



**ASIIN Seal**

# **Accreditation Report**

**Bachelor's Degree Programmes**  
***Animal Science and Industry***  
***Biology***

Provided by  
**Universitas Gadjah Mada, Yogyakarta**

Version: March 29<sup>th</sup> 2019

# Table of Content

<b>A About the Accreditation Process.....</b>	<b>3</b>
<b>B Characteristics of the Degree Programmes .....</b>	<b>5</b>
<b>C Peer Report for the ASIIN Seal .....</b>	<b>8</b>
1. The Degree Programme: Concept, content & implementation .....	8
2. The degree programme: structures, methods and implementation.....	15
3. Exams: System, concept and organisation.....	22
4. Resources .....	24
5. Transparency and documentation.....	28
6. Quality management: quality assessment and development .....	30
<b>D Additional Documents .....</b>	<b>32</b>
<b>E Comment of the Higher Education Institution (09.02.2018) .....</b>	<b>33</b>
<b>F Summary: Peer recommendations (27.02.2018) .....</b>	<b>34</b>
<b>G Comment of the Technical Committees (16.03.2018).....</b>	<b>36</b>
Technical Committee 08 - Agriculture, Nutritional Sciences and Landscape Architecture (12.03.2018).....	36
Technical Committee 10 – Life Sciences (16.03.2018).....	36
<b>H Decision of the Accreditation Commission (23.03.2018) .....</b>	<b>37</b>
<b>I Fulfilment of Requirements (29.03.2019).....</b>	<b>39</b>
Analysis of the peers and the Technical Committees (08.03.2019) .....	39
Decision of the Accreditation Commission (29.03.2019) .....	41
<b>Appendix: Programme Learning Outcomes and Curricula .....</b>	<b>42</b>

## A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for <sup>1</sup>	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC) <sup>2</sup>
Program Sarjana Biologi	Undergraduate Programme in Biology	ASIIN	-	10
Ilmu dan Industri Peternakan	Study programme Animal Science and Industry	ASIIN	-	08, 10
<b>Date of the contract:</b> 24.02.2017 <b>Submission of the final version of the self-assessment report:</b> 29.09.2017 <b>Date of the onsite visit:</b> 20.11. – 21.11.2017 <b>at:</b> Yogyakarta, Indonesia				
<b>Peer panel:</b> Prof. Dr. Matthias Gauly, University of Bozen Prof. Dr. Friedhelm Meinhardt, University of Muenster Prof. Dr. Hilmar Förstel, Agroisolab GmbH Atika Rahasta, Student, Universitas Brawijaya				
<b>Representative of the ASIIN headquarter:</b> Rainer Arnold				
<b>Responsible decision-making committee:</b> Accreditation Commission for Degree Programmes				
<b>Criteria used:</b>				

<sup>1</sup> ASIIN Seal for degree programmes;

<sup>2</sup> TC: Technical Committee for the following subject areas: TC 08 – Agronomy, Nutritional Sciences and Landscape Architecture; TC 10 – Life Sciences

<p>European Standards and Guidelines as of 15.05.2015</p> <p>ASIIN General Criteria as of 28.03.2014</p> <p>Subject-Specific Criteria of Technical Committee 08 – Agronomy, Nutritional Sciences and Landscape Architecture; as of 09.12.2011</p> <p>Subject-Specific Criteria of Technical Committee 10 – Life Sciences as of 09.12.2011</p>	
---	--

## B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF <sup>3</sup>	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Undergraduate Programme in Biology	Sarjana Sains (S.Si) / Bachelor of Science (B.Sc.) in Biology	-	6	Full time	no	8 Semester	144 credits (207,36 ECTS)	May – June 1995/96
Study Programme Animal Science and Industry	Sarjana Peternakan (S.Pt) / Bachelor of Animal Science	-	6	Full time	no	8 Semester	144 credits (220 ECTS)	August 2005

---

<sup>3</sup> EQF = The European Qualifications Framework for lifelong learning

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

„The Faculty of Biology of Gadjah Mada University (UGM), as an institution of higher education, aims to produce a qualified Biology Scholar, prepared with modern biological knowledge in accordance with its role, especially in key roles of biodiversity and biotechnology, such as biosystematics and evolution, developmental biology, cell and molecular biology, microbial biology, and environmental biology. Faculty of Biology UGM has alumni spread all over the country with various professions, both as a lecturer and researcher in various universities or research institution as well as expert staff in various government agencies and government owned or private industries.“

“The vision of the Undergraduate Program, Biology Study Program UGM is to become an excellent study program, as the center of education, research, development, and community service in the field of biology, especially in tropical biology, which is oriented to the interests of the nation and based on Pancasila.”

For the Bachelor's degree programme Animal Science and Industry UGM has presented the following profile in the Self-Assessment Report:

„The Faculty of Animal Science, Universitas Gadjah Mada (FAS-UGM) has a strong commitment to be a world class educational institution in Animal Science. It offers an educational program that aims to produce competent graduates who are highly skilled, possess creative thinking and critical analysis, strong personality, with high awareness of the life-long learning process and the need for continuous professional growth. The Faculty is committed to the development of a professional programme and improvement of the education system enabling graduates to possess knowledge and technical skills in Animal Science, and to develop mutual beneficial collaboration with other institutions and industries within and outside the country.

The vision of Study Programme of Animal Science and Industry (SP-ASI) is to be an excellent, independent and dignified programme in animal science and industry that is internationally recognized, and Pancasila-oriented (based on Indonesia Five Principles) focusing on prioritization of national interest and prosperity of Indonesia. The Missions of SP-ASI are:

1. To conduct an internationally qualified education in animal science and industry producing graduates with high moral integrity and knowledge involved in nation building and development of the country.
2. To conduct research utilizing local excellence and expertise in order to develop science and technology in animal science.

## **B Characteristics of the Degree Programmes**

---

3. To provide community services and to develop innovations needed by the community.
4. To develop organization in relation to educational activities, research and community development through transparent, accountable and qualified managements. “

## C Peer Report for the ASIIN Seal

### 1. The Degree Programme: Concept, content & implementation

<b>Criterion 1.1 Objectives and learning outcomes of a degree programme (intended qualifications profile)</b>
---

**Evidence:**

- Self-Assessment Report
- Study plans of the degree programmes
- Module descriptions
- Webpage Ba Biology: [http://biologi.ugm.ac.id/en/?page\\_id=4099&lang=en](http://biologi.ugm.ac.id/en/?page_id=4099&lang=en)
- Webpage Ba Animal Science and Industry: <http://fapet.ugm.ac.id/home/en/static-7-undergraduateprogram.html>

**Preliminary assessment and analysis of the peers:**

The peers refer to the Subject-Specific Criteria (SSC) of the Technical Committee Life Sciences as a basis for judging whether the intended learning outcomes of the Bachelor's degree programmes Biology, as defined by UGM, correspond with the competences as outlined by the SSC. In addition, they analyse if the intended learning outcomes of the Bachelor's degree programme Animal Science and Industry match with the SSC of the Technical Committee Agronomy, Nutritional Sciences and Landscape Architecture. The peers come to the following conclusions:

According to the Self-Assessment report, the graduates of the Bachelor's degree programme Biology should be capable to understand and to apply the scientific and technological methods of the biological sciences with an emphasis on tropical biology, and should be familiar with the rational use and management of biological resources, as well as with the preservation of the biodiversity. In addition, they acquire scientific and technological knowledge in the areas biodiversity, structure and function of living beings, biotechnology, molecular biology, ecological management and environmental impact and preservation, as well as knowledge and skills that enables them to contribute to scientific development. They learn to work in a team and should adopt a scientific attitude with a high ethical sense



and social awareness. The purpose is to educate biologists with a high commitment towards living things and the environment and with the ability to conduct research activities.

