peers consider the ILO and PEO of all four programmes under review to be well founded and reasonable.

Criterion 1.2 Participation in the formulation of mission and outcomes

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
According to the Self-Assessment Report, internal (programmes coordinators, lecturers, and students) as well as external stakeholders are involved in formulating and further developing the objectives and intended learning outcomes of the four programmes.

The ILO and PEO are aligned with the requirements of the medical sector and the required competencies are based on national educational standards such as the National Qualification Framework for Higher Education (KKNI), the Indonesian Dental Profession Educational Standards (IDPES), and the Competency Standard of Indonesian Medical Doctors (SKDI).

The external stakeholders include alumni, representatives from administrative, educational and professional institutions, such as the Indonesian Association of Medical Education Institutions (Asosiasi Institusi Pendidikan Kedokteran Indonesia/AIPKI), the Indonesian Consortium for Biomedical Sciences (Konsorsium Ilmu Biomedik Indonesia/KIBI), the Indonesian Collegium of Medical Doctors (Kolegium Dokter Indonesia/KDI), the Indonesian Medical Council (Konsil Kedokteran Indonesia/KKI), the Ministry of Health of Indonesia (Kementrian Kesehatan Republik Indonesia/Kemenkes RI), the Ministry of Education and Culture of Indonesia (Kementrian Pendidikan dan Kebudayaan RI), and the Ministry of Research, Technology, and Higher Education of Indonesia (Kementerian Riset, Teknologi dan Pendidikan Tinggi Republik Indonesia/Kemenristekdikti RI). Input from the stakeholders is important for taking different aspects such as the labour market needs, recent healthcare regulation in Indonesia, and current developments in healthcare into account.

The assessment of the objectives and learning outcomes is performed periodically by the Quality Assurance Unit on programme level and is supervised by the Quality Assurance Unit at faculty and university level.

The peers confirm that there is a well described and established process for designing and validating the objectives and learning outcomes. All relevant stakeholders are involved in the process.

Criterion 1.3 Institutional autonomy and academic freedom

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:

As a semi-autonomous public university, Universitas Brawijaya (UB) is able to formulate and implement policies and degree programmes according to their own agenda.

As described in the Self-Assessment Report, UB puts a strong emphasis “on the development of science and technology, academic freedom, and scientific autonomy. The development of science and technology is carried out by the academic community through learning and/or scientific research by upholding religious values and national unity for the advancement of civilization and the welfare of mankind. The implementation of academic freedom, and scientific autonomy the personal responsibility of the academic community that must be protected and facilitated by the leadership of UB. Academic freedom is the freedom of the academic community in Higher Education to explore and develop science

and technology responsibly through the implementation of the "Tridharma". Scientific autonomy is the autonomy of the academic community in a branch of Science and / or Technology in discovering, developing, disclosing, and / or maintaining scientific truth according to scientific principles, methods, and academic culture."

The peers confirm that academic freedom at UB is given.

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

UB does not comment on this criterion in its statement.

The peers consider criterion 1 to be fulfilled.

2. Educational Programme

Criterion 2.1 Curriculum model and instructional methods

Evidence:

- Self-Assessment Report
- Study Plans
- Module descriptions
- Webpage Ba Medicine: http://pd.fk.ub.ac.id/en/jadwal-kuliah/buku-mkk-2/
- Webpage Ba Dentistry: https://fkg.ub.ac.id/en/program-studi-sarjana-kedokteran-gigi/
- Webpage Ma Biomedical Science: http://biomedical.fk.ub.ac.id/en/
- Webpage PhD Medical Science: http://pdik.fk.ub.ac.id/en/
- Discussions during the audit

Preliminary assessment and analysis of the peers:

The Medical programme in the Faculty of Medicine, Universitas Brawijaya (FMUB), comprises two educational stages: the Bachelor's stage and the Professional stage. After completing the professional stage, the graduates receive a Doctor of Medicine (Dokter). However, this report only deals with the Bachelor's stage; the Professional stage is not the subject of this procedure. The curriculum of the Bachelor's degree programme Medicine encompasses 148 credits, which is equivalent to 222 ECTS points. The programme is designed

for a minimum study period of 7 semesters (3.5 years) and a maximum of 14 semesters (7 years).

The general structure of BSPM is depicted in the following table:

Activity	SCU	ECTS
Compulsory Subject	135	202,5
Elective Subject	4	6
Field work	3	4,5
Final Project	6	9
Total	148	222

Table 1: Structure BSPM, source: SAR U Brawijaya

The Dentistry programme in the Faculty of Dentistry, Universitas Brawijaya (FDUB), comprises two educational stages: the Bachelor's stage and the Professional stage. After completing the professional stage, the graduates receive a Doctor of Dental Surgery (Dokter Gigi). However, this report only deals with the Bachelor's stage; the Professional stage is not the subject of this procedure. The curriculum of the Bachelor's degree programme Dentistry has a similar structure. Here, graduates have to complete 144 credits (216 ECTS points) in 7 semesters. The maximum study period is 14 semesters. The programme's structure is depicted in the following table:

Activity	SCU	ECTS
Compulsory Subject	107	163.5
Elective Subject	2	3
Compulsory Practical Work	27	37.5
Field work	2	3
Final Project	6	9
Total	144	216

Table 2: Structure BSPD, source: SAR U Brawijaya

The compulsory courses include Basic Medical Sciences Courses, Basic Clinical Courses and General Education Courses such as Civic Education, Indonesian Language, Religion, and Pancasila. These four courses are university requirements and need to be taken by all undergraduate students at UB, regardless of which major they have chosen. They are intended to build personal character as well as introduce students to scientific methodology and critical thinking.

Usually during the last year of studies, Bachelor's students must complete community service/field work (Kuliah Kerja Nyata-Belajar Bersama Masyarakat/KKN-BBM). The peers discuss with the programme coordinators 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 takes 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 own 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 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.

Both Bachelor's programmes have the following modes of teaching: lectures, small group teachings, clinical skills sessions, practical work, simulation sessions, tutorials, and seminars. Audio-visual aids and e-learning supplement the attendance-based classes. Tutorials with problem-based learning and a student-centred teaching approach are the learning methods used in most of the advanced courses. This method comprises several steps, which requires students to gather information, solve problems, make reports, and discuss and present the results. In addition, thesis proposal and research activities, followed by a written thesis, are compulsory tasks for all students in the Bachelor's degree programmes Medicine and Dentistry.

The curriculum of the Master's degree programme Biomedical Science is designed for two years, during which 38 credits (57 ECTS points) need to be acquired. The curriculum includes attendance-based classes in the first year and research project proposal, research implementation, thesis writing, and publication in a national/international journal in the second year of studies. The general structure is depicted in the following table:

Activity	SCU	ECTS
Compulsory Course	**14**	**21**
Interest Based Course	**10**	**15**
Practical Work	**2**	**3**
Elective Course	**2**	**3**
Final Project Proposal Examination Research Result Seminar Journal Publication Thesis Examination	**2** **4** **4** **2**	 **3** **6** **6** **3**
Total	**38**	**57**

Table 3: Structure MPBS, source: SAR U Brawijaya

The PhD programme Medical Science comprises 58 SCU (84 ECTS) with matriculation and 50 SCU (75 ECTS) without matriculation. The programme offers four different areas of specialisation:

1) Biomedical Sciences
2) Reproductive Biology
3) Medical Technology
4) Social Medicine

The curriculum is designed for 6 semesters and includes attendance-based classes in the first year and research project proposal, research implementation, thesis writing, and publication in a national/international journal in the second year of studies. If students are lacking knowledge "non-aligned educational background" in some medical areas (e.g. anatomy, physiology, and pathology), they have to take additional classes in the respective subject. This is called matriculation. As the programme coordinators explain during the audit, especially in the specialisation of medical technology, not only graduates from medical programmes but also from other majors, e.g. computer sciences are accepted. Because these students lack some of the necessary medical knowledge, they have to take additional classes in subjects like anatomy, physiology, and pathology.

The programme's structure is shown in the following table:

Activity	SCU	ECTS
Matriculation	6	9
Basic Course	6	9
Elective/Supporting Course	6	9
Practical Work		
Pre Proposal Writing Seminar 1-4	8	12
Qualification Exam	2	3
Final Project		
Research Proposal Exam	3	4.5
Research Implementation	10	15
Research Result Seminar	2	3
Journal Publication	4	6
Dissertation Exam I (Feasibility)	6	9
Dissertation Exam II (Final)	3	4.5
With Matriculation	**56**	**84**
Without Matriculation	**50**	**75**

Table 4: Structure DPMS, source: SAR U Brawijaya

According to the academic regulations, attendance for lectures, tutorials, seminars, practical, laboratory and clinical placements, and any other teaching session in whatever mode is obligatory for students. At least 80 % of the classes have to be attended; the teachers keep attendance lists for each class. Students, who fail to attend the classes, may be excluded from the final exam and thus may fail the class.

There are no international classes in both Bachelor's programmes. However, teachers are encouraged to use presentations and slides in English and approximately 20 % of the teaching is conducted in English. In the Master's and the PhD programmes, the teaching is conducted in English if there are international students in the course; otherwise, the teaching is conducted in Bahasa Indonesia. In addition, international guest lecturers are invited, who give classes in English. The dentistry programme offers a summer course programme for international students. This and last year, students from Malaysia and Vietnam joined the programme. However, the peers think that it would be useful to introduce more English elements in the lectures and to have more courses that are taught in English, especially in the Master's and the PhD programmes, even if there are no international students in the course.

While analysing the study plans, the peers notice that the study plans of BSPM, MPBS, and DPMS do not mention the awarded ECTS points for the courses. In addition, all study plans

should include a list of electives. The PhD programme should provide specific study plans for every specialisation (Biomedical Sciences, Reproductive Biology, Medical Technology, and Social Medicine). This will help students and prospective students to better plan their studies.

During the audit, the peers learn that there is a "Fast Track" programme for Bachelor's students who want to join the Master's degree programme Biomedical Science. Bachelor's students can enrol in the Master's programme Biomedical Science while still doing their required practical work in the professional stage to become medical doctors. This way, they may finish the Master's programme faster than students that join the programme after finishing the professional stage. However, the peers think that doing the rotations in the professional stage and conducting research activities in the Master's programme causes a too high workload, because both programmes are designed as fulltime programmes and it will to be almost impossible to do both at the same time. For this reason, they think that the "Fast Track" programme is not useful and needs to be redesigned or cancelled.

The auditors confirm that all four degree programmes have a defined study plan and the curriculum ensures that students are prepared for lifelong learning. In addition, the individual forms of teaching and learning (lectures, tutorials, seminars, electives, project work, and thesis) are defined in a way that students know what to expect.

Criterion 2.2 Scientific method

Evidence:

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

Preliminary assessment and analysis of the peers:
From the first semester of the Bachelor's degree programmes Medicine and Dentistry, students are introduced to critical thinking and scientific methods. Especially in the evidence-based learning courses, students need to solve clinical cases by using a scientific approach.

Students in the Bachelor's degree programmes Medicine are introduced to research and scientific methods in the course "Methodology I" already in the first semester. The course "Methodology II" is offered in the fourth semester and focuses on biostatistics and critical scientific thinking. Students prepare their research proposal in the fifth semester in the

course “Methodology III”. The results of their research project and the written thesis are presented in the course “Final project” in the sixth semester.

In the fifth semester of the Bachelor’s degree programme Dentistry, students are required to develop a research proposal in the course “Research Methodology I”. The proposal will be marked and evaluated by the advisor so that students are allowed to conduct the research project. In the seventh semester, students present their research projects/thesis in the course “Research Methodology II”.

One important goal of the Master’s degree programme Biomedical Science is to educate medical researchers and teachers. Therefore, the programme focuses on research activities by teaching students how to identify and treat diseases based on scientific principles. In the third and fourth semester, students design their research proposal, conduct their research activities, and write a thesis, which should result in a publication in a reputable scientific journal.

Especially the PhD programme Medical Science has a strong focus on medical research and scientific methods. For this reason, the students learn about advanced medical research methods and evidence-based medicine. The dissertation is an essential part of the curriculum including proposal seminars and courses on research methods and article publication. The students are required to demonstrate their advanced, up-to-date knowledge of medical problems and their understanding of their research area through a publication. The medical research at UB covers the areas biomedical science, reproductive biology, medical technology, and social medicine.

The peers confirm that students learn the principles of scientific methods and are introduced to medical research methods and evidence-based medicine.

Criterion 2.3 Basic Biomedical Sciences

Evidence:

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

Preliminary assessment and analysis of the peers:

Classes in basic biomedical sciences such as “Biochemistry”, “Molecular Biology”, Cellular Biology“, and “Microbiology” are offered in the first semesters of the Bachelor’s degree

programmes Medicine and Dentistry. It is expected that students acquire the necessary knowledge in basic biomedical sciences in order to be able to understand the underlying scientific principles and fundamental concepts, which enables them to follow and apply the methods of medical and dental sciences in the next level of studies. The basic biomedical sciences are taught in courses based on human body systems using the problem-based approach, including soft skills and social reflection. In this context, it is necessary to point out that the focus of the biomedical education in the Bachelor's degree programme Dentistry is on oral biology whereas the Bachelor's degree programmes Medicine treats the complete human body. The field of oral biology bridges pre-clinical (biomedical) sciences with clinical sciences by providing a scientific basis for understanding the management of various oral dental tissue disorders in healthy and in pathological conditions and for understanding the body's response mechanisms at tissue, cell, and molecular levels. The integration of new developments in the field of biomedical sciences into the core content of both Bachelor's programmes is ensured through active participation of researchers in the design of the respective programme and its content.

As can be directly seen from the curriculum of the Master's degree programme Biomedical Sciences, there is a strong focus on biomedical courses. Advanced courses in subjects such as "Cell Molecular Biology", "Medical Biochemistry", "Molecular Genetics", "Bioscience and Biotechnology", and "Bioinformatics" represent the main part of the curriculum in the first two semesters.

The PhD programme Medical Science focuses on research and on advanced clinical subjects. For this reason, no classes in biomedical sciences are offered. The PhD students are expected to have acquired the necessary competences in biomedical sciences in their previous studies (they need to complete a Master's programme before being admitted to the PhD programme).

Criterion 2.4 Behavioural and social sciences and medical ethics

Evidence:

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

Preliminary assessment and analysis of the peers:
Behavioural and social sciences including courses such as “Pancasila”, “Civics”, “Bahasa Indonesia”, “Religion”, and “Bioethics and Medical Law” are extensively taught especially in the first two semesters of the Bachelor’s degree programmes Medicine and Dentistry. The acquired social competences can directly be applied during the Community Service. The goal is to familiarise students with the changing scientific, technological, demographic, cultural contexts, and the anticipated needs of the society and the health care system.

The auditors confirm that students of the Bachelor’s degree programmes Medicine and Dentistry are well educated in social sciences and ethics and are introduced to evidence-based medicine, health promotion, and preventive medicine.

As described before, the focus of the Master’s degree programme Biomedical Sciences is on biomedicine and students have already completed a Bachelor’s or MD programme. Therefore, only few classes, such as “Research Methodology” are offered in the area of behavioural and social sciences. The peers consider this sufficient for Master’s students. The same observation is valid for the PhD programme Medical Science, which focuses on medical research. However, PhD students are offered the course “Social Determinant and Anthropology of Health” if they chose Social Medicine as their area of interest.

Criterion 2.5 Clinical sciences and skills

Evidence:

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

Preliminary assessment and analysis of the peers:
The Bachelor’s degree programme Medicine is designed to prepare the students for contributing to the direct health care of patients in a clinical context. To achieve this goal, the curriculum includes a clinical teaching and clinical skill performance. The clinical teaching is applied from the third semester to the seventh semester, while practical clinical skills are integrated in the clinical lectures in each clinical system course. Students receive a clinical skills guide to prepare their practical training for administering clinical procedures. This includes anamnesis/history taking, physical examination, diagnosis (including indication and contraindication as well as interpretations), therapeutical procedures, clinical reasoning,

medical data recording, and communication and information for the patients and the community (family, relatives, etc.).

