ASIIN Seal
Accreditation Report

Bachelor's Degree Programmes
Dental Medicine
Veterinary Medicine
Aquaculture

Provided by
Universitas Airlangga, Surabaya

Version: 26.06.2020

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A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Pendidikan Dokter Gigi	Bachelor Degree in Dental Medicine	ASIIN	--	10
Pendidikan Dokter Hewan	Bachelor Degree in Veterinary Medicine	ASIIN	--	10
Budidaya Perairan	Bachelor Degree in Aquaculture	ASIIN	--	08
Date of the contract: 12.09.2018 **Submission of the final version of the self-assessment report:** 11.02.2019 **Date of the onsite visit:** 05.-06.03.2019 **at:** Universitas Airlangga, Surabaya				
Peer panel: Prof. Dr. Thomas Göbel, University of Munich, Faculty of Veterinary Medicine (only paper-based) Prof. Dr. Holger Jentsch, Leipzig University Hospital, Department of Periodontology PD Dr. habil. Sonja Kleinertz, Bogor Agricultural University, Professorship for Aquaculture and Sea-Ranching Prof. Dr. Friedhelm Meinhardt, University of Münster, Department of Biology				

[1] ASIIN Seal for degree programmes

[2] TC: Technical Committee for the following subject areas: TC 01 - Mechanical Engineering/Process Engineering; TC 02 - Electrical Engineering/Information Technology; TC 03 - Civil Engineering, Geodesy and Architecture; TC 04 - Informatics/Computer Science; TC 05 - Physical Technologies, Materials and Processes; TC 06 - Industrial Engineering; TC 07 - Business Informatics/Information Systems; TC 08 - Agriculture, Nutritional Sciences and Landscape Architecture; TC 09 - Chemistry; TC 10 - Life Sciences; TC 11 - Geosciences; TC 12 - Mathematics; TC 13 - Physics.

Ms Witiya Almada, Student Representative	
Representative of the ASIIN headquarter: Christin Habermann	
Responsible decision-making committee: Accreditation Commission for Degree Programmes	
Criteria used: European Standards and Guidelines as of 15.05.2015 ASIIN General Criteria, as of 10.12.2015 Subject-Specific Criteria of Technical Committee 08 – Agriculture as of 09.12.2011 Subject-Specific Criteria of Technical Committee 10 – Life Science as of 09.12.2011	

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
Ba Dental Medicine	SKG (Bachelor of Dental Medicine)	--	6	Full time	--	7 Semester	148 Indonesian credits (224 ECTS)	August / First time?
Ba Veterinary Medicine	SKH (Bachelor of Veterinary)	--	6	Full time	--	8 Semester	148 Indonesian credits (224 ECTS)	August / First time?
Ba Aquaculture	SPi (Bachelor of Fishery Sciences)	--	6	Full time	--	8 Semester	146 Indonesian credits (220 ECTS)	August / First time?

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

For the Bachelor's degree programme Dental Medicine the Universitas Airlangga (UNAIR) has presented the following profile in their self-assessment report:

"Undergraduate and Professional Program of Dental Medicine, Faculty of Dental Medicine, Universitas Airlangga is the first and leading research based institution for dental education in Indonesia. Faculty of Dental Medicine, Universitas Airlangga has produced the majority of Indonesian dentists, serving the country over the past decades. The National Accreditation Agency (BAN-PT) has awarded the program as Excellent Leader, based on IWA2 and MBNQA certification.

Vision of the Programme

To be a Dental Medicine Study Programme that facilitate the student's long life learning at dental medicine academic training program and dental medicine-skill training program based on research.

Mission of the Programme

1. Conduct competence based basic medical and dentistry science, clinical medicine and clinical dentistry education that are human, patient safety and advancement oriented.
2. Produce basic and applied researchers in the field of dentistry for the interest of the society in supporting both national and international development
3. Devoting ethic based development of science and technology of dentistry in efforts of improving dental and oral health of the society."

For the Bachelor's degree programme Veterinary Medicine Universitas Airlangga (UNAIR) has presented the following profile in their self-assessment report:

"The Veterinary Medicine program creates high-quality and dignified graduates who can integrate, apply and develop the science of veterinary and husbandry in order to compete at national and international level. Curriculum in veterinary medicine is designed and established to regulate education in accordance to the need of veterinary professionalism. Veterinary Medicine Education Program Universitas Airlangga has been certified by the ASIAN University Network (AUN) in 2015. Therefore, it is highly expected that graduates will be internationally recognized in order to gain opportunities to compete on a global level.

Vision of the Programme

The Vision of Veterinary Medicine Program is to be a leading study program at national and international level, to be the pioneer of educational and research development in the field of veterinary and animal husbandry which are independent and innovative based on religion, morality, ethics, living environment preservation and animal welfare by keeping the orientation to community welfare.

Mission of the Programme

1. To conduct academic, professional, specialist studies in the field of veterinary and husbandry based on modern learning technology, therefore the study program can create graduates with professional ability and a strong will to develop their science, have entrepreneurial spirit and respect religion, morality and ethics.
2. To conduct basic and applied researches and policy researches, which are innovative and high-quality in the fields of veterinary and husbandry to support the development of science and knowledge, education and community service based on religion, morality, ethics, living environment preservation and animals prosperity.
3. To dedicate skills in the fields of veterinary and husbandry to the community
4. To create mutual partnership with respective institutions in order to create the independence of faculty oriented on quality and competitiveness at national and international level."

For the Bachelor's degree programme Aquaculture Universitas Airlangga (UNAIR) has presented the following profile in their self-assessment report:

"The vision of Aquaculture Study Programme is synchronized with the vision of the Faculty of Fisheries & Marine as well Universitas Airlangga consisting four keywords which are independence, innovation, excellence and morality. The study program's mission consists of four aspects: education, research, social services, and cooperation reflecting synergistic and harmonious mission with the Faculty and the University. The graduate competence is arranged according to curriculum of 2012 and refers to Indonesian Qualification Framework (Kerangka Kualifikasi Nasional Indonesia-KKNI) level 6 (equal to Bachelor Degree) which consists of applying, reviewing, designing, utilizing of science and technology, and solving a problem. The Aquaculture Study Programme has taken feedbacks from stakeholders, in formulating the expected learning outcomes (ELO) to produce the quality graduates who have the capability as Manager, Entrepreneur, Research, and Instructor.

The Aquaculture Study Programme, Faculty of Fisheries and Marine, Universitas Airlangga, has specificity in fish disease and aquatic environment health, which made different with same study program from other Universities in Indonesia. The Aquaculture Study Programme has officially accredited A by National Council for Higher Education Accreditation (BAN-PT) for 5 years and will end in 2022. It also has a certificate of Airlangga Integrated Management Systems (AIMS) since 2013 to present. Since September 2017, the Aquaculture Study Programme has been certified by AUN-QA valid until September 2022.

Vision of the Programme

The vision of the Aquaculture Study Programme is to become the study programme nationally and internationally known and having competitive advantages in developing and implementing science, insight and technology in aquaculture field focused on fish health and environmental sustainability as well as become an independent human resources developing science and technology in aquaculture in line with morality, ethics and environmental sustainability and representing social welfare oriented institution. The vision of Aquaculture Study Program has synchronized with the vision of Faculty of Fisheries and Marine as well as Universitas Airlangga, which consists of four keywords: independence, innovation, excellence and morality.

Mission of the Programme

1. Providing good academic education in the field of aquaculture-based learning technology that can motivate the students to have the confidence and professional skills as well as a strong desire to develop their knowledge,
2. Conducting basic research, applied and policy research which is innovative and high quality in the field of aquaculture to the community,
3. Dedicated their expertise in the field of aquaculture to the community, and
4. Develop partnerships and information systems of science and technology with several government and private institution, which is concerned.”

C Peer Report for the ASIIN Seal

1. The Degree Programme: Concept, content & implementation

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

Evidence:

- Self-Assessment Report
- Discussions during the audit
- Curricula of the degree programmes
- Module Descriptions
- Diploma Supplements of the degree programmes

Preliminary assessment and analysis of the peers:
The peers refer to the Subject-Specific Criteria (SSC) of the Technical Committee Life Sciences and the SSC of the Technical Committee Agriculture as a basis for judging whether the objectives and intended learning outcomes of the Bachelor's Degree Programmes Dental Medicine, Veterinary Medicine and Aquaculture, as defined by UNAIR, correspond with the competences outlined by the SSC. They come to the following conclusion:

According to the Self-Assessment Report, the objective of the Bachelor's degree programme Dental Medicine is to produce graduates in the fields of care provider, decision maker, communicator, community leader, manager, researcher, creator and innovator. As such, the graduates of the programme hold the following qualifications:

1. Graduates are competent, qualified, and have entrepreneurial spirit as a result of the student-centred learning methods and life-long learning principle of the study programme. This enables them to manage the stomatognathic problem and improve the health of the community.

2. Graduates are reliable in conducting basic medical-dentistry, public health, and applied medical-dentistry researches both independently and through joint researches, which are oriented to the principle of giving benefits and compliance to uphold the morality and intellectual property rights.
3. Graduates are capable of empowering the communities as they can identify and formulate the health problems which are related to general conditions and/or stomatognathic functions and are able to apply the appropriate and useful technology for strategic planning in solving stomatognathic problems as part of human health as a whole.

According to the Self-Assessment Report, the Bachelor's degree programme Veterinary Medicine has the following objectives:

1. Produce graduates who are qualified, have dignity and are able to compete at a national and international level
2. Produce innovative research that can solve veterinary and husbandry problems in the community
3. Produce community service products that can improve the community's ability in the areas of veterinary and husbandry
4. Create an independent programme that is adaptive, creative and proactive to the changes of knowledge, science and technology within the area of veterinary and husbandry
5. Develop an entrepreneurial and research-based faculty

According to the Self-Assessment Report, the Bachelor's degree programme Aquaculture has the objectives of producing graduates who are:

1. Qualified and able to develop science and technology in fisheries and marine areas and are competitive based on religious morality
2. Capable to conduct innovative research that supports the development of science and technology in fisheries and marine areas at national and international levels
3. Capable to conduct community service activities that can empower community to solve problems in fisheries and marine areas independently and sustainably

For each of the three degree programmes, UNAIR has also set up intended learning outcomes (ILO) that have been formulated with the involvement of internal and external stakeholders, including the university's members of staff, alumni, and students as well as external stakeholders (s. Annex).