Due to their broad scientific background in the different areas of the biological sciences the graduates of the Bachelor's degree programme Biology are able to work in various areas of the public and private sector, such as education, agriculture, forestry, preservation and environmental management.

The purpose of the Bachelor's degree programme Animal Science and Industry is to enable the graduates to carry out research activities in all sectors of the livestock industry and to start their own livestock business. By acquiring the necessary chemical, nutritional, and biological knowledge, the graduates should be able to solve problems in the area of livestock nutrition, management, production and animal products. They also should be capable of making substantiated decisions that allow the continuous improvement of animal feed and the development of new products. In addition, they learn to solve subject-specific problems based on information analysis and data, and to give alternative solutions individually or as a member of a team.

Animal scientists can work in areas such as livestock and food industry, biotechnology and pharmaceuticals companies, fishery, food resources and agriculture.

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

For the award of the ASIIN subject-specific label distinctive learning outcomes have to be achieved by First Cycle Programmes. Programme outcomes, as defined by the SSC, have been divided into the categories "Specialist Competences" and "Social Competences". The SSC are the result of an assessment, regularly performed by ASIIN Technical Committees, which summarise what is considered as good practice by a professional community formed equally by academics and professional practitioners in higher education and is required as future-oriented quality of training in the labour market.

Based on the Self-Assessment Report and the discussions during the on-site-visit, the peers see that the graduates of both Bachelor's degree programmes under review acquire the necessary subject-related competences, such as a life science-related sound knowledge of mathematics and the natural sciences, in-depth knowledge and methodological competence in biological sciences and are able to apply this in other contexts. They also gain methodological competence in the classical core life sciences, are familiar with the hazards caused by handling chemicals, the manipulation of living and non-living material (pathogenic viruses, bacteria, and parasites), are adequately trained on the necessary safety measures and precautions, are able to carry out practical work in laboratories and outdoors

independently. Moreover, the graduates should be able to handle organisms, and have acquired relevant knowledge of safety and environmental issues as well as the associated legal fundamentals. Furthermore, they are able to solve subject-relevant problems, can present the results, have trained their analytical and logical abilities and have an awareness of possible social, ethical and environmental effects of their actions. During the course of their studies, the students have also acquired communicative skills, can work in a team and have developed a strategy for life-long learning. The intended learning objectives are accessible to all stakeholders via the university's webpage.

With respect to social competences, the graduates have trained their conceptual, analytical and logical thinking, have an awareness of possible social, ethical and environment-related effects of their actions and can communicate scientific information in a suitable manner. Finally, they also gain some competences in work methodology such as the knowledge and skill to work independently on scientific tasks and to present work results.

In summary, the auditors are convinced that the intended qualification profiles of both Bachelor's degree programmes allow the students to take up an occupation, which corresponds to their qualification. The degree programmes are designed in such a way that they meet the objectives set for them and the peers judge the objectives and learning outcomes of the degree programmes suitable to reflect the intended level of academic qualification. They respectively correspond with the ASIIN Subject-Specific-Criteria (SSC) of the Technical Committee 10 – Life Sciences and the SSC of the Technical Committee 08 - Agronomy, Nutritional Sciences and Landscape Architecture.

The peers appreciate that UGM aims for high standards as to give their graduates good chances in the national job market as well as a good starting point to transfer to other academic programmes to complete a Master and maybe even a PhD-programme.

<b>Criterion 1.2 Name of the degree programme</b>
---

**Evidence:**

- Self-Assessment Report

**Preliminary assessment and analysis of the peers:**

The peers discuss with the programme coordinators of the Bachelor's degree programme Animal Science and Industry about the reason for using the addition "and Industry". They learn that the students also acquire basic competences in business administration and management in order to be prepared for working in the food production industry after graduation. In order to make this goal obvious the addition "and Industry" was included in

the name of the degree programme. The peers are satisfied with this explanation and confirm that the English translation and the original Indonesian names of both Bachelor's degree programmes correspond with the intended aims and learning outcomes as well as the main course language.

### Criterion 1.3 Curriculum

#### Evidence:

- Self-Assessment Report
- Study plans of the degree programmes
- Module descriptions
- Webpage Ba Biology: [http://biologi.ugm.ac.id/en/?page\\_id=4099&lang=en](http://biologi.ugm.ac.id/en/?page_id=4099&lang=en)
- Webpage Ba Animal Science and Industry: <http://fapet.ugm.ac.id/home/en/static-7-undergraduateprogram.html>

#### Preliminary assessment and analysis of the peers:

Both Bachelor's degree programmes are designed for eight semesters; each semester consists of fourteen weeks of lectures and two weeks of exams.

The Bachelor's degree programme Biology encompasses a minimum of 144 and a maximum of 148 Indonesian credits. It consists of 126 credits for compulsory courses and 18 - 22 credits for elective courses. Elective courses can be chosen by the students in accordance with their areas of interest and after consultation with their academic advisor. The courses in the first two semesters convey basic knowledge of natural sciences, mathematics and languages (Indonesian and English). Courses on the different biological sciences are offered from the third to the sixth semester. During this phase, the students can choose between three different areas of interest:

1. Functional and Developmental Biology
2. Environmental Biology and Biodiversity
3. Molecular Biology and Biotechnology

The students can select their field of interest after completing at least 80 credits or after the fifth semester; they are also required to ask for the guidance of the academic advisor beforehand. During the seventh and eighth semester, students must complete the Community Service and the undergraduate thesis.

The courses of the Bachelor's degree programme Animal Science and Industry are divided into compulsory and elective courses; in total students have to complete 144 – 148 Indonesian credits consisting of 122 credits for compulsory courses and 22-26 credits for elective courses.

The students select the elective courses based on their interests and after consulting with the academic advisor. In the first and second semester, students take general courses such as religious studies, mathematics, chemistry, physics, biology, Bahasa Indonesia, and English. From the third semester onwards until the sixth semester, the courses taken are more subject-specific and are designed for achieving the intended learning outcomes of the Bachelor's degree programme Animal Science and Industry. During the seventh and eighth semester, students must complete the Community Service and the undergraduate thesis.

The members of the teaching staff explain on demand of the peers that they offer possible topics for the Bachelor's thesis according to their own research projects. All members of the teaching staff supervise theses. The topics are announced e.g. via internet and a white board at the respective laboratory. The students have to design a research proposal with a time schedule for the project, which is discussed with the academic advisor. If they agree, the students apply formally for being allowed to work on the suggested topic.