Students are trained to use systematic mechanisms in dealing with ”problems” (problem-based) in daily practices, starting from finding and identifying the health issues and analysing the cause-effect of the medical problems. Students should acquire methodological competences and practical experiences in clinical sciences by field visits, not only in the context of individual health care in hospitals but also in community health centres. Students are introduced to clinical problems through reflective and interactive learning, constructive feedback given by lecturers/doctors, and simulated patients.

In the Bachelor’s degree programme Dentistry, primary and clinical dentistry are taught through lectures, problem-based learning, practical works, and skills labs. The proportion ratio of basic dentistry and clinical dentistry is 30: 70. Basic dentistry is conducted in the first two semesters (Blocks 1-4) with 41 credits, while clinical medicine is conducted in semesters 3-7 with 105 credits. The clinical skills (skills lab) have a share of 20 % - 40 % in each block.

Preventive health care and health promotion are taught in block two in the Preventive Dentistry course and in block four in the Health Promotion course. In these courses, the basic theory of prevention is given and various types of prevention (primary, secondary, and tertiary) in general with various prevention theories are discussed. Health promotion deals with the efforts made by a dentist in improving the health status of the community (e.g. infection control and proper brushing techniques). In the last year of studies (block 13), a practical exam is conducted, where students are asked to apply the theories on how to educate the public.

Graduates of the Master’s degree programme Biomedical Science and of the PhD programme Medical Science are set to work primarily in an academic environment as lecturer, health care manager, or researcher. Thus, in these programmes, students are not necessarily required to interact directly with patients, although the majority of the research topics is related to clinical aspects. Therefore, students usually need to interact with the patients at the hospital during their research activities.

Most of the academic staff members have a number of years of clinical experience and are actively involved in research activities and supervise Bachelor’s, Master’s, or PhD students. The Faculty of Medicine is located next to UB university hospital. Medical students can study there and the medical staff serves as clinical lecturers at UB. In addition, cooperations with the regional health offices, the public health centres, and other hospitals are established to ensure a close student-patient interaction.

Criterion 2.6 Curriculum structure composition and duration

Evidence:

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

Preliminary assessment and analysis of the peers:

The Medical Programme consists of two stages: The academic (Bachelor's) phase, which is designed for 7 semesters with 148 credits (222 ECTS), and the Professional (Medical Doctor) phase, which encompasses 4 semesters with 49 credits (73.5 ECTS).

The Bachelor's phase is carried out in the form of courses, which includes the study of behavioural, social, and basic biomedical sciences. This is followed by medical courses based on the human body system. The last two semesters are designed to prepare students for clinical practice in the professional phase and include electives and the final projects to accommodate the special interests of the students. Basic clinical courses are offered from third to seventh semester. In these courses, students will learn basic concepts of clinical sciences, which are organized into several themes by integrating various organ systems in each semester. Cognitive and theoretical knowledge regarding biomedical sciences have a larger share in the basic biomedical courses, while applicative knowledge regarding clinical sciences and practical skills are given more room in the basic clinical courses.

The Dentistry programme is also divided into a Bachelor's and a Professional phase. The Bachelor's phase encompasses 14 blocks with 144 credits (216 ECTS) in 7 semesters, while the Professional phase is designed for four semesters and 38 credits (57 ECTS). Each block consists of courses that integrate several departments. Basic medicine and basic dentistry are taught in blocks 1 to 4, which is followed by clinical dentistry in blocks 5 to 13. Electives, final project, and clinical simulations as preparation for entry to the professional level are carried out in blocks 13 and 14. The generic competencies that comprise the general education in basic medical and dental sciences are delivered in the first two years. These courses are supposed to lay the foundation with respect to critical thinking and understanding of basic knowledge in medical and dental topics for the subsequent semesters. In the electives, students are introduced to the concepts of traditional health sciences (herbal medicine) or more advanced clinical sub-sciences (e.g., dental anthropology, geriatric dentistry). Theoretical knowledge regarding medical and basic dental sciences have a larger

share in the first semesters, while applicative knowledge regarding clinical dental sciences, psychomotoric components, and professionalism are taught in the dental clinical courses.

The Master's degree programme Biomedical Science is designed for 4 semesters with a maximum length of studies of 4 years. MPBS includes 38 credits (57 ECTS). These credits are divided into lectures and practical work within the first year, as well as thesis and publication in the second year. At the end of the first semester, students can submit a thesis proposal to start their research project in the second semester. In the second semester, students can further develop their theoretical knowledge in biomedicine and hone their practical skills. There are elective courses in traditional medicine and herbal medicine and pipeline drug development to understand and develop students' research in the area of drug products.

The curriculum of the PhD programme Medical Science encompasses 50 credits (128.6 ECTS) and is designed for six semesters. It offers four major areas of interests: Biomedical Sciences, Reproductive Biology, Medical Technology, and Social Medicine. Students with non-aligned educational backgrounds must take matriculation courses (9 ECTS). The first year comprises general and specific scientific skills, whereas in the second year the research activities are carried out. The curriculum is adjusted to the specialization chosen by students at the time of registration. The basic (9 ECTS) and elective (9 ECTS) courses are all intended to support the dissertation research. There are pre-proposal seminars (12 ECTS) and a qualification exam (3 ECTS) to prepare for the dissertation implementation. In total, the dissertation accounts for 42 ECTS (proposal examination (4.5 ECTS), research process (15 ECTS), research result seminar (3 ECTS), journal publication (6 ECTS), dissertation eligibility test (9 ECTS), and dissertation final examination (4.5 ECTS)).

The pre-proposal seminars related to dissertation research are conducted four times (total 12 ECTS) starting from the first semester to accelerate the study period. During the pre-proposal writing and seminars, the student is supported by four advisors to ensure that the dissertation topic is "valid, novel, and beneficial to society through technology transfer". After the pre-proposal papers are approved, the students prepare themselves for the qualification exam (3 ECTS). There is one advisor and five professors as examiners who ensure that the student has the capability to conduct the dissertation project. There is also one lecturer who attends the qualification exam to perform monitoring and evaluation of the examination quality. Students who have passed the qualification exam may propose their dissertation topic.

The four degree programmes describe their curricula very clearly and in detail. It would be useful, if the students' handbooks would include information on how to calculate their credits in ECTS points and a short summary of the goals of the respective programme.

Criterion 2.7 Programme management

Evidence:

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

Preliminary assessment and analysis of the peers:
The Faculty of Medicine (FMUB) manages the Bachelor's degree programme Medicine as well as the Master's degree programmes Biomedical Science and the PhD programme Medical Science. On the other hand, the Bachelor's degree programme Dentistry is managed by the Faculty of Dentistry (FDUB).

For further developing the programmes according to national and international standards, the needs and the feedback from stakeholders, including students, alumni, lecturers, administration staff, and employers are taken into consideration. The curriculum design, as proposed by the respective Curriculum Committee, is then reviewed by the Dean's Office and the Quality Assurance Unit. The main task of this unit is to review and provide suggestions to the proposed curriculum. Curriculum evaluation is conducted every year, while major changes are usually implemented in a five year cycle.

Criterion 2.8 Linkage with medical practise and the health sector

Evidence:

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

Preliminary assessment and analysis of the peers:
Students at the Faculty of Medicine and the Faculty of Dentistry learn from the beginning of their studies how to interact with patients and doctors in hospitals or health centres. The peers confirm that there is a strong cooperation with hospitals, public health centres, and the regional health offices.

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

The peers understand that both the medical and the dentistry programmes include a Bachelor's and a Professional phase. However, UB has only applied for the accreditation of the Bachelor's and not the Professional programmes. For this reason, the peers only assess the Bachelor's programmes.

The peers thank UB for explaining what courses in which programme are delivered in English. The peers support these efforts but still think that it would be useful to encourage the students even more to actively speaking English, especially in the Master's and PhD programmes.

The peers appreciate that UB has already stopped fast track medical programme and will discuss the same issue for the dentistry programme with UB's Vice Rector of Academic Affairs.

Since the peers can only access the updated study plans for the BSPM-FMUB programme, they are not able to confirm that the electives and ECTS points are also included in the study plans of the other three programmes. The study plan and the module descriptions of the BSPM-FMUB programme are fine and include all necessary information.

The peers consider criterion 2 to be mostly fulfilled.

3. Assessment of Students

Criterion 3.1 Assessment methods

Evidence:

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

Preliminary assessment and analysis of the peers:

The methods of assessment and the weighting, if there is more than one component for each study-unit, are indicated in the respective module description and are announced to the students at the beginning of each semester. The grade for each class takes into account

all assessment components. There are few students whose performance fails to reach the minimum standards. They are then required to retake the exams or to repeat the whole course. The regulations allow students to repeat a course once. The passing grade for every course is "C". If a student fails to get a “C”, they are given a chance to undergo a supplementary test before the end of semester as remedial. If they are still unable to reach “C”, they can join the additional remedial semester (this period is two months before the start of the new academic year). Courses with a "C" may be retaken. The highest grade for a retaken course is B. The grade put in the academic transcript is the one with the higher value.

Assessment methods in the Bachelor’s degree programmes Medicine and Dentistry depend on the intended learning outcome of each course. They include written exams, essays, practical examinations, e-exams, IT-based simulation, oral examinations, practical skills examination, thesis, and objective structured clinical examination (OSCE). In addition, students have to complete the Community Service, which is assessed by a field supervisor (lecturer), who serves as a student’s field mentor and assessor. The evaluation is based on a work plan, discipline, teamwork, programme implementation, and activity report.

In both Bachelor’s degree programmes, students are assessed via formative (e.g. laboratory work, quizzes, assignments) and summative assessments (mid-term and final exams), team-based projects, and case-based projects. The final exam is usually conducted in the form of multiple-choice questions (MCQ) using a computer-based test (CBT). For team-based projects, students are given a topic at the beginning of the semester. They are expected to work as a team to finish the project by the end of the semester.

In BSPM as well as in BSPD, students are required to conduct research as a final project before graduation. After reaching the fifth semester, students are expected to have found a topic for their final research project. Assessment components in the final assignment are divided into two parts: the research process and writing, and also research seminar. Each student will be assigned to two lecturers (research advisors) to guide them from the time they choose a research topic, all the way through research and scientific writing. This process will culminate in a final research project examination, a discussion-based assessment by research advisors and one examiner. The minimum passing grade for the final project is “C”.

BSPD students who have passed the Bachelor's degree can take the OSCE (Objective-Structured Clinical Examination), as a prerequisite for joining the dentist professional programme. OSCE consists of eight stations including conservation dentistry, paediatric dentistry, prosthodontics, periodontics, orthodontics, oral disease, oral surgery, and community dentistry.

Students are allowed to take part at the final exam at the end of the semester, if they have attended at least 80 % of lecture sessions and 100 % of practical activities unless they have important reasons for their absence. Accepted reasons are (a) medical condition (proven by a medical letter), (b) assigned in curricular and extra-curricular events out of campus, and (c) have other reasons that are approved by the Dean/Rector.

In FMUB, the typical forms of assessment include a midterm exam (written test; 20 – 40 %), a final exam (written test; 20 – 40 %), assignments (journal critical appraisal or oral presentation; 20 – 60 %) and practical skills tests (practical course only; 10 %). The final grade of a course is calculated from the average of grades (based on proportion) of the assignments and exams. If a course is taught by a team of lecturers, the final grade is the average of grades given by each lecturer.

Master's students who fail to achieve a GPA of at least 3.00 (12 ECTS at minimum) during their first semester will be given a "Letter of Warning" for poor performance. The letter is intended to encourage students to improve their academic achievements in the following semester. Students, who fail to achieve a GPA of 3.00 (24 ECTS at minimum) in their second semester, will be declared "fail" and are not allowed to continue their studies. Students, who get "D" or "C", can retake the respective course. Retaking the courses can only be done once and the highest score for the retake course is B. The final grade is determined from the highest score obtained by the student. Students who have taken 36 ECTS with a GPA of 3.00, and no "D" grade for any course may submit the research proposal for their thesis.

During the thesis, each Master's student will be accompanied by two advisors and two examiners (the first one should be internal and the second one could be internal or external) to ensure the research process is valid. Thesis proposal has to be approved by the thesis advisors and defended in front of the thesis examiners committee (consisting of thesis advisors and thesis examiners). Master's students who have passed the thesis proposal exam may commence their research project. In order to graduate, Master's students need to publish at least one thesis-related article in an accredited national journal or an indexed international journal.

As described in the Self-Assessment Report, DPMS is a degree "by research". At the time of students' admission, candidates must already have prepared a dissertation research outline. From the beginning of the PhD programme, students choose a specialisation according to their dissertation topic. The assessment methods of each course (basic and elective courses) comprise several components, including practical reports (practical courses only), structured assignments, scientific papers, oral presentations, journal reading, and written examinations (midterm and final exams). The PhD students are evaluated by study progress achieved each semester. Students' performance evaluation is carried out regularly every

semester by inviting the advisor and the student. Students who perform below expectations will be given a “Letter of Warning” and their advisor discusses with them about difficulties or problems encountered.

During the dissertation, each PhD student is supported by three advisors, and at least two internal examiners and one external examiner to ensure the research process is valid and novel. The dissertation proposal has to be defended and approved by all the advisors and examiners. Students who have passed the proposal examination and completed all required courses may conduct their research project. Students should record all the research activity and document in a logbook that is monitored and evaluated by the advisors. There are also regular progress reports.

After finishing their research projects, PhD students need to perform a research result seminar and submit research articles to at least two reputable international journals. The obligation of publishing the research articles in reputable international journals is intended to ensure the validity and novelty of the dissertation research.

Case-based learning is one of the most important forms of assessments; it is applied to assess students' level of understanding and knowledge. In FMUB and FDUB, this case-based learning method is carried out using the problem-based learning (PBL) method, which focuses on problems taken from real clinical cases. The students are given a real clinical case and are assessed with respect to their capability to deal with the given task (information gathering and questioning, information giving, critical thinking, and reasoning), to deal with other persons (interpersonal skills, which includes empathy, respect, adequate cooperation with colleagues and other professionals), to handle themselves (emotional control, handling suggestions and or critics given by others, dedication, responsibility, and willingness to involve themselves to solve a problem), and overall performance. Each student is assessed individually by a teacher, who will provide each student with personalised feedback to ensure they understand their strengths and areas of improvements.

In MPBS and DPMS, the case-based learning method aims to create a participatory environment and facilitate discussion between students and teachers in all teaching processes. This is typically supported by journal readings and/or oral presentations.

Furthermore, a project-based learning method is applied in all degree programmes under review to support students' learning by actively engaging in the real world focused on the topics related to the final project, thesis, or dissertation. The project-based learning method should help students to integrate their theoretical knowledge and practical skills to solve health problems.

At the end of each course, the course coordinator is responsible for compiling and computing the grades and submitting the final grade to the Academic Affairs Staff. The Academic Affairs Staff then enters the final grades of each course into the Academic Information System (SIAKAD). Students can then access their academic record online via the Student Academic Information System (SIAM). If there is any complaint, students can appeal their grades to the course coordinator within seven days after the result is officially released. The students' appeal procedure is detailed in the respective Academic Handbook.

The peers also inspect a sample of examinations and final papers and are overall satisfied with the general quality of the samples. They conclude that the examinations are suitable to verify whether the intended learning outcomes are achieved or not.

Criterion 3.2 Relation between assessment and learning

Evidence:

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

Preliminary assessment and analysis of the peers:
Forms of assessment include written examinations (multiple choice questions, essays), oral examinations, clinical and practical examinations, and the Objective Structured Clinical Examination (OSCE).

In all four programmes under review, assessments are conducted in accordance with the intended learning outcomes. For example, for several basic biomedical courses in which the level of competency focuses on understanding, the assessment methods are multiple choice tests and laboratory examinations. Moreover, for courses with a focus on clinical skills, the chosen assessment method is usually a practical skills examination or OSCE.

The methods of assessment are indicated in the module descriptions. In addition, the examination form is communicated to the students at the beginning of the course.