With regard to the ILOs of Aquaculture, the peers notice that they relate more towards the field of fisheries and marine science than to aquaculture as they include ILOs such as "mastering the fisheries and marine sciences", "interpreting the policy of fisheries and marine development" and "exhibiting the potencies in the fisheries and marine development." During the discussion with the programme coordinator, the peers learn that other topics, such as cultivation, shrimp or algae are also taught, yet this is not clearly stated in the module descriptions (s. criterion 5.1). The peers also ask why the study programme is given a Bachelor's degree of Fisheries instead of a Bachelor's degree of Aquaculture. They learn that every Bachelor's degree in aquaculture will automatically be awarded a "Sarjana perikanan", which roughly translates to "Bachelor of Fisheries". While this is a governmental regulation, the peers nonetheless urge UNAIR to make sure that the title of the Bachelor programme, its ILOs and its content correspond with one another.

The peers learn during the audit that employers are very satisfied with the qualification profile of the graduates and that there is a high demand for graduates of UNAIR in the areas of dentistry, veterinary and aquaculture. The peers are informed that most of the graduates of the Bachelor's degree programme Dental Medicine and Bachelor's degree programme Veterinary Medicine continue their education with a consecutive Professional Degree at UNAIR as only those who hold a Professional Degree can become dentists and veterinaries. However, students who only hold a Bachelor's Degree in dental or veterinary medicine may still enter the labour market without an additional degree and find employment in research facilities or as lecturers. For the Bachelor's degree programme Aquaculture, students can work as researchers, entrepreneurs selling product from fisheries or marines, or as managers and instructor. Student can also continue their studies at UNAIR with a Master's degree programme in Biotechnology or in Fishery Science. Yet, only between 5-10% of students choose to do so.

Furthermore, there exists a strong partnership between the stakeholders from the industry, many of whom are graduates from UNAIR themselves. For example, partners from the industry are regularly invited to UNAIR to discuss the curriculum and can offer suggestions to change the curriculum if needed. In addition, UNAIR supports its graduates by organizing career events, offering personal support and conducting excursions to different companies and industries. The peers are impressed by this relationship and regard it as one of the study programmes' strongest features as this partnership ensures that the students learn all the necessary skills and knowledge to find successful employment after graduation.

The stakeholders from the industry, however, express their wish that the students would undertake more international exchanges to gain knowledge about international affairs, international standards and international procedures regarding their respective study programme. The peers agree with the stakeholders that it would indeed serve the profile of

the graduates if they would be introduced to international topics during their studies and recommend to increase the international mobility of the students.

The auditors hold the view that the objectives and intended learning outcomes of all three degree programmes under review are reasonable and well founded. They are convinced that the intended profiles of all three degree programmes allow students to take up an occupation (or continue their studies with a Professional or Master's degree) that corresponds to their qualification. The degree programmes are designed in such a way that they meet the objectives set for them and the peers judge the objectives and learning outcomes of the degree programmes suitable to reflect the intended level of academic qualification. They correspond with the ASIIN Subject-Specific-Criteria (SSC) of the Technical Committee 10 – Life Sciences and the SSC of the Technical Committee 08 - Agriculture. The peers appreciate that UNAIR aims for high standards as to give their students good chances in the national job market as well as a good starting point to transfer to other academic programmes.

Criterion 1.2 Name of the degree programme

Evidence:

- Self-Assessment Report
- Discussions during the audit
- Curriculum of the three study programmes

Preliminary assessment and analysis of the peers:

With regard to the title of the degree programmes Dental Medicine and Veterinary Medicine the auditors hold the opinion that the English translation and the original Indonesian names correspond with the intended aims and learning outcomes as well as the main course language.

As stated under criterion 2.1, the peers wonder why the study programme is titled Aquaculture, yet the curriculum seems to be designed for the studies of fisheries and marine sciences. They urge the programme coordinators to harmonise the programme title, its intended ILOs and its content.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report
- Discussions during the audit
- Curricula of the degree programmes

Preliminary assessment and analysis of the peers:

In the self-assessment report, UNAIR states that the curriculum of all three study programmes have been modified over the last few years and the peers inquire the reason for this. The programme coordinators explain that in 2015, the Indonesian government for example has established new standards for the competencies a dentist must acquire, which forced the faculty to change their study programme accordingly. Furthermore, the curriculum is evaluated every year by stakeholders from the industry to ensure that students learn the newest skills in order to find employment after graduation. The peers acknowledge that students and alumni have also been involved in the redesign of the curricula.

The curriculum of the Bachelor's degree programme Dental Medicine consists of 148 Indonesian course credits and 223,63 ECTS, with 220,61 ECTS for compulsory courses and 3,02 ECTS for elective courses. 86,13 ECTS are given for courses classified as general scientific classes, while the remaining 134,48 ECTS are given for courses categorized as subject-specific classes. General specific skills encompass basic courses in the natural sciences and medical area as well as courses in religion. The study programme can be completed in 7 semesters. Elective courses are few, yet they can be chosen by the students in accordance with their areas of interest and after consultation with their academic advisor. The programme coordinator informs the peers that elective courses are so few because the Bachelor's degree serves as a basis for the consecutive professional programme, which includes various elective profiles. Elective courses of the Bachelor degree include "Basic research", "Management of Dentistry Practice" and "Advanced Clinical Dentistry."

In the second semester, students can attend the selection for joining the International Dental Course Programme (IDC), which is an exchange programme with the University of Hiroshima, Japan. Since 2011, those student chosen spend their first year of studies at UNAIR and finish their degree by studying three to four years at University of Hiroshima. Students receive a degree from UNAIR. The peers laude this exchange programme and especially the international skills the attending students gain.

The curriculum of the Bachelor's degree programme Veterinary Medicine consists of 148 Indonesian course credits or 236,7 ECTS. 94,4 ECTS are classified as general scientific classes, encompassing veterinary classes as well as religious and language classes, while the remaining 142,3 ECTS are categorized as subject-specific classes. The programme can be

completed in 8 semesters. The curriculum entails 59 compulsory and 7 elective courses. Similar to the Bachelor's programme Dental Medicine, elective courses are so few because the Bachelor's degree serves as a basis for the consecutive professional programme, which is comprised of various electives.

The curriculum of the Bachelor's degree programme Aquaculture consists of 146 Indonesian course credits or 238,9 ECTS, from which 6,4 ECTS are elective courses. 152,67 ECTS are classified as general scientific classes, encompassing aquaculture classes as well as religious and language courses, while the remaining 79,83 ECTS are categorized as subject-specific classes.

During the last two semesters of every study programme, students must complete the Community Service and the undergraduate thesis. The peers discuss with the programme coordinators the content and goal of the Community Service and learn that it is compulsory for all students of UNAIR. It has a minimum length of eight 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 about further development. The assessment of the Community Service consists of a work plan, the programme implementation, and an activity report. 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 UNAIR 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 peers learn that for the Bachelor's degree programmes Veterinary Medicine and Dental Medicine international classes exist, which are taught in English so the exchange students can also understand the content of the lectures. These are no English-learning classes but there are "normal" courses that are taught in English to allow the students to better their English language skills and to prepare them for a career in an international surrounding. In the Veterinary Medicine Programme five parallel classes are taught, one of which is taught entirely in English. During the discussions with the students, the peers learn that the students appreciate the international classes and would like to increase them, as well as the use of international English material, especially in the Aquaculture Programme, where no international classes exist as of yet. The peers agree with the students.

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

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

Criterion 1.4 Admission requirements

Evidence:

- Self-Assessment Report
- Curriculum of all three study programmes
- Discussions during the audit

Preliminary assessment and analysis of the peers:
According to the Self-Assessment Report, admission of new students to UNAIR is possible via different modes of entry (national and local university modes). The different modes of entry are designed not only to select the top-quality students from high schools, but also to provide opportunities for high school students from all over Indonesia, especially those from rural areas.

The different modes of entry are:

1. SNMPTN (National Entry Selection of Public Universities), based on academic performance during high school.
2. SBMPTN (Joint Entry Selection of Public Universities), based on a nationwide selection test that is held every year for university candidates.
3. Mandiri Selection (Local admission), these students are selected under special consideration of their education, local origin, social background, achievements in sports or science, and financial means.

Each year, 50% of students are selected through SNMPTN, 15% through SBMPTN and 35% through Mandiri. Prospective students for all three degree programmes must have graduated from the National Education and Examination Unit of SMA/MA/SMK/MAK or an equivalent no more than two years prior the their admission. Students must also be of

great physical and mental health and they must not be acoustically or visually impaired (e.g. have low vision or colour blindness). The peers ask how the physical health of an applicant is determined and also inquire whether it is not discriminatory to ban students with disabilities from studying in these three programmes. The programme representatives reply that colour blindness hinders the study quality of the students to do practical and laboratory work. Still, the peers are of the opinion that colour-blind or otherwise disabled students should not be excluded from studying but that instead measures must be taken to create an environment where all students can prosper.

The peers also inquire about the tuition fee for the three study programmes and learn that the fee is based upon the students' parent's income, so that also students from lower-income families can attend university. Additionally, scholarships are available, especially in emergency situations, where parents suddenly cannot finance their children's' studies anymore. The peers laude this financial scheme.

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:

Objectives and Learning Outcomes

With regard to the intended learning outcomes of the Bachelor's degree programme Aquaculture, the peers had noticed that they relate more to the field of fisheries and marine sciences than aquaculture. In its statement, UNAIR comments that those broader and more generalised ILOs – "mastering the fisheries and marine sciences", "interpreting the policy of fisheries and marine development" and "exhibiting the potencies in the fisheries and marine development" – are social competencies required by the Indonesian Qualification Framework. UNAIR emphasizes that all other ILOs are aquaculture-related. The peers understand that the general objectives are required by the Indonesian Qualification Framework and thus agree that the ILOs for the Bachelor's degree Aquaculture are sufficient.

Curriculum

The peers learn that UNAIR teaches aquaculture-specific topics such as cultivation, shrimp or algae and that these topics are also clearly depicted in the module descriptions. Shrimp cultivation is mentioned, for example, in the module description of the module Brackish Aquaculture Management. Similarly, algae cultivation is depicted in the module description of the course Natural Feed Cultivation. As the module descriptions were only available to the peers during the on-site visit, those examples might have been missed.

UNAIR furthermore points out that some module, for example Brackish Aquaculture Management, involve not only classroom and laboratory work but also field work at aquaculture industries such as the Brackish Water Aquaculture Centre located in Japara as well as shrimp ponds managed by the Shrimp Club Indonesia in Gerokgak Singaraja. In line with their annual evaluation of the curriculum, UNAIR will nonetheless revise its course content and modules.

Degree Awarded

UNAIR provides documentation that clearly delineates that according to the Decree of Minister of Research, Technology and Higher Education of the Republic of Inonesia Number 257/M/KPT/2017, any aquaculture study programme in Indonesia is awarded a Bachelor's Degree of Fisheries (Sarjana Perikanan).