According to the Self-Assessment Report the search for a suitable topic for the Bachelor's thesis, the preparation of the research proposal, and the execution of the Bachelor's thesis are the main reasons for exceeding the regular studying time, especially in the Bachelor's degree programme Animal Science and Industry. During the discussion with the students, the peers learn that the organisation of the last three semesters is not optimal. In particular, the completion of the Community Service, the preparation of the research proposal and the Bachelor's thesis should be done successively and should follow a strict timetable. Otherwise, the students will not be able to complete these courses in time, which causes delays and bottlenecks. For this reason, the peers recommend re-organizing the curriculum of the last three semesters of both Bachelor's degree programmes. For example, the Community Service could already be completed before the start of the seventh semester. During the seventh semester, the students should look for a suitable topic of the Bachelor's thesis and prepare the research proposal. The eighth and last semester should then be dedicated for executing the Bachelor's thesis. Harmonising the curriculum with international standards would be very useful for attracting more international students. In addition, it is hard for a Bachelor student to write a proposal already in the sixth semester. Shifting it to the seventh semester may speed up the process and may reduce the average length of studies.

Moreover, the peers recommend offering additional modules to prepare for writing the thesis (e.g. scientific methods and writing). It would also be helpful to the students to provide a list of possible topics for the theses at the beginning of each semester and to mention what teacher will supervise what topic. Finally, it should be ensured that the thesis is started and finished in time, and that the topic can be covered in the allocated amount of time. This topic is also discussed under Criterion 2.2.

During the seventh or eighth semester, students must complete the Community Service. Since there was no module description for the Community Service available to the peers, they discuss with the programme coordinators about the content and goal of this course. The programme coordinators explain that Community Service is compulsory for all Indonesian students. It has a minimum length of six weeks and 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 the society and bring further development about. This course was introduced at all Indonesian Universities in 1971. The peers understand that the students should work for the benefit of the community and the Indonesian society during the Community Service and support this concept.

Since UGM has the goal to become internationally more visible and wants to further internationalise its degree programmes, the peers discuss with the programme coordinators if there are any classes taught in English. The programme coordinators explain that the course descriptions and the necessary documents are all available in English, but only a few classes are taught in English. This is for example the case if there is an international student attending the class. UGM’s partner from the industry point out that the practical English skills of the graduates could be improved. This is confirmed by the students who express their sincere wish to have more subject-specific elements taught in English. This could for example be achieved by offering a journal club, where the students read, discuss and present current international papers. In addition, the peers recommend doing poster presentations and oral presentations in English, which will also improve the communication skills of the students.

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

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

#### Criterion 1.4 Admission requirements

##### Evidence:

- Self-Assessment Report
- Decree of Minister of Research, Technology and Higher Education No. 2, 2015
- UGM webpage: <https://www.ugm.ac.id/en/pendaftaran>

##### Preliminary assessment and analysis of the peers:

According to the Self-Assessment Report, the admission procedures and policies for new and students follow the National Regulation No.2, 2015. The requirements, schedule, registration venue, and selection test are announced on UGM's webpage and thus accessible for all stakeholders.

There are three different ways by which students can be admitted to UGM. First of all, there is the national admission system, which is based on the academic performance at the high school. 40 % of the students at UGM are admitted through this selection system. Secondly, a national selection test is held every year for university candidates. It is a nationwide written test and it accounts for 30 % of the admitted students at UGM. Finally, 30 % of the students are selected based on a written test specifically held by UGM.

In the course of the last years, the number of applicants for both degree programmes has constantly increased and exceeds the number of available places by far. For example, in 2016/17, there were 4841 students applying for admission to the Bachelor's degree programme Biology and only 229 new students were accepted. This is equivalent to an admission rate of only 5 %. The numbers in the Bachelor's degree programme Animal Science and Industry are very similar. In 2016, 3209 students applied for admission of which 253 were admitted, this is equal to an admission rate of 8 %.

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

The peers inquire of the programme coordinators why there are so many students applying for studying at UGM. They learn that Biology and Animal Science and Industry are very popular degree programmes because the job perspectives are very good. In addition, there are a great many high school graduates in Indonesia and UGM is one of the most prestigious

universities in the country. Consequently, UGM is able to only accept the very best candidates. From their discussion with the students, the peers gain the impression that the admission system is very effective and only very motivated and high-performing candidates are admitted. The peers consider the highly selected and dedicated students to be one of the strong points of both Bachelor's degree programmes.

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

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

The peers see that UGM takes their recommendation to reorganize the last 3 semesters under consideration. Most of the students take Community Service between semesters and both Community Service and Bachelor's thesis can be either taken in the 6<sup>th</sup>, 7<sup>th</sup>, or 8<sup>th</sup> semester of the Biology programme. The peers still suggest following the international system by offering the Bachelor's thesis as the final course in the degree programme. It is laudable that UGM has managed to solve the bottlenecks with respect to the Bachelor's thesis and has reduced the average time needed for completing the thesis in the Biology programme from 7.2±2.4 months (2015) to 6.0±1.9 months (2017). In the Animal Science and Industry programme, UGM was able to reduce the average length of study to 4.6±0.5 years (based on the student batch of the years 2011, 2012 and 2013).

The peers consider criterion 1 to be mostly fulfilled.

## 2. The degree programme: structures, methods and implementation

### Criterion 2.1 Structure and modules

**Evidence:**

- Self-Assessment Report
- Study plans of the degree programmes
- Module descriptions
- Webpage Ba Biology: [http://biologi.ugm.ac.id/en/?page\\_id=4099&lang=en](http://biologi.ugm.ac.id/en/?page_id=4099&lang=en)

- Webpage Ba Animal Science and Industry: <http://fapet.ugm.ac.id/home/en/static-7-undergraduateprogram.html>

**Preliminary assessment and analysis of the peers:**

The structures of the Bachelor's degree programme Biology and the Bachelor's degree programme Animal Science and Industry are very similar.

During the course of the eight semester, long degree programmes the students must take compulsory courses and elective courses. The compulsory courses include the Community Service and the Bachelor's thesis. The choice of different electives gives the students the opportunity to set individual priorities according to their interests. In the course of the discussion with the programme coordinators the peers learn that approximately 30% of the graduates of the Bachelor's degree programme Biology continue their academic education and attend a Master's programme, whereas the rate in Bachelor's degree programme Animal Science and Industry is much lower only 10 to 12 %,

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

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

*International Mobility*

According to the opinion of the peer group, a critical aspect of the Bachelor's degree programmes under review is the limited academic mobility of the students especially in the Bachelor's degree programme Biology.

According to the Self-Assessment Report, the Faculty of Biology has several agreements with international universities. The international cooperations include a staff and student mobility programme with two universities in Japan (Ehime University, Nagoya University), a joint research project with the University of Warwick (Great Britain), joint supervision of theses with the Nara Institute of Science and Technology in Japan, and the implementation of a joint seminar with the University Tun Hussein Onn in Malaysia. In addition, there are visiting lecturers from the University Leiden and the College of Idaho at the Faculty of Biology. Although, some international co-operations exist, especially the number of Indonesian students spending some time abroad is rather low. In 2015 and 2016, the Faculty of Biology



sent 2 students each year for a semester to Japan. In 2017, 3 Indonesian students joined an international summer course at Nagoya University.