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

The peers thank the Dentistry programme for explaining that the information about assessment methods and the weighting of the scores is provided in the Academic Handbook and are announced to the students by the Course/Block Coordinator at the beginning of each

semester. The composition of the final grade is usually: Small Group Discussion and Report (10%), Log Book (15%) and Final Block Examination (75%). However, the lab courses include a Pre-Test/Quiz (10%), Process Assignments (20%) and Final Skills Lab Examination (70%).

The peers consider criterion 3 to be fulfilled.

4. Students

Criterion 4.1 Admission policy and selection

Evidence:

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

Preliminary assessment and analysis of the peers:
New students in the Bachelor's degree programmes Medicine and Dentistry are admitted either via a national or an university selection process. The national selection is divided into two categories: Seleksi Nasional Masuk Perguruan Tinggi Negeri (SNMPTN) and Seleksi Bersama Masuk Perguruan Tinggi Negeri (SBMPTN). The independent university selection at UB is called Seleksi Masuk Universitas Brawijaya (SMUB). In addition, there is also the admission for international students.

The selection methods are:

1. National Entrance Selection of State Universities (SNMPTN), a national admission system, which is based on the academic performance during the high school.

2. Joint Entrance Selection of State Universities (SBMPTN). This national selection test is held every year for university candidates. It is a nationwide computer-based test (subjects: mathematics, Bahasa Indonesia, English, physics, chemistry, biology, economics, history, sociology, and geography).

3. SMUB has similar requirements as the SBMPTN; it is a written test and is specifically conducted at UB.

4. International Student Entrance Selection

The Bachelor's degree programme Medicine had a quota of 27 % to 28 % for SNMPTN, 37 % to 45 % for SBMPTN, and 28 % to 35 % for SMUB selection from 2018 to 2020. The numbers are similar for the Bachelor's degree programme Dentistry. Here, between 25 % to 35 % of the new students were admitted through SNMPTN, between 37 % to 51 % through SBMPTN, and between 16 % to 37 % through SMUB selection from 2018 to 2021.

In contrast, the admission procedure for new students in the Master's degree programme Biomedical Science and the PhD programme Medical Science is conducted through a selection that is organised by the respective degree programme.

Candidates who apply for the Master's degree programme Biomedical Science must hold a Bachelor (undergraduate degree) certificate in biosciences (e.g. bachelor in medicine and/or medical doctor, dentistry, veterinary, pharmacy, nursing, nutrition, biology, and other related fields). The Grade Point Average (GPA) needs to be higher than 3.00 for regular classes and higher than 3.25 for fast track classes. In addition, an academic potency test (TPA-OTO BAPPENAS) with a score of > 500 and an English proficiency certificate (e.g. TOEFL score of > 500 or TOEIC score of > 600) must be submitted. Candidates that fulfil these formal requirements are then asked to pass a psychology test (MMPI) and an interview with the head and secretary of the degree programme and experts, who are recommended by the head of the degree programme. The programme coordinators explain that the applicants are asked about their commitment and motivation for applying for the Master's programme, about their academic and professional background as well as their social activities.

For the admission to the PhD programme Medical Science, candidates need to hold a Master's degree in the fields of Basic Medical Sciences, Clinical Medicine (Specialist), Dentistry, Veterinary Medicine, Nursing, Midwifery, Pharmacy, Life Sciences (Biology, Biochemistry, Biomedicine, Reproductive Biology), Nutrition, or Sports Health Sciences. In addition, they need a certificate of Scholastic Aptitude Test (Tes Potensi Akademik/TPA) with a minimum score of 500 and a proof of English proficiency (e.g. a valid TOEFL ITP or equivalent certificate issued by an official TOEFL ITP institution with a minimum score of 525). Moreover, publication of journal articles and/or two certificates of participation in a national/international conference from the last two years and an outline of the research proposal (5 pages at maximum) need to be submitted. Candidates that have provided all necessary documents will take part at an interview, which aims at assessing their readiness and ability to successfully completing their degree programme and the dissertation. During the interview, prospective students are asked to give a brief presentation about their research plan.

Students can apply online at UB for admission to MPBS and DPMS and admission is conducted twice annually each year, i.e., in the odd and even semesters. The schedule of admission, the requirements, and the procedures are published and can be accessed via UB's homepage.

All students at UB have to pay tuition fees. There are eight different levels of tuitions fees for the Bachelor's programmes, depending on the financial ability of the parents. Currently, the fees range from IDR 500 000 (EUR 35) to IDR 23 450 000 (EUR 1560) for BSPM and from IDR 500 000 (EUR 35) to IDR 21 600 000 (EUR 1437) for BSPD per year. The tuition fees for the Master's and PhD programme are fixed and do not depend on the parents' economic situation. Currently, Master's students have to pay a tuition fee of IDR 12 500 000 (EUR 831). The tuition fee per semester for international Master's students is currently EUR 1500. As stated in the Academic Requirements there is a registration fee for the PhD programme (one-time payment) of IDR 2.000.000 (EUR 140) and a tuition fee of IDR 20.000.000 (EUR 1330) per semester. The tuition fee per semester for international PhD students is currently EUR 5250.

Scholarships and grants for students in the Faculty of Medicine and Faculty of Dentistry are available from the central or local government and private institutions. This includes the Ministry of Education and Culture, Ministry of Research and Technology, Ministry of Finance, and Ministry of Marine Affairs and Fisheries. Private scholarships are provided by companies and non-governmental organizations (NGOs). The scholarships are managed through the university, and eligible students can apply directly to the Unit of Academic and Student Service. Several senior students work as laboratory assistants or as medical doctors (MPBS and DPMS) to earn some money for financing their studies.

In summary, the auditors find the terms of admission to be binding and transparent.

Criterion 4.2 Student intake

Evidence:

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

Preliminary assessment and analysis of the peers:

The annual intake quota of the Bachelor's degree programme Medicine is 250 students. The number of applicants exceeds by far the number of available places. For example, in

2019/20, there were 9636 students applying for admission and only 206 new students were accepted. This is equivalent to an admission rate of only 2.1 %. The numbers in former years are similar. There are also applicants from several neighbouring countries, including Malaysia, Republic Democratic of Timor-Leste, Myanmar, and Vanuatu. As can be seen from the following table, the ratio of enrolled candidates and applicants in the past five years ranges from 1:20 to 1:47.

Academic Year	Applicants			Ratio*	Number of foreign students
	Quota	Applicants	Enrolled		
2016/2017	250	8224	237	1:34	14
2017/2018	250	7415	231	1:32	10
2018/2019	250	7368	224	1:32	0
2019/2020	250	9636	206	1:47	4
2020/2021	250	5059	260	1:20	3

Table 5: Admission BSPM, source: SAR U Brawijaya

The number of available study places (around 125) in the Bachelor's degree programme Dentistry and the number of applications (between 3838 and 5307) are lower than in BSPM. However, the acceptance quota is similar. In the last five years, the ratio between applications and enrolled new students was between 1:55 and 1:30. The exact numbers are shown in the following table:

Academic Year	Quota	Number of applicants		Ratio*	Number of new students		
		Applicants	Accepted		Domestic	Transfer	Foreign students
2016/2017	100	4033	128	1:31	128	0	0
2017/2018	100	3828	128	1:30	128	0	0
2018/2019	100	5307	126	1:42	126	0	0
2019/2020	100	5059	91	1:55	91	0	0
2020/2021	100	4048	118	1:34	118	0	0

Table 6: Admission BSPD, source: SAR U Brawijaya

The peers inquire why there are so many students applying for studying at UB. They learn that medicine is a very popular subject because the employment prospects are very good and medical or dental doctor are very prestigious occupations. In addition, there are many high school graduates in Indonesia and UB is one of the most prestigious universities in the country. Consequently, UB is able to accept only 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 assets of the Bachelor's degree programmes Medicine and Dentistry.

In MPBS and DPMS, an internal committee determines the annual student quota based on the availability of educational and research facilities and the number of academic staff members. In the last five years, the capacity of the Master's degree programme Biomedical Science was 40 students per academic year. However, the number of applications and of accepted students is sometimes below the maximum intake. The share of international students in MPBS is on average 10 %. The respective numbers are shown in the following table:

Academic	Quota	Number of applicants		Ratio*	Number of new students		
Year		Applicants	Enrolled		Domestic	Transfer	Foreign students
2016/2017	40	48	36	1:1.3	29	0	7
2017/2018	40	34	30	1:1.1	25	0	5
2018/2019	40	35	27	1:1.3	26	0	1
2019/2020	40	31	24	1:1.3	21	0	3
2020/2021	40	49	44	1:1.1	42	0	2

Table 7: Admission MPBS source: SAR U Brawijaya

Master's students are often employed as staff members in one of the departments of the Faculty of Medicine but are not allowed to teach students without a Master's degree. In order to qualify as a teacher, they need to complete the Master's programme. While doing so, they are usually exempted from working until they have finished the programme.

The annual capacity of the PhD programme Medical Science was 25 students in the last five years. As can be seen from the table below, the number of application has varied between

57 and 23 in the last five years. Nevertheless, only around half of the available study places are occupied.

Academic year	Quota	Applicants	Enrolled	Ratio*
2016/2017	25	29	21	1:1.4
2017/2018	25	23	18	1:1.3
2018/2019	25	57	47	1:1.2
2019/2020	25	26	22	1:1.2
2020/2021	25	38	28	1:1.4

Table 8: Admission DPMS, source: SAR U Brawijaya

A new specialization (social medicine) was introduced in 2018/19 and new PhD students for this specialization were accepted in addition to the regular quota. For this reason, 47 new PhD students were accepted in 2018/19 although the regular intake is only 25 students per year. In order to make this distinction clear, the numbers should be separated in the table. Otherwise, one might get the impression that too many new students were accepted and that the available capacity is not sufficient for adequately training all new PhD students.

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

Criterion 4.3 Student counselling and support

Evidence:

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

Preliminary assessment and analysis of the peers:

UB offers a comprehensive advisory system for all 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 a group of students from her/his classes. The advisor is a student's first port of call for advice or support on academic or personal matters and is obliged to regularly meet with her/his students during the semester. In BSPM and BSPD, students should meet with their academic advisor at least four times each semester.

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, that they meet regularly, and that they can always contact their advisor personally and ask for help or advice.

In the MPBS and DPMS, each advisor is responsible for up to six students. Their duties are limited to academic and personal problems and guiding future career options and paths. For non-academic problems that cannot be solved by the academic advisors, especially financial problems related to tuition fee payment, students can address the programme coordinators to find a solution.

For specific courses, such as the final projects and community service, students are assigned special advisors according to their field of expertise. These project advisors will guide the students throughout the process, from planning and project implementation to writing the final report and presenting the results. The role of the thesis supervisors is to help students to complete their thesis research; they also monitor the progress of thesis in order to ensure the completion of the thesis in the intended amount of time. Each student will have two thesis supervisors, who are experts from related departments, who provide full guidance in carrying out the thesis, starting from finding research idea, writing proposal, conducting research activities, writing the report, and preparing an article for publication.

All students at UB have access to the Student Academic Information System (SIAM). The students' profiles (student history, study plan, academic transcript and grade point average/GPA, lecturer evaluation, course list, etc.) are available via SIAM.

UB supports and encourages academic and non-academic activities as part of students' development. This includes competitions at national and international levels. UB provides mentors to guide/train the students, funding, and awards for successful participants. There is also medical and social support for students at UB and the Job Placement Centre (JPC) offers a career counselling service.

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.

Criterion 4.4 Student representation

Evidence:

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

Preliminary assessment and analysis of the peers:
Curriculum design, monitoring, and evaluation is carried out by the Curriculum Committee, its members are appointed by the Dean.

Students in each degree programme are welcome to establish their student council. The councils, which consist of executive and legislative sections, are also involved in the degree programme and faculty meetings to discuss about the quality assurance policies and activities. As representatives of all students in their degree programme, the student council members are involved in designing the faculty's vision, mission, and strategic plan. The student council structure and members of the Bachelor's, Master's, and PhD programmes are available online on the faculty and degree programmes' websites

In addition, the Faculty of Medicine provides support, funding, and facilities for non-academic students' activities. Non-academic activities include student activities and student organizations at local, national and international levels. These activities aim to develop students' interests and talents to improve their skills. For example, there are students' clubs for music, theatre, dancing, and sports.

The peers observe that students at the Faculty of Medicine are involved in the quality assurance process and thus actively participate in evaluating and further developing the medical programme.

In summary, the peers appreciate the comprehensive advisory system, the high availability of staff members, the good relation between students and staff members, and the involvement of the students in further developing the degree programmes.

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

The peers thank the PhD programme for providing a more detailed table on the admission numbers, which now differentiates between the regular quota and non-regular students.

The peers consider criterion 4 to be fulfilled.

5. Academic Staff/Faculty

Criterion 5.1 Recruitment and selection policy

Evidence:

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

Preliminary assessment and analysis of the peers:

At UB, 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.

The total number of lecturers in the four degree programmes under review and their academic position are presented in the following table:

	BSPM FMUB	BSPD FDUB	MPBS FMUB	DPMS FMUB
No Functional Position	43	8	0	0
Assistant Professor (Asisten Ahli)	88	29	1	0
Assistant Professor (Lektor)	42	8	9	6
Associate Professor	12	12	7	15
Professor	16	8	20	24
Total	201	65	37	45

Table 9: Academic Staff, source: SAR U Brawijaya

The ratio of lecturers to active students is 1:6 in BSPM, 1: 6 in BSPD, 1:1.3 in MBPS, and 1:5 in DPMS.

In addition to the permanent staff, there are also practitioners (e.g. medical doctors) involved in the teaching processes. Practitioners are experts in their medical field and are usually working in affiliated hospitals or other health care facilities. There are 45 practitioners in BSPM, 12 in MPBS, 8 in BSPD and 111 in DPMS.

The academic staff activity in Indonesia is called Tridharma Perguruan Tinggi, it means that lecturers have the tasks of carrying out teaching, research, and community services in accordance with their fields of expertise and provide guidance to students in order to meet their needs and interests in the education process. Non-permanent lecturers only have to teach.

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 teachers' average workload (credits per semester) in 2020 in each degree programme is shown in the following table:

Aspect	BSPM FMUB	BSPD FDUB	MPBS FMUB	DPMS FMUB
Teaching	7.0	8.15	5.8	8.31
Research	2.46	2.84	4.0	3.46
Service activities (Community Service and Supporting aspect)	3.15	1.71	2.3	1.93
Total	12.62	12.7	12.1	13.7

Table 10: Staff Workload, source: SAR U Brawijaya

In order to broaden the students' horizon especially in the field of research and current developments, guest lecturers from both Indonesia and overseas are regularly invited. The guest lectures from abroad usually have research collaborations with members of the teaching staff. The number of guest lecturers within the last three years is depicted in the following table:

	BSPM FMUB	BSPD FDUB	MPBS FMUB	DPMS FMUB
2018	3	3	3	3
2019	1	6	1	1
2020	1	7	1	1
Total	5	16	5	5

Table 11: Guest Lecturers, source: SAR U Brawijaya

Non-academic staff members such as IT staff, librarians, technicians, and laboratory staff support the teachers. The number of supportive staff members in each degree programme is as follows:

	BSPM-FMUB	MPBS FMUB	DPMS FMUB	BSPD FDUB
Study Program Supporting Staff	6	2	3	23
Medical Major Supporting Staff	3			-
IT Staff	6			2
Laboratory Staff	7	5		1
Skill Laboratory Staff	3	-	-	12
Librarian	1			1
Total	26	17	18	39

Table 12: Non-Academic Staff, source: SAR U Brawijaya

The peers discuss with UB's management, how new staff members are recruited. They learn that every year the faculties and departments announce their vacancies to UB's management. Since UB is semi-autonomous, the university can decide themselves what staff members to hire. One way to recruit new teachers is to send promising Master's students from UB abroad to complete their PhD and then to hire them as teachers when they complete their own studies. UB also hires graduates from other universities, but it is hard to attract them, because if they are promising at early career stages, 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 peers observe that the teachers are professionally qualified and their qualification profiles fit well with the focus of the degree programmes. Clinical expertise and activities are well integrated into the curriculum, which leads to a good interaction between teaching and patient care.