Admission Requirements

UNAIR emphasizes that the university has been equipped with facilities that accommodate accessibility for disabled students, such as lifts, connector buildings, stairs with ramps and wheel chairs. One of the lecturers of the Aquaculture programme has a disability and a graduate from the Aquaculture programme had hearing deficiencies and was provided by the university with hearing aids. The peers recognize that UNAIR puts an effort in accommodating students with disabilities and urge to further these undertakings to support even more students with different disabilities.

The peers regard criterion 1 as fulfilled.

2. The degree programme: structures, methods and implementation

Criterion 2.1 Structure and modules

Evidence:

- Self-Assessment Report
- Curriculum of all three degree programmes
- Study plans of all three degree programmes
- Module Descriptions
- Discussion during the audit

Preliminary assessment and analysis of the peers:
The structures of the Bachelor's degree programme Dental Medicine, the Bachelor's degree programme Veterinary Medicine and the Bachelor's degree programme Aquaculture are very similar, even though Dental Medicine is structured for 7 semesters while Veterinary Medicine and Aquaculture are structured for eight semesters.

In all three study programmes, all students of the same academic year are divided into three classes to make sure that the number of students per class is adequate to enable the learning process. In the Bachelor's degree programme Dental Medicine, around 160 students enrol each year, in the Bachelor's degree programme Veterinary Medicine, 175 students enrol and in the Bachelor's degree programme, 180 students begin their studies each year. With regard to practical classes, such as clinical work, each class is further divided into groups, so that approximately 10-12 students work in one group. A tutor supervises each group, yet the peers believe that it would garner a better learning experience if the groups were to be smaller, so that one tutor can supervise two groups of 5-6 people.

During the courses, the students must take compulsory courses as well as a few elective courses. The compulsory courses include the Community Service and the Bachelor's thesis. The peers inquire why there are so few elective courses and learn that the programme coordinators as well as the stakeholders from the industry are of the opinion that the compulsory courses cover all the necessary knowledge and skills the graduates must have and that they can further specialize in their Master's programme if they wish to continue their studies. During the discussion with the programme coordinators, the peers are also informed that nearly all of the graduates of the Bachelor's Degree programme Dental Medicine and the Bachelor's Degree programme Veterinary Medicine continue with their so-called Professional Degree as they only become dentists and veterinaries once they have also graduates from this programme. As a result, the Bachelor's and the Professional Degree in both medical programmes are "integrated and inseparable." The rate in the Bachelor's degree Aquaculture is much lower, only around 5-10%, as student can already find sufficient employment after graduating with a Bachelor's degree.

After analysing the module descriptions and the study plans the peers confirm that all 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 faculties allows 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 ensure that the intended learning outcomes of the respective degree programme can be achieved.

International Mobility

According to the peers, international mobility, although actively promoted by the programme coordinators, is still very limited. Prolonged study time and financial problems are two contributing factors. UNAIR tries to promote the international mobility by waiving tuition fees during the stay abroad, by providing financial assistance in form of scholarships and by creating exchange programmes, for example with University of Hiroshima in the Bachelor's degree programme Dental Medicine. The peers are glad to learn that UNAIR attracts some international students, mostly from Japan or Malaysia, and that some students spend a few months abroad for an internship in countries such as Thailand, Malaysia or Vietnam. Yet, the numbers remain significantly low in comparison to the high number of students enrolling each year. The respective faculties have recognised that there is a serious need for increasing the academic mobility of their own students and for attracting more international students. The peers support the first steps undertaken (tuition waiver, scholarships and implemented exchange programme), but are convinced that more measures must be implemented in order to support the internationalization of UNAIR. For example, there should be more international classes taught solely in English and more and better-endowed scholarships could be provided for 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 exchange programmes and more scholarships.

The peers appreciate the effort to foster international mobility and support the faculties in further pursuing this path.

Criterion 2.2 Work load and credits

Evidence:

- Self-Assessment Report
- Curriculum of all three study programmes
- Discussions during the audit

Preliminary assessment and analysis of the peers:
According to the Airlangga University Credit Transfer System (ACTS), there are different study load hours to calculate the credits of lecture components or practical work components:

1. One credit of lecture is equivalent to 170 minutes per week of student activity within one semester, which consists of 50 minutes class activity, 60 minutes structures activity and 60 minutes self-independent study

2. One credit of practical work / field work and laboratory work is equivalent to 170 minutes a week of student activity within one semester, which consists of 100 minutes laboratory work / field work and 70 minutes of self-independent study.

There are 16 weeks of academic activity per semester covering 14 weeks of lectures and 2 weeks of examination process. The workload describes the time needed by students to finish a learning activity (such as in-class meetings, seminars, practical work, independent activity, examinations etc.). At UNAIR the workload of each student ranges from 1152 to 2304 hours for one academic year (12 to 24 ACTS per semester). The workload is usually divided into 18 credits per semester. An ECTS credit point is equal to 25-30 hours while an ACTS is equal to 48 hours. The average workload is equivalent to 60 ECTS credits per year, with one ECTS equating 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 peers notice that all three study programmes have the same amount of Indonesian credits (148), yet the Bachelor's degree dental medicine can be finished in 7 semesters, while the Bachelor's degree veterinary medicine and aquaculture is set up for 8 semesters. The curricula of the three study programme are based upon the respective national collegium. The peers learn that students in the later two degree programmes may also finish their studies in 7 semesters. UNAIR provides statistics that show that nearly all students in the medical programmes finish their studies on time, while in the aquaculture programme, around 80% of all students finish their studies without prolongation. The peers are satisfied with this result and agree that all three study programmes can be finished in due time.

Criterion 2.3 Teaching methodology

Evidence:

- Self-Assessment Programme
- Study Plans of the degree programme
- Module Descriptions

Preliminary assessment and analysis of the peers:

The degree programmes under review make use of several different educational methods for each module such as practical laboratory work with presentations, case studies, team projects, lectures, social service, and internship or final thesis.

The overall learning model at UNAIR is aimed at improving the students' competences through discussions, case studies, research tutorials, and lectures. Practical work is designed to impart good laboratory skills and is usually done as a group activity. Some practical works include small research projects. For example in the Veterinary Programme and the Aquaculture Programme, students perform practical works such as handling/preparing samples, and analysing components using various analytical methods.

During the classes, active and interactive teaching methods (e.g. lectures, discussions, reports, presentations, and group work) are applied. UNAIR 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 centered to a student centered learning approach.

To help the students to achieve the intended learning outcome and to facilitate adequate learning and teaching methods UNAIR has developed an e-learning platform. It is a learning management system, designed as a digital platform, where students and teachers can interact and where quizzes and videos are uploaded as well.

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
- Discussions during the audit

Preliminary assessment and analysis of the peers:
UNAIR 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 around 10 students from his classes. He is a student’s first port of call for advice or support on academic or personal matters and should meet his students at least four times per 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 career and skill 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, whom they meet regularly, and that they can always contact their advisor personally and ask for help or advice.

In addition, every student who enrols for the seminar and the thesis courses will be assigned a thesis supervisor. The role of thesis supervisor is to help students to complete their thesis research; they also monitor the progress of the thesis to ensure the completion of the thesis within the intended amount of time. The thesis supervisors should meet their students at least six times per semester. The students are allowed to independently choose their supervisor according to their field of interest. A lecturer can only supervise of 6-12 students at the maximum per year. This limitation is aimed at ensuring that each student receives sufficient guidance from his supervisor. The students confirm towards the peers that they are supervised in the working/research group during their work on the Bachelor's thesis.

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 UNAIR.

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

Amount of Master's Students

UNAIR clarifies in its statement that the rate of 5-10% refers to those Bachelor students, who continue their Master's at UNAIR. Yet, many graduates also continue their study outside UNAIR, for example at Bogor Agricultural Institute (IPB), Universitas Brawijaya (UB) or Gajah Mada University (UMG). Some even choose to study further abroad, for example at Bergen University in Norway, Wageningen Unversity in the Netherlands or Hiroshima University in Japan.

Structure and Modules

The peers learn that with regard to the practical classes in the Bachelor's degree programme Dental Medicine, students are already divided into groups of 5-6 members each and not into groups of 10-12 students. Each group is supervised by one tutor. The peers notice that the groups are small enough to allow for a successful learning environment.

International Mobility

The peers learn that there exist measures to support the internationalization of UNAIR. For example, foreign lecturers are invited as guest lecturers or adjunct professors and inbound-outbound staff programmes have been set up. To increase the number of students going

abroad, the Dental Medicine programme conducts short summer courses in Japan and allows for the community service to be done in other countries. The programme also regularly holds teleconference lectures with universities in Japan, Cambodia and Vietnam. The peers commend UNAIR's efforts towards increasing the international mobility. Yet, they believe that even more can be done to increase the opportunities for students to spend a semester abroad.

The peers assess criterion 2 as mostly fulfilled.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation

Evidence:

- Self-Assessment Report
- Curriculum of the three degree programmes
- Module Descriptions

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 UNAIR's homepage and the digital e-learning platform.

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 "Class Contract", a document the lecturer hands out in the first session of each course and which contains the study plan as well as the exam dates and forms. The final grade is the result of the different activities in the course.

If a student fails an exam in Veterinary Medicine or Dental Medicine, he can repeat the exam in the break between the current and the following semester. In Aquaculture, if a student fails the course, he has to repeat the course again in the following year. The final marks must be uploaded to the Universitas Airlangga Cyber Campus (UACC) within two weeks after the final exam. Subsequently students can view their exam's scores through UACC.

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

As stipulated in the Academic Study Guide, every student is required to do a final thesis in the fourth year of studies. 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. The peers learn that the student meets regularly with the final supervisor to discuss the topic of the thesis and the research development. The students are also encouraged to pick their own research topic for the final thesis. The thesis is usually done parallel to the Community Service in the seventh and eighth semester.

The peers are positively surprised to learn that the final theses are always aimed at being published in international journals. If the theses are not strong enough to be published internationally, they will still be published in national journals. The peers are informed that around 80 theses have so far been published in international journals and are very impressed that the three study programs prepare their students for international publication already at the stage of their Bachelor's degree.

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 standards of the Bachelor's theses.

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

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

The peers regard criterion 3 as fulfilled.