The efforts to attract international students are a little more successful. In 2015, there were 2 students from Ehime University in Japan taking part at a short course at UGM. In 2016, 3 students from Charles Darwin University in Australia joined a summer course. In the same year, 30 students from Malaysia came to UGM for attending a short course. The Faculty of Biology has recognised that there is a serious need for increasing the academic mobility of its own students and for attracting more international students. For this reason, the Faculty of Biology has initiated an agreement to establish a double degree with the Australian National University in Canberra and wants to establish a student exchanges programme with University Tun Hussein Onn in Malaysia. The peers support these first steps, but are convinced that more measures need to be implemented in order to support the internationalisation of UGM and especially the Faculty of Biology. For example, there should be more English elements in the subject-specific classes, the members of the teaching staff should improve their English proficiency and spent more time abroad. Furthermore, the Faculty of Biology should invite more visiting lecturers, initiate more international exchange programmes, offer more places for summer courses, and should provide more and better endowed scholarships for the outgoing students.

The students confirm during the discussion with the peers that some opportunities for international academic mobility exist. However, they also point out that they wish for more places, more exchange programmes and more scholarships.

The situation at the Faculty of Animal Science with respect to international activities is more positive. For example, in 2016 there were a total of 46 international students (from Cambodia, Korea, Malaysia, Thailand and Vietnam) spending some time at the Faculty of Animal Science. Also in 2016, 40 Indonesian students spent some time abroad. Destinations were Australia, Japan, Korea, Malaysia, Singapore, Taiwan, Thailand and Vietnam. International students enrolled at the Faculty of Animal Science are either taking part at an exchange programme or participate in a summer course.

The peers appreciate the effort to foster international mobility and support both faculties to further pursue this path. However, the academic mobility is still low and there is a lot of room for improvement.

<b>Criterion 2.2 Work load and credits</b>
--

**Evidence:**

- Self-Assessment Report
- Study plans of the degree programmes
- Module descriptions
- Academic Guidance Book
- Decree of Minister of Education No. 49, 2014

**Preliminary assessment and analysis of the peers:**

According to Decree of Minister of Education No. 49, 2014 one Indonesian credit is awarded for:

1. Lecture activity of 50 minutes per week per semester;
2. Learning activities by structured assignments of 50 minutes per week per semester;
3. Self-study activities of 60 minutes per week per semester.

In the form of seminar work or other equivalent learning activities, one Indonesian credit includes:

1. Lecture activities of 100 minutes per week per semester;
2. Self-study activities of 60 minutes per week per semester.

One Indonesian credit of practical work, research (thesis), community services, and other equal learning activities is equivalent to:

1. Learning activities of 160 minutes per week per semester.

The standard workload for students is eight hours per day or 48 hours per week, the semester takes 14 weeks. In total, students are required to complete the workload of 6912 hours for eight semesters, or 1728 hours a year. The workload sums up to 144 Indonesian credits, usually divided into 18 credits per semester.

This workload is equivalent to 60 ECTS credits per year, with assuming one ECTS credit equals 28.8 hours.

The peers confirm that the workload in hours is indicated in the module descriptions and the distinction between classroom work and self-studies is made transparent and is in line with the credits awarded.

The Bachelor's degree programmes under review are designed for 8 semesters with a minimum of 144 Indonesian credit points, including mandatory and elective courses.

The peers discuss with the programme coordinators and the students about the length of the Community Service and the Bachelor's thesis, the related workload, and the awarded credit points. They gain the impression that the students regularly spent more time on the Community Service and the Bachelor's thesis than expected. Since the workload of the students was only estimated by the programme coordinators and seems to be too low in comparison to the actual time needed by the students, they suggest asking the students directly about their experiences. This could e.g. be done by including a respective question in the course evaluations. In any case, UGM must make sure that the actual workload of the students and the awarded credits correspond with each other.

According to the Self-Assessment Report, the average length of studies in the Bachelor's degree programme Biology has decreased from five years in 2009 to four years and four months in 2017. Based on the annual self-evaluations, it was found that the average length of studies was regularly exceeding the scheduled four years mainly due to the time needed for completing the undergraduate thesis.

Therefore, some measures have been implemented by the Faculty of Biology to shorten the length of the Bachelor's thesis. For example, the students are now encouraged to join research projects earlier during their studies in order to easier find suitable topics for the undergraduate thesis. In addition, the procedure for officially registering the thesis, which requires the submission of research proposal, has been accelerated. Finally, since the academic year 2010/2011, all participating students are required to register themselves as member of the undergraduate thesis class on the e-learning system (e-Lisa). By doing so, the students can access all information regarding the undergraduate thesis project. When the Faculty of Biology implemented ISO standards in 2009, the thesis monitoring system was put in place. This system monitors the progress of the thesis in order to ensure that the student follows the research schedule and can graduate in time. The peers appreciate that the Faculty of Biology has recognized the need for monitoring the thesis and has successfully reduced the average length of studies.

During the discussion with the programme coordinators of the Bachelor's degree programme Animal Science and Industry, the peers find out that the average of length of studies is 5.3 years. The programme coordinators explain that this is due to limited equipment, funding and research materials in the laboratories (most of the undergraduate students conduct research on their own expenses); some students have part time jobs, and student's personal problems (from family and social environment).

The Faculty of Animal Science has recognised the problems causing the exceedance of the regular length of studies and tries to solve them by doing more collaborative research with companies and by intensively monitoring and counselling the students. The peers support

these first steps, but are convinced that more measures are necessary especially with respect to the Bachelor's thesis. The Faculty of Animal Science should learn from the Faculty of Biology and implement similar measures. In addition, the curriculum of both Bachelor's degree programmes should be reorganised (see Criterion 1.3); and the thesis advisor must make sure that the scope of the Bachelor's thesis is consistent with the expected period (see Criterion 3).

### **Criterion 2.3 Teaching methodology**

**Evidence:**

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

**Preliminary assessment and analysis of the peers:**

The Bachelor's degree programmes under review make use of several different educational methods for each course such as practical laboratory work with presentations, lectures, Community Service, internship, and undergraduate thesis.

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

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

In summary, the peer group judges the teaching methods and instruments to be suitable to support the students in achieving the intended learning outcomes.

### **Criterion 2.4 Support and assistance**

**Evidence:**

- Self-Assessment Report
- Academic Guidance Book

**Preliminary assessment and analysis of the peers:**

UGM offers a comprehensive advisory system for all undergraduate students. At the start of the first semester, every student is assigned to an academic advisor. Each academic advisor is a member of the academic staff and is responsible for a group of 15 to 20 students from his classes. He is a student's first port of call for advice or support on academic or personal matters.

The role of the academic advisor is to help the students with the process of orientation during the first semesters, the introduction to academic life and the university's community, and to respond promptly to any questions. They also offer general academic advice, make suggestions regarding relevant careers and skills development and help if there are problems with other teachers. The students confirm during the discussion with the peers that they all have an academic advisor, that they meet regularly, and that they can always contact their advisor personally and ask for help or advice.

