ASIIN Seal

Accreditation Report

Bachelor's Degree Programmes
Mathematics
Physics

Provided by
Universitas Islam Negeri Sunan Kalijaga Yogyakarta

Version: 27 June 2025

Table of Content

A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Sarjana Matematika (S.Mat)	Bachelor in Mathematics	ASIIN		12
Sarjana Sains (S.Si.)	Bachelor in Physics	ASIIN		13
Date of the contract: 13.05.2024 **Submission of the final version of the self-assessment report:** 18.09.2024 **Date of the onsite visit:** 18.-19.02.2025 **at:** Campus UIN Yogyakarta				
Expert panel: Prof. Dr. Hans-Georg Weigand, University of Würzburg Prof. Dr. Arno Schindlmayr, Paderborn University Prof. Dr. Setia Pramana, Politeknik Statistika STIS, BPS Statistics Indonesia Muhammad Taufiqi, Student, Institut Teknologi Sepuluh Nopember (ITS)				
Representative of the ASIIN headquarter: Dr. Natalia Vega				
Responsible decision-making committee: Accreditation Commission for Degree Programmes				
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of March 28, 2023				

[1] ASIIN Seal for degree programmes.
[2] TC: Technical Committee for the following subject areas: TC 12 - Mathematics; TC 13 – Physics.

Subject-Specific Criteria of Technical Committee 12 – Mathematics as of December 9, 2016 Subject-Specific Criteria of Technical Committee 13 – Physics as of March 20, 2020	

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Bachelor in Mathematics (Bc-Math)	Sarjana Matematika (S.Mat)/ Bachelor of Mathematics	- Algebra - Analysis - Applied Mathematics - Statistics	6	Full time	No	8 semesters (4 years)	225 ECTS/ 150 Credit	1 September 2005
Bachelor in Physics (Bc-Phys)	Sarjana Sains (S.Si.) / Bachelor of Science	- Physics Instrumentation - Material physics - Geophysics - Biophysics and medical physics	6	Full time	No	8 semesters (4 years)	216 ECTS/ 144 Credit	1 September 2005

Universitas Islam Negeri Sunan Kalijaga Yogyakarta (UIN Sunan Kalijaga or simply UIN Suka) is an Indonesian state university located in Yogyakarta, a city in the centre of the Indonesian island of Java and the educational hub of the archipelago. Founded on 10 March 1948, it is the oldest Islamic higher education institution in Indonesia. Currently, it has 8 faculties, which offer in total 44 undergraduate programmes, 19 Master's programmes, and 6 doctoral programmes. The core values of UIN Sunan Kalijaga Yogyakarta are as follows: Integrative-Interconnective, Dedicative-Innovative, and Inclusive-Continuous Improvement.

The Faculty of Science and Technology at UIN Sunan Kalijaga Yogyakarta comprises seven undergraduate programmes and two Master's programmes among which are the Bachelor's programmes in Physics and Mathematics.

The expert panel conducted a comprehensive audit of the study programmes and found that UIN demonstrates a strong commitment to academic quality, student support, and continuous improvement. The programmes are supported by engaged faculty, motivated students, and adequate infrastructure. Internal quality assurance mechanisms, such as regular curriculum evaluations and teaching assessments, are well established.

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

While several strengths were identified, including inclusive education and a focus on holistic student development, the panel also noted areas requiring improvement. These include clearer curriculum documentation, integration of scientific English, specification of examination formats, and enhancement of internationalization efforts.

Overall, the programmes provide a solid foundation with significant potential for further development and alignment with international academic standards.

For the **Bachelor's degree programme Mathematics (Bc-Math)**, the institution has presented the following profile on its website:

"Scientific Vision

"To produce excellent and prominent bachelor graduates in the integration and development of Islamic and scholarly studies in the field of mathematics for civilization."

For the **Bachelor's degree programme Physics (Bc-Phys)**, the institution has presented the following profile in the Self-Assessment Report:

"The scientific vision of Bc-Phys is: "To excel and be prominent in the development of physics integrated with insights and fundamental Islamic values."

"Explanation:

"Islamic insight" in the above vision is Islamic concepts on a particular subject. For example, the Qur'anic insight about earthquakes, the Qur'anic insight about light, the Quranic insight about iron.

"Islamic basic values" are Islamic teachings that apply in all aspects of life, including Tawheed, Gratitude, Justice, Effective and Efficient, Beneficial, Prosperous and others.

"Excellence" in the above vision implies leading or being a pioneer in the development of physics science that is integrated with basic Islamic insights and values in the field of education and teaching of Physics, research in the field of physics as well as community service and Islamic values.

"Prominent" in the above vision contains a meaning that is well known within the scope of Southeast Asia in 2039 because of its excellence in education and management activities, research and community service in the field of physics."

C Expert 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)

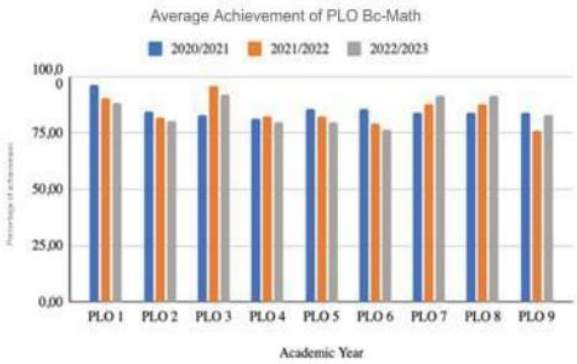
Evidence:

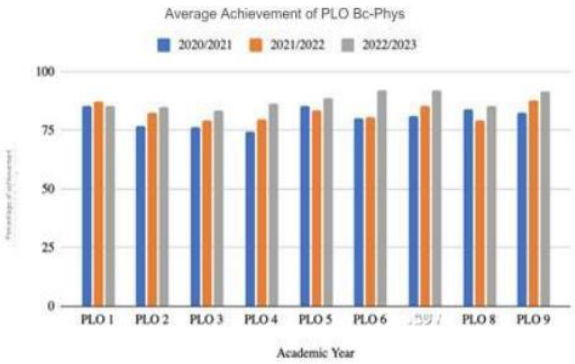
- Self-Assessment Report (SAR)
- Programme-specific Objectives and Learning Outcomes
- Relationship between the PEO and the PLO
- Curriculum Book
- Correlation between PLOs and SSC ASIIN
- Mapping Graduate Profiles with Mathematics Graduate Learning Outcomes
- Module Handbook for each programme
- Diploma Supplement for each programme
- Website of Bc-Math: https://matematika.uin-suka.ac.id/en
- Website of Bc-Phys: https://fisika.uin-suka.ac.id/en
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The experts refer to the respective ASIIN Subject Specific Criteria (SSC) of Technical Committee 13 (Physics) and 12 (Mathematics), to the learning module matrices for each programme, and to the modules as a basis for assessing whether the intended learning outcomes of the programmes under review correspond to the competences as outlined in the SSC.