4. Resources

Criterion 4.1 Staff

Evidence:

- Self-Assessment Report
- Research Publications of all three study programmes
- Staff handbook
- Overview of staff exchange
- Lecturer Performance Evaluation
- Discussions during the audit

Preliminary assessment and analysis of the peers:
At UNAIR, 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 staff of the Bachelor's degree programme Dental Medicine is composed of 17 Professors, 72 staff members with a doctoral degree that act as assistant professors and lecturers, as well as 46 staff members with a Master's degree, serving as lecturers and tutors. For the Bachelor's degree programme Veterinary Medicine, there are 26 Professors, 76 staff members with a doctoral degree and 34 with a Master's Degree. For the Bachelor's degree programme Aquaculture, the staff is composed of 3 Professors, 9 staff members with a doctoral degree as well as 17 staff members with a Master's Degree. The ratio of lecturers to students is 1:16, 1:14 and 1:25 for the Dental Medicine, Veterinary Medicine and Aquaculture programmes respectively. Because the ratio of staff to student is comparably high in the Aquaculture programme, the peers ask if there are sufficient teachers available for all students. The members of staff as well as the students explain that for the Aquaculture Programme, group sizes can be larger than in the medical programmes as they do not require work with patients or in the hospitals.

In order to broaden the students' horizon, especially in the field of research and current developments, guest lectures and researchers from both Indonesia and overseas are regularly invited. The peers learn that the number of visiting professors depends on the policy of each faculty but there exist a minimum of 3 positions for them. The study programmes

also regularly invite guest lecturers from the industry to teach the students about the newest developments in their respective economic fields. Visiting scholars can be recruited for one year or for three months, depending on the contract.

During the discussion with the programme coordinators the peers learn that UNAIR has a semi-autonomous status, which allows them to recruit their own staff members. However, the Indonesian Ministry of Higher Education still decides how many new staff members can be hired every year. The staff members are in general satisfied with the existing opportunities for pursuing their research interests. International publications are the goal and the key performance indicator for evaluating the research quality of the teachers. UNAIR tries to promote this by offering financial incentives and by providing additional means for upgrading the technical equipment and the facilities.

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 UNAIR. For this reason, they recommend also hiring new staff members that graduated from other universities. At least UNAIR should make sure that the staff members spent some time abroad or at another Indonesian university after their graduation from UNAIR before hiring them permanently, for example by sending them abroad for doing a PhD.

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
- Research Publications of all three study programmes
- Staff handbook
- Overview of staff exchange
- Lecturer Performance Evaluation
- Discussions during the audit

Preliminary assessment and analysis of the peers:
UNAIR encourages the training of its academic staff so it has developed a programme for improving the didactic abilities and teaching methods. According to the Self-Assessment Report, lecturers are provided with pedagogical training and development programmes such as PEKERTI, particularly for junior lecturers, and Applied Approach (AA) for both junior and senior lecturers. Those programmes are facilitated by the Centre for Innovation in Learning and Certification (PIPS), which also provides trainings for e-learning and teaching material writing programmes.

The development of academic staff is also achieved through trainings in both Indonesian universities and abroad and members of the teaching staff, who are conducting a PhD abroad. The departments and faculties facilitate the staff development by enabling them to participate in national and international seminars and conferences. The staff exchange program is supported by each faculty and funded by UNAIR and the Indonesian Ministry of Research, Technology and Higher Education. In addition, senior lecturers are required to mentor and train newly recruited staff members in the areas of teaching and research.

The peers learn that all lecturers have life-long contract. They also recognized that the professors are very satisfied with the time they have to conduct their own research and that many research projects are ongoing or anticipated for the near future.

In summary, the auditors confirm that UNAIR 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 and seminar rooms

Preliminary assessment and analysis of the peers:
During the audit, the peer group also visits the laboratories and the classrooms in order to assess the quality of the infrastructure and the technical equipment. They notice that there are no severe bottlenecks due to missing equipment or a lacking infrastructure.

With respect to the laboratories and facilities of all three study programmes, the peers notice that there are enough workspaces, enough laboratories as well as an attached dental hospital and a veterinary clinic. All laboratories are equipped with modern and sophisticated instruments to accommodate the needs of the students in conducting the practical

tasks of each course as well as their own individual research. Each laboratory has the capacity to accommodate up to 40-50 students and holds enough equipment for each student to participate sufficiently in class.

The peers notice that all laboratories also adhere to international safety standards and are, where necessary, equipped with safety showers, eye showers, portable fire extinguishers, special containers to keep hazardous and toxic materials, as well as different bins for medical and non-medical waste.

The peers are especially impressed with the two hospitals, the dental clinical and the veterinary clinic, which offer the students the opportunity to gain hands-on experience as well as interpersonal skills with their patients. The peers inquire into the funding for the study programmes and learn that the programmes are financed through government funding and tuition fees and that both staff and students are very satisfied with their equipment and laboratory spaces. For the Bachelor's degree programme Veterinary Medicine, however, the peers believe that the purchase of a gel documentation system will support the students' documentation of their research results. For the Bachelor's degree programme Dental Medicine, the peers recommend the university to obtain more dummies and mannequins for intra-oral work, more microscopes for pathological work, and more material basis to learn all procedures for radiography. Furthermore, restorative dentistry and endodontology should not only be taught with models of teeth but with extracted natural teeth to increase the understanding of the students. Additionally, the peers believe that including 3D-scanning for electronic utilization and computerized treatment system will aid UNAIR's goal of offering the best dental medicine programme in Indonesia. The basis for e-learning and electronic search of literature should be improved step by step.

In summary, the peers agree that the facilities of all three study programmes are adequate to allow students to reach the intended learning outcomes and to gain the necessary skills and qualifications for a successful career after graduation.

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

Staff

UNAIR clarifies that while many academic staff members have obtained their Bachelor's degree from UNAIR, Universitas Airlangga has a policy that all junior lecturers must obtain their PhD abroad. At present, lecturers are completing their PhDs in Japan, Thailand and Taiwan. The peers acknowledge that UNAIR supports the mobility of its staff members. Yet, the peers recommend to also hire professors and lecturers that have not graduated from UNAIR.

Funds and Equipment

The peers learn that the funding for a gel documentation has been allocated in the current budget year and will be ordered in the upcoming semester. Furthermore, the dental medicine programme has already ordered more mannequin and dummies, microscopes as well as extracted natural teeth. The latter will be used in endodontic practical work. A 3D-Scanner is also planned to be purchased this year. The peers are impressed with these plans hope to see the equipment purchased soon.

The peers regard criterion 4 as fulfilled.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Self-Assessment Report
- Module Descriptions

Preliminary assessment and analysis of the peers:
The module descriptions are published on UNAIR's website in both Bahasa Indonesia and English so that students and stakeholders can access them at anytime.

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

Only for the Bachelor's degree programme Aquaculture, the descriptions of the module's contents must be stated more precisely and more detailed as they are currently too vague and do not convey a specific image of the topics and skills taught. Furthermore, the peers also recommend updating the bibliographic references in the module descriptions because some of the mentioned books and papers are more than 30 years old.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report
- Sample Transcript of Record of each degree programme

- Sample Diploma Supplement 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.

Criterion 5.3 Relevant rules

Evidence:

- Self-Assessment Report
- Website of UNAIR: http://www.unair.ac.id/?lang=en

The auditors confirm that the rights and duties of both UNAIR 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 including at the beginning of each semester.

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

The peers are informed that the curriculum and module handbook of the Aquaculture study programme will be evaluated to follow up the inputs from ASIIN and other external stakeholders. With regard to the outdated literature references in the module descriptions, the peers learn that modern textbooks are used; however, this has not been depicted in the module descriptions but will be done so in line with the general revision of the module descriptions.

The peers regard criterion 5 as partially not fulfilled.

6. Quality management: quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the peers:
The auditors discuss the quality management system at UNAIR 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 is conducted at the university level by the Quality Assurance Board (BPM), which is supported by the Quality Assurance Units at the faculty level (SPM) and the degree programme level (GPM).

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 e-learning platform. 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 complaint box for the students that can be used for suggestions or criticism. The auditors gain the impression that the faculties take the students' feedback seriously and changes are made if there is negative feedback.

External quality assessment of the degree programmes is provided by the National Accreditation Agency for Higher Education (BAN-PT) every five years. This national standard of higher education was designed to encourage educational institutions to improve their performance in providing quality education services. Moreover, the objective of this standard

is to support transparency and accountability in the implementation of national education system. Additionally, all three study programmes have also been certified by the ASEAN University Network Quality Assurance (AUN-QA).

The peers discuss with the representatives of UNAIR'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.

During the discussion with the programme coordinators, the peers also learn that alumni are regarded the highest capital of UNAIR as they mark a link between the university and the economic world, especially since the alumni are distributed in various places within Indonesia or other countries. To hold contact with the alumni, UNAIR has created a mobile app that 128.000 alumni have joined so far. Students as well as alumni state that they are involved in biannual meetings with the dean who is very open to suggestions or improvements.

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 regard criterion 6 as 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:

D 1. Contract with Hiroshima University for the joint study programme of Bachelor Dental Medicine.
D 2. Study plan of the joint international degree Bachelor of Dental Medicine at Hiroshima University
D 3. Examples of exams and quizzes
D 4. Dates when the study programmes were first offered
D 5. Related documents or decree about government's regulation awarding the name of the Aquaculture Degree Programme in Indonesia

E Comment of the Higher Education Institution (03.05.2019)

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

- Basic Agreement of International Exchange Programme between Faculty of Dentistry, Airlangga University and Faculty of Dentistry, Hiroshima University
- Study Plan of Joint International Dental Course
- Application for Admission to the Joint International Dental Course
- Example of Mid-Term Evaluation for the Aquaculture degree programme
- Examples of quizzes and exams for the Dental Medicine degree programme

F Summary: Peer recommendations (21.05.2019)

Taking into account the additional information and the comments given by UNAIR 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 accreditaiton
Ba Dental Medicine	Without requirements	/	30.09.2024
Ba Veterinary Medicine	Without requirements	/	30.09.2024
Ba Aquaculture	With requirements for one year	/	30.09.2024

Requirements

For the Bachelor's degree programme Aquaculture

A 1. (ASIIN 5.1) The module descriptions must be rewritten so as to include precise information about the content of each module.

Recommendations

For all degree programmes

E 1. (ASIIN 2.1) It is recommended to increase the opportunities for students to study abroad.

E 2. (ASIIN 1.4) It is recommended to allow students with colour-blindness and other disabilities to also attend the study programmes.

For the Bachelor's degree programme Aquaculture

E 3. (ASIIN 2.1) It is recommended to increase the proportion of teaching in English language.

E 4. (ASIIN 5.1) It is recommended to update the list of literature in the module descriptions to reflect more modern works.

For the Bachelor's degree programme Dental Medicine

E 5. (ASIIN 4.3) It is recommended to constantly update the laboratory equipment.

For Bachelor's degree programmes Aquaculture and Veterinary Medicine

E 6. (ASIIN 4.3) It is recommended to provide a gel documentation system.