Criterion 5.2 Staff activity and development policy

Evidence:

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

Preliminary assessment and analysis of the peers:
UB encourages training of its academic and technical staff for improving the didactic abilities and teaching methods. As described in the Self-Assessment Reports, faculty members and non-academic staff regularly participate in training or workshops. Every year, the teachers together with the Heads of Departments and degree programmes map the competencies of their staff, analyse organisational needs for continuous improvement, and make plans for annual work programmes in line with the faculty's and university's strategic plans.

To this end, UB has established several programmes to support staff development. New staff members are required to undertake an intensive basic training programme called Pre-Service or Pra-Jabatan. Following Pra-Jabatan, lecturers are required to undertake Training for the Development of Basic Skills in Instructional Techniques (PEKERTI) and Applied Approach (AA) to develop teaching and management skills. In addition, lecturers are required to take a lecturer certification and obtain an educator certificate (SERDOS) that shows their recognition as a professional staff. In addition, lecturers are mentored by their seniors to develop their expertise and to advance their career. Finally, UB provides awards for high performing and high achieving staffs, such as the Governance, Innovation, Reputation, Alumni, Faculty, Fund, and Efficiency (GIRAFFE) Award. FMUB conducts some training especially to improve the teaching proficiency of the staff members. These trainings include, for example, PBL (Problem Based Learning) training, quality assurance, assisting students & counselling, and curriculum workshops.

Faculty members can also further develop their competencies through several activities such as post-doctoral programmes, training, workshops, joint research, etc. Moreover, they are encouraged to present their research papers in national and international conferences, and to collaborate with colleagues from international universities. The departments and faculties facilitate the staff development by enabling them to participate in national and international seminars and conferences. The staff exchange programme is supported by each faculty and funded by UB and the Indonesian Ministry of Research, Technology and Higher Education. Sabbatical leave is also possible, but the length of the stay may vary from one month to one year; there are funds from the Indonesian Ministry of Higher Education and UB available for such stays

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 UB, 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. However, it would be useful to increase staff outbound mobility not only for taking part at seminars or workshops but also for establishing more collaborations either in Indonesia or aboard.

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

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

The peers appreciate that the Dentistry and Master's programmes have started to send more lecturers abroad and have increased their international research activities.

The peers consider criterion 5 to be fulfilled.

6. Educational Resources

Criterion 6.1 Physical facilities

Evidence:

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

Preliminary assessment and analysis of the peers:

The Faculty of Medicine (FMUB) and the Faculty Dentistry (FDUB) provide various facilities to support the implementation of the four degree programmes under review. Available facilities include lecture rooms/auditoriums, classes, tutorial or group discussions rooms, laboratories for student practical works and research activities, laboratories for clinical skills (clinical skills' lab), office rooms, library/reading rooms, information, and technology facilities (internet network, computers for the Computer Based Test room).

There are eleven laboratories in FMUB and FDUB: Biomedicine, Anatomy and Histology, Biochemistry, Clinical Pathology, Human Physiology, Microbiology, Parasitology, Pathology, Pharmacology, Animal Model, and Oral Biology.

In addition, there are other supporting facilities such as the Central Laboratory of Life Sciences (LSIH) and the Research Center of Biological Industrial Materials (Institute Biosains), which is a joint research laboratory for students and teachers. FMUB and FDUB also have educational hospitals that facilitate the learning processes and the research activities. The main partner is the Universitas Brawijaya Teaching Hospital, where students get in close contact with different kinds of cases. Other hospitals as well as public health centres are also involved in teaching, the main satellite hospital is RSUD Dr. Saiful Anwar in Malang. The collaboration with provincial and city health offices and professional associations also support the educational process. In addition, there are also supporting facilities for students' activities, including the UB library where discussion rooms or learning areas are available.

The Faculty of Dentistry has the Dental Hospital of Universitas Brawijaya as its main partner. In addition, there are cooperations with Dr. Iskak Hospital in Tulungagung, Kediri District Hospital, and with 13 network health centers in the area of Malang.

Students and teachers have access to e-books and e-journals via remote Xs, which is offered by the UB library. UB library also subscribes to several scientific databases such as Clinical Key, Proquest, SpringerLink, ScienceDirect, Scopus, and EbscoHost. At faculty level, there is also a library that provides medical books.

During the audit, the auditors also visit the wards, the laboratories, the skills labs, the simulation settings, and the lecture rooms in order to assess the quality of infrastructure and technical equipment. The financial resources of the university are sufficient for guaranteeing the sustenance of the medical programmes. The peers especially laud the good skills labs, the new building for the Faculty of Medicine, and the modern medical equipment in the University Hospital (pain centre, dentistry). In general, there are no bottlenecks at the Faculty of Medicine or the Faculty of Dentistry with respect to resources.

Criterion 6.2 Clinical training resources

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions

- Discussions during the audit

Preliminary assessment and analysis of the peers:
Students receive clinical training from the second semester of the Bachelor's degree programmes Medicine and Dentistry. Among the imparted competencies are anamnesis skills on different cases (such as dyspnoea, infection, pregnancy, etc.), basic physical examination (such as vital sign, spine, thorax, abdomen, ENT, etc.) and invasive procedures (such as injection, intra venous-line, urethral catheter, nasogastric tube, circumcision, etc.). In clinical skills courses, students are given lectures and demonstrations by experts, followed by practical sessions, where students are divided into small groups, each supervised by an instructor. Students take turns on taking the role as a doctor or as a patient. Each group is provided with a mannequin and medical equipment according to each topic. There are hospital visit sessions to observe clinical practice at the hospital with real patients.

In BSPD, there is a strong focus on students' practical skills, which are carried out in the departments Periodontics, Orthodontics, Prosthodontics, Paediatric Dentistry, Conservation Dentistry, Oral Surgery, Oral Medicine, Dental Radiology, Community Dental Health, and Health Prevention.

To support the learning and teaching processes in the Master's degree programme Biomedical Science and the PhD programme Medical Science, students also use primarily facilities within the Faculty of Medicine, such as discussion/lecture room, library and laboratory provided in each department. The programmes also collaborate with the University Hospital, RSUD Dr. Saiful Anwar and other affiliated hospitals and health centres in East Java, and laboratories and research centres.

While visiting the facilities, the peers see where the medical teaching is conducted. The number of mannequins and cadavers is sufficient for small group teaching (3 to 5 students per mannequin, 10 students per cadaver) so that the students can acquire the necessary practical skills.

In general, there are sufficient clinical training resources available for adequately teaching the students. In addition, cooperations with other medical schools e.g. in Japan for sending staff members abroad for using sophisticated instruments that are not available at UB are implemented.

Criterion 6.3 Information technology

Evidence:

- Self-Assessment Report

- Study plans
- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:
All students at UB have access to the Student Academic Information (SIAM), which is an online information system for managing academic and financial data. In SIAM, students can access various academic services such as class schedules and registration, exam schedules and results, and financial services.

Furthermore, UB also provides the teaching staff with an electronic platform called SIADO, where teachers can manage lecture attendance, view students' academic data, offer counselling hours, etc.. In addition to the platforms provided by UB, lecturers and students also use other digital platforms, e.g. Google Classroom and Google Meet.

Motivated by the restrictions during the COVID-pandemic, the learning and teaching processes at UB is supported by online learning facilities, e.g. by uploading lecture files on UB's virtual learning management platform. The lectures can also be delivered directly through Zoom or Google Meet.

Internet access at Universitas Brawijaya (UB) is available via cable and wireless networks (Wi-Fi). Internet access is used for educational staff computers and for public PCs used by teaching staff, supportive staff, students, and guests. Wi-Fi access is available for the entire academic community in all buildings and all floors in UB.

Criterion 6.4 Medical research and scholarship

Evidence:

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

Preliminary assessment and analysis of the peers:
Research and promoting students' independent scientific work is part of the learning process and is incorporated into the curriculum of all four programmes under review. Especially in the Master's degree programme Biomedical Science and the PhD programme Medical Science there is strong focus on research activities.

In the Bachelor's degree programmes Medicine and Dentistry, students' research start in the fifth semester, when they prepare their research proposal. Once approved, research begins in the sixth semester. The research methodology course is designed to help students in understanding and applying the basics of research design, methods, and analysis and drafting a research proposal according to their fields of interest. There is also a research guidebook and procedures for writing proposals and theses in each study programme. The results of the research conducted need to be published in a recognised journal.

Master's and PhD students prepare their research proposal from the beginning of the first semester. Most of the research conducted in MPBS is integrated within the learning processes. This integration can be in the form of delivering research results on one of the course's topics (e.g. presentations), application of research results in the medical system, and implementation in the research projects.

In DPMS, the research activities are very detailed and complex. They begin with the pre-proposal seminars, the dissertation qualification exam, the research proposals evaluation, and the implementation of research conducted at UB or at other institutions. Students' understanding of research principles and how to write research reports are assessed through research seminars and examinations.

Research by lecturer and students is sometimes performed in collaboration with other institutions within or beyond UB, domestic or overseas. For Master's and PhD students grants for research collaborations with international universities are available.

Lecturers conduct their research activities usually by involving students. Research funding is available from UB, the Indonesian government, and private, national, and international institutions such as the Research and Community Service Agency (BPPM) and the Institute for Research and Community Service (LPPM) for international funding. Lecturers also work in international research groups and some have cooperations with private companies or research institutions in health-related projects. The research results are presented in seminars, published in books, and national and international journals.

Criterion 6.5 Educational expertise

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The auditors confirm that students are generally satisfied with the teachers' expertise, delivery and support. This is verified through the course evaluations.

UB recognises that not only academic performance is important for becoming a successful medical practitioner but also soft skills and behaviour skills (communication skills, teamwork, etc.) need to be imparted. UB tries to cover these areas by addressing them in courses like "Bioethics and Medical Law", especially during the Community Service. In addition, the Faculty of Medicine and the Faculty of Dentistry encourage their students to pursue extracurricular activities and develop critical thinking. Moreover, both provide opportunities for supporting the teachers' academic and professional development, including the obligation of all teachers to participate in character training, pedagogical skills training (Pekerti and Applied Approach). The peers are satisfied with the existing opportunities and the teachers' educational expertise.

Criterion 6.6 Educational exchanges

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The Faculty of Medicine and the Faculty of Dentistry encourage their students to participate in international exchange programmes and to spend some time during their studies abroad. In addition, UB facilitates international student admission through the International Office. A problem faced by students is the possible loss of study time as a consequence of spending time at other institutions and a lack of financial resources. Classes in the Bachelor's programmes are usually taught in Bahasa, while courses in MPBS and DPMS are taught in English if an international student is attending the class. Moreover, the students' English proficiency is fostered by inviting international guest lecturers who give classes in English and by offering summer schools for Indonesian and international students.

In all programmes, there is the possibility to recognise a stay abroad as an elective course. Cooperations exist with the following universities: Shinsu University, Japan, School of Medicine and Allied Health Sciences, University of Gambia, Carol Davila University of Medicine and Pharmacy, Bucharest, Faculty of Tropical Medicine, Mahidol University, Thailand, Hue University of Medicine and Pharmacy, Vietnam, and the Institute of Advanced Technology, Universiti Putra, Malaysia. As the peers learn during the audit, the Faculty of Dentistry has already signed a memorandum of understanding with the Faculty of Dentistry at Kagoshima

University, Japan. Currently negotiations about establishing a students' exchange programme between both faculties are underway. The peers support these efforts and encourage the Faculty of Medicine and the Faculty of Dentistry to establish more international cooperations.

However, the peers point out that students' academic mobility is still very low. This observation is valid for outbound as well as inbound activities. For example, in BSPM, from 2017-2021 there were 15 international students (from Malaysia and East Timor) in the programme. In BSPD, there were none, while there were five students from Libya in MPBS and four international students in DPMS (from Libya, Palestine, and Gambia). On the other hand, several international students spend some time (internships, research stays) at UB. At the same time, some medical students from UB spend some time abroad. For example, as many as eight BSPM students in 2018 and nine BSPM students in 2019 studied overseas (e.g. in Malaysia, Philippines, Taiwan, Romania, Egypt, Slovenia, and Germany).

A good starting point for initiating more international cooperations are the personal international contacts of the faculty members and the guest lecturers. It is also possible for students and teachers to apply to international organisations like the German Academic Exchange Council (DAAD) for receiving funds for stays abroad.

The Faculty of Medicine and the Faculty of Dentistry encourage students to spend a few weeks abroad to experience another health care system. Such programmes usually take place during summer time when the university is in recess. Academic staff members can attend workshops and conferences abroad or can conduct their research activities at international universities.

In summary, the peers confirm that opportunities for international educational exchange for students exist. Nevertheless, the students' academic mobility is low and the peers recommend encouraging and better supporting students to spend some part of their medical education abroad.

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

The peers appreciate that the programmes have provided current numbers on inbound and outbound students. They encourage all programmes to increase their efforts to further internationalising UB and the programmes by promoting academic mobility and sending more students abroad as well as accepting more international students.

The peers consider criterion 5 to be mostly fulfilled.

7. Programme Evaluation

Criterion 7.1 Mechanisms for programme monitoring and evaluation

Evidence:

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

Preliminary assessment and analysis of the peers:
The auditors discuss the quality management system at UB 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 its improvement is assessed through internal (IQAS) and external quality assurance (EQAS).

There are three levels of quality assurance implementation. At the university level, it is conducted by the Quality Assurance Centre (Pusat Jaminan Mutu, PJM), at the faculty level, it is conducted by the Quality Assurance Group (Gugus Jaminan Mutu, GJM), and at the department level it is conducted by the Quality Assurance Unit (Unit Jaminan Mutu, UJM). At the end of every year, PJM conducts internal audits for all Bachelor's degree programme. During this process, the programme coordinators assess the quality of all learning and teaching procedures based on the KPIs set by PJM. From these evaluations, room for improvement is identified. The Heads of Department lead a meeting to evaluate the teaching and learning processes within the department once each semester. In the meeting, availability of supporting resources, i.e., laboratory equipment, teaching methods, and administration services are discussed. At faculty level, a coordination meeting is conducted every semester to evaluate teaching and learning processes and supporting resources.

External quality assessment of the degree programmes is provided every five years by the Indonesian Accreditation Agency for Higher Education in Health (IAAHEH/LAMPTKES). This national standard of higher education was designed to encourage educational institutions to improve their performance in providing quality education services. All four programmes under review have achieved the highest level “A” from IAAHEH.

In addition, BSPM and MPBS have been accredited by the ASEAN University Network Quality Assurance (AUN-QA).

Criterion 7.2 Teacher and student feedback

Evidence:

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

Preliminary assessment and analysis of the peers:
Internal evaluation of the quality of the degree programmes is mainly provided through student surveys. The students give their feedback on the courses by filling out the questionnaire online on SIAM. Giving feedback on the classes is compulsory for the students; otherwise, they cannot access their account on UB's digital platform. The questionnaires are used to monitor and evaluate the learning processes and are distributed every semester to the lecturers before the final exam is done. A summary of the students' feedback is sent to the respective lecturers. Based on the results, the programme coordinator and the teachers re-assess every course and possibly some changes are made. If there are negative results, the Department Head invites the concerned teacher to discuss about his or her teaching methods and thus, they are expected to enhance their performance in the future.

Finally, students also have the opportunity to give direct feedback via the suggestion box. The community inside and outside of the university can give online feedback to the university, faculty, and department through UB-care, which can be openly accessed.

The auditors gain the impression that the students' feedback is taken seriously and changes are made if necessary.

During the audit, the peers learn that in the Faculty of Dentistry two students are members of the Quality Assurance Group. However, this is not the case in the Faculty of Medicine. For this reason, the peers are convinced that the Faculty of Medicine should have the same requirement and follow the good example of the Faculty of Dentistry. It is important to involve the students directly in the decision-making processes with the goal of further improving the respective degree programme.

Criterion 7.3 Performance of students and graduates

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions

- Discussions during the audit

Preliminary assessment and analysis of the peers:
Students' performance in all four degree programmes under review is evaluated by the Head of Study Programme through analysing the grade point average (GPA), average length of studies, and research progression. The Bachelor's degree programmes Medicine and Dentistry carry out the evaluation every semester. The Master's degree programme Biomedical Science and the PhD programme Medical Science evaluate the students' performance in a more flexible schedule. Graduate's performance is monitored by the Head of Study Programme and the Quality Assurance Unit through tracer studies, which include the waiting period between graduation and employment, the kind of employment, salaries, and workplace location.