The objectives for each programme are described in the SAR and can also be found in the curriculum book (see **Appendix** below). The Programme Educational Objectives (PEO) are based on the vision and mission of the programmes and on the stakeholder needs

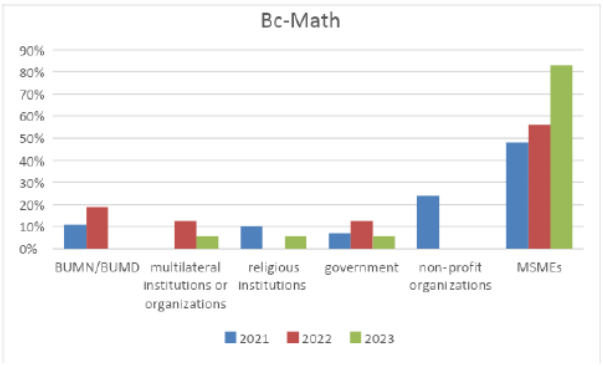
The PLO are assessed periodically at the end of each semester to measure the achievement of PLOs for each course. The average achievement of the PLOs of Bc-Math and Bc-Phys is shown in the following graph:

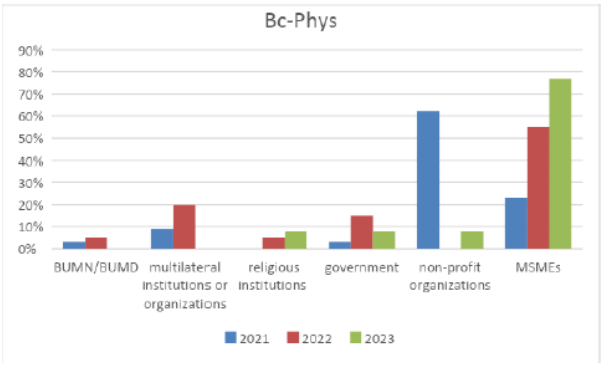




Results are reported in the Outcome-Based Education (OBE) system, which allows the programme coordinator to analyse and evaluate the results for continuous improvement and is shared with course instructors. PLO development also includes SWOT analysis, needs analysis, market signals, alumni tracking (tracer study), stakeholders' feedback, and recommendations from relevant study programme associations.

The following figure shows the distribution of graduates' employment in the labour market:





The SAR indicates that the PEOs are in line with the results of the tracer study.

For graduates of the **Bachelor's Programme in Mathematics (Bc-Math)**, the following professional areas are expected: lecturer or teacher, research assistant, consultant or practitioner who understands the basics of mathematics, statistics, and their applications, and uses them to solve problems in the industrial field with the assistance of software. The results of the tracer study show that 82.9% of the graduates with a **Bachelor's degree in Mathematics** are employed in positions corresponding to their academic specialisation, such as academia (in both public and private universities) and school teaching, as well as

positions in the banking sector, programming or insurance companies, Islamic financial institutions, civil service positions in the Ministry of Villages, positions in the Electoral Supervisory Board, and financial and business analysis positions.

Regarding the **Bachelor's Degree in Physics (Bc-Phys)**, three general graduate profiles were identified: professional, scientist, and entrepreneur. According to the tracer study, graduates of the Bc-Phys programme are employed by governmental entities, private enterprises, and have even established independent businesses. It includes positions such as civil servant, researcher, technician in research institutions and government agencies, laboratory assistant in schools, analyst in private banks, professor at both public and private universities, physics teacher, medical physicist in hospitals, and business consultant and entrepreneur. Furthermore, a number of alumni have pursued further studies at the master's and doctoral levels, both nationally and internationally. The analysis revealed that approximately 46% of graduates secured positions closely aligned with their field of study upon initial employment, while around 21% demonstrated moderate alignment, and 33% exhibited low alignment.

Both programmes have continued to improve, with the employment rate increasing from 72.7% in 2020 to 90.9% in 2022 for **Bc-Math**, and from 71.4% (2020) to 86.4% (2023) for **Bc-Phys**.

The experts note that, according to the results of the tracer study, more than half of the physics graduates have secured positions with moderate or low alignment to their studies, a proportion that is significantly higher than that of mathematics graduates. The head of the physics programme explains that this is common in the field of physics, due to the limited number of jobs that are specific to physics graduates. However, they highlight that the employability of physics graduates has increased in the year 2024. Their goal is to improve the situation and achieve systematically higher results for close or at least moderate alignment. They also consider it important to offer alumni more opportunities for research work at the university.

As explained by the programme coordinators during the discussion, the results of the tracer study are also used for curriculum development. For example, the introduction of the specialisations in Geophysics was based on alumni remarks.

During the audit, the experts discuss the possibility of introducing Master's degree courses within the faculty. Most students want more Master's courses to be offered by the faculty so they can continue their studies and gain more specialised knowledge. The rector and the UIN Suka management agree with this proposal and express their intention to develop Master's programmes in Mathematics and Physics in the future. The introduction of a Mas-

ter's programme would also be met with approval from the lecturers. The university management recognises the need to enhance the visibility and appeal of these disciplines, which they perceive as lacking in popularity among prospective students due to misperceptions and concerns surrounding their perceived complexity. To address this, they want to emphasise the importance and enjoyment of these fields, with a view to attracting a more diverse and interested student body.

The experts also ask about the scientific vision, which includes the integration of the specific area with Islamic knowledge and is explained as "Islamic concepts on a particular subject". The programme coordinators explain that this vision derives from the status of UIN as an Islamic University under the Ministry of Religious Affairs and implies that some courses integrate subject-related scientific topics and Islamic concepts on a particular subject. They illustrate this with some examples from the field of physics. In geophysics, for instance, students learn about the scientific origin of earthquakes but also about references to earthquakes in the Qur'an. The experts learn that lecturers and students are satisfied with the link between modern and Islamic knowledge, which is also often a reason for choosing UIN Suka to study.

The experts confirm that the module descriptions include learning outcomes for each module of the programmes under review. As explained by the programme coordinators, learning outcomes are updated based on alumni and employer feedback in a general review every four years and for minor revisions every two years. In order to achieve the module learning outcomes, students are guided by lecturers or advisers, for example, to take some subjects at the beginning of the semester.

In summary, the experts conclude that the descriptions of the qualification objectives for both programmes are comprehensive and include the competences achieved and the possible career opportunities for graduates. The objectives and learning outcomes are made available to all stakeholders as they can be found on the university's website. On the basis of a learning objectives-module matrix describing the modules in which students learn the competences envisaged in the PLOs, the expert group considers that the intended learning outcomes of the programmes are suitable for producing qualified graduates.

However, in comparing the PLOs in the different documents, the expert group found that the wording, numbering and classification of the PLOs in the two programmes under review are not congruent across all documents. They therefore need to be standardised across all documents, including the Curriculum Book, the Diploma Supplement and the programme website. The programme coordinators explain that the discrepancies are in part due to the fact that some documents stem from earlier curriculum reviews and do not reflect the latest updates, but they agree that a consistent wording is necessary.

In addition, as students wish to continue their studies at the same university, the experts consider that a strategy should be developed for opening Master's degrees **in both areas, mathematics and physics**, (e.g. by improving the research environment and support, supporting the further qualification of teaching staff, etc.).