For the Bachelor's degree programme Veterinary Medicine

E 7. (ASIIN 2.3) It is recommended to reduce the number of students in the microbiological classes so that each student has enough time for sufficient learning

G Comment of the Technical Committees

Technical Committee 08- Agriculture, Nutritional Sciences and Landscape Architecture (19.06.2019)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the procedure and generally agrees with the assessment of the peers.

The Technical Committee 8 – Agriculture, Nutritional Sciences and Landscape Architecture recommends the award of the seal as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Aquaculture	With requirements for one year	/	30.09.2024

Technical Committee 10- Life Sciences (13.06.2019)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the procedure and generally agrees with the assessment of the peers.

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

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Dental Medicine	Without requirements	/	30.09.2024
Ba Veterinary Medicine	Without requirements	/	30.09.2024

H Decision of the Accreditation Commission (28.06.2019)

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

The Accreditation Commission for Degree Programmes discusses the procedure and agrees with the assessment of the peers and the involved technical committees.

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

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Dental Medicine	Without requirements	/	30.09.2024
Ba Veterinary Medicine	Without requirements	/	30.09.2024
Ba Aquaculture	With requirements for one year	/	30.09.2024

Requirements

For the Bachelor's degree programme Aquaculture

A 1. (ASIIN 5.1) The module descriptions must be rewritten so as to include precise information about the content of each module.

Recommendations

For all degree programmes

E 1. (ASIIN 2.1) It is recommended to increase the opportunities for students to study abroad.

E 2. (ASIIN 1.4) It is recommended to allow students with colour-blindness and other disabilities to also attend the study programmes.

For the Bachelor's degree programme Aquaculture

E 3. (ASIIN 2.1) It is recommended to increase the proportion of teaching in English language.

E 4. (ASIIN 5.1) It is recommended to update the list of literature in the module descriptions to reflect more modern works.

For the Bachelor's degree programme Dental Medicine

E 5. (ASIIN 4.3) It is recommended to constantly update the laboratory equipment.

For the Bachelor's degree programmes Aquaculture and Veterinary Medicine

E 6. (ASIIN 4.3) It is recommended to provide a gel documentation system.

For the Bachelor's degree programme Veterinary Medicine

E 7. (ASIIN 2.3) It is recommended to reduce the number of students in the microbiological classes so that each student has enough time for sufficient learning

I Fulfilment of Requirements (26.06.2020)

Analysis of the peers and the Technical Committee (17.06.2020)

For all degree programmes

A 1. (ASIIN 5.1) The module descriptions must be rewritten so as to include precise information about the content of each module.

Initial Treatment	
Peers	fulfilled Justification: In general, the module descriptions are much better than their previous version and include all necessary information. As the English translations are sometimes a bit confusing, it would be helpful if – in preparation for reaccreditation – those descriptions were to be carefully re-examined and corrected.
TC 08	fulfilled Vote: unanimous Justification: The technical committee follows the assessment of the peers.

Decision of the Accreditation Commission (26.06.2020)

Degree programme	**ASIIN-label**	**Subject-specific label**	**Accreditation until max.**
Ba Aquaculture	All requirements fulfilled	/	30.09.2024

Appendix: Programme Learning Outcomes and Curricula

According to Curriculum Document the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Dental Medicine:

The graduates of the Dental Medicine Programme UNAIR are expected to have the following competencies:

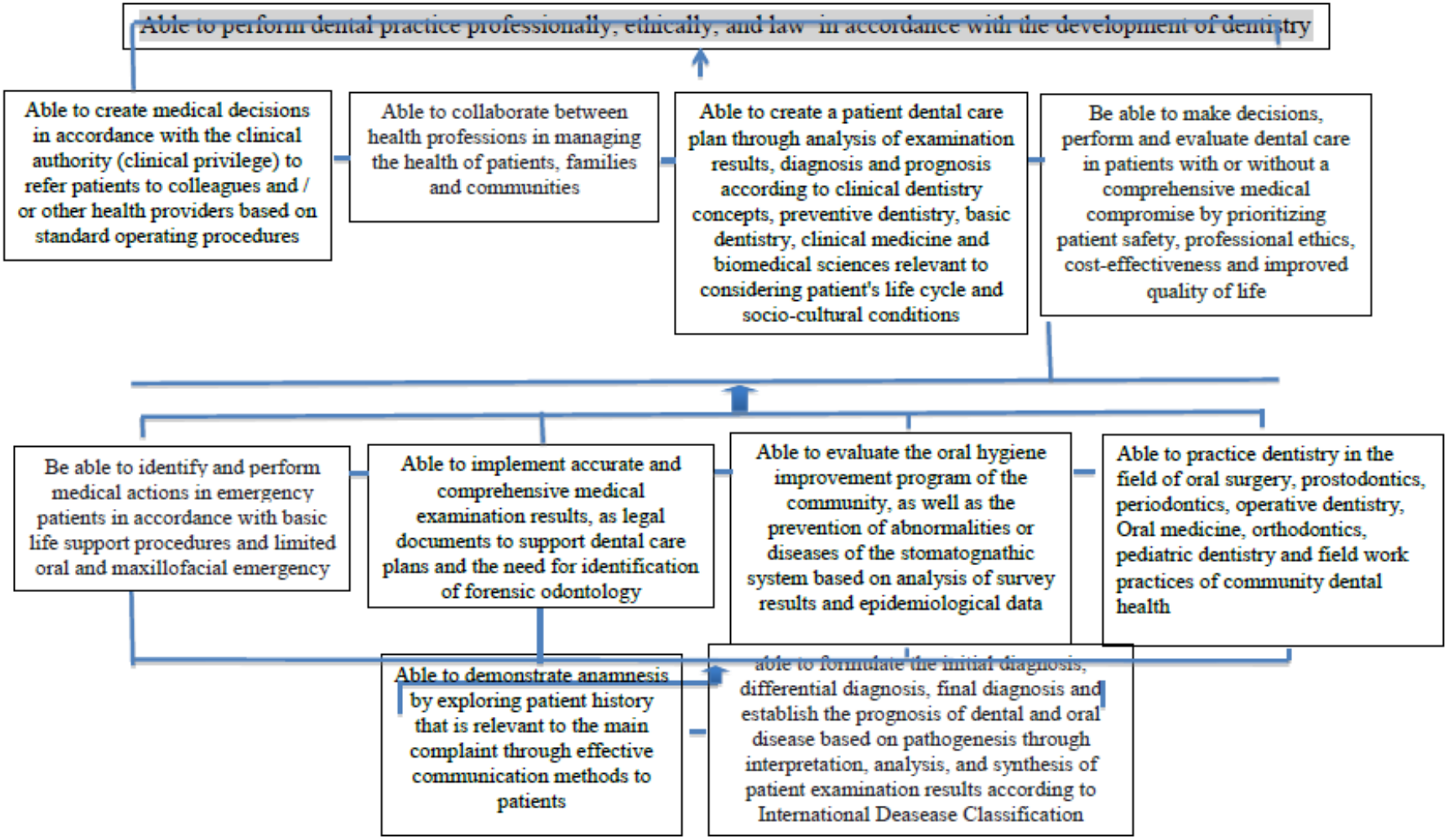
LO1: Able to understand the basic principles and applied basic medical science and basic social science to support dentistry

LO2: Able to apply basic medical science, clinical medicine, basic dental science, and clinical dental science to solve problems on dental cases

LO3: Able to demonstrate general physical examination and stomatognathic system examination, establishing diagnosis, and formulating treatment plans in order to achieve excellent oral and dental health through promotive actions, preventive actions, curative actions, and rehabilitative actions towards mannequin or simulation patient

LO4: Able to perform dental research as the application of scientific methods and disseminate the results according to the rules of science

UNAIR also provides an analysis of the competences gained by the students (s. following page).


Able to perform dental practice professionally, ethically, and law in accordance with the development of dentistry
Able to create medical decisions in accordance with the clinical authority (clinical privilege) to refer patients to colleagues and / or other health providers based on standard operating procedures
Able to collaborate between health professions in managing the health of patients, families and communities
Able to create a patient dental care plan through analysis of examination results, diagnosis and prognosis according to clinical dentistry concepts, preventive dentistry, basic dentistry, clinical medicine and biomedical sciences relevant to considering patient's life cycle and socio-cultural conditions
Be able to make decisions, perform and evaluate dental care in patients with or without a comprehensive medical compromise by prioritizing patient safety, professional ethics, cost-effectiveness and improved quality of life
Be able to identify and perform medical actions in emergency patients in accordance with basic life support procedures and limited oral and maxillofacial emergency
Able to implement accurate and comprehensive medical examination results, as legal documents to support dental care plans and the need for identification of forensic odontology
Able to evaluate the oral hygiene improvement program of the community, as well as the prevention of abnormalities or diseases of the stomatognathic system based on analysis of survey results and epidemiological data
Able to practice dentistry in the field of oral surgery, prostodontics, periodontics, operative dentistry, Oral medicine, orthodontics, pediatric dentistry and field work practices of community dental health
Able to demonstrate anamnesis by exploring patient history that is relevant to the main complaint through effective communication methods to patients
able to formulate the initial diagnosis, differential diagnosis, final diagnosis and establish the prognosis of dental and oral disease based on pathogenesis through interpretation, analysis, and synthesis of patient examination results according to International Deasease Classification

The following **curriculum** is presented:

Courses (Compulsory and Electives)	Credit (sks)	Credit (%)	ECTS
Academic Program/ Bachelor degree			
A. General Scientific Skill	57	38,51	86.13
B. Specific Scientific Skill	89	60,13	134.48
C. Elective studies	2	1,36	3,02
Total	**148**	100	**223,63**
Profession Program/Professional degree			
Specific Scientific Skill	36	100	**54,40**

No	Course Code	General Scientific Skills	Year	Semester	Credit	ECTS
1	AGI101	Islamic I	1	1	2	3.02
	AGB101	Buddhism I				
	AGK101	Catholicism I				
	AGP101	Christianity I				
	AGH101	Hindism I				
	AGC101	Confucianism I				
2	NOP104	Civics Education	1	1	2	3.02
3	NOP103	Pancasila	1	1	2	3.02
No	Course Code	General Scientific Skills	Year	Semester	Credit	ECTS
4	PHG101	Philosophy	1	1	2	3.02
5	ETH103	Legal ethics & Medicolegal ethics	1	1	2	3.02
6	BAI101	Indonesian language	1	1	2	3.02