The peers observe that the Bachelor's degree programme Medicine and Dentistry are very competitive and the entrance requirements are very strict. Within the last five years, the acceptance quota in BSPM was 4.0 % (29002 applications and 1158 enrolled new students) and only 2.7 % in BSPD (22275 applications and 591 enrolled new students). For this reason, the students are very motivated to complete the degree programme in time and only a few (1 to 2 %) resign and do not complete the programme successfully. This indicates that BSPM as well as BSPD have a very high appeal for Indonesian students.

Almost all Bachelor's graduates continue their academic education with joining professional programmes to become medical doctors or dentists. Their competence is assessed by Indonesia Medical Council through National Board Examination to acquire the certificate of competence. Approximately more than 90 % of students from both programme pass the National Board Examination.

As can be seen from the following table, the average GPA of the graduates in BSPM from 2017 to 2019 was around 3.3 and more than 90 % graduated in time. As stated in the Self-Assessment Report, most students who did not graduate on time were international students. They needed additional guidance, mostly with respect to language training, when they conducted their final project.

	GPA	Study Period	On-Time Graduation Rate (%)
2017/2018	3.24	7.55	95.85
2018/2019	3.36	7.47	93.01
2019/2020	3.26	7.57	87.45

Table 13: KPI BSPM, source: SAR U Brawijaya

The results for BSPD are similar. Here the average GPA of the graduates from 2017 to 2020 was around 3.3 and more than 80 % graduated in time.

	GPA	Study Period (semester)	On-Time Graduation Rate (%)
2017/2018	3.29	8.15	42.78
2018/2019	3.33	7.52	80.85
2019/2020	3.32	7.71	82.41
2020/2021	3.4	7.1	84.15

Table 14: KPI BSPD, source: SAR U Brawijaya

In MPBS only 44.4 % graduated in time 2018/19 and the average length of studies was 5.2 semesters. As explained in the Self-Assessment Report, this was mostly caused by the students who take the fast-track programme. The fast-track programme allows the students to take a two years break in order to complete the co-assistant period as a requirement to obtain the medical doctor certificate. The Faculty of medicine has tried several measures to improve these numbers. For example, coordination with the hospital to arrange the break for co-assistant period was improved as well as continuous monitoring and evaluation of the students learning processes was intensified. On the other hand, the graduates' average GPA with around 3.75 is very high. The exact numbers are depicted in the following table:

	GPA	Study Period (semester)	On-Time Graduation Rate (%)
2017/2018	3.66	4	62.7
2018/2019	3.74	5.2	44.4
2019/2020	3.83	4.5	56.8
2020/2021	3.81	3.2	42.5

Table 15: KPI MPBS, source: SAR U Brawijaya

DPMS graduates achieve are very high GPA. Within the last four years, the average GPA was 3.8. On the other hand, the average length of studies is very high with more than 11 semesters and on average less than 10 % graduate in time. The programme coordinators are not satisfied with these numbers and have rearranged the curriculum in 2016/17. The number of required scientific papers (6) reduced into pre-proposal seminars (4 papers) and the timeline of pre-proposal seminars was accelerated. In addition, a more intensive monitoring and evaluation system of students' progress was introduced. A slight improvement in the average length of studies and the on-time graduation in the last four years rate can be seen in the following table:

	GPA	Study Period (semester)	On-Time Graduation Rate (%)
2017/2018	3.89	11.50	0
2018/2019	3.83	12.11	3.33
2019/2020	3.86	12.15	3.03
2020/2021	3.92	11.01	13.04

Table 16: KPI DPMS, source: SAR U Brawijaya

As can be seen in table 16, the average length of studies in the PhD programme significantly exceeds the expected 6 semesters. According to the provided data, PhD students needed on average between 11 and 12 semesters to finish the degree programme. In 2020/21 the average length of studies has already decreased from 12 to 11 semester. However, this is still much longer than the expected length of 6 semesters and the programme coordinators can only speculate on the reasons. They mention, for example, that most of the PhD students work besides their studies or conduct their residency. This causes a high workload and often results in a prolongation of the studies. The peers point out that UB needs to identify systematically the reasons why PhD students take so much longer than expected to finish their degree e.g. by conducting a graduation survey and interviewing students that are behind their roadmap. As a second step, UB should analyse the results and finally establish suitable measures with the goal of further reducing the average length of studies.

The quality of graduates is not only measured by the final grades but also by the satisfaction of the employers (from hospitals, research institutions, universities, or private companies). Tracer studies on stakeholders show a high satisfaction rate. Criteria are ethics, general competence, foreign language skills, use of information technology (IT), communication, teamwork, and self-development.

In general, the employers confirm during the discussion with the peers, that they are very satisfied with the qualification profile of the graduates. Moreover, they point out that the demand in Indonesia for medical doctors is very high and still growing. More hospitals are going to be built, especially in more remote areas, thus, more medical doctors are needed.

Criterion 7.4 Involvement of stakeholders

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions

- Discussions during the audit

Preliminary assessment and analysis of the peers:
Monitoring and evaluation activities in the four degree programmes under review involve lecturers, students, alumni, and employers. Feedback is given by filling out questionnaires, both online and offline. The external stakeholders of the four degree programmes are regularly consulted via tracer studies. In the course of these studies, alumni and the employers gave some valuable input regarding the curriculum, the facilities and the technical equipment of the research laboratories. External stakeholder satisfaction with the quality of graduates is generally high to very high, and external stakeholders' suggestions for improvement of the study programme are implemented in the programme. For example, based on the tracer study the curriculum of the Master's programmes was changed to give students more time for research activities and publications.
UB regularly conducts an alumni tracer study. By taking part at this survey, alumni can comment on their educational experiences at UB, the waiting period for employment after graduation, their professional career, and they can give suggestions how to improve the programme. Moreover, the employers are asked to give feedback to UB on employability and acquired competencies of UB's graduates. During the audit, the employers express their general satisfaction with the graduates' qualification profile.

The peers discuss during the audit if there are regular meetings with the partners on faculty or department level, where they discuss the needs and requirements of the employers and possible changes to the degree programmes. They learn that some employers and alumni are invited to give their feedback on the content of the degree programmes and participate in the tracer studies. The peers appreciate that UB stays in contact with its alumni and has a close relation with its partners from the medical area. However, an advisory board with external stakeholders only exists on university level. 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 employer in the quality assurance process. Nevertheless, they recommend establishing an academic advisory board at the Faculty of Medicine and the Faculty of Dentistry. The advisory board should consist of a group of professionals, employers, and experts of the relevant fields from outside the university (e.g. hospitals, health care centres, and medical institutions).

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 7:

The peers appreciate that in the Dentistry programme student and stakeholder representatives are being appointed as members of the Quality Assurance Group and the Dental Education Unit. They recommend that the other programmes follow this good example and make student representatives members of the boards at the Faculty of Medicine in order to directly involve them in the decision making processes for further developing the degree programmes.

The peers consider criterion 7 to be mostly fulfilled.

8. Governance and Administration

Criterion 8.1 Governance

Evidence:

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

Preliminary assessment and analysis of the peers:

As described in the Self-Assessment Report the governance of UB refers to the national standards in Indonesia as regulated by the Minister of Research, Technology, and Higher Education. The organisational structure of UB is shown in the following diagram:

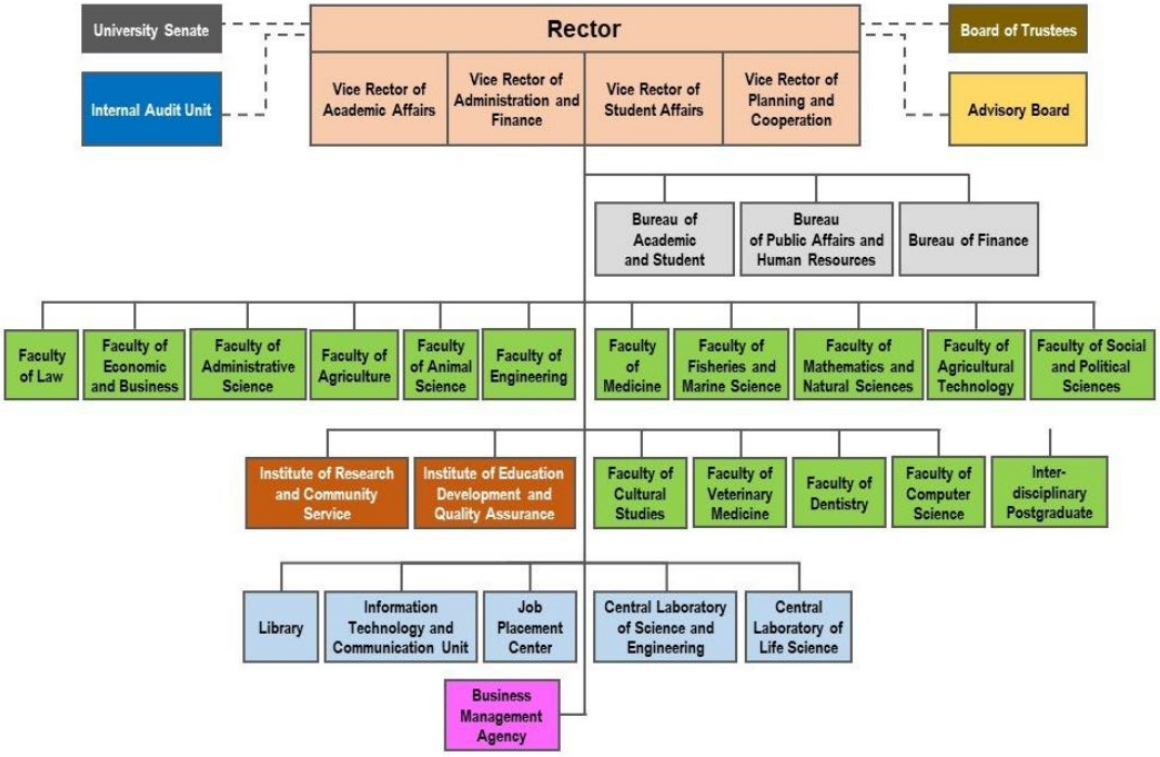

Diagram 1: UB Organisational Structure, source: SAR U Brawijaya

The highest decision making board at UB is the University Senate, which is headed by the Rector. At faculty level, the Dean is assisted by the Vice Deans and each degree programme is led by the Head of Study Programme.

The Head of Study Programme coordinates the implementation of the respective degree programme activities, while being assisted by the Quality Assurance Unit in monitoring and evaluating the outcomes. Lecturers' briefing is done through coordination meetings at the beginning of the semester and evaluation meetings at the end of the semester. Communication with students is done through a meeting between the Head of Study Programme and the students' representatives at the beginning of the semester.

The peers confirm that UB, the Faculty of Medicine and the Faculty of Dentistry have a well-defined structure of governance, which includes representatives from all stakeholders.

Criterion 8.2 Academic leadership

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions

- Discussions during the audit

Preliminary assessment and analysis of the peers:
The academic leaders at UB are the Deans, they chair the faculty's meetings and refer academic matters to the University Senate, of which they are members.

At programme level, the Head of Study Programme has the function of leading the implementation of educational processes, research activities, community service, and fostering the cooperation with the community and the administrative staff.

In addition, the Head of Study Programme regularly monitors and evaluates students' performance and the result of academic and non-academic staff evaluations, and uses this feedback for improving the respective degree programme.

Criterion 8.3 Educational budget and resource allocation

Evidence:

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

Preliminary assessment and analysis of the peers:
BSPM, MPBS, and DPMS are fully supported by UB and the Faculty of Medicine, while BSPD is funded by UB and the Faculty of Dentistry. Most of UBs funding is covered by the central and regional governments (mostly in form of lecturers and education staff salaries, research funds and scholarship assignments) and tuition fees. Income from non-governmental sources is low and could be increased.

As the peers learn during the discussion with UB's management, around 15 % of UB's total budget comes from the Indonesian government (Ministry of Education) the rest is mostly derived from tuition fees (75 %) and some from UB's business units (5 %), donations and grants (5 %).

The peers confirm that UB provides sufficient financial resources for adequately running all four degree programmes under review. FMUB and FDUB annually allocate the budget to facilitate laboratory improvement.

The budgeting process begins with designing an annual financial plan at faculty level by involving the Head of Study Programmes, the Head of Laboratories, and the administrative staff. The Dean will review the budget plan before submitting it to the Finance Unit of UB.

All revenues are centralized at the University and then distributed to the faculties according to their financial needs. Each Department and each Faculty presents an annual budget plan so that the UB's finance unit can design a budget for the whole University.

Criterion 8.4 Administrative staff and management

Evidence:

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

Preliminary assessment and analysis of the peers:
Non-academic staff consist of administration staff, librarians, and technicians (laboratory assistants, technicians, and IT-experts). The Faculty of Medicine and the Faculty of Dentistry usually directly recruit administrative and supporting staff members.

UB supports the non-academic staff members in increasing their qualifications and competencies. For this reason, different training is offered: training in archive management, workshops on rules and contracts, teamwork training and self-development, office administration technical training, and computer courses.

For the further enhancement of skills, UB regularly organises specialised skills training such as procurement of goods and services, laboratory training, and computer training. All staff members are involved in internal monitoring and evaluation of the degree programmes.

Criterion 8.5 Interaction with health sector

Evidence:

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

Preliminary assessment and analysis of the peers:
The peers observe that the Faculty of Medicine and the Faculty of Dentistry have a strong working relationship with the health sector in Indonesia. The cooperation exists mainly in

the fields of education, research, community service, and medical technology. Collaboration with East Java Health Office enables students to study at affiliated hospitals including Dr. Iskak Hospital in Tulungagung, RSUD Kabupaten Kediri, RSUD Bangil, Leprosy Hospital in Kediri, and Ngudi Waluyo hospital in Wlingi, Blitar and public health centres. This offers additional opportunities to improve the learning process, especially in terms of hands-on experience with patients.

The major interaction with the national and regional health sector is the collaboration between the Faculty of Medicine and Faculty of Dentistry with Dr. Saiful Anwar Hospital and Universitas Brawijaya Hospital, which are the main teaching hospitals. The collaboration between faculties and the teaching hospitals includes teaching, research, and community service. The qualified medical staff in the teaching hospitals are working as professional experts in the Faculty of Medicine and Faculty of Dentistry and are registered with the Ministry of Education and Culture. On the other hand, the members of academic staff at UB are included officially as professional staff members in the main teaching hospitals.

Other interactions with the national and regional health sector include collaboration with the health authorities in Malang and Batu City and health institutions, medical laboratories, scientific laboratories, health professional associations, and health industries all over Indonesia

In summary, the peers conclude that the Faculty of Medicine and the Faculty of Dentistry have an excellent reputation as one of the best medical institution in Indonesia. The cooperation with alumni is good and the employers are very satisfied with the qualification profile of the graduates.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 8:

UB does not comment on this criterion in its statement.

The peers consider criterion 8 to be fulfilled.

9. Continuous Renewal

Evidence:

- Self-Assessment Report
- Study plans

- Module descriptions
- Discussions during the audit

Preliminary assessment and analysis of the peers:
As described in the previous chapters, continuous renewal of the four degree programmes under review is an essential part of quality assurance system at UB.

For example, there is a continuous process at UB in order to improve the quality of the degree programmes, which is carried out through internal and external evaluation. Internal evaluation of the quality of the degree programmes is mostly provided through students' feedback and quality audits. In addition, alumni and employers' surveys are conducted. The peers appreciate that the Faculty of Medicine and the Faculty of Dentistry stay in close contact with their alumni and use their expertise and feedback for further developing the degree programmes.

Moreover, UB collects data about applications, enrolment and academic results. These indicators are used to analyse the programme's success and if deficits are found, they are addressed.

As an overall judgement, the peers generally find that continuous monitoring and renewal is indeed taking place and that most of the quality assurance loops are closed. Furthermore, the peer group confirms that the quality management system is suitable to identify weaknesses and to improve the degree programmes. The stakeholders are involved in the process.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 9:

UB does not comment on this criterion in its statement.