Criterion 1.2 Name of the Degree Programme

Evidence:

- Self-Assessment Report (SAR)
- Module Handbook for each programme
- Website of Bc-Math: https://matematika.uin-suka.ac.id/en
- Website of Bc-Phys: https://fisika.uin-suka.ac.id/en
- Discussions during the audit

Preliminary assessment and analysis of the experts:
As stated in the SAR, the names of the **Bachelor Programme in Mathematics** (Program Studi Matematika) and **Bachelor Programme in Physics** (Program Studi Fisika) are in accordance with the "Recommendation Letter of the Minister of National Education Number 05/MPN/HK/1004 dated January 23, 2004"; with the "Decree of the Director General of Islamic Institutions Number Dj.II/206/2005 concerning the Licensing of Undergraduate (S1) Level Programs"; and with the "Decree of the Minister of Research, Technology, and Higher Education of the Republic of Indonesia Number 257/M/KPT/2017".

The experts confirm that the English translation and the original Indonesian name of the Bachelor's degree programmes under review correspond with the intended aims and learning outcomes. They agree that the teaching and learning content and the competence profile are consistent with the proposed titles of both programmes.

Criterion 1.3 Curriculum

Evidence:

- Self-Assessment Report (SAR)
- Curriculum Book for each programme
- Structure of Curriculum
- Module Handbook for each programme

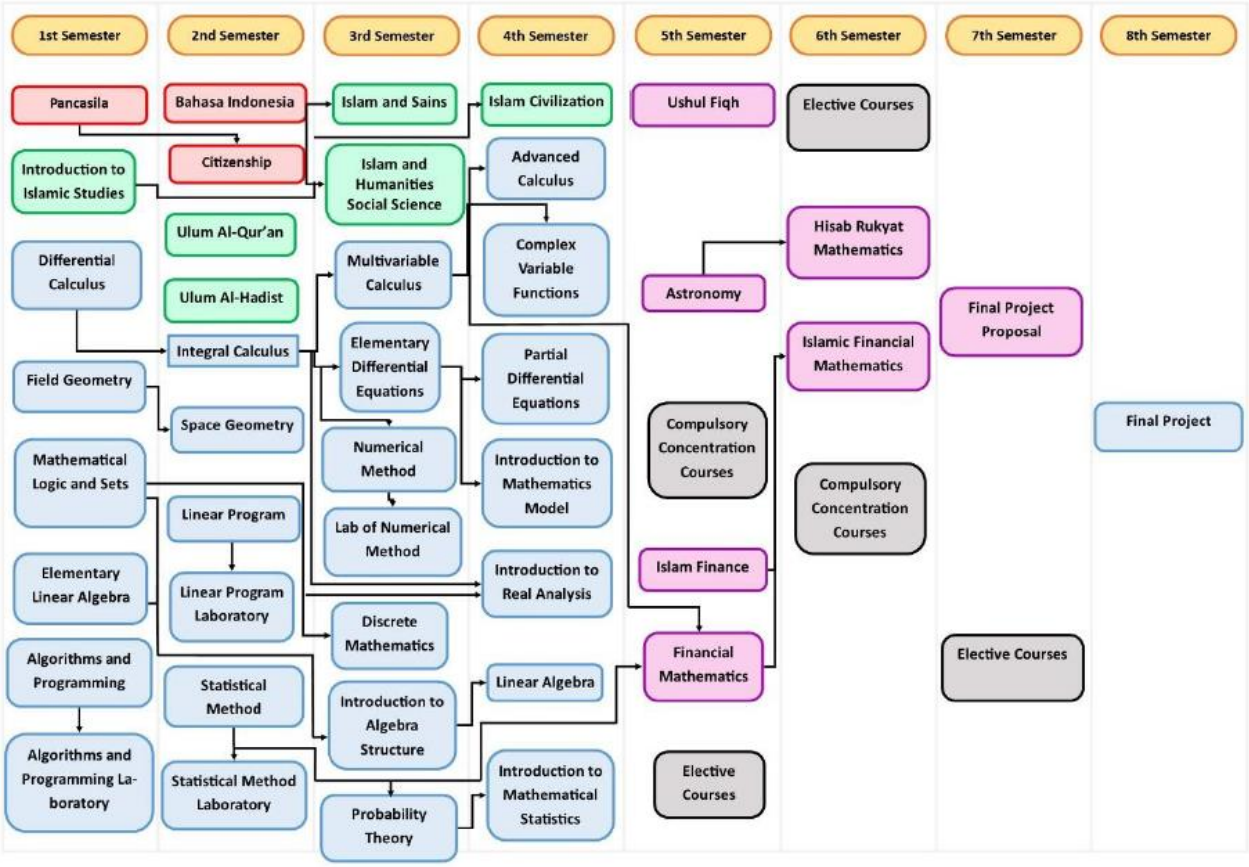
- Implementation of MBKM programme
- MBKM Guidelines for each programme
- Curriculum structure mapping towards PLOs
- Website of Bc-Math: https://matematika.uin-suka.ac.id/en
- Website of Bc-Phys: https://fisika.uin-suka.ac.id/en
- Discussions during the audit

Preliminary assessment and analysis of the experts:

Content and structure of the programme

Both study programmes are four-year programmes (8 semesters) with either 144 credits (equivalent to 216 ECTS) or 150 credits (equivalent to 225 ECTS), upon completion of which graduates are awarded a Bachelor of Sciences (B.Sc.). According to the SAR, the programmes take a minimum of 8 semesters to earn the degree, with a maximum of 14 semesters. It is in accordance with According to Regulation of the Minister of Education and Culture No. 3 of 2020.

For **Bc-Math**, the following curriculum structure is presented:



In both programmes, the courses consist of compulsory university courses (e.g. Pancasila, Bahasa Indonesia, Citizenship, and Introduction to Islamic Studies), compulsory programme courses and elective courses or the independent study programme (MBKM). From semester 5 to semester 7, students are free to take elective courses or the Independent Study Programme besides some compulsory modules.

UIN Sunan Kalijaga offers eight programmes for MBKM activities, including student exchange, internship, teaching assistance in educational units, research, humanitarian projects, entrepreneurial activities, independent studies or projects, and village development project or thematic community service. Students can choose one of the programmes in semesters 5, 6, and 7, with a maximum of 20 credits per semester.

The total credits of the courses in the programmes are as follows:

Programme	University Mandatory Courses	Study Program Mandatory Courses	Elective Courses/MBKM	Total
Bc-Math	20 sks / 30 ECTS	70 sks / 105 ECTS	60 sks / 90 ECTS	150 sks / 225 ECTS
Bc-Phys	20 sks / 30 ECTS	64 sks / 96 ECTS	60 sks / 90 ECTS	144 sks / 216 ECTS

Both programmes allow students to undertake an internship programme as part of the internship elective. The internship may be undertaken in partner institutions, companies, or elsewhere, subject to the approval of the academic advisor and the programme director. Students will be assigned an internship supervisor who will guide them through the completion of the internship report and examination. Guidelines for internship activities as part of the Independent Learning Programme (MBKM) can be found in the MBKM guidelines.

Students interviewed confirm that advisors and lecturers help them to source companies for the internship. They are satisfied with the possibility to undertake an internship, and they are confident that the programme will prepare them well, improving their practical skills.