7	BIA103	Anatomy I	1	1	1	1.51
8	BIA201	Laboratory Work of Anatomy I	1	1	1	1.51
9	BIF103	Physiology I	1	1	2	3.02
10	BIK 103	Biochemistry I	1	2	2	3.02
11	BIA 104	Anatomy II	1	2	1	1.51
12	BIA 203	Laboratory Work of Anatomy II	1	2	1	1.51
13	BIH103	Histology	1	2	2	3.02
14	BIH104	Laboratory Work of Histology	1	2	1	1.51
15	BIF 202	Physiology II	1	2	2	3.02
16	BIF 203	Laboratory Work of Physiology	1	2	1	1.51
17	BIM 101	Microbiology	1	2	2	3.02
18	PSG 201	Psychology	1	2	1	1.51
19	BIM 208	Parasitology	2	3	1	1.51
20	BIM 210	Laboratory Work of Parasitology	2	3	1	1.51
21	BIK 202	Biochemistry II	2	3	1	1.51
22	BIK 203	Laboratory Work of Biochemistry	2	3	1	1.51
23	BIM 102	Laboratory Work of Microbiology	2	3	1	1.51
24	FAT 202	Pharmacology and Therapeutics I	2	3	2	3.02
25	FAT 203	Laboratory Work of Pharmacology and Therapeutics	2	3	1	1.51
26	KDJ 301	Psychiatry	2	3	1	1.51
27	KDS 304	Dermatology & venereal	2	4	1	1.51
28	FAT 303	Pharmacology and Therapeutics II	2	4	2	3.02
29	KDA 202	Anesthesiology & Reanimation	2	4	1	1.51
30	KDD 303	Internal Medicine	2	4	2	3.02
31	KDK 203	Clinical Pathology	2	4	2	3.02
32	KDK 204	Laboratory Work of Clinical Pathology	2	4	1	1.51
33	KDP 301	Pediatrics	2	4	1	1.51
No	Course Code	General Scientific Skills	Year	Semester	Credit	ECTS
34	KDN 303	Neurology	2	4	1	1.51
35	KDB 301	Surgery	3	5	2	3.02
36	KME 202	Research methodology and statistics	3	5	2	3.02
37	AGI 401	Islamic II	3	5	2	3.02
38	AGB 401	Buddhism II				

	AGK 401	Catholicism II				
	AGP 401	Christianity II				
	AGH 401	Hindism II				
	AGC 401	Confusianism II				
39	KDT 404	Otholaryngology	3	5	1	1.51
40	KDE 403	Opthalmology	3	5	1	1.51
		Sub Total			57	86.13

No	Course Code	Specific Scientific Skills	Year	Semester	Credit	ECTS
41	KGM101	Dental materials I	1	1	2	3.02
42	KGI101	Modul I/ Critical Thinking and Evidence- Based Learning	1	1	2	3.02
43	SOA 324	Dental Anthropology	1	2	1	1.51
44	KGM 103	Dental materials II	1	2	2	3.02
45	KGM 102	Laboratory Work of Dental materials I	1	2	1	1.51
46	KGI 103	Modul II/ Interpersonal Communication and Basic Techniques Interviews	1	2	2	3.02
47	KGI105	Skills Lab I/ Wax Carving, Determination of Human Teeth	1	2	1	1.51
48	LKM 108	Dental Public Health I/ Environmental Health Sciences	2	3	1	1.51
49	KDK 218	Oral & Maxillofacial Pathology	2	3	2	3.02
50	KDK 219	Laboratory Work of Oral & Maxillofacial Pathology I	2	3	1	1.51
51	KGM 201	Laboratory Work of Dental Materials II	2	3	1	1.51
52	BIO 203	Oral Biology I	2	3	1	1.51
53	BIO 204	Laboratory Work of Oral Biology I	2	3	1	1.51
No	**Course Code**	**Specific Scientific Skills**	**Year**	**Semester**	**Credit**	**ECTS**
55	KGI 106	*Modul III/ Holistic Approach Human and Enviroment*	2	3	2	3.02

56	KGI 121	Skills Lab II/ The Making of Removable Orthodontic Appliance (Impression technique, Orthodontic Appliance)	2	3	2	3.02
57	BIO 301	Oral Biology II	2	4	1	1.51
58	BIO 302	Laboratory Work of Oral Biology II	2	4	1	1.51
59	KDY 204	Odontology Forensic	3	4	2	3.02
60	KDK 211	Laboratory Work of Oral & Maxillofacial Pathology II	3	4	1	1.51
61	KMD 202	Dental Public Health II/ Basic Science of Epidemiology & Surveillanc	3	4	2	3.02
62	KDR 201	Dental Radiology I	3	4	1	1.51
63	KGI 122	Modul IV/Temporo Mandibular Disorder	3	4	2	3.02
64	KGI 207	Skills Lab III/ The making of Removable Denture and Partial Denture	3	4	4	6.04
65	KGA 301	Pediatrics Dentistry I	3	5	1	1.51
66	KDY 205	Laboratory work of Odontology Forensic	3	5	1	1.51
67	KMP 302	Dental Public Health III/ Health Sciences Prevention & Nutrition	3	5	1	1.51
68	KDR 302	Dental Radiology II	3	5	1	1.51
69	KGP 301	Periodontics I	3	5	2	3.02
70	KGK 201	Operative Dentistry I	3	5	1	1.51
71	KNG 401	Community Service Program (KKN)	3	5	3	4.53
72	KGI 201	Modul V/ Infectious Diseases	3	5	2	3.02
73	KGI 208	Skills Lab IV /Tooth Preparation (Cavity and Root Canals Preparation of Permanent Tooth, Cavity Preparation of Deciduous Tooth, Tooth Preparation for Dental Bridge Abutment)	3	5	2	3.02
74	KGT 301	Prosthodontics I	3	6	2	3.02
No	**Course Code**	**Specific Scientific Skills**	**Year**	**Semester**	**Credit**	**ECTS**

75	KGT 402	Prosthodontics II	3	6	2	3.02
76	KGB 303	Oral and Maxillofacial Surgery I	3	6	2	3.02
77	KGD 301	Oral Medicine I	3	6	1	1.51
78	KMP 306	Dental Public Health / Behavioral Science & Health Promotion	3	6	1	1.51
79	KGP 302	Periodontics II	3	6	1	1.51
80	KGK 301	Operative Dentistry II	3	6	1	1.51
81	KGA 302	Pediatrics Dentistry II	3	6	2	3.02
82	KGO 301	Orthodontics I	3	6	2	3.02
83	PNG 498	Thesis Proposal	3	6	2	3.02
84	KGI 204	Modul VI/ Non Infectious desease	3	6	2	3.02
85	KGI 305	*Skills Lab* V/ Case Management of Hard Tissue and Soft Tissue in the Oral Cavity (Anamnesis, Oral Medicine, Periodontics and Dental Radiology Interpretation)	3	6	2	3.02
86	KGB 304	Oral and Maxillofacial Surgery II	4	7	2	3.02
87	KMA 403	Dental Public health V/ Health Policy Administration and Planning	4	7	1	1.51
88	KGD 401	Oral Medicine II	4	7	2	3.02
89	KGK 302	Operative Dentistry III	4	7	2	3.02
90	KGT 402	Prosthodontics III	4	7	2	3.02
91	KGO 401	Orthodontics II	4	7	2	3.02
92	KGI 307	Micropracticing	4	7	1	1.51
93	KGI 301	Module 7/ Integrated clinical case management in dentistry	4	7	2	3.02
94	PNG 499	Thesis	4	7	2	3.02
95	KGI 306	*Skills Lab* VI: Basic Management of minor Surgery (Suturing, Vital Sign Examination, Local Anasthesia, Exodontia, Splinting)	4	7	3	4.53
		Sub Total			**89**	**134.48**

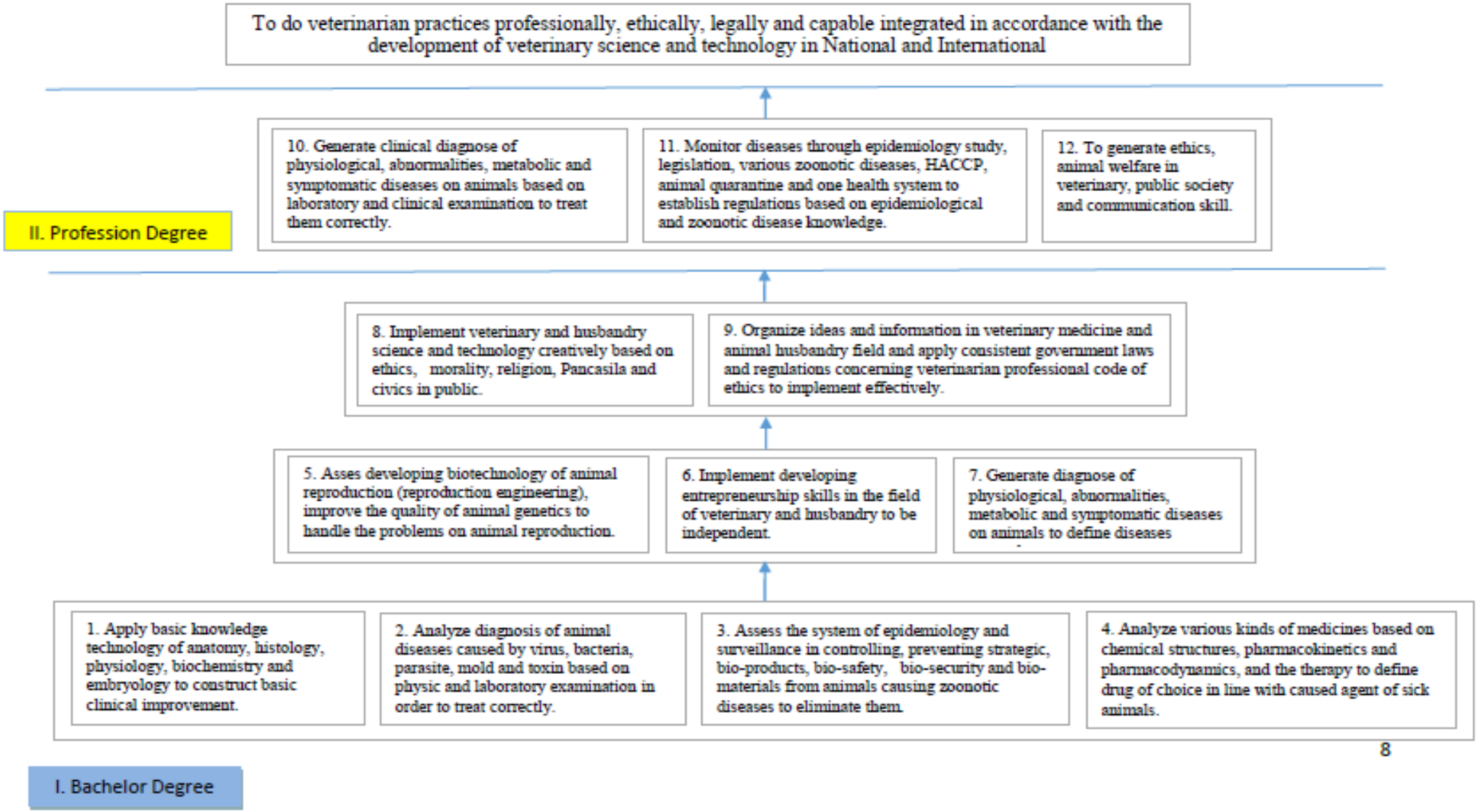
No	Course Code	Elective Scientific Skills	Year	Semester	Credit	ECTS
96	PNG 491	Basic Research	4	7	2	3.02
97	MNS 406	Management of Dentistry Practice				
98	KGI 402	Advanced Clinical Dentistry				
		Sub Total			**2**	**3.02**