In addition, each student is assigned to an undergraduate thesis supervisor; he supervises four to eight students every semester and helps them to find a suitable topic for the Bachelor's thesis, to prepare the research proposal, and ensures the successful completion of the thesis. The students confirm towards the peers that they are supervised in the working/research group during their work on the Bachelor's thesis. There are regular lab meetings where the students present their results and receive feedback from the other lab members.

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

There is also medical, social, and psychological support for students at UGM (Gadjah Mada Medical Center/GMC and UGM Hospital).

Finally, there are several student organizations at UGM; they include Student's Activity Clubs, which are divided into arts, sports, religious and other non-curricular activities.

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

The peers judge the extensive advisory system to be one of the strong points of UGM.

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

The peers acknowledge that UGM has reviewed and updated its statistical data concerning international mobility. In 2016, 15 students of the Biology programme have taken part at international seminars and exchange programmes in 5 countries. This increased in 2017, when 33 students joined summer courses, international conferences or competitions in 9 countries. Also the number of incoming students as increases from only two international students in 2016, whereas, in 2017 as many as 43 foreign students visited the Biology Department. To increase international mobility, UGM has signed agreements with universities in Australia and Malaysia for Biology students. The Animal Science and Industry programme will co-operate with Chungnam National University, South Korea, to conduct a double degree programme. In addition, students are send to Thailand, Malaysia, South Korea, Japan and Australia to carry out short-term stays.

Students from both degree programmes can apply for financial aid to different private associations, UGM and the government. In addition, UGM will invite more foreign lecturers. The peers support these efforts and hope they will promote international mobility and English proficiency of the students.

Taking UGM's statement into consideration, the peers judge criterion to be mostly fulfilled.

### **3. Exams: System, concept and organisation**

<b>Criterion 3 Exams: System, concept and organisation</b>
--

**Evidence:**

- Self-Assessment Report
- Module descriptions
- Academic Guidance Book
- Academic Calendar

**Preliminary assessment and analysis of the peers:**

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

The written exams can be multiple choice, quizzes, or essays. In addition, there are oral exams, especially for assessing the laboratory work. The students are informed about mid-term and final exams via the Academic Calendar. The final grade is the result of the different activities in the course (e.g. laboratory work, mid-term exam, the final exam, quizzes or other given assignments).

Students who could not take the final exam with eligible reasons are given an opportunity to re-do it once. If a student fails, he has to repeat the entire module in the following semesters. The further details are described in the Academic Guidance Book.

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

At the end of the first two years, the students' academic achievements are evaluated to determine whether they can continue their studies or must leave the faculty. Students may continue their studies if they acquire at least 30 credits and have a GPA of  $\geq 2.00$ . According to the comments of the students most drop-outs in both Bachelor's degree-programmes are due to students failing this evaluation. Only few students leave the degree programmes for other reasons and the total dropout rate is rather low (approximately 5 %).

The peers confirm that there is a form of assessment for each course and that all students are well informed about the form of assessment and the details of what is required to pass the module. The rules for re-sits, disability compensation, illness and other circumstances are written down in the Academic Guidance Book and therefore transparent to all stakeholders.

As stipulated in the Academic Guidance Book, every student is required to do a final thesis. Prior to the actual research work, the student will need to sign up for the thesis course to prepare a research proposal, which is submitted to the Thesis Advisory Committee. This committee will verify the students' administrative fulfilment for thesis requirements, then assign the student to appropriate thesis advisor. This committee also acts as mediator between student and the thesis advisors if there is a dispute. The thesis is usually done parallel to the Community Service in the seventh and eighth semester.

After completing the work on the Bachelor's thesis the student has to defend the thesis in front of the Thesis Defence Committee; it consists of a minimum of 3 lecturers (1 advisor and 2 examiners) and will determine whether the thesis qualifies for graduation.

As already discussed under Criterion 2.4 the peers learn during the audit that the search for a suitable topic, the preparation of the research proposal and the execution of the Bachelor's thesis are main reasons for exceeding the regular length of studies, especially in the Bachelor's degree programme Animal Science and Industry. For this reason, the peers recommend a closer monitoring of all processes associated with choosing and completing the Bachelor's thesis. In particular, the thesis advisor must make sure that the scope of the Bachelor's theses is suitable and does not exceed the expected period.

The peers also inspect a sample of examination papers and final theses and are overall satisfied with the general quality of the samples. They confirm the high standard of the Bachelor's theses.

The peers come to the conclusion that besides the critical issue of the length of the Bachelor's thesis the criteria regarding the examinations system, concept, and organization are fulfilled and that the examinations are suitable to verify whether the intended learning outcomes are achieved or not.

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

The peers consider criterion 3 to be fulfilled.

## 4. Resources

<b>Criterion 4.1 Staff</b>
----------------------------

**Evidence:**

- Self-Assessment Report
- Staff Handbook

**Preliminary assessment and analysis of the peers:**

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



According to the Self-Assessment Report, the teaching staff at the Faculty of Animal Science consists of 69 full-time teachers (20 professors, 22 associate professors, 17 assistant professors, and 10 lecturers), 3 visiting professors and 27 teachers (15 courses) from other degree programmes at UGM. Of the total 69 full-time teachers, 66 are actively on duty and 3 are on a leave in order to get a doctoral degree. The proportion of teachers holding a PhD degree is 84 %. The ratio of lecturer/student is 1:12 at the Faculty of Animal Science.

At the Faculty of Biology 66 full-time teachers are involved with the undergraduate programme in biology. With respect to the academic position, the teaching staff consists of 5 professors, 18 associate professors, 25 assistant professors and 18 lecturers. Furthermore, the teacher/student ratio of UPB is 1:18 and the proportion of teachers holding a PhD degree is 55 %.

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 only weak point they identify with respect to the qualification of the teaching staff is the fact that most of the staff members are also graduates from UGM. For this reason, they recommend also hiring new staff members that graduated from other universities. At least, UGM should make sure that the staff members spent some time abroad or at another Indonesian university after their graduation from UGM before hiring them permanently (for example by sending them abroad for doing a PhD). In addition, the peers suggest mentioning the industrial cooperations in the staff handbook of the Faculty of Animal Science even if no transfer of money but of other resources is involved.

The auditors are impressed by the excellent and open-minded atmosphere among the students and the staff members. It is supported by an extensive advisory system, which ensures that every student has an academic advisor. This atmosphere of understanding and support is one of the strong points of the degree programmes.

#### **Criterion 4.2 Staff development**

##### **Evidence:**

- Self-Assessment Report
- Staff handbook

##### **Preliminary assessment and analysis of the peers:**

UGM encourages the training of its academic and technical staff, so it has developed a programme for improving the didactic abilities and teaching methods. The professional and scientific development of the staff members is coordinated by the Vice Dean for Finance,

Administration and Human Resources and the Vice Dean for Academic and Student Affairs. There are financial resources available for staff members to go abroad for a limited time and to take part at conferences or other events in order to stay up to date with the scientific development in their area of expertise. In addition, both faculties want to promote the process of internationalisation at UGM by hosting international scientific events, facilitating sabbatical leaves, and inviting international professors.