Overall, the experts conclude that the curricula of both programmes under review are generally well structured. They consist of compulsory foundation courses in the first three semesters, elective courses for individual specialisation up to the seventh semester, and one semester for the final project. The electives offered opportunities for individual focus and study. In addition, they highlight that students and graduates appear to be very satisfied with their respective programmes and feel well prepared for their future careers. Moreover, the experts appreciate that UIN is interested not only in the learning values, but also

in developing social competences. Nevertheless, there are some important aspects to be improved in order to enable that the learning outcomes can be achieved.

Firstly, the experts note that some module descriptions are missing in the module handbooks, such as the Research Proposal in the 8th semester of the **Bc-Phys** or the Thesis in the 8th semester of the **Bc-Math**. These must still be supplied later.

Regarding the **Bc-Phys**, the module descriptions do not include recommended prerequisites for all modules after the first semester. The experts believe that it is imperative to include prerequisites for the individual modules in the Physics programme in order to enable the students to structure their studies in an adequate manner, as limits on credit earning based on previous performance regularly force students to deviate from the standard curriculum and take courses in a different order (see below **Criterion 4.1**).

In addition, according to the **Bc-Phys** curriculum structure, there are only 4 credits (6 ECTS) allocated for laboratory/practical work in compulsory courses until the end of the 5th semester, partially in applied theoretical classes such as “Computational Physics”, and no dedicated laboratory courses. This has led to questions from experts regarding the adequacy of the programme in preparing students to design and carry out experimental measurements for physics research. In response, the programme coordinators explain that the provided document contains incomplete information and that there is in fact an experimental practicum within a compulsory course in each semester until the 5th, as confirmed by the individual module descriptions. However, the experts believe that the practical experimental skills in **Bc-Phys** should still be improved by increasing the amount of time for laboratory work.

Concerning **Bc-Math**, the experts note that some of the modules in the first year are very elementary, as evidenced by the questions on the sample exams provided. The programme coordinators explain that this is only at the beginning of the programme, as an introduction and refresher of school subjects. Nevertheless, the experts recommend the introduction of tutorials or bridging courses before the study or during the first semester to refresh basic mathematical topics from school and to ensure that all students are at the same level at the beginning of their studies.

The experts also raise questions regarding the extensive list of electives, seeking clarification on the student selection process for these courses. The programme coordinators outline that the 5th-7th semester is structured around the so-called independent learning programme (MBKM) mandated by the Ministry of Education. They further emphasise that courses are subject to a minimum attendance requirement of five students to ensure their viability. In addition, they advise students to choose elective courses based on their individual interests and professional focus. The experts acknowledge the principle of academic

freedom and commend the measures implemented to support it. However, they believe that the electives **for both programmes** could be better structured and conclude that for both programmes the electives should be grouped according to the available specialisations.

Furthermore, regarding the **Bc-Math**, the experts believe that the collaboration with the industry (public and private institutions and companies in Indonesia and abroad) should be strengthened in order to improve the skills of lecturers and students and possibilities for students' professional future.

Student mobility

In the SAR, several programmes for national and international mobility implemented by the Faculty of Science and Technology are mentioned:

1. The Youth Break the Boundaries (YBB) Foundation provides students with the opportunity to make friends with international students from Turkey during student mobility attending offline classes at UIN Sunan Kalijaga Yogyakarta.
2. Students participate in a student mobility program for one semester at the Faculty of Applied Sciences and Technology (FAST) at Universiti Tun Hussein Onn Malaysia.
3. Students engage in a one-semester student mobility programme at the Faculty of Science at Prince of Songkla University (PSU) in Thailand.
4. Students of the Faculty of Science and Technology take online courses for one semester at the Faculty of Science at Prince of Songkla University (PSU) in Thailand.
5. A short workshop on halal science at the International Islamic University Malaysia (IIUM), covering topics such as fundamental halal and critical ingredients, and halal food safety and security.
6. Students participate in student mobility at Universiti Pahang Al-Sultan Abdullah, Malaysia.
7. Students engage in student mobility at the Rochester Institute of Technology, USA.

In addition, the Kalijaga International Student Mobility Award, organised by the Centre for Developing Cooperation and International Affairs, enables students to spend at least a week on academic visits to some overseas universities in countries such as Malaysia and Thailand. The International Affairs Office of the Faculty of Science and Technology also offers an international mobility programme for students to undertake activities in other universities, such as attending international workshops, academic visits, and participating in a semester of study in Malaysia and Thailand for a limited number of students. According to a list provided by UIN Suka, nine students from the Bc-Math programme spent a semester at universities in Malaysia or Thailand, while 23 from the Physics programme did so.

Furthermore, the Faculty of Science and Technology offers students the opportunity to study for one semester at other Indonesian universities through a national student mobility programme (PERMATA), organized by the Ministry of Indonesian Religious Affairs.

In terms of incoming students, the Faculty of Science and Technology has hosted several international students from other Indonesian universities. However, most come from African countries such as Cameroon, Egypt, Sierra Leone, Somalia, Tanzania, as well as Bangladesh and Yemen. Some of these students came for short-term academic visits, while others participated in the international events organised by the Faculty of Science and Engineering, such as the annual International Summer School.

According to the SAR, UIN Sunan Kalijaga offers several scholarship programmes for both domestic and international students. International students who have a good academic record and great potential to contribute to the society in their home country can apply for a scholarship called Suka Global Scholarship Programme for undergraduate and postgraduate levels. Various scholarship funds are also available for domestic students.

Regarding the mobility programme, one of the students interviewed tells the experts about his experience during his stay abroad in Thailand. He felt well supported and explained that the financial support was adequate. Students also highlight the annual international summer course, where students can take part in various activities such as lectures, group discussions, presentations and excursions around Yogyakarta and have cultural exchanges with students from abroad. However, a majority of the students feel that the financial support is not enough for a semester abroad. They also explain that the number of students selected for the mobility programme offered by UIN Suka is very low and that the faculty should increase the number of students selected to go abroad. Furthermore, as mentioned above, the majority of students interviewed stated that they would prefer to see more emphasis on developing English skills in the classroom.

The experts appreciate the exchange with Indonesian universities and with institutions in Malaysia and Thailand. However, on the basis of student feedback, they believe that UIN Suka should improve its internationalisation strategy by promoting English language in lectures, providing more support for international student mobility, and increasing exchanges with foreign institutions and lecturers.

Periodic Review of the Curriculum

As stated in the SAR, the curriculum of the programmes within the Faculty of Science and Technology is subject to comprehensive evaluation and revision, namely in 2005, 2009, 2013, 2016 and 2020. This evaluation process incorporates input from internal and external

stakeholders and responds to advances in science and technology as well as the needs of future graduates.

The curriculum is periodically reviewed with regard to the implementation of the programme objectives; curricular changes are documented. This review also includes whether the order of modules enables students to graduate within the standard period of study.

Overall, the experts appreciate that the curriculum is regularly reviewed and that suggestions and input from stakeholders are used as important considerations in the curriculum review process.