According to Curriculum Document the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Veterinary Medicine:

The graduates of Veterinary Medicine Education Programme are expected to have the following competencies:

Specialized Competences	
LO 1	Apply basic knowledge technology of anatomy, histology, physiology, biochemistry and embryology to construct basic clinical improvement
LO 2	Analyze diagnosis of animal diseases caused by virus, bacteria, parasite, mold & toxin based on physic and laboratory examination in order to treat correctly
LO 3	Assess the system of epidemiology and surveillance in controlling, preventing strategic, bio-products, bio-safety, bio-security and bio-materials from animals causing zoonotic diseases to eliminate them
LO 4	Analyze various kinds of medicines based on chemical structures, pharmacokinetics, and pharmacodynamics, and the therapy to define drug of choice in line with caused agent of sick animals
LO 5	Asses developing biotechnology of animal reproduction (reproduction engineering), improve the quality of animal genetics to handle the problems on animal reproduction
LO 6	Implement developing entrepreneurship skills in the field of veterinary and husbandry to be independent
LO 7	Generate diagnose of physiological, abnormalities, metabolic and symptomatic diseases on animals to define diseases correctly

Social Competences	
LO 8	Implement veterinary and husbandry science and technology creatively based on ethics, morality, religion, Pancasila and civics in public
LO 9	Organize ideas and information in veterinary medicine and animal husbandry field and apply consistent government laws and regulations concerning veterinarian professional code of ethics to be implemented effectively.


To do veterinarian practices professionally, ethically, legally and capable integrated in accordance with the development of veterinary science and technology in National and International
II. Profession Degree
10. Generate clinical diagnose of physiological, abnormalities, metabolic and symptomatic diseases on animals based on laboratory and clinical examination to treat them correctly.
11. Monitor diseases through epidemiology study, legislation, various zoonotic diseases, HACCP, animal quarantine and one health system to establish regulations based on epidemiological and zoonotic disease knowledge.
12. To generate ethics, animal welfare in veterinary, public society and communication skill.
8. Implement veterinary and husbandry science and technology creatively based on ethics, morality, religion, Pancasila and civics in public.
9. Organize ideas and information in veterinary medicine and animal husbandry field and apply consistent government laws and regulations concerning veterinarian professional code of ethics to implement effectively.
5. Asses developing biotechnology of animal reproduction (reproduction engineering), improve the quality of animal genetics to handle the problems on animal reproduction.
6. Implement developing entrepreneurship skills in the field of veterinary and husbandry to be independent.
7. Generate diagnose of physiological, abnormalities, metabolic and symptomatic diseases on animals to define diseases
1. Apply basic knowledge technology of anatomy, histology, physiology, biochemistry and embryology to construct basic clinical improvement.
2. Analyze diagnosis of animal diseases caused by virus, bacteria, parasite, mold and toxin based on physic and laboratory examination in order to treat correctly.
3. Assess the system of epidemiology and surveillance in controlling, preventing strategic, bio-products, bio-safety, bio-security and bio-materials from animals causing zoonotic diseases to eliminate them.
4. Analyze various kinds of medicines based on chemical structures, pharmacokinetics and pharmacodynamics, and the therapy to define drug of choice in line with caused agent of sick animals.
8
I. Bachelor Degree

The following curriculum is presented:

No	Course code	General Scientific Skills	Year	Semester	Credit	ECTS
1	AGI601	Religion (Islam) I	1	1	2	3.2
	AGP101	Religion (Protestantism) I				
	AGK101	Religion (Catholicism) I				
	AGH101	Religion (Hinduism) I				
	AGB101	Religion (Buddhism) I				
	AGC101	Religion (Confucianism) I				
2	NOP101	Civics Education	1	1	2	3.2
3	SOP101	Pancasila (State of Ideology)	1	1	2	3.2
4	BAE120	Indonesian Language	1	1	2	3.2
5	BIA101	Veterinary Anatomy I (Basic of osteology, myology, neurology, angiology, splanchnology)	1	1	3	4.8
6	BIK101	Veterinary Biochemistry I	1	1	3	4.8
7	BIK102	Veterinary Biochemistry II (practical)	1	1	1	1.6
8	BIP101	Veterinary Embryology	1	1	2	3.2
9	KHR101	Introduction to Veterinary Science	1	1	2	3.2
10	KHU101	Veterinary Physiology I	1	2	3	4.8
11	KHU102	Veterinary Physiology II (practical)	1	2	1	2.6
12	BIA201	Veterinary Anatomy II (topography anatomy of head, neck, cranial and caudal extremities, and abdominal)	1	2	3	4.8
13	BIA 102	Veterinary Histology I	1	2	2	3.2
14	BIA 104	Veterinary Histology II (practical)	1	2	2	3.2
15	PHH101	Philosophy of Science	1	2	2	3.2
16	BIA301	Veterinary Anatomy III (Anatomy capita selecta: Sensoric organs, poultry anatomy and applied anatomy cases)	2	3	2	3.2
17	FAT401	Veterinary Pharmacology	2	3	3	4.8
18	BIM105	Veterinary Microbiology I (Bacteriology and Mycology)	2	3	3	4.8
19	BIM201	Veterinary Microbiology II (Virology)	2	3	2	3.2
20	BIM204	Veterinary Parasitology	2	3	2	3.2
21	PNH496	Integrated Research Methodology I	2	4	2	3.2
22	PNH497	Integrated Research Methodology II	3	5	2	3.2
23	KKV420	KKN-BBM (fieldwork)	3	5	3	4.8
24	AGI401	Religion (Islam) II	3	6	2	3.2
	AGP401	Religion (Protestantism) II				
	AGK401	Religion (Catholicism) II				
	AGH401	Religion (Hinduism) II				
	AGB401	Religion (Buddhism) II				
	AGC401	Religion (Confucianism) II				
25	MNW101	Entrepreneurship	3	6	2	3.2
26	KLV301	Veterinary Counceling	3	6	2	3.2
27	HKD102	Veterinary Legislation	3	6	2	3.2
		Subtotal				94.4

No	Course code	Specific Scientific Skills	Year	Semester	Credit	ECTS
1	NUV101	Animal Feed and Nutrition Science	1	2	2	3.2
2	KHR102	Ruminant Science	1	2	2	3.2
3	KHR 103	Poultry and Non-ruminant sciences	2	3	2	3.2
4	KHT301	Animal Feed Technology	2	3	3	4.8
5	BIG102	Animal Genetics	2	3	2	3.2
6	FAT402	Veterinary Pharmacotherapy and Toxicology	2	4	3	4.8
7	KHD201	Infectious Disease I (Bacterial and fungal diseases)	2	4	3	4.8
8	KHD202	Infectious Disease II (Viral disease)	2	4	3	4.8
9	KHU103	General Veterinary Pathology	2	4	3	4.8
10	BIR 201	Physiology and Technology of Reproduction I	2	4	3	4.8
11	BIR102	Physiology and Technology of Reproduction II (practical)	2	4	1	1.6
12	KHD205	Parasitic Disease	2	4	3	4.8
13	KHD401	Veterinary Clinical Diagnosis	3	5	3	4.8
14	KHD303	Poultry Health Management	3	5	2	3.2
15	FAF300	Veterinary Pharmacy Science	3	5	3	4.8
16	KHU104	Veterinary Systemic Pathology	3	5	3	4.8
17	KMV301	Veterinary Public Health I (Meat, egg and fish hygiene)	3	5	2	3.2
18	MNG401	Hazard Analysis and Critical Control Points	3	5	2	3.2
19	KHD304	Aquatic Animal Health Science/Diseases	3	5	2	3.2
20	KMV302	Veterinary Public Health II (Milk hygiene)	3	6	2	3.2
21	KHB401	Veterinary General Surgery (Pre- peri- and post surgery)	3	6	2	3.2
22	KHD301	Veterinary Internal Medicine I (Large animals)	3	6	2	3.2
23	KHD302	Zoonosis	3	6	2	3.2
24	FIN401	Radiology	3	6	2	3.2
25	BII101	Immunology	3	6	2	3.2
26	MNH401	Management of Experimental Animals	3	6	2	3.2
	MNS401	Health Management of Dairy Cattle				
	MNS402	Management of Horses, Dogs and Cats				
27	KHD402	Veterinary Internal Medicine II (Small animals)	4	7	3	4.8
28	LKM405	Environmental Health	4	7	2	3.2
29	KHB402	Veterinary Special Surgery (Applied surgery)	4	7	3	4.8

30	KHU401	Veterinary Clinical Pathology	4	7	3	4.8
31	KHO401	Obstetrics and Infertility I	4	7	3	4.8
32	KHO402	Obstetrics and Infertility II (practical)	4	7	2	3.2
33	KME417	Veterinary Epidemiology and Economics	4	7	2	3.2
34	LKM106	Wild Animal	4	7	2	3.2
	PKA401	Veterinary Acupuncture				
	KUH401	Veterinary Forensic				
	KHL421	Bioproduct, Biosafety and Biosecurity				
35	PNH498	Seminar	4	8	3	4.8
36	PNH499	Thesis	4	8	5	7.9
		Subtotal				142.3
		TOTAL			148	236.7

According to Curriculum Document the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Aquaculture:

The graduates of Aquaculture Study Programme are expected to have the following competences:

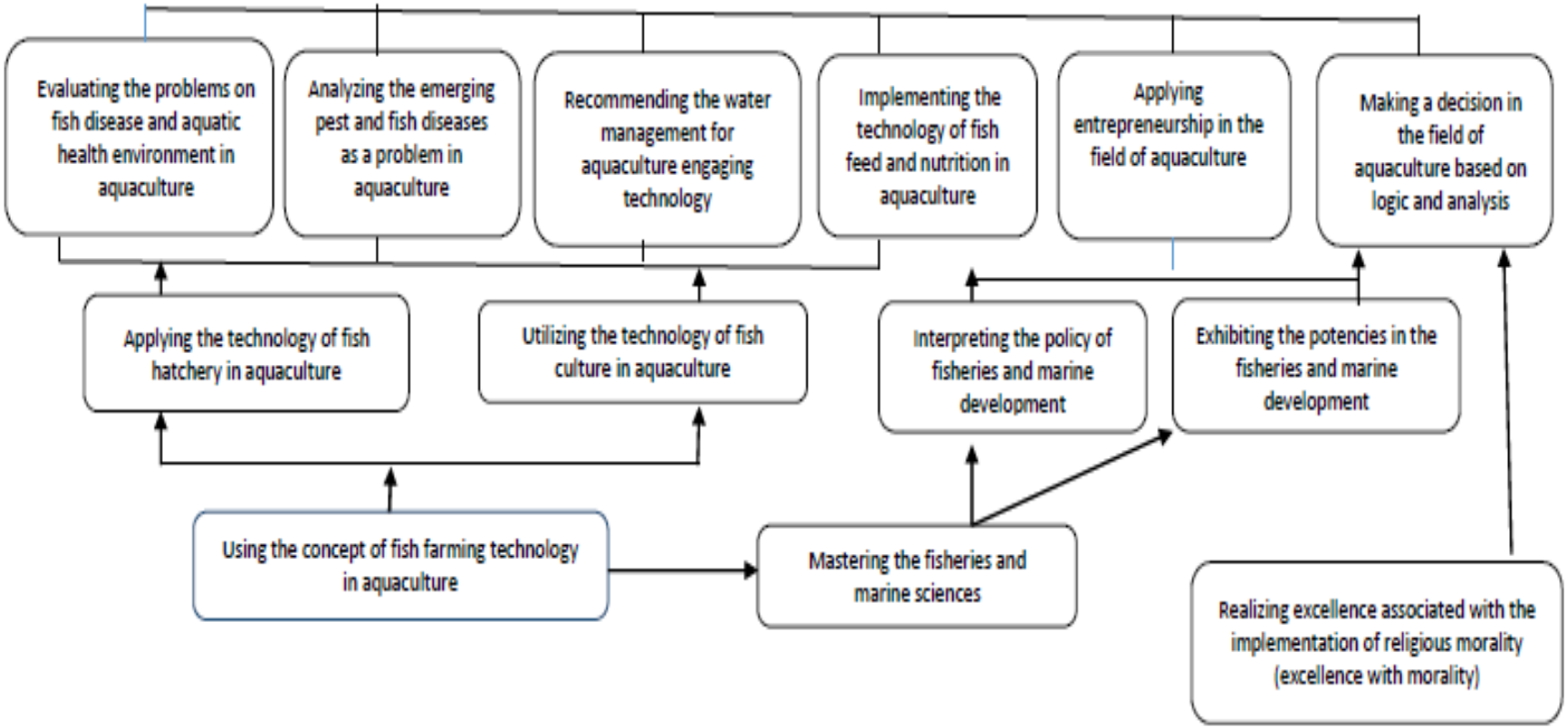
Specialist Competence:

LO 1	Using the concept of fish farming technology in aquaculture
LO 2	Applying the technology of fish hatchery in aquaculture
LO 3	Utilizing the technology of fish culture in aquaculture
LO 4	Implementing the technology of fish feed and nutrition in aquaculture
LO 5	Recommending the water management for aquaculture engaging technology
LO 6	Analyzing the emerging pest and fish diseases as problem in aquaculture
LO 7	Evaluating the problem on fish disease and aquatic health environment in aquaculture
LO 8	Applying entrepreneurship in the field of aquaculture
LO 9	Making a decision in the field of aquaculture based on logic and analyzing
LO 10	Conceptualizing the aquaculture technology in ensuring environmental sustainability

Social Competence:

LO 11	Mastering the fisheries and marine sciences
LO 12	Interpreting the policy of fisheries and marine development
LO 13	Exhibiting the potencies in the fisheries and marine development
LO 14	Realizing excellence associated with the implementation of religious morality (excellence with morality)

UNAIR also provides an analysis of the competences gained by the students (s. following page)


Evaluating the problems on fish disease and aquatic health environment in aquaculture
Analyzing the emerging pest and fish diseases as a problem in aquaculture
Recommending the water management for aquaculture engaging technology
Implementing the technology of fish feed and nutrition in aquaculture
Applying entrepreneurship in the field of aquaculture
Making a decision in the field of aquaculture based on logic and analysis
Applying the technology of fish hatchery in aquaculture
Utilizing the technology of fish culture in aquaculture
Interpreting the policy of fisheries and marine development
Exhibiting the potencies in the fisheries and marine development
Using the concept of fish farming technology in aquaculture
Mastering the fisheries and marine sciences
Realizing excellence associated with the implementation of religious morality (excellence with morality)

The following curriculum is presented:

No	Course Code	General Scientific Skills	Year	Semester	Credit	ECTS
1	AGI101	Islamic Religion I	1	1	2 (2-0)	3.20
	AGP101	Kristen Protestant Religion I	1	1		
	AGK101	Kristen Catholic Religion I	1	1		
	AGH101	Hindu Religion I	1	1		
	AGB101	Buddhism Religion I	1	1		
	AGC101	Kong Hu Chu Religion I	1	1		
2	NOP103	Pancasila (State of Ideology)	1	1	2 (2-0)	3.20
3	NOP104	Civics/Kewarganegaraan	1	1	2 (2-0)	3.20
4	PLU105	Planktonology	1	1	3 (2-1)	4.79
5	BAE110	English	1	1	2 (2-0)	3.20
6	HKA106	Fisheries Law and Policy	1	1	2 (2-0)	3.20
7	PLU104	Introduction to Fisheries Science	1	1	2 (2-0)	3.20
8	PLU103	Ichthyology	1	1	3 (2-1)	4.79
9	PLU101	Introduction to Aquaculture	1	1	2 (2-0)	3.20
10	BAI101	Indonesian	1	1	2 (2-0)	3.20
11	PLU102	Aquatic Animal Physiology	1	2	3 (2-1)	4.79
12	BIK101	Biochemistry	1	2	3 (2-1)	4.79
13	PLL102	Limnology	1	2	3 (2-1)	4.79
14	SOS252	Sociology and Counselling of Fisheries	1	2	2 (1-1)	3.20
15	PLU106	Aquatic Invertebrates	1	2	3 (2-1)	4.79
16	MNG301	Fisheries Agribusiness	1	2	2 (2-0)	3.20
17	PLL103	Introduction to Oceanography	1	2	3 (2-1)	4.79
18	PLL201	Aquatic Ecology	1	2	3 (2-1)	4.79
19	PLU201	Fisheries Biology	2	3	3 (2-1)	4.79
20	MNG204	Water Quality Management	2	3	3 (2-1)	4.79
21	BIM202	Microbiology	2	3	3 (2-1)	4.79
22	BIL301	Marine Biology	2	3	3 (2-1)	4.79
23	PLT304	Fish Capture Technology	2	3	2 (2-0)	3.20
24	PLT301	Fisheries Product Technology	2	4	3 (2-1)	4.79
25	MNG303	Coastal and Marine Management	2	4	2 (2-0)	3.20
26	MNW301	Entrepreneurship	3	5	2 (2-0)	3.20
27	PLL202	Water Pollution	3	5	2 (2-0)	3.20
28	MAS210	Statistics	3	5	2 (2-0)	3.20
29	BIS302	Introduction to Molecular Biology	3	5	2 (2-0)	3.20
30	KNI491	Community Service-Learning Based Community (KKN-BBM)	3	6	3 (0-3)	6.80
31	PNI497	Research Methodology	3	6	2 (2-0)	3.20
32	PNI301	Experimental Design	3	6	2 (2-0)	3.20
33	KLI401	Field Work Practice (PKL)	3	6	3 (0-3)	6.80
34	AGI401	Islamic Religion II	4	7	2 (2-0)	3.20
	AGP401	Kristen Protestant Religion II	4	7		
	AGK401	Kristen Catholic Religion II	4	7		
	AGH401	Hindu Religion II	4	7		
	AGB401	Buddhism Religion II	4	7		

	AGC401	Kong Hu Chu Religion II	4	7		
35	PHI101	Philosophy of Science	4	7	2 (2-0)	3.20
36	PNI498	Bachelor Thesis Proposal	4	7	2 (2-0)	3.20
37	PNI499	Bachelor Thesis	4	8	6 (6-0)	9.60
		Subtotal			**93**	**152.67**

No	Course Code	Specific Scientific Skills	Year	Semester	Credit	ECTS
38	PLU202	Fish Histology	2	3	3 (2-1)	4.79
39	FAT205	Introduction to Aquatic Pharmacology	2	3	2 (2-0)	4.79
40	MNG203	Fresh Water Aquaculture Management	2	3	3 (2-1)	4.79
41	KHD204	Fish Parasite and Disease I	2	4	3 (2-1)	4.79
42	MNG302	Marine Culture Management	2	4	3 (2-1)	4.79
43	MNG202	Brackish Water Aquaculture Management	2	4	3 (2-1)	4.79
44	PLU203	Fish Pathology	2	4	3 (2-1)	4.79
45	PLP201	Life Feed Culture	2	4	3 (2-1)	4.79
46	KHD305	Fish Parasite and Disease II	3	5	2 (1-1)	3.19
47	KHD306	Fish Disease Analysis I	3	5	3 (2-1)	4.79
48	BIG301	Genetic and Fish Breeding	3	5	3 (2-1)	4.79
49	PLU302	Fish Reproduction	3	5	3 (2-1)	4.79
50	NUI301	Fish Nutrition	3	5	3 (2-1)	4.79
51	PLT303	Fish Feed Technology	3	6	3 (2-1)	4.79
52	KHD307	Fish Disease Analysis II	3	6	3 (2-1)	4.79
53	PLT302	Fish Breeding Technology	3	6	3 (2-1)	4.79
54	BIT401	Aquaculture Biotechnology	3	6	3 (2-1)	4.79
		Subtotal			**49**	**79.83**

No	Course Code	Elective studies	Year	Semester	Credit	ECTS
55	PLU301	Coralogy (elective)	3	Odd	2 (2-0)	3.20
56	PLT309	Marine Biota Industrial Technology (elective)	3	Odd	2 (2-0)	3.20
57	PLU303	Fish Quarantine (elective)	4	Even	2 (2-0)	3.20
58	PLL302	Marine Resources Exploration (elective)	4	Even	2 (2-0)	3.20
		Sub Total			**8**	**12.80**