The peers consider criterion 9 to be fulfilled.

D Additional ASIIN Criteria

Criterion D 1.2 Name of the degree programme

Evidence:

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

Preliminary assessment and analysis of the peers:

The peers consider the original Indonesian names as well as the English translations of the Bachelor of Medicine (Sarjana Kedokteran), Bachelor of Dentistry (Sarjana Kedokteran Gigi), Master of Biomedical Science (Magister Sains Biomedik), and the PhD programme (Doktor) to be in line with the intended learning outcomes and the curricular content.

Criterion D 2.2 Work load and credits

Evidence:

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

Preliminary assessment and analysis of the peers:

Based on the National Standards for Higher Education of Indonesia (SNPT), all degree 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.

The peers stress that the students' total workload in hours per semester also needs to be indicated in the module descriptions and the distinction between classroom work and self-study should be made transparent.

During the discussions with the programme coordinators and the students, the peers learn that so far there has been no survey asking the students to evaluate the amount of time they spend outside the classroom for preparing the classes and studying for the exams. Since this is necessary in the ECTS framework, the peers suggest asking the students directly about their experiences. This could be done by including a respective question in the course evaluations. The peers point out that the Faculty of Medicine and the Faculty of Dentistry should follow the ECTS users' guide, while determining the students' total workload. This is the time students typically need to complete all learning activities (such as lectures, seminars, projects, practical work, self-study and examinations).

Since workload is an estimation of the average time spent by students to achieve the expected learning outcomes, the actual time spent by an individual student may differ from this estimate. Individual students differ because some progress more quickly, while others progress more slowly. Therefore, the workload estimation should be based on the time an "average student" spends on self-study and preparation for classes and exams. The initial estimation of workload should be regularly refined through monitoring and student feedback.

With respect to the Master's and the PhD programmes, the peers point out that the number of awarded ECTS points for the total programme need to be verified. A four semester long programme (MPBS) should award around 4 x 30 = 120 ECTS points and not only 57. The same issue concerns the PhD programme, here 75/84 ECTS are awarded for six semesters. Otherwise, the graduates will have a disadvantage, especially if they apply for an international job, because the currently awarded number of credits is much too low in comparison to similar study programmes and does not reflect correctly the actual workload.

The students confirm with the peers that the workload is high but manageable.

In summary, the peers expect the Faculty of Medicine and the Faculty of Dentistry to verify the students' total workload and to adjust the awarded ECTS credits accordingly.

Criterion D 3 Exams: System, concept and organisation

Evidence:

- Self-Assessment Report
- Study plans
- Module descriptions
- Exemplary Bachelor's, Master's theses and PhD dissertations
- Discussions during the audit

Preliminary assessment and analysis of the peers:
As described in the previous chapters, all four degree programmes under review comprise a thesis. During the audit, the peers also inspect a sample of final theses (Bachelor's, Master's, and PhD) and are overall satisfied with their general quality.

Criterion D 5.1 Module descriptions

Evidence:

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

Preliminary assessment and analysis of the peers:
While analysing the provided module descriptions, the peers note that the students' total workload (contact hours and time for self studies) and the awarded ECTS credits are not mentioned in the module descriptions of BSPM, MPBS, and DPMS. The module descriptions of the dentistry programme are fine and should be an example for the three medical programmes. In addition, the peers point out that the awarded ECTS credits and the students' workload need to be consistent and verified (see criterion D 2.2). Furthermore, the study plans of BSPM, MPBS, and DPMS should include the ECTS points for all courses.

Otherwise, the module descriptions include all necessary information about the respective module.

Criterion D 5.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report
- Exemplary Diploma Supplements for each degree programme

Preliminary assessment and analysis of the peers:

As the peers have pointed out before, it is necessary to award the ECTS points for each course in accordance with the students' total workload. Although, all graduates receive a Diploma Supplement upon graduation together with a transcript of records and a diploma certificate, the provided exemplary Diploma Supplements do not mention the awarded ECTS points. This should be corrected.

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

Since the peers can only access the updated module descriptions for the BSPM-FMUB and PhD programmes, they are not able to confirm that the information about the students' total workload and the awarded ECTS points is now included in the module handbooks of the Dentistry and the Master's programmes.

The module descriptions of the BSPM-FMUB and the PhD programmes are fine and include all necessary information.

With respect to the Diploma Supplement, the peers confirm that information about the awarded ECTS points is now included.

The peers consider the additional ASIIN criteria to be mostly fulfilled.

E Additional Documents

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

- none

F Comment of the Higher Education Institution (05.12.2022)

UB submits the following statement:

Ba Dentistry (Criterion 1.2):

BSPD-FDUB PEO and ILO's was formulated and developed through a workshop involving not only the FDUB's civitas-academica (such as Lecturers and Students) but also the external stakeholders such as Alumni, representatives from Public Hospital that collaborated with FDUB, the Indonesian Association of Dental Education Institutions (Asosiasi Fakultas Kedokteran Gigi Indonesia/AFDOKGI), the Indonesian Collegium of Dentist (Kolegium Dokter Gigi Indonesia/KDGI), the Indonesian Medical Council (Konsil Kedokteran Indonesia/KKI), the Indonesian Dentist Association (PDGI) and Malang City Public Health Office as well as the Ministry of Education and Culture of Indonesia (Kementrian Pendidikan dan Kebudayaan RI), and the Ministry of Research, Technology, and Higher Education of Indonesia (Kementerian Riset, Teknologi dan Pendidikan Tinggi Republik Indonesia/Kemenristekdikti RI).

Ba Dentistry (Criterion 2.1):

The Dentistry programme in the Faculty of Dentistry Universitas Brawijaya (FDUB), comprises two educational stages: the Bachelor's stage and the Professional stage. After completing the Bachelor's stage, the graduates will continue their study in the Professional stage and must complete 32 credits (102 ECTS) in 4 semesters to graduate and become a Doctor of Dental Surgery (DDS/drg).

The Dentist Professional stage educational approach is implementing the integrated patient-centered learning in which students can experience real-patient cases to help them improve their knowledge and procedural skills for providing comprehensive oral healthcare.

We would like to address this matter and clarify that in BSPD-FDUB, the educational approach being implemented is Student-centered Learning with Problem-based Learning methods, which not only being conducted on the basic courses (in Block 1 Semester 1 to Block 4 Semester 2) but also for the clinical and advances courses (Block 5 Semester 3 to Block 14 Semester 7). In the Block 5 Semester 3, student will also conduct Problem-Solving Tutorial at the end of each modules, in which they will be presented with more complex

clinical case scenarios to help the student improve their critical thinking and clinical problem solving skills, as well as developing a comprehensive understanding on the topics being taught in the modules.

All programmes (Criterion 2.1):

As in BSPD-FDUB, other than having international guest lecturers and conducting international summer courses, we have also provided Elective Course Herbal Medicine and Elective Course Special Care Dentistry delivered in English by our lecturer, even though there are no international students in the course.

In Ma Biomedical Science, most of the courses (80%) are provided in English. In all of Journal reading (100%) sessions, students have to present their selected journal for discussion in English. For classes that have international students, all learning materials and resources are presented in English.

In the case of journal reading activities and student's assignment presentations, students and lecturers have to use English even though there are no foreign students in the class.

The PhD program has allocated a budget for supporting students' mobility (students outbound).

To encourage the international collaboration climate, the PhD program supports students to get the examiner of their doctoral thesis from abroad, especially from international collaborators.

Ba Dentistry (Criterion 2.1):
The implementation of the Fast Track program provided a lot of benefit for BSPD-FDUB students who are interested in deepening their knowledge and pursuing their interest in research, particularly in the topics related to Biomedicine. However, considering the advice given by the Peers during the ASIIN procedure filed visit, BSPD-FDUB will soon have a meeting with the Vice Rector of Academic Affairs to discuss matters regarding the curriculum restructuration of the Fast Track program.

Master Biomedical Science (Criterion 2.1):
The curriculum for the master program in Ma biomedical sciences refers to the Outcome-based education (OBE) curriculum which continues to experience the dynamics of the advancement of science and technology and market interests. So that we continue to strive for continuous evaluation and improvement. Based on the results of the evaluation of the curriculum team, the fast-tract program curriculum, in consultation with the Medical and Health Education Unit (MHEU) we decided to stop (except for those already running). Based on the Rector's regulation No. 88 of 2022 about the Regulation of Master and Doctor

Program by Research. Concerning this new regulation we are currently preparing a Master program by research.
Based on the results of the stakeholder survey, it was found that 50% of respondents agreed and 50% strongly agreed to open a program of research by providing various inputs for curriculum development.

Ba Dentistry (Criterion 2.4):
As an additional information, BPSD-FDUB has also had a Professional Behaviour Courses delivered in Block 1 and 2 Semester 1 with the goals to teach students how to have a positive attitude and behave professionally as a dentist (ILO presented in the Module Descriptions).

Ba Medicine (Criterion 2.6):
Following this suggestion, BSPM-FMUB has amended the Curriculum Book (The new nomenclature for academic handbook for study program) and supplemented with the information in helping the student to calculate or convert the SCU of the course to ECTS.

Ba Dentistry (Criterion 2.6):
BSPD-FDUB Academic Handbook for the Academic Year 2022/2023 has already been supplemented with the information in helping the student to calculate or convert the SCU of the course to ECTS.

Master Biomedical Science (Criterion 2.6):
The Ma Biomedical Science calculation and conversion of workload from SCU to ECTS can be seen in the module description.

PhD Programme (Criterion 2.6):
The PhD program Module Handbook for the Academic Year 2021/2022 has already provided the information about the calculation of their credits in ECTS points and a short summary of the goals of the respective program (Program Education Outcome and Intended Learning Outcome) in the introduction section.

Ba Dentistry (Criterion 2.7):
As in BSPD-FDUB, curriculum evaluation is conducted “at the end of every semester” by the curriculum committee together with the program director, the block coordinators, the skill’s lab coordinators and the team teaching who are responsible with the learning process in respective blocks. The procedures of curriculum evaluation followed the SOP of monitoring evaluation curriculum, discussing the feedback from students, lecturers, administration staff which was collected from the questioner distributed during and after the learning process in the block/skill’s lab. Based on that data, the curriculum committee then

provides suggestions whether the block modules or the course topics or the learning issues/outcome nor the assessment methods need to be revised or added in some way by the team teaching. So technically, we have implemented micro curriculum evaluation twice a year, which are at the end of the odd and even semester. Major changes, such as changes in the ILO of the blocks or the credits number, are usually implemented in a five year cycle.

Ba Dentistry (Criterion 3):

BSPD-FDUB has provided the information about assessment methods and the weighting of the scores in the Academic Handbook and also announced to the student by the Course/Block Coordinator at the beginning of each course/block in the respective semester (each semester consists of two blocks).

BSPD-FDUB's form of assessment is informed in the Academic Handbook and Module Descriptions. Even Though each block modules or courses taught by a team of lecturers, the final grade given is as follow: a PBL Small Group Discussion and Report (10%), Log Book (15%) and Final Block Examination (75%). Meanwhile, the Skills Lab Course forms of assessment include a Pre-Test/Quiz (10%), Process Assignments (20%) and Final Skills Lab Examination (70%).

During Small Group Discussions, the performance of each student is evaluated individually by a facilitator/teacher, who then will provide personalized feedback to ensure they understand their strengths and areas of improvement. Moreover, the peer assessment also performed to encourage students to give feedback on the performance of their peers. It can help them to become more engaged in learning and develop their interpersonal skills.

PhD programme (Criterion 4):

In order to explain that in the year 2018/2019 the number of new students are more than the regular quota, we have separated non regular students with regular students in the 5 years Admission Table:

Academic year	Quota	Regular Applicants	Non-Regular Applicants	Regular Enrolled	Non-Regular Enrolled	Ratio*
2016/2017	25	29	-	21	-	1:1.4
2017/2018	25	23	-	18	-	1:1.3
2018/2019	25	37	20	27	20	1:1.2
2019/2020	25	26	-	22	-	1:1.2
2020/2021	25	38	-	28	-	1:1.4
Total		143	20	116	20	1:1.2

All programme (Criterion 4):

We appreciate this encouraging remark. The student counselling and support has received special attention in all study programs. Using the students' feedback, we continuously strive to improve the student services to aid the students in achieving the PEOs and ILOs.

We acknowledge the peers' comments. As stakeholders, students are always involved in the construction, evaluation, and quality assurance of the curriculum, vision, and programmes in the Faculty of Medicine.

Ba Dentistry (Criterion 4):

The Faculty of Dentistry provides support, funding (5-10% of total faculty budgets) and facilities for non-academic students' activities. All students are required to take part in all student organization program since in the first year to prepare them to be active in local (Executive Student Body, Legislation Student Body, Denref, Formikagi, Emergency Medicine., etc.), national (PSMKGI) and international (APDSA, IADS) student organization. Students have also engaged to other activities in talent scouting and interest-based program which are also provided in faculty and university level to improve their skills and prepare for any competition.

Ba Dentistry (Criterion 5):

We appreciate the suggestions made by the peers. As a commitment for this, starting this year (2022), some lecturers of BSPD-FDUB have been conducting research in the University of Putra (UPM) Malaysia as a part of the partnership agreement between FDUB and UPM. And to Hong Kong University (WCU Grants)

Ma Biomedical Science (Criterion 5):

We have recently updated our activities, especially during November-December 2022 where some of our students and lecturers had joined short courses in Miyazaki University, Japan through Sakura exchange program.

Some of the lecturers have also engaged with an overseas collaboration with the Mahidol University-Thailand.

We also increase the international collaboration, for example with Cebu Normal University, Philippines (November 4th 2022).

All programmes (Criterion 6):

The following responses are applicable for all programs because the international collaboration is overseen by the International Relation Office (IRO).

The IRO has made an updated list of the cooperation partners until 2022. The list of partners is increasing every year including universities in the Top-world ranking, industrial partners, and research enterprises. The reason for the decreasing number of academic mobility was COVID19 pandemic. Several countries were closed or limiting access for mobility students.

Recently, the FMUB signed a collaboration with KMUTT especially in education and research that allow many opportunities for students (especially for PhD program) to join some collaborative activities such as an internship program and student outbound.
As previously conveyed, currently, several students from Ba Medicine, Master Biomedical, and PhD Program are joining The Sakura Program at Japan.

Ba Dentistry (Criterion 6):

There is MOA Faculty of Dentistry Universitas Brawijaya with Faculty of Dentistry Kagoshima University.

Inbound Students:

In 2021 there are 6 international students exchange from UPM Malaysia to Faculty of Dentistry, Universitas Brawijaya. In 2021 there are 3 international students exchange from Vietnam to Faculty of Dentistry, Universitas Brawijaya. In 2022 there are 5 international students exchange from Vietnam to Faculty of Dentistry, Universitas Brawijaya.

Outbound students:

In 2021 there are 2 students from the Faculty of Dentistry, Universitas Brawijaya to Biruni Turkiye. In 2021 there are 10 students exchange between the Faculty of Dentistry, Universitas Brawijaya with Kagoshima university. In 2022 there are 20 students exchange between the Faculty of Dentistry, Universitas Brawijaya with Kagoshima University.

Ma Biomedical Science (Criterion 6):

Outbound students

Ma Biomedical Science in 2022 have three students exchange with Miyazaki University

Inbound students:
In 2022, Ma Biomedical Science has two foreign students from Sudan and Tunisia.

From July - August 2022 we will conducted Summer School in Neuroscience in collaboration with Indonesia Neuroscience Institute and International Brain Organization (IBRO).

Ba Dentistry (Criterion 7):

In BSPD FDUB, there are student and stakeholder representatives being appointed as members of the Quality Assurance Group and also the Dental Education Unit.

We understand the important role of student representatives in the quality assurance and medical and health education unit. Their involvement needs to be formally regulated in the Faculty Organizational Structure and Governance as Dean decree. Previous regulations do not accommodate this formal involvement, but in line with the new UB legal statute, we

have proposed the student involvement in the “draft” of the Dean decree which is now under review of the Faculty Law and Regulation Unit. In this draft, the involvement of student representatives is clearly stated as a formal member of the Quality Assurance Unit at the Department level, Study program monitoring and evaluation, and Faculty Medical and Health Education Unit.