Criterion 1.4 Admission Requirements

Evidence:

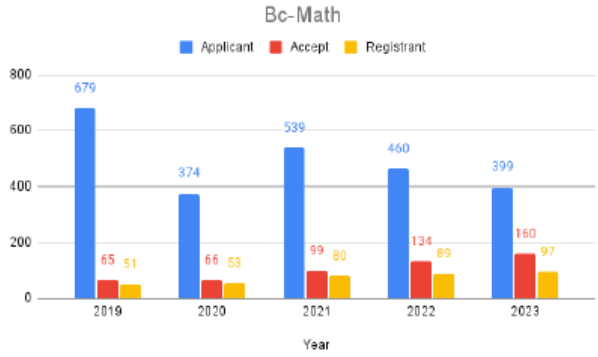
- Self-Assessment Report (SAR)
- Academic Guidelines
- Website Admissions Office at UIN Sunan Kalijaga: https://admisi.uin-suka.ac.id/
- Website of Bc-Math: https://matematika.uin-suka.ac.id/en
- Website of Bc-Phys: https://fisika.uin-suka.ac.id/en
- Discussions during the audit

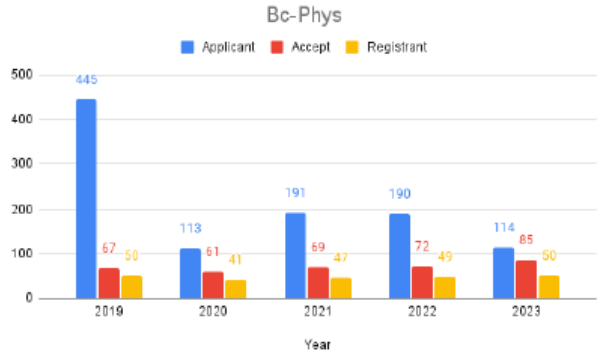
Preliminary assessment and analysis of the experts:
As stated in the SAR, the admission procedure for Bachelor's degree programmes at UIN Suka follows the national procedure and the university procedure. The regular admission consists of different pathways: the national general admission pathways (SNMPTN, SBMPTN), the Ministry of Religious Affairs procedure (SPAN-PTKIN, UMPTKIN), and Independent Admissions (CBT), which comprises the three selection pathways Computer Based Test (CBT), Academic Achievement Pathway and Portfolio Pathway. The portfolio independent pathway also serves as an admission pathway for international students and is also available for prospective students with disabilities through the Special Disability Independent Programme organized by the Center for Disability Services at UIN Sunan Kalijaga Yogyakarta.

The Admissions Office at UIN Sunan Kalijaga (Admisi UIN Sunan Kalijaga) oversees the admission process, in collaboration with designated working units appointed by the Rector within a committee structure.

Participation in a summer course is counted as a part-time study; hence students are eligible for credits in the relevant study programme.

As the following data show, for the past five years, from 2019 to 2023, the number of applicants has declined. However, the number of new students who re-register has increased, especially in **Bc-Math**, and it tends to remain relatively constant in **Bc-Phys**:





The admission rules are published on the university's website and provide potential students with detailed information on the requirements and steps necessary to apply for admission to the programmes. As they are based on official regulations, the experts consider them to be binding and transparent. They confirm that the admission requirements support students in achieving the intended learning outcomes.

Criterion 1.5 Workload and Credits

Evidence:

- Self-Assessment Report (SAR)
- Curriculum Book for each programme
- Structure of Curriculum
- Module Handbook for each programme
- Student Workload Survey report for each programme 2024-2025
- Academic Guidelines
- Website of Bc-Math: https://matematika.uin-suka.ac.id/en
- Website of Bc-Phys: https://fisika.uin-suka.ac.id/en
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The study programmes at UIN Sunan Kalijaga use a credit system based on student workload. According to the Regulation of the Minister of Education and Culture No. 3 of 2020,

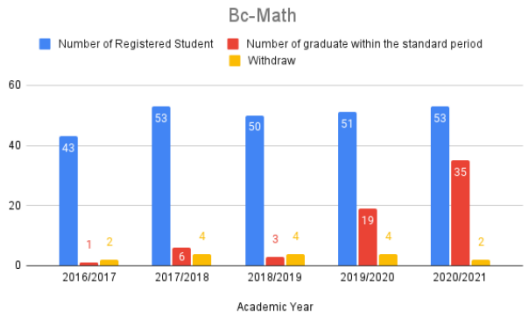
the total number of credits required to graduate from the Bachelor's programme is a minimum of 144 credits (equivalent to 216 ECTS) and a maximum of 160 credits (equivalent to 240 ECTS), consisting of mandatory national courses and programme-specific courses. A minimum of 8 semesters and a maximum of 14 semesters are required to complete the degree. Academic leave is included in the duration of the course.

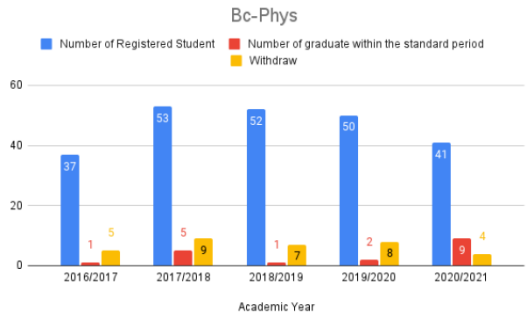
1 credit equates to 170 minutes of learning per session, typically including 50 minutes of face-to-face learning, 60 minutes of structured assignments and 60 minutes of independent study. As there are 16 sessions in a semester, the total learning load of the student per semester is 45 hours and 20 minutes. According to UIN Rector Sunan Kalijaga Yogyakarta Decree No. 181.4 of 2022, 1 ECTS credit is equivalent to 30 hours of study, so 1 credit is equivalent to 1.5 ECTS credits.

In addition, students participate in various off-campus academic activities such as community service, internships, and field work practices. The off-campus activities do not require class meetings, therefore the credits for such activities are different from normal on-campus classes. Students can accumulate up to 45 hours per credit in off-campus activities.

In the meeting with the programme coordinators, the uneven distribution of the workload between different semesters, especially the high workload in the second year of both programmes, was a key topic of discussion. The programme coordinators explain that all first-year students are given a package of courses with fixed credits. However, students in their second year and beyond may receive credits based on their previous semester's GPA. The minimum number of credit hours is determined by analysing the credit weight of each course based on the breadth of content and coverage of study materials. Based on GPA, students can earn up to 24 ECTS credits. Additionally, students can choose from a range of activities under the MBKM or independent learning programme in semesters 5, 6, and 7, which partially take place outside the lecture period, with a maximum of 20 credits per semester. A student is considered to have dropped out if they do not complete their studies within the prescribed period (maximum of 14 semesters).

According to the following data, the number of students graduating on time in both programmes for the years 2016-2021 still needs to be increased. However, the experts learn during the audit that the number of students graduating on time has increased significantly in the last years. For instance, according to the programme coordinators, about 68% graduate on time for the year 2023 and the dropout rate is less than 5%. Moreover, most of the students who exceed the standard period require only one or two extra semesters, and the number of students dropping out of the entire Bachelor programme or withdrawing from both programmes is low compared to the number of enrolled students. For these reasons, the experts do not see a problem in this context.