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

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

#### **Criterion 4.3 Funds and equipment**

**Evidence:**

- Self-Assessment Report
- On-site visit of the laboratories, lecture rooms, and the library

**Preliminary assessment and analysis of the peers:**

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

There is basic funding from the faculties for teaching the students, additional funds for advanced research can be provided by UGM or the Indonesian government, but the teachers have to apply for them. In addition, there is the possibility of cooperation with industrial partners.

In the Faculty of Animal Science, the peers notice that for example the animal nutrition laboratory and the laboratory for meat science only fulfil the basic needs for teaching the

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

The situation in the Faculty of Biology is very similar. More laboratory space for each minor in biology is needed. In addition, specific laboratories for each subject such as microbiology, molecular biology, and cell biology should be created. The technical equipment of the faculty laboratories should include up-to-date microscopes, incubators, working benches with laminar flow hoods and water baths, freezers, an up-to-date refrigerated centrifuge, up-to-date autoclaves, photometers, incubators, equipment for gel electrophoresis and documentation, PCR machines, a temperature regulated culture shaker as well as sufficient micro pipettes.

Since the central laboratory is used by staff members from all faculties, the advanced equipment there is in high demand, which leads to bottlenecks and causes delays. Therefore, the peers expect that UGM as well as the Faculty of Animal Science and the Faculty of Biology invest more money and resources in the teaching laboratories. This will make the faculties more independent from the central laboratory and will increase the possibilities for the staff members to conduct their research activities and for students to prepare high quality Bachelor's theses. It would also be useful to establish several research laboratories in both Faculties where the teaching staff can follow their research interests and the students can do their Bachelor's theses.

If UGM and both faculties want to be competitive on an international level, such investments have to be made and are urgently needed.

The peers are impressed by the modern central library that offers direct access to international literature, scientific journals, and publications e.g. via SpringerLink. The students also express their satisfaction with the library and the available literature. From their point of view, there is sufficient access to current international literature and databases and a remote access is possible.

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

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

UGM confirms in its statement that only 5.8 % of lecturers obtained their Bachelor's degree from other Indonesian Universities. The new staff members are encouraged to study

abroad for Master's and PhD programmes and must sign an agreement that they will to join an international PhD programme within the next two years. Ninety percent of the lecturers have spent some time abroad and currently six lecturers are studying for their PhD degree abroad.

The peers see that the Faculty of Animal Science co-operates with private industries, research institution (both national and international), local government and farmers in order to offer more and better research opportunities. In addition, the Faculty of Animal Science will establish a Learning Centre for Animal Science (6 floors) consisting of advance research equipment and learning facilities. The peers believe this will significantly enhance the research possibilities.

The peers welcome UGM's intention to update und upgrade the laboratory equipment in the Biology programme. They expect UGM to submit meaningful documents in the course of the fulfilment of requirements.

The peers consider criterion 4 to be mostly fulfilled.

## 5. Transparency and documentation

### Criterion 5.1 Module descriptions

#### Evidence:

- Self-Assessment Report
- Module descriptions
- UGM's webpage: [www.ugm.ac.id](http://www.ugm.ac.id)

#### Preliminary assessment and analysis of the peers:

During the audit the peers receive the module descriptions from the Bachelor's degree programme Biology, the module description of the Bachelor's degree programme Animal Science and Industry were available as appendences to the Self-Assessment Report.

The students, as all other stakeholders, have access to the module descriptions via UGM's homepage.

After studying the module descriptions the peers confirm that they include all necessary information about the persons responsible for each module, the teaching methods and work load, the awarded credit points, the intended learning outcomes, the content, the

applicability, the admission and examination requirements, and the forms of assessment and details explaining how the final grade is calculated.

The peers recommend updating the bibliographical references in the module descriptions, because some of the mentioned papers and textbooks are more than 10 years old.

Furthermore, the module handbooks of both Bachelor's degree programmes do not include module descriptions for the Community Service and the Bachelor's thesis. Since these two courses are essential parts of the degree programmes the peers ask UGM to provide module descriptions for both courses.

### **Criterion 5.2 Diploma and Diploma Supplement**

**Evidence:**

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

**Preliminary assessment and analysis of the peers:**

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

The auditors point out that a Diploma Supplement should also include statistical data about the distribution of final grade according to the ECTS-Users' guide. This allows the reader to categorise the individual result. For this reason, the peers ask UGM to include this additional information in the Diploma Supplement.

### **Criterion 5.3 Relevant rules**

**Evidence:**

- Self-Assessment Report
- All relevant regulations as published on the university's webpage: [www.ugm.ac.id](http://www.ugm.ac.id)

**Preliminary assessment and analysis of the peers:**

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

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

The peers appreciate that UGM has taken first steps to rewrite the module description and to update the bibliographical references.

Together with its statement, UGM has submitted module descriptions for the Community Service and the Bachelor's thesis. The peers accept these documents and, therefore, abstain from issuing a requirement in this respect.

The peers see that UGM will add additional information to the Diploma Supplement. They expect UGM to submit the updated documents in the course of the fulfilment of requirements.

The peers consider criterion 5 to be mostly fulfilled.

## **6. Quality management: quality assessment and development**

**Evidence:**

- Self-Assessment Report
- Quality Procedure, Analysis of Students' performance and Evaluation of Lecturing Implementation, held on May 27th 2014

**Preliminary assessment and analysis of the peers:**

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

Internal evaluation of the quality of the degree programmes is mainly provided through student and alumni surveys. The students give their feedback on the courses by filling out the questionnaire online. Giving feedback on the classes is compulsory for the students; otherwise, they cannot access their account on the digital platform PALAWA. There are 12 categories in the questionnaire (e.g. schedule, course materials, workload, motivation). The course evaluations are held during the final exam week. A compilation of the students' feedback is sent to the respective lecturers.

In addition to the surveys, there is an annual Internal Quality Audit in order to evaluate whether the general learning objectives have been achieved. Students, supporting staff, lecturers, alumni and employers are all taking part at the Quality Audit.

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

External quality assessment of the degree programmes is provided by the Board of National Accreditation (BAN-PT) every five years. In addition, both degree programmes have been accredited by the ASEAN University Network Quality Assurance (AUN-QA).

The peers discuss with the representatives of UGM's partners from public institutions and private companies that there are regular workshops with the partners on faculty level, where they discuss the needs and requirements of the employers and possible changes to the degree programmes. As the peers consider the input of the employers to be very important for the further improvement of the degree programmes they appreciate the existing culture of quality assurance with the involvement of all stakeholders in the quality assurance process.

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

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

The peers consider criterion 6 to be fulfilled.

## **D Additional Documents**

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

- Module descriptions for the Community Service and the Bachelor's thesis.