Ma Biomedical Science (Criterion 7):

We conducted a survey for the student, lecturer, alumni and stakeholder to evaluate the performance of the Fast-track program. In conclusion, through an extensive discussion with all parties involved we decided to discontinue the fast-track program.

Furthermore we offer a by Research Program, based on the Regulation of The Rector of Universitas Brawijaya NO.88 Of 2022.

Ba Medicine (Additional ASIIN Criteria):

The BSPM-FMUB program has provided the detail of the amount of notional hours which based the calculation of awarded ECTS points in the module handbook and in the list of courses. We chose to divide the notional hours to 30 hours in order to get the comparable ECTS student workload credit with our SCU calculation.
We also provided the list of elective topics in the description course in Module handbook.

We found the peers’ suggestion on evaluation of study workload spent on self-study and preparation for classes and exams are essential. Therefore, we will integrate the question about the student perception on study workload in our Monitoring & Evaluation cycle, which will be performed at the end of semester cycle (the end of December 2022). The result will become information to the course coordinators to evaluate their course’s performance. We will happily share the result of this M&E cycle. This means we could not provide it along this response due to optimizing the benefit of the suggestion.

As Diploma supplement is part of a legal document, it is necessary to proceed the legal matter for any amendment. BSPM has created an amendment to the Diploma Supplement to involve the calculation of ECTS.

Ba Dentistry (Additional ASIIN Criteria):

BSPD-FDUB provides the information about the student’s total workload in hours per semester and distinguish the classroom work and self-study in the Module Descriptions.

There has been survey asking the students to evaluate the amount of time they spend outside the classroom for preparing the classes and studying for the exams.

BSPD-FDUB Diploma Supplement’s has mentioned the awarded ECTS points.

Ma Biomedical Science (Additional ASIIN Criteria):

MPBS has described the student's total workload in hours per semester included preparation, lecture sessions, self-study activities and assignments in Module Handbook.

MPBS served diploma supplement for every student with the ECTS conversion.

PhD Medical Science (Additional ASIIN Criteria):

The PhD Program has added the students' total workload in hours per semester and the distinction between classroom work and self-study in the introductory section of Module Descriptions.

The PhD Programme Diploma Supplement's has mentioned the awarded ECTS points.

G Summary: Peer recommendations (19.12.2022)

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

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Medicine	With requirements for one year	-	30.09.2028
Ba Dentistry	With requirements for one year	-	30.09.2028
Ma Biomedical Science	With requirements for one year	-	30.09.2028
PhD Medical Science	With requirements for one year	-	30.09.2028

Requirements

For all degree programmes

A 1. (ASIIN 2.2) Verify the students' total workload for each course and make sure that the awarded ECTS points comply with the students' total workload.

For Ba Dentistry and Ma Biomedical Science

A 2. (ASIIN 5.1) The module descriptions need to include information about the students' total workload and the awarded ECTS points.

For PhD Medical Science

A 3. (WFME 7.3) Systematically ask the graduates for the reasons why they exceed the expected time for finishing the degree programme. The results should be analysed and subsequently suitable measures should be implemented with the goal of reducing the average length of studies.

Recommendations

For all degree programmes

E 1. (WFME 2.1) It is recommended that the study plans include a list of electives.

E 2. (WFME 6.6) It is recommended to further promote the academic mobility of the students and to increase the number of available places and scholarships.

E 3. (WFME 7.4) It is recommended to establish an advisory board with external stakeholders at the Faculty of Medicine and the Faculty of Dentistry.

For Ma Biomedical Science and PhD Medical Science

E 4. (WFME 2.1) It is recommended that the study plans include the number of ECTS points awarded for each course.

For Ba Medicine, Ma Biomedical Science and PhD Medical Science

E 5. (WFME 7.4) It is recommended to make student representatives members of the boards at the Faculty of Medicine and to directly involve them in the decision making processes for further developing the degree programmes.

For PhD Medical Science

E 6. (WFME 2.1) It is recommended to design and publish specific study plans for each specialisation.

H Comment of the Technical Committee 14 - Medicine (13.06.2022)

Assessment and analysis for the award of the ASIIN seal:

The TC evaluates as particularly positive that modern medical equipment of the university hospital (pain center, dentistry) and that the graduates have very good career prospects. On the other hand, there is need for improvement in the area of academic mobility, conversion to ECTS credits, module descriptions, and feedback on teaching evaluations. Overall, the TC agrees with the requirements and recommendations as proposed by the expert group.

The Technical Committee 14 – Medicine recommends the award of the seals as follows:

Degree Programme	**ASIIN seal**	**Subject-specific labels**	**Maximum duration of accreditation**
Ba Medicine	With requirements for one year	-	30.09.2028
Ba Dentistry	With requirements for one year	-	30.09.2028
Ma Biomedical Science	With requirements for one year	-	30.09.2028
PhD Medical Science	With requirements for one year	-	30.09.2028

I Decision of the Accreditation Commission (23.06.2022)

Assessment and analysis for the award of the ASIIN seal:

The AC discusses the procedure and decides to follow the suggestions of the experts and the TC 14 – Medicine. The proposed requirements and recommendations are accepted without any changes.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Medicine	With requirements for one year	-	30.09.2028
Ba Dentistry	With requirements for one year	-	30.09.2028
Ma Biomedical Science	With requirements for one year	-	30.09.2028
PhD Medical Science	With requirements for one year	-	30.09.2028

Requirements

For all degree programmes

A 1. (ASIIN 2.2) Verify the students' total workload for each course and make sure that the awarded ECTS points comply with the students' total workload.

For Ba Dentistry and Ma Biomedical Science

A 2. (ASIIN 5.1) The module descriptions need to include information about the students' total workload and the awarded ECTS points.

For PhD Medical Science

A 3. (WFME 7.3) Systematically ask the graduates for the reasons why they exceed the expected time for finishing the degree programme. The results should be analysed and subsequently suitable measures should be implemented with the goal of reducing the average length of studies.

Recommendations

For all degree programmes

E 1. (WFME 2.1) It is recommended that the study plans include a list of electives.

E 2. (WFME 6.6) It is recommended to further promote the academic mobility of the students and to increase the number of available places and scholarships.

E 3. (WFME 7.4) It is recommended to establish an advisory board with external stakeholders at the Faculty of Medicine and the Faculty of Dentistry.

For Ma Biomedical Science and PhD Medical Science

E 4. (WFME 2.1) It is recommended that the study plans include the number of ECTS points awarded for each course.

For Ba Medicine, Ma Biomedical Science and PhD Medical Science

E 5. (WFME 7.4) It is recommended to make student representatives members of the boards at the Faculty of Medicine and to directly involve them in the decision making processes for further developing the degree programmes.

For PhD Medical Science

E 6. (WFME 2.1) It is recommended to design and publish specific study plans for each specialisation.

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 Medicine:

Programme Learning Outcomes (PLO):

PEO 1. Noble & Divine Professionalism

Students will be able to perform professional medical practice in accordance with the values and principles of divinity, nobility, morals, ethics, law, and socio- culture.

PEO 2. Self-awareness and self-development

Students will demonstrate awareness of their limitation also constantly develop and upgrade their knowledge and skills for the sake of patient safety.

PEO 3. Effective communication

Students will demonstrate ability to explore and exchange information verbally and nonverbally with patients, communities, colleagues, and other professions.

PEO 4. Information management

Students will be able to utilize communication and information technology for medical practice and expanding medical knowledge.

PEO 5. Scientific base of medical knowledges

Students will demonstrate ability to solve health problems based on the latest scientific medical and health sciences to get optimal results for the patients.

PEO 6. Clinical skills

Students will demonstrate ability to perform clinical procedures including preventive, diagnostic, and therapeutic procedures related to health problems with patient, self, and others safety as priority.

PEO 7. Health problem management

Students will be able to manage individual and community health problems in a comprehensive, holistic, and sustainable manner in the context of primary health care.

PEO 8. Medical emergency and disaster management

Students will demonstrate ability to identify emergency problems as well as take appropriate medical action to hinder emergency consequences including morbidity and mortality.

PEO 9. Biomedical Research ability

Students will be able to produce creative scientific research/paper in biomedical and biomolecular fields based on decent medical theoretical and technical knowledge.

PEO 10. Leadership and Social Entrepreneurship

Students will be able to demonstrate collaborative leadership skill as well as to become initiator of innovation in scientific activities, organization, and various aspects of health.

Intended Learning Outcomes (ILO):

ILO 1: Becoming individual with solid religious belief, high morality, good ethical and professional behaviors, as well as embedding social and cultural knowledge

ILO 2: Practicing self-awareness and life-long learning

ILO3: Performing effective communication towards patients and the patient's family

ILO 4: Performing effective communication towards colleagues and communities

ILO 5: Having the ability to access and appraise information and knowledge

ILO 6: Having the ability to effectively disseminate information and knowledge to the health care professionals, patients, communities and related parties to improve the quality of health care services.

ILO 7: Having ability to implement the latest biomedical science, humanities, clinical medicine, and public health or preventive/community medicine in order to holistically manage health problems.

ILO 8: Having the ability to perform diagnostic procedures.

ILO 9: Having the ability to perform comprehensive health problem management procedures.

ILO 10: Having the ability to carry out health promotion and prevention levels for individuals, families and communities.

ILO 11: Having the ability to carry out individuals, families and communities' health problems management.

ILO 12: Having ability to describe various essential analytical methods or techniques currently used in biomedical/biomolecular research.

ILO 13: Having ability to implement knowledge and basic principles of leadership & social entrepreneurship.

ILO 14: Having ability to implement principles of emergency management in primary health care services and principles of resources management during disaster periods independently or as a team.

ILO 15: Producing at least one creative scientific work (written or a design) in biomedical/biomolecular field during the study period.

The following **curriculum** is presented:

No	NAME OF COURSES	CONTENTS/CORE MATERIALS	CODE	CREDITS
Semester 1 Basic Medical Sciences				
1	Basic Medical Science 1	Cell Biology, Biochemistry, Molecular Biology	DAA61001	3
2	Basic Medical Science 2-A	Structure and Function 1	DAA61002	2
3	Basic Medical Science 2-B	Structure and Function 2	DAA61003	2
4	Basic Medical Science 3	*Life cycle 1*, nutrition, aging, embryology	DAA61004	2
5	Religion: - Islam - Protestant - Hindu - Buddhism	Application of Religion in the Doctor's Profession	MPK4001 MPK4002 MPK4003 MPK4004 MPK4005	2
6	Doctoring 1	*Being A Good Doctor*	DAA61005	1
7	English	English and the World of Medicine	DAA61006	2
8	Bioethics and Medical Law	Law, Ethics, and the Doctor's Profession	DAA61007	2
9	Communication	*History taking*	DAA61008	2
10	Metodology 1	The basics of scientific thingking	DAA61009	2
	Total			20
Semester 2 Basic Medical Sciences				
1	Basic Medical Science 4 A	Microbiology	DAA62010	3
2	Basic Medical Science 4-B	Parasitology	DAA62011	2
3	Basic Medical Science 4-C	Basic Immunology	DAA62012	2
4	Basic Medical Science 5	General Pathology, inflammation, repair process, neoplasia	DAA62013	2
5	Basic Medical Science 6	Pharmacodynamics, pharmacokinetics, ANS, Toxicology, Herbal medicine	DAA62014	3
		development		
6	Basic Clinical examination	Basic Clinical Skills	DAA62015	2
7	Clinical test & Procedure	Basic surgery, basic oncology, basic radiology, radiotherapy, radiodiagnostics, clinical pathology	DAA62016	2
8	Civic Education	Civic Education	MPK4006	2
9	Indonesian Language	Indonesian Language	MPK4007	2
10	Pancasila	Pancasila	MPK4008	2
	Total			22

Semester 3 Life Structure				
1	Sistem Muskuloskeletal 1	Sistem Muskuloskeletal 1	DAA61017	3
2	Sistem Muskuloskeletal 2	Sistem Muskuloskeletal 2 + *skill*	DAA61018	3+1
3	Sistem Integumen 1	Sistem Integumen 1+*skil*l	DAA61019	3
4	Sistem Integumen 2	Sistem Integumen 2	DAA61020	2
5	IKM – KP 1	Ilmu Kesehatan Masyarakat dan Kedokteran Pencegahan 1	DAA61021	2
6	IKM – KP 2	Ilmu Kesehatan Masyarakat dan Kedokteran Pencegahan 2	DAA61022	2
7	Patient Safety 1	Keselamatan pasien 1	DAA61023	1
8	Doctoring 2	Sesuai tema	DAA61024	1
9	Entrepreneurship	Kewirausahaan	DAA61025	2
	Jumlah			20
Semester 4 Life protection				
1	Hematology System 1	Hematology and limphoreticular 1	DAA62026	2
2	Hematology System 2	Hematology and limphoreticular 2 + *skill*	DAA62027	2,5
3	Endocrine System	Endocrine -metabolic + skill	DAA62028	2,5
4	Tropical Disease and Infections	Tropical Disease and Infections	DAA62029	2
5	PHC & Disaster Medicine	Pre Hospital Care & Disaster Medicine	DAA62030	2
6	Methodology 2	Biostatistics, critical review, Evidence-Based Medicine	DAA62031	2
7	Life cycle -2	Perinatology, Child Development Disorders, geriatrics and gerontology	DAA62032	2
8	Patient safety 2	Patient safety 2	DAA62033	1
9	Elektive 1	Based on interest	DAA62034	2
10	Doctoring - 3	Based on theme	DAA62035	1
	Jumlah			19
Semester 5 : Life Control				
1	Psychiatry	Psychiatry + skill	DAA61036	3
2	Eye Sense System	Eye + skill	DAA61037	3,5
3	ENT Sense System	ENT + skill	DAA61038	3,5
4	Nervous System 1	Nervous System 1	DAA61039	3
5	Nervous System 2	Nervous System 2 + skill	DAA61040	3
6	Methodology 3	Thesis Proposal Preperation	DAA61041	2
7	Doctoring -4	Based on theme	DAA61042	1
8	Elektive – 2	Based on interest	DAA61043	2
	Total			21

Semester 6 Life support				
1	Cardiology 1	Cardiology 1	DAA62044	2,5
2	Cardiology 2	Cardiology 2 + skill	DAA62045	3
3	Respiratory 1	Respiratory 1	DAA62046	2,5
4	Respiratory 2	Respiratory 2 + skill	DAA62047	3
5	Anestesi	Anesthesia +Cardiopulmonary Resuscitation	DAA62048	2
6	IKM KP 3	Public Health Sciences and Preventive Medicine	DAA62049	2
7	Patient Safety -3	Patient Safety -3	DAA2050	1
8	Final Project		DAA62051	6
9	Doctoring 5	Based on theme	DAA62052	1
	Total			23
Semester 7 Life Care & maintenance				
1	Gastroenterology 1	Gastroenterohepatology 1	DAA61053	3
2	Gastroenterology 2	Gastroenterohepatology 2 + skill	DAA61054	3,5
3	Urogenital	Urogenital + skill	DAA61055	3,5
4	Reproduction 1	Reproduction 1	DAA61056	2
5	Reproduction 2	Reproduction 2 + skill	DAA61057	2
6	Approach to Paediatrics	Clinical Approach to Paediatrics	DAA61058	2
7	Forensic	Forensic Medicine	DAA61059	3
8	Doctoring 6	Based on theme	DAA61060	1
9	PKNM	Student Field Work Program	DAA61061	3
	Total			23
	Total of credits in 7 semesters		148 credits	

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

PEO Number	Program Education Outcomes (PEOs)
PEO 1	Able to treat patients holistically, as an individual, part of the family and community members, and provides quality comprehensive care within the scope of a doctor-patient relationship that is based on trust and mutual benefit
PEO 2	Able to make the right decisions and choose the right technology to use in improving health services that are feasible and affordable for the community
PEO 3	Able to motivate a healthy lifestyle by providing effective and appropriate education in a socio-cultural and economic context, so that the health of individuals and groups will be improved and maintained
PEO 4	Able to know the health needs of individuals and groups, gaining recognition and trust from the local community to participate in improving public health.
PEO 5	Able to work effectively and harmoniously with others both inside and outside the organization/health care system to identify the needs of patients and the community
PEO 6	Able to act as a scientist and lifelong learner in accordance with advances in science and technology, in the field of dental nanotechnology, through research that is used to educate the public
PEO 7	Able to cultivate creativity, innovation, and entrepreneurial spirit to make changes and solutions as an effort to improve people's health status

ILOs Number	Intended Learning Outcomes (ILOs)
ILO 1	Able to comprehensively apply basic medical science, basic dental science, clinical medicine, and clinical dental science in making appropriate decisions to solve dental and oral health problems
ILO 2	Able to comprehensively apply basic medical science, basic dental science, clinical medicine, and clinical dental science in making appropriate decisions to solve dental and oral health problems.
ILO 3	Able to demonstrate clinical skills, including history taking, clinical examination, interpretation skills, procedural skills, information communication skills, and education in the prevention, treatment, and rehabilitation of dental and oral diseases.
ILO 4	Able to analyze individuals' dental and oral health problems to establish a diagnosis and establish a comprehensive treatment plan.
ILO 5	Able to analyze community dental and oral health problems to prepare community assessments and organize public health programs
ILO 6	Able to implement management functions and develop strategies for implementing practical management and management in the dental work environment considering social aspects.
ILO 7	Able to apply medical ethics and law as well as human rights relevant to the practice of dentistry.
ILO 8	Able to apply scientific methods and evidence-based dentistry and innovate in the context of the development or implementation of dental science and present the results orally and in writing.