As stated in the SAR and as previously mentioned, co-curricular activities such as the "religious and Indonesian mentoring programme", the Arabic and English language training, as well as the "information technology training" are compulsory for students but do not carry credit hours. The successful completion of such activities is recognised with the "Certificate of Accompanying Diploma". During the audit, the experts ask about the reasons for not awarding credits in these mandatory co-curricular courses, although some of them, such as English language in **Bc-Phys**, contribute directly to certain PLOs. The programme coordinators explain that this is based on university regulations.

The experts also learn that the Quality Assurance Agency of UIN Suka carries out a student workload survey. The survey results are published in a book and used to improve learning activities. In general, students are satisfied with the workload. However, some students from **BC-Phys** feel that the curriculum is quite challenging and that they could require more time than planned for some subjects and for end-of-course work. Students acknowledge that they can provide feedback on workload in the workload survey and directly to their lecturers.

The experts confirm that the credit system used by UIN Sunan Kalijaga is based on student workload. As the workload for each semester is based on the GPA, the experts conclude that the estimated workload is realistic and transparently anchored, as confirmed by students, and that the workload is regularly monitored. However, the experts conclude that the co-curricular activities (religious and Indonesian mentoring Programme (PPKK), Arabic and English language training and information technology training) in **both programmes** need to be awarded with credits, as they are compulsory components of the study programmes.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:

- Self-Assessment Report (SAR)

- Curriculum Book for each programme
- Structure of Curriculum
- Module Handbook for each programme
- Website of Bc-Math: https://matematika.uin-suka.ac.id/en
- Website of Bc-Phys: https://fisika.uin-suka.ac.id/en
- Standard operating procedure: Lectures And Practicum Preparation
- Standard operating procedure: Implementation of lectures and practicum
- Discussions during the audit

Preliminary assessment and analysis of the experts:
As explained in the SAR, teachers in the programmes under review use a variety of teaching approaches, including traditional lectures (face-to-face), e-learning, blended learning, laboratory/field practice and work placements. Teaching and learning is carried out through a combination of student-centred learning (SCL), case-based learning (CBL) and project-based learning (PBL). The programmes ensure that the lecturers build an effective and collaborative interaction based on the student-centred approach created by the combination of CBL and PBL. In some sessions, lecturers use the CBL method by presenting a case which is then analysed and solutions are sought based on existing concepts. Alternatively, lecturers use PBL by giving students the task of finding problems and recommending solutions using the knowledge and concepts they have acquired.

In addition, UIN Suka provides an e-learning platform (via https://daring.uin-suka.ac.id/) which facilitates synchronous and asynchronous lectures, assignments, quizzes, and attendance. There is also a chat room that allows students to connect with lectures and peers for effective discussion. Teaching methods are outlined in the course syllabus and module handbook. They are reviewed and assessed by lecturers within the same academic field, based on learning outcomes or achievement of PLOs from the previous semester.

Through the implementation of integrative learning, students are expected to relate classroom material to other concepts and real cases in their environment. They are also trained to develop scientific thinking skills while upholding religious values, norms and nationalism. In addition, UIN Suka supports extracurricular activities organised by the student organisation (ORMAWA).

Monitoring and evaluation of the learning process is carried out regularly and covers course characteristics, planning, delivery, learning process and student workload. At the end of each course, students are required to complete a course evaluation survey covering various aspects of teaching and learning, such as course structure, feedback on course materials,

and teaching aids. The surveys can be completed online at akademik.uin-suka.ac.id. The results of the survey will be used as feedback for lecturers and programmes. In addition, students may receive feedback on their learning from the Academic Advisor, who evaluates the student's grade point average (GPA), which is recorded on the official academic transcript. This evaluation takes place each semester through a scheduled meeting with the Academic Advisor. Follow-up action may include recommendations for adjustment or disciplinary action.

The experts appreciate the diversity of teaching methods and believe that they ensure that the course objectives and the overall intended learning outcomes are achieved. Nevertheless, a majority of students interviewed state that they would prefer to see greater emphasis on developing English skills within the classroom setting. They explain that while some lecturers include mini projects and presentations in English, these are not sufficient to achieve the requisite TOEFL scores. Therefore, the students highlight a need for increased English language training and express a desire for courses to be delivered in English. The programme coordinators explain that the university offers Basic English courses on a weekly basis, delivered by the Language Centre. Arabic and English courses are in fact mandatory and a prerequisite for graduation, but do not count towards the students' credits. In addition, some courses may integrate presentations, discussions, and projects in English, although these are not anchored in the module objectives and learning outcome. Based on this, the experts conclude, firstly, that credits need to be awarded for all compulsory components of the study programme based on the respective workload (see above **Criterion 1.5**). In addition, for **both programmes**, the training of scientific English needs to be enhanced and explicitly included in the module descriptions (for example, presentations in English, research proposal etc.).

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

In its statement, the university provides an updated version of the Programme Learning Outcomes (PLOs) for each programme of study on the website, in the curriculum handbook and on the diploma supplement. The learning outcomes were reviewed and seem to be standardised across all documents (e.g. diploma supplement, website and curriculum document). The experts appreciate this update and are of the opinion that the learning outcomes are consistently used.

Regarding the co-curricular activities which are mandatory but not credited, the university responds that, since this is a university policy, the programmes propose to the LPM and the

university to review this policy for inclusion in the curriculum. In fact, some of these activities have already been accommodated and are listed in the diploma supplement under “Certificate of Competencies”. Upon graduation, students will not only receive their diploma and transcript, but also a supplementary document that outlines their skills. The experts would like to clarify that the requirement is not to transform the co-curricular activities to regular modules on a university-wide basis, but to award ECTS points and consider it in the students’ workload. All that is necessary is to clearly identify the workload and take it into account in the design of the study programme, provide a transparent and easily retrievable module description, and ideally include the courses in the Transcript of Records (see also below **Criterion 4**).

UIN states that several efforts have been implemented by the Physics and Mathematics programs to support students' English proficiency, for example, in the Physics program, offering bilingual instruction in courses like Basic Properties of Materials and Lab Management, taught by Dr. Asih Melati Indonesia and English (Bilingual). Similarly, the Mathematics Program has implemented several initiatives to support English proficiency, including: Offering courses in English, such as Graph Theory, and bilingual courses like Advanced Linear Algebra and Ring Theory. The experts confirm that in some module descriptions, the language has now been changed to bilingual (Indonesian and English). The experts appreciate the efforts of the university. They recommend to further enhance the training of scientific English especially concerning the professional language in mathematics and physics and to describe this explicitly in the module descriptions including an explicit reference to English skills in the contents and learning outcomes.

2. Exams: System, Concept and Organisation

Criterion 2 Exams: System, Concept and Organisation

Evidence:

- Self-Assessment Report (SAR)
- Curriculum Book for each programme
- Module Handbook for each programme
- Academic Guidelines for undergraduate program
- Standard Operating Procedure Thesis
- Standard Operating Procedure Examination Faculty of Science and Technology
- Guidelines for writing thesis of Department of Mathematics
- Final project writing Guidelines for Physics Study Programme
- Statistical data about the progress of studies for both programmes
- Samples of exams, reports, final project and thesis
- Website of Bc-Math: https://matematika.uin-suka.ac.id/en
- Website of Bc-Phys: https://fisika.uin-suka.ac.id/en
- Discussions during the audit

Preliminary assessment and analysis of the experts:
Examinations for the programmes under review are conducted in accordance with the examination regulations set out in the Academic Regulations for Undergraduate Programmes at UIN Sunan Kalijaga.

The examination schedule is based on the academic calendar issued by UIN Suka and prepared by the Examination Committee. The examination schedule for each student should not exceed two types of examinations in one day. If a student is scheduled to take two examinations on the same day, they must be separated by a break. Depending on the number of students, one or two invigilators will supervise the exams.

There is one mid-term and one final examination per semester. Depending on the nature of the course, the examinations may be written, oral or practical.

The module handbooks provided by the UIN Suka for both programmes under review specify the weight for each assessment and the determination of the final letter grade based on

the overall score. However, the experts note that the examination forms (e.g. written or oral) are not specified there (see below **Criterium 4.1)**.

Lecturers are given 7 days after the exam to input grades into the academic system. Grades can be viewed by students with details for each assessment. The final course grade ranges from 0-100 and is converted into letter grades as follows:

No	Number Value	Letter Value	NO	Number Value	Letter Value
1	≥ 95	A	7	65-69.99	B/C
2	90-94.99	A-	8	60-64.99	C+
3	85-89.99	A/B	9	55-59.99	C
4	80-84.99	B+	10	50-54.99	C-
5	75-79.99	B	11	55-34.99	D
6	70-74.99	B-	12	<35	E

According to UIN Suka, make-up exams can only be offered under certain conditions, such as student illness, disaster, family emergency, or official duties for the state/campus. In order to take a make-up exam, students must have the approval of the programme director and the dean of the faculty.

As stated in the SAR, in order to ensure the quality and accuracy of the assessment, the examination questions developed by the course instructors are first validated by the coordinator of the scientific field area and then approved by the head of the programme before being submitted to the examination organising committee. Lecturers are required to attach assessment rubrics to each assessment to ensure authenticity, objectivity, and accountability in grading. Laboratory practicals are also monitored by coordinators, lab assistants, and practical assistants to ensure that students' laboratory skills meet set standards. The same quality standards apply to final assignments, where students are supervised by lecturers. For the final project, students are allowed a minimum of eight consultations with their final project supervisors over a maximum of two semesters.

Each programme has guidelines for the completion of final projects, including topics, structure and examples. As explained in the SAR, the process of writing the final thesis begins with a course/workshop on research methodology, which is compulsory for students in the fifth semester. Students are then grouped according to their interests and guided by lecturers in choosing a research topic. Once a topic has been chosen, there is an internal meeting to assign a supervising tutor. Each student who is assigned a thesis supervisor must go through four sequential processes: drafting a thesis proposal, conducting a thesis proposal defence, writing the thesis, and attending an oral thesis defence. The thesis defence is a closed oral examination attended by the student, the examination committee, and the supervisors. The purpose of this oral examination is to assess the originality, writing style,

novelty, and the student's ability or competence to communicate ideas and respond to questions from the board.

The final project assessment includes grades for seminars, technical aspects, academic content and presentations. These grades are accumulated through the judgement of the examination commission and supervisors during the final project examination.

The auditors examine samples of examinations and final projects submitted by the programmes under review. According to them, the documents show that the level of the students' academic performance and the content of the modules are sufficient for the programmes concerned. The final projects are of adequate standard and show that students are able to work independently. They also consider that the number and distribution of examinations ensure an appropriate workload and sufficient time for preparation.

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

See below **Criterion 4**.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

- Self-Assessment Report (SAR)
- Staff Handbook for each programme
- List of lecturers´ research in the last years
- List of lecturer research involving students
- List of national and international speakers that support student Learning
- Performance Accountability Report of Mathematics Programme
- Discussions during the audit

Preliminary assessment and analysis of the experts:

According to the information provided by UIN Suka, there are 15 faculty members in the BC-Math department and 10 in the BC-Physics department. The profiles of all faculty members are available on the university's website. The following tables show the distribution and qualifications of the teaching staff:

Table 3.1 Number and qualifications of Bc-Math teaching staff

	Professor	Assoc. Prof	Assist. Prof	Lecturer
Doctor (Ph.D)	1	3	2	
Master		1	5	3
Total teaching staff	15			

Table 3.2 Number and qualifications of Bc-Phys teaching staff

	Professor	Assoc. Prof	Assist. Prof	Lecturer
Doctor (Ph.D)		1	4	
Master			2	3
Total teaching staff	10			

The teacher-student ratio for both programmes under review is as follows:

No.	Study Program	Faculty Members	Number of Active Students	Ratio
1	Bc-Math	15	336	1:22.4
2	Bc-Phys	10	203	1:20.3

The ratio is in line with the Ministry of Education and Culture and Research Technology Regulation No. 105/M/V1/2015, which states that a 1:30 faculty-to-student ratio is ideal for exact sciences.

In accordance with the regulations of the Ministry of Education and Culture and Ministry of Religious Affairs, the recruitment plan for academic staff is formulated taking into account workload analysis and assessment of staffing needs. Through a rigorous selection process, candidates must pass a series of competency tests and have their qualifications assessed.

As stated in the SAR, guest lecturers are regularly invited to broaden students' perspectives. They also engage in academic activities such as professional training for students, public lectures, summer courses and other academic discussion forums.

Faculty research projects are supported by government or university sources. A list provided by the Physics programme shows that students are often involved in these projects to provide them with research experience and to assist in the completion of research projects. UIN Suka also rewards faculty members who successfully publish their work in recognized national and international journals.

According to Ministry regulations, all lecturers must undergo professional development and teaching skills training in the form of the “Novice Teacher Skills Improvement Workshop” and obtain a teaching certificate. In addition, UIN Sunan Kalijaga offers other teaching workshops for teachers. These are organised by the Center for Teaching Staff Development (CTSD), managed, and coordinated by the University Quality Assurance Unit.

In addition, as part of staff development, the Faculty of Science and Technology encourages lecturers to pursue doctoral studies to meet the needs of the study programmes and provides support in relation to the necessary documentation for advanced study preparation. It also supports staff to participate actively in various national and international academic forums as speakers or participants. The faculty is committed to supporting staff development through benchmarking between universities nationally and internationally, with the aim of enhancing professional capacity.

The lecturers confirm that they feel supported by the university and faculty, and that there are several training and development opportunities available. The experts question whether the research funds are sufficient or whether more funding would be desirable, especially in view of the future establishment of research-focused Master’s programmes. The teaching staff interviewed explain that there is some funding available from the Ministry of Religious Affairs, the faculty and foreign organisations. Some of them have been able to visit international conferences and secure additional funding independently. However,

the majority of the lecturers feel that they need more support from UIN Suka for research, for international conferences and to facilitate international collaboration. In addition, regarding the **Bc-Phys**, the lecturers consider the enhancement of the equipment in the labs essential, in order to be able to publish in renowned journals and carry research at an internationally competitive level (see section 3.3).