## E Comment of the Higher Education Institution (09.02.2018)

The institution provided a detailed statement as well as the following additional documents:

- Referring to the peer findings about Module descriptions for the Community Services:
- Universitas Gadjah Mada is the pioneer of Community Services Program as parts of the curriculum in universities in Indonesia. Therefore, UGM become reference and model of implementation for the implementation of students' community services program. The module/guideline can be accessed in <https://kkn.ugm.ac.id/wp-content/uploads/2017/07/BUKU-PEDOMAN-KKN-PPM-WEB.pdf> while other supporting documents are available at: <https://kkn.ugm.ac.id/berkas-berkas/>
- Referring to the peer findings about the Bachelor's thesis, the module of bachelor thesis can be accessed at <http://fapet.ugm.ac.id/data/panduan-akademik/4.%20Buku%20Panduan%20Skripsi.pdf>
- Appendix ASI 1: Module Handbook of Community Services
- Appendix ASI 2: Design of Learning Center of Animal Science UGM.
- **Appendix BIO.001**-Number of student in Community Service
- **Appendix BIO.002**-Length of Undergraduate Thesis
- **Appendix BIO.003**-Lecturers and Student Mobility
- **Appendix BIO.004**-Course in English
- **Appendix BIO.005**-Bachelor Program Biology Laboratories Location and Lab Equipments
- **Appendix BIO.006**-The Module Handbook – Community Service (KKN)
- **Appendix BIO.007**-The Module Handbook – Thesis

## F Summary: Peer recommendations (27.02.2018)

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

Degree Programme	ASIIN seal	Subject-specific Label	Maximum duration of accreditation
Ba Biology	With requirements for one year	-	30.09.2023
Ba Animal Science and Industry	With requirements for one year	-	30.09.2023

### Requirements

#### For all degree programmes

- A 1. (ASIIN 4.3) Provide a concept how the technical equipment in the teaching laboratories will be updated so that students will be able to carry out advanced practical work and to prepare their Bachelor's thesis.
- A 2. (ASIIN 1.3) Re-design the degree programmes so that students can complete the Bachelor's thesis in time and without any prolongation of the studies.
- A 3. (ASIIN 2.2) Make sure that the actual workload of the students is consistent with the awarded credits.
- A 4. (ASIIN 5.2) Include statistical data about the distribution of the final according to the ECTS-Users' guide in the Diploma Supplement.

### Recommendations

#### For all degree programmes

- E 1. (ASIIN 1.3) It is recommended further improving the English proficiency of the students by introducing more English taught subject-specific elements into the curriculum.
- E 2. (ASIIN 2.1) It is recommended to further promote the academic mobility of the students.

**F Summary: Peer recommendations (27.02.2018)**

---

- E 3. (ASIIN 4.1) It is recommended hiring new staff members also from other universities, not only graduates of UGM.
- E 4. (ASIIN 5.1) It is recommended to update the bibliographical references in the module descriptions.

## **G Comment of the Technical Committees (16.03.2018)**

### **Technical Committee 08 - Agriculture, Nutritional Sciences and Landscape Architecture (12.03.2018)**

*Assessment and analysis for the award of the ASIIN seal:*

The Technical Committee fully agrees with the assessment and the recommended resolution of the expert panel.

The Technical Committee 08 - Agriculture, Nutritional Sciences and Landscape Architecture recommends the award of the seals as follows:

<b>Degree Programme</b>	<b>ASIIN-seal</b>	<b>Subject-specific label</b>	<b>Maximum duration of accreditation</b>
Ba Biology	With requirements for one year	-	30.09.2023
Ba Animal Science and Industry	With requirements for one year	-	30.09.2023

### **Technical Committee 10 – Life Sciences (16.03.2018)**

*Assessment and analysis for the award of the ASIIN seal:*

The Technical Committee follows fully the proposed recommendations and requirements of the peers.

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

<b>Degree Programme</b>	<b>ASIIN-seal</b>	<b>Subject-specific label</b>	<b>Maximum duration of accreditation</b>
Ba Biology	With requirements for one year	-	30.09.2023
Ba Animal Science and Industry	With requirements for one year	-	30.09.2023

## H Decision of the Accreditation Commission (23.03.2018)

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

The ASIIN Accreditation Commission for Degree Programmes shortly discusses the in-house recruitment of the staff members at UGM and the community service that is compulsory for all Indonesian students.

The Accreditation Commission slightly changes the wording of requirement A 4 and follows otherwise the suggestions of the auditors.

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

<b>Degree Programme</b>	<b>ASIIN-seal</b>	<b>Subject-specific label</b>	<b>Maximum duration of accreditation</b>
Ba Biology	With requirements for one year	-	30.09.2023
Ba Animal Science and Industry	With requirements for one year	-	30.09.2023

### Requirements

#### For all degree programmes

- A 1. (ASIIN 4.3) Provide a concept how the technical equipment in the teaching laboratories will be updated so that students will be able to carry out advanced practical work and to prepare their Bachelor's thesis.
- A 2. (ASIIN 1.3) Re-design the degree programmes so that students can complete the Bachelor's thesis in time and without any prolongation of the studies.
- A 3. (ASIIN 2.2) Make sure that the actual workload of the students is consistent with the awarded credits.
- A 4. (ASIIN 5.2) Include statistical data about the distribution of the final grades according to the ECTS-Users' guide in the Diploma Supplement.

### Recommendations

**For all degree programmes**

- E 1. (ASIIN 1.3) It is recommended further improving the English proficiency of the students by introducing more English taught subject-specific elements into the curriculum.
- E 2. (ASIIN 2.1) It is recommended to further promote the academic mobility of the students.
- E 3. (ASIIN 4.1) It is recommended hiring new staff members also from other universities, not only graduates of UGM.
- E 4. (ASIIN 5.1) It is recommended to update the bibliographical references in the module descriptions.

# I Fulfilment of Requirements (29.03.2019)

## Analysis of the peers and the Technical Committees (08.03.2019)

### Requirements

#### For all degree programmes

- A 1. (ASIIN 4.3) Provide a concept how the technical equipment in the teaching laboratories will be updated so that students will be able to carry out advanced practical work and to prepare their Bachelor's thesis.

Initial Treatment	
Peers	fulfilled Vote: unanimous Justification: The university has provided a list of technical equipment that has already been purchased and that will be purchased in 2019 and 2020.
TC 08	fulfilled Vote: unanimous Justification: The TC follows considers the requirement to be fulfilled.
TC 10	fulfilled Vote: unanimous Justification: The TC follows the assessment of the auditors.

- A 2. (ASIIN 1.3) Re-design the degree programmes so that students can complete the Bachelor's thesis in time and without any prolongation of the studies.

Initial Treatment	
Peers	fulfilled Vote: unanimous Justification: The credit requirements for field work has been reduced, the reporting system also was simplified, and a fixed timeline was established. In addition, the students will monitored more closely during their bachelor's thesis.
TC 08	fulfilled Vote: unanimous

	Justification: The TC follows considers the requirement to be fulfilled.
TC 10	fulfilled Vote: unanimous Justification: The TC follows the assessment of the auditors.

- A 3. (ASIIN 2.2) Make sure that the actual workload of the students is consistent with the awarded credits.

Initial Treatment	
Peers	fulfilled Vote: unanimous Justification: A questionnaire regarding actual workload has been designed and distributed to the students in order to verify the consistency of the workload with the awarded credits.
TC 08	fulfilled Vote: unanimous Justification: The TC follows considers the requirement to be fulfilled.
TC 10	fulfilled Vote: unanimous Justification: The TC follows the assessment of the auditors.