The following curriculum is presented:

YEAR	SEM	BLOCK	BLOCK THEMES	LEARNING CONTENT	SCU	Ects
I	I	1	General Course and Professional Behavior I	MPK60001 Islamic Religious Education MPK60003 Christian Religious Education MPK60002 Catholic Religious Education MPK60004 Hindu Religious Education MPK60005 Buddhist Education DDG4102 Philosophy of Science MPK60008 Pancasila MPK60006 Citizenship MPK60007 Indonesian KGS61001 English KGS61002 Professional Behaviour I	2 2 2 2 2 2 2 2	3 3 3 3 3
				TOTAL	**14**	
			Skills lab - KGS61003 Professional Behaviour I (Outbound)		**1**	1,5
		2	KGS61004 **Basic Medical Science**	Oral Biology 1 Public Dental Health and Prevention 1	4 1	6 1,5
				TOTAL	**5**	
			KGS61005 **Professional Behaviour 2**		**1**	**1,5**
			Skills lab - KGS61006 Basic Physiology (*Vital Sign*)		**1**	1,5
	SEMESTER I STUDY LOAD = 22 SCU					
	II	3	KGS62001 **Basic Dentistry I**	Oral Biology 2 and Forensic Medicine Basic Radiology and Dental Radiology 1 Dental Materials 1	4 1 2	6 1,5 3
				TOTAL	**7**	
			Skills lab - KGS6202 Dentistry Material Science 1 - KGS62003 Oral Biology 2 (Tooth Determination) - KGS62004 Dental Radiology 1		**1** **1** **1**	1,5 1,5 1,5
		4	KGS62005 **Basic Dentistry II**	Oral Biology 3 Public Dental Health and Prevention 2	5 1	7,5 ,5
				TOTAL	**6**	
			KGS62006 **LEADING NANOMEDICINE I** **BLOCK 3: Introduction to nanomedicine & nanodentistry, stem cells** **BLOCK 4: Nano drug delivery & nano material**		**1**	1,5
	SEMESTER II STUDY LOAD = 17 SCU					

	III	5	KGS63001 **Pulp and Periapical Disease I**	Oral Biology 4 Dental Conservation 1 Public Dentistry and Prevention 3 and Pediatric Dentistry 1	1 5 1	1,5 7,5 1,5
II				Dental Radiology 2	1	1,5
				TOTAL	**8**	
			Skills lab - KGS63002 Dental Conservation Science 1 - KGS6303 Dentistry Radiology 2		**1** **1**	**1,5** **1,5**
		6	KGS63004 **Pulp and Periapical Disease II**	Dental Conservation 2 Pediatric Dentistry 2 Dental Radiology 3	5 1 1	7,5 1,5 1,5
				TOTAL	**7**	
			Skills lab - KGS63005 Dental Conservation Science 2 - KGS63006 Dental Radiology 3		**1** **1**	**1,5** **1.5**
	SEMESTER III STUDY LOAD = 19 SCU					
	IV	7	KGS64001 **Periodontal Disease**	Periodontics1 Oral Medicine 1 Dental Radiology 4	5 1 1	7,5 1,5 1,5
				TOTAL	**7**	
			Skills lab - KGS64002 Periodontics 1 - KGS64003 Dental Radiology 4 - KGS64004 Dentist-Patient Communication 2		**1** **1** **1**	1,5 1,5 1,5
		8	KGS64005 **Orocraniofacial Development**	Pediatric Dentistry 3 Orthodontics 1 Periodontics2 Dental Radiology 5	5 2 1 1	7,5 3 1,5 1,5
				TOTAL	**9**	
			Skills lab - KGS64006 Dental Radiology 5 - KGS64007 Orthodontics 1 - KGS64008 Pediatric Dentistry 3		**1** **1** **1**	1,5 1,5 **1,5**
	KGS64009 LEADING NANOMEDICINE II BLOCK 7: Nanotechnology in hard tissue BLOCK 8: Nanotechnology in soft tissue				**1**	1,5
	SEMESTER IV STUDY LOAD = 23 SCU					

III	V	9	KGS65001 Management of dento-craniofacial disorders	Orthodontics 2	5	7,5
				Pediatric Dentistry 4	1	1,5
				TOTAL	**6**	
			KGS65002 Research Methodology I (Theory and Thesis Proposal)		2	3
			KGS65003 Biostatistics		1	1,5
			Skills lab			
			- KGS65004 Orthodontics 2		1	1,5
			- KGS65005 Pediatric Dentistry 4		1	1,5
		10	KGS65006 Oral Mucous Disease and Medical Compromise	Oral Medicine 2	4	6
				Oromaxillofacial Surgery 1	3	4,5
				Oral Biology 5	1	1,5
				Periodontics 3	1	1,5
				TOTAL	**9**	
			Skills lab			
			- KGS65007 Pharmacy		1	1,5
			- KGS65008 Oral Medicine 2		1	1,5
	SEMESTER V STUDY LOAD = 22 SCU					
	VI	11	KGS66001 Oromaxillofacial Surgery and Rehabilitation	Oromaxillofacial Surgery 2	4	6
				Prosthodontics 1	3	4,5
				TOTAL	**7**	
			Skills lab			
			- KGS66002 Prosthodontics 1		1	1,5
			- KGS66002 Oromaxillofacial Surgery 2		1	1,5
		12	KGS66004 Oromaxillofacial Surgery and Rehabilitation	Prosthodontics 2	6	9
				Oromaxillofacial Surgery 3	1	1,5
				Oral Medicine 3 and Neurology	1	1,5
				TOTAL	**8**	
			Skills lab			
			- KGS66005 Prosthodontics 2		2	3
	SEMESTER VI STUDY LOAD = 19 SCU					
IV	VII	13	KGS67001 Dental Emergency	Oromaxillofacial Surgery 4	2	3
				Medical Emergency	1	1,5
				Public Dental Health and Prevention 4	1	1,5
				TOTAL	**4**	
			KGS67002 Elective 1		1	1,5
			KGS67003 Research Methodology 2 (Thesis)		4	6
			KGS67004 Forensic Odontology		1	1,5
			Skills lab			
			- KGS67005 Medical Emergency		1	1,5
			- KGS67006 Oromaxillofacial Surgery 4		1	1,5
		14	KGS67007 Elective 2		1	1,5
			KGS67008 Dental Practice Management and Ergonomics		1	1,5
			KGS67009 Entrepreneurship		3	4,5
			KGS67010 Community Service Program (PKNM berbasis IPE)		2	3
			Skills lab			
			- KGS67011 Clinic Simulation		2	3
			KGS67012 LEADING NANOMEDICINE III BLOCK 13: Smart material & nanodiagnostic BLOCK 14: Nanosurgery		1	1,5
	SEMESTER VII STUDY LOAD = 22 SCU					

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

PEO Number	Program Education Outcomes (PEOs)
PEO 1	Produce graduates who believe and fear God, independent, professional morals, and character. Integrated biomedical science in education, research, and community service
PEO 2	Produce graduates who are able to demonstrate expertise in biomedical sciences and adhere to the ethic, professional code of practice
PEO 3	Produce graduates who are able to carry out lifelong learning, innovation, competitiveness at both national and international levels
PEO 4	Produce graduates who are able to contribute to improving the health and quality of life of the community
PEO 5	Produce graduates with in-depth knowledge of biomedical science and the ability to apply that knowledge to solve health-related issues.

Intended learning Outcomes (ILO)

The graduates of MPBS FMUB are expected to (be):	
Knowledge Literacy	
ILO 1	Demonstrate a comprehensive understanding of the concepts of basic biomedical science in selected areas of emphasis, including anatomy-histology, molecular physiology, pharmacology, toxicology, immunology, microbiology, parasitology
ILO 2	Demonstrate a comprehensive understanding of the key principles and recent developments in the specific disciplines of biomedical science focused on herbal medicine, growth, and development, metabolic and degenerative diseases, autoimmune diseases, and infections.
Specific Skills	
ILO 3	Apply critical and creative thinking to solve problems in the field of biomedical science through inter- and multidisciplinary approaches.
ILO 4	Able to independently perform innovative and valid research in the field of biomedical science aimed at improving public health, which is eligible to be published in an accredited national journal or an indexed international journal and intellectual property right as well
ILO 5	Able to perform analytical methods and techniques used in biomedical research.
Generic Skills	
ILO 6	Perform effective communication both orally and in writing.
ILO 7	Demonstrate independence and good organizational skills.
ILO 8	Demonstrate leadership and good collaborative work.
ILO 9	Apply the principles of academic entrepreneurship
Attitude	
ILO 10	Demonstrate ethical standards for all intellectual and professional activities in the field of biomedical science and healthcare.

The following **curriculum** is presented:

STUDY PLAN

MASTER PROGRAM IN BIOMEDICAL SCIENCES –
FACULTY OF MEDICINE, UNIVERSITAS BRAWIJAYA

Year	Semester	Code	Course	Unit	Status
I	Semester I	DAC80001	Cell Molecular Biology	2	
		DAC80002	Medical Biochemistry	2	
		DAC80003	Molecular Genetics	2	
		DAC80004	Basic Immunology	2	
		DAC80005	Instrumentation & Biomolecular Technique Analysis	3	
		DAC80006	Research Methodology, Biostatistics and Scientific Writing	3	
	Semester II	DAC80011	Bioscience and Biotechnology	2	
		DAC80012	Bioinformatics in Biomedical Sciences	2	
			Elective	10	
II	Semester III	DGB80001	Thesis (Research, Publication)	12	
	Semester IV		Continued Thesis		

STATUS :

CM = Completed
CR = Credit Awarded
EN = Currently Enrolled
ENROL = Add to Enrollments

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

PEO Number	Program Education Outcomes (PLOs)
PEO 1	The graduates are expected to have intellectual integrity and professional attitude;
PEO 2	The graduates are expected to have the ability to create and develop novelty in medical science and contribute technology transfer to society
PEO 3	The graduates are expected to have the managerial skills to perform innovative and valid research through inter- trans and multidisciplinary approaches
PEO 4	The graduates are expected to have the ability to gain international recognition by communicating and publishing their research findings to the academic society

Intended Learning Outcomes (ILO)

No	Bloom's Taxonomy Domain	Intended Learning Outcomes
ILO1	Cognitive	Able to **analyze** health problems to develop arguments and solutions in the field of Biomedical Science, Reproductive Biology, Medical Technology, and Social Medicine on the basis of critical thinking or facts/ concepts/ principles/ theories scientifically and ethically justified.
ILO2	Cognitive	Able to **evaluate and select** research in Biomedical Science, Reproductive Biology, Medical Technology, and Social Medicine that is effective, current, advanced, and provides benefits to mankind.
ILO3	Cognitive	Able to **construct and develop** research related to path-mechanism and treatment of diseases that can result in bio-markers, diagnoses, and patented products as well as biosensor medical devices that keep up with the latest technology (for Biomedical Science, Reproductive Biology, Medical Technology Concentration) and research in the field of Social Medicine which is useful for health policies (for Social Medicine Concentration).
ILO4	Cognitive and Psychomotor	Able to **plan, develop and conduct** appropriate, current, and advanced research independently in Biomedical Science, Reproductive Biology, Medical Technology, and Social Medicine that benefits humankind through an interdisciplinary, multidisciplinary, or trans-disciplinary approach,
ILO5	Psychomotor	Able to **organize** research in Biomedical Science, Reproductive Biology, Medical Technology, and Social Medicine by using data and technology literacy, including recording, auditing, saving, and retrieving data and information pertaining to research findings.
ILO6	Cognitive	Able to **design and develop** a research road map in Biomedical Science, Reproductive Biology, Medical Technology, and Social Medicine using an interdisciplinary, multidisciplinary, or trans-disciplinary approach.
ILO7	Psychomotor, Affective	Able to **demonstrate** and **produce** dissertation research published in reputed international journals and or indexed international proceedings
ILO8	Cognitive (Creating)	Able to **formulate** a new scientific theory/concept/idea, particularly in Biomedical Science, Reproductive Biology, Medical Technology, and Social Medicine, with deep respect toward and promotion of human values in their respective disciplines
ILO9	Affective	Able to **demonstrate** academic leadership in managing, developing, and training human resources and organization.
ILO10	Affective	Able to **develop and organize** a collegial and mutual relationship within their environment or through collaborative networks with research communities outside the institution

The following **curriculum** is presented:

No	Semester	Courses	Credits
A. Matriculation Courses			
1	0	Medical Anatomy and Physiology	2
2	0	Pathobiology of Human Disease	2
3	0	Biochemistry and Biomolecule	2
		B. Basic Courses	
		General Compulsory Course	
1	I	Research Method and Scientific Writing	3
2	I	Bioinformatics	1
		Specific Compulsory Course	
1	I	Bioscience	2
2	I	Social Determinant and Anthropology of Health	2
3	I	Basic Medical Technology	2

4	I	Biology, Physiology and Reproductive Genetic	2
	C. Pre-Proposal Writing Seminar and Qualification Examination		
1	I	Pre-Proposal Writing Seminar I	2
2	I	Pre-Proposal Writing Seminar II	2
3	II	Pre-Proposal Writing Seminar III	2
4	II	Pre-Proposal Writing Seminar IV	2
5	II	Qualification Examination	2
	D. Elective Courses (at minimum 3 courses @ 2 credits)		
1	III-IV	Infectious Diseases	2
2	III-IV	Degenerative Disease of Bone and System Nerve	2
3	III-IV	Metabolic Degenerative Diseases	2
4	III-IV	Malignancy	2

5	III-IV	Autoimmune, Hypersensitivity, and Inflammation	2
6	III-IV	Herbs for Health	2
7	III-IV	Stem Cells for Health	2
8	III-IV	Medical Device Development	2
9	III-IV	Instrumentation	2
10	III-IV	Reproduction Health	2
11	III-IV	Advanced BioStatistic	2
12	III-IV	Qualitative Research Methods	2
13	III-IV	Advanced Epidemiology	2
14	III-IV	Health Management	2
15	III-IV	Health Behavior	2
16	III-IV	Health Economy	2

17	III-IV	Gender and Health	2
18	III-IV	Environmental Health	2
19	III-IV	Community Nutrition	2
		E. Final Project	
1	II	Research Proposal Examination	3
2	III-IV	Research Implementation	10
3	V	Research Result Seminar	2
4	V	Publication in Reputable International Journals	4
5	VI	Dissertation Examination Stage I (Dissertation Feasibility)	6
6	VI	Dissertation Examination Stage II (Final Dissertation)	3