In conclusion, the experts confirm that the number and academic specialisation of the teaching staff are appropriate for the successful implementation and sustainability of the two programmes under review. The university and the faculty support their staff and provide adequate opportunities for professional and pedagogical development. However, the experts conclude that the faculty should develop a strategy to increase its research strength in order to gain a stronger international reputation (e.g. publications in impactful international journals and presentations at international conferences, acquisition of funding for research activities and equipment in physics laboratories, more national and international collaborations). In addition, the experts draw attention to the composition of the teaching staff, especially for the **Bc-Phys**, which consists almost entirely of Assistant Professors and Lecturers at very junior career levels. The representatives of the faculty and rectorate acknowledge the momentary situation but emphasise that several promotions to more senior levels have already been initiated or are foreseen in the near future.

Criterion 3.2 Student Support and Student Services

Evidence:

- Self-Assessment Report (SAR)
- Staff Handbook for each programme
- Monitoring and Evaluation of the Lecturer Performance Index Odd Semester Academic Year of 2024-2025
- Discussions during the audit

Preliminary assessment and analysis of the experts:
Each student in the faculty is assigned an Academic Supervisor (DPA) who provides academic and non-academic guidance. In addition, there is a thesis supervisor (DPS) who assists the students in the completion of their final projects.

At the university level, UIN Sunan Kalijaga has a Centre for Entrepreneurship and Career Development (CENDI), which provides students with advice on career preparation. It ensures that students graduate with a well-rounded personal profile that includes career interests, personality traits and work ethic. CENDI organises an annual job fair that attracts

both national and multinational companies, giving students access to career opportunities after graduation.

According to the results of the evaluation of the lecturer performance and student's satisfaction survey, the students are satisfied with their lecturers and the support provided. Evaluations of both academic and non-academic staff are carried out by the faculty, with academic evaluations conducted online by students and overseen by the Vice Dean for Academic Affairs. Suggestions for improvement from student evaluations are discussed at regular end-of-semester meetings at programme and faculty level. According to the report on the results of the "Monitoring and evaluation of the lecturer performance, overall teaching performance of all lecturers in both programmes falls into the "good" category. However, regarding the timeliness of grade submission in the Mathematics programme, the score is still 2.92. This means that, on average, lecturers submit grades 8-11 working days after the exam.

During the on-site discussion, students express their satisfaction with the support and assistance offered by UIN Suka and their teachers. Students have the option of consulting their academic advisor for information about courses, projects and teaching methods, or for support in case of difficulties. Lecturers are attentive and supportive, providing advice during counselling and at other times as required. Students meet with their academic advisors at least three times per semester to discuss examination content. There are also meetings with the head of the study programme and a WhatsApp group for easy communication and feedback.

The experts note that students generally have a very good relationship with their teachers. Both students and staff confirm that there is always an academic advisor available to work with students on any questions or problems. The auditors believe that the support system helps students to achieve the intended learning outcomes and to complete their studies successfully and without undue delay. Students are well informed about the services available to them. The experts consider that the guidance and mentoring system in place is very good.

Criterion 3.3 Funds and equipment

Evidence:

- Self-Assessment Report (SAR)
- List of Laboratories
- Discussions during the audit

Preliminary assessment and analysis of the experts:
In terms of financial resources, the university explains in the SAR that UIN Suka operates as a government institution under the financial management framework of public service agencies.

The financial resources of the Faculty of Science and Technology come from the university with limited amounts depending on the number of students, the faculty's income, the programme's accreditation performance and the previous year's budget realisation. The faculty's budget is further managed and allocated to both programmes. The financial resources of the faculty come from several sources, such as the “State University Operational Assistance” (APBN funds for government employees and non-government employees, while BOPTN for financing operational costs) and non-taxed state revenues (internal revenues from students' individual tuition fees, use of state-owned assets such as income from the university's assets, club house, university hotel and meeting room rentals).

Student satisfaction with the facilities and infrastructure of the programmes is measured through surveys conducted each semester by the programmes under the coordination of the University Quality Assurance Unit, which collects and analyses the evaluation results for follow-up actions by the programmes.

Each classroom in the Faculty of Science and Technology is outfitted with essential tools, such as, LCD projectors, folding chairs, whiteboards, interactive TVs, and air conditioning (AC) system. Additionally, the faculty has laboratories tailored for practical instructional activities and scientific exploration. Each laboratory is equipped with appropriate laboratory equipment pertinent to its designated study programme. To support student learning, UIN Sunan Kalijaga provides support facilities such as co-working spaces strategically located throughout the campus for group discussions and study sessions. In addition, there is a health clinic for the academic community, including students, to access health services.

During the on-site visit, the experts inspect the university's facilities, library, computer rooms, and laboratories. They visit among others the Basic Physics Laboratory, Analysis Laboratory, Modern Physics Laboratory as well as the Algebra Laboratory, Electronics Laboratory, Applied Mathematics Laboratory, Computational Physics Laboratory, Statistics Laboratory, and Thermodynamics Laboratory.

Overall, the experts conclude that UIN Suka has secure funding and reliable financial planning. The campus and infrastructure are adequate and sufficient. They consider that there is sufficient space, rooms and facilities, and adequate computer resources. In addition, the university’s library is equipped with the Electronic Library Information Management System (ELIMS) and Radio Frequency Identification (RFID) for cataloguing purposes. The uni-

versity also provides services for students with disabilities, organised by the Disability Services Centre (PLD). During the site visit, the experts could observe how a student with a visual impairment was supported in the library. They express their appreciation for this and encourage UIN Suka to continue providing such support. However, as mentioned above (see 3.1), the experts believe that a strategy to enhance the research strength should be developed in order to gain a stronger international reputation and provide the basis for the future establishment of research-focused Master's programmes. This strategy should also encompass the enhancement of equipment in the Physics laboratories. In addition, regarding the **Bc-Math**, cooperation with external partners/industry (public and private institutions and companies, national and international) should be strengthened in order to improve the capacity of the teaching staff.

4. Transparency and Documentation

Criterion 4.1 Module Descriptions

Evidence:

- Self-Assessment Report (SAR)
- Module Handbooks for each programme
- Discussions during the audit

Preliminary assessment and analysis of the experts:
The module handbooks for both degree programmes under review are published on the university's websites for each degree programme and are thus accessible to the students as well as to all stakeholders in both Indonesian and English language.

The experts found that the module descriptions are accessible and contain the required information for each module: Module name, responsible persons, teaching methods, credit points awarded and workload (including contact hours and self-study time), intended learning outcomes, content, examination requirements, literature, assessment methods, and details explaining how the final grade is calculated. The module handbook for the **Bc-Math** also specifies the recommended prerequisites for each module. However, with regard to **Bc-Phys**, the module descriptions do not include recommended prerequisites for all modules after the first semester. It is the opinion of the experts that including these prerequisites for the individual modules in the Physics programme is imperative in order to enable students to plan their studies and individual curricula in an adequate manner. (see above **Criterion 1.3**.).

Furthermore, the experts observe that in the module descriptions, the assessment methods for each module are outlined (Final Examination, Mid-Term Examination, Class Activities: Quiz, Homework, etc.). However, the specific form of examination for each assessment (e.g. written or oral) is not included. It is therefore essential that the examination forms be specified in the module descriptions for **both programmes**. The form must be appropriate to assess the full breadth of the module learning outcomes.

The experts also conclude that the training of scientific English needs to be enhanced and explicitly included in the module descriptions for **both programmes** (for example, presentations or project work in English, research proposal