- A 4. (ASIIN 5.2) Include statistical data about the distribution of the final grades according to the ECTS-Users' guide in the Diploma Supplement.

Initial Treatment	
Peers	fulfilled Vote: unanimous Justification: Statistical data about the distribution of final grades according to ECTS-Users' guide has been added to the Diploma Supplement.
TC 08	fulfilled Vote: unanimous Justification: The TC follows considers the requirement to be fulfilled.
TC 10	fulfilled Vote: unanimous Justification: The TC follows the assessment of the auditors.



## Decision of the Accreditation Commission (29.03.2019)

<b>Degree programme</b>	<b>ASIIN-label</b>	<b>Subject-specific label</b>	<b>Accreditation until max.</b>
Ba Animal Science and Industry	All requirements fulfilled	--	30.09.2023
Ba Biology	All requirements fulfilled	--	30.09.2023

## 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 Biology:

“The PEO of Undergraduate Program in Biology (UPB) of Faculty of Biology Universitas Gadjah Mada (UGM) is to provide:

- [1] Graduates with a comprehensive scientific education in all of biology disciplines.
- [2] Graduates with ability to pursue any career path in biology, particularly in Tropical Biology.
- [3] Graduates with leadership and management skills to provide solutions to Tropical Biology problems.
- [4] Graduates who embrace Pancasila as a base for ethical scientific activities, as well as research, publication and daily conduct.
- [5] Graduates with an intellectual and practical understanding of good science on Tropical Biology to pursue higher education

In order to achieve above mentioned PEO effectively, the PEO values are elaborated into more specific attainable outcomes in Program Learning Outcomes (PLO). The PLO contains the details of expected Skills (S), Knowledge (K) and Competency (C) of each students and graduates in Faculty of Biology. The formulation of learning outcome is based on internal and external demand analysis obtained from survey of alumni and their users. Hence, it is hoped that the formulation of learning outcome could fulfill stakeholder's' expectation which is monitored and evaluated on the basis of tracer study result. The PLO of UPB are:

- [1] The students will have an ability to apply what they have learned in Biology. (K, S)
- [2] The students will be able to demonstrate skills and knowledge of Molecular Biology and Biotechnology in Tropical Biology. (S)
- [3] The students will be able to demonstrate skills and knowledge of Functional Biology in Tropical Biology. (S)
- [4] The students will be able to demonstrate skills and knowledge of Environmental Biology and Biodiversity in Tropical Biology. (S)

- [5] The students will be able to design and to conduct biological research both individually or in a team, and then to analyze as well as to interpret the data and to form conclusions based on it. (S, C)
- [6] The students will be able to identify problems including safety and environmental issues related to Tropical Biology and to develop scientifically sound solutions to them. (C)
- [7] The students will understand the importance of professional and ethical responsibility, and a commitment to apply these ethical principles in their research or daily conduct. (K)
- [8] The students will be able to communicate and express a fundamental scientific opinion effectively, in both oral and written formats. (S)
- [9] The students will acquire an appreciation for self-improvement and long-life learning, and ability to identify avenues for improvement. (C)
- [10] The students will understand about scientific method, scientific rigor, and the importance of good science. (K)
- [11] The student will acquire an appreciation for all biological disciplines and fundamental biology- relevant knowledge of mathematics and the natural sciences. (K)''

The following **curriculum** is presented:

Table 1.4. Curriculum Map and Assessment Schedule of Program Learning Outcomes each semester in Study Program of Biology

Semester									
1	2	3	4	5	6	7	8		
<b>General Biology (4-0)</b> PLO 2 = 5% PLO 11 = 20%	<b>Animal Structure and Development (3-1),</b> PLO 3= 25%	<b>Biochemistry (3-1)</b> PLO 2 25%	<b>Technical Biochemistry (1-1)</b> PLO 2= 10%	<b>Molecular and Cell Biology (3-0)</b> PLO 2= 15%	<b>Evolution (2—0)</b> PLO 4 10%	<b>Religion (2-0)</b> PLO 7 15%	<b>Community Services (0-3)</b> PLO 1 30% PLO 9 40%		
<b>Environmental Science (2-0)</b> PLO 6= 60%.	<b>Plant Structure and Development (3-1)</b> PLO 3= 25%	<b>Genetics (3-1)</b> PLO 2= 25%	<b>Microbiology (3-1)</b> PLO 2= 20%	<b>Animal Physiology (3-1)</b> PLO 3= 25%	<b>Philosophy of Science (2-0)</b> PLO 9 20% PLO 10 40%	<b>Pancasila (2-0)</b> PLO 7 20%			
<b>English for Biology (2-0)</b> PLO 8= 10%	<b>Statistics (2-0)</b> PLO 5= 10% PLO 11= 10%	<b>Ecology (3-1)</b> PLO 4= 30% PLO 6= 40%	<b>Plant Physiology (3-1)</b> PLO 3= 25%	<b>Microbial Systematics (3-1)</b> PLO 4= 20%	<b>Civic (2-0)</b> PLO 7 15%				
<b>Mathematics (3-0)</b> PLO 11= 20%	<b>Organic Chemistry (2-1)</b> PLO 11= 10%	<b>Plant Systematics (3-1)</b> PLO= 4 20%	<b>Animal Systematics (3-1)</b> PLO 4= 20%	<b>Job Training (0-2)</b> PLO 1= 30% PLO 9= 20%	<b>Undergraduate Thesis (0-6)</b> PLO 1 25% PLO 5 25% PLO 8 40% PLO 9 20%				
<b>Physics (3-1)</b> PLO 11= 10%	<b>Paleontology (2-1)</b> PLO 11= 10%	<b>Scientific Methods and Experimental Design (3-0)</b> PLO 5= 20% PLO 10= 30%	<b>Technical Biochemistry (1-1).</b> PLO 5= 30%	<b>Seminar (0-2)</b> PLO 1= 10% PLO 5= 15% PLO 8= 35%					
<b>Chemistry (2-1)</b> PLO 11= 10%			<b>Scientific writing (2-0)</b> PLO 7= 50% PLO 8= 15% PLO 10= 30%						
<b>Geology (2-0)</b> PLO 11= 10%									

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

„The following are SP-ASI Programme Objectives (PO):

1. To produce animal science graduates who are able to apply science and skills in all sector of livestock industry and also able to professionally develop a livestock business with Pancasila spirit.
2. To produce animal science graduates who are able to apply their knowledge in animal science and technology and to solve problems in livestock and also able to adapt under difficult situation.
3. To produce animal science graduates who have knowledge of theoretical concept of general livestock principles and who are competent to formulate procedural problem solving.
4. To produce animal science graduates who are competent to make decision precisely based on information analysis and data, and also capable of giving alternative solutions independently or as a team.
5. To produce animal science graduates who are dedicated to their profession and able to accept responsibility for attaining organizational work outcome.
6. To produce individuals with aptitude for a life long learning through graduate studies, research and professional activities both nationally and internationally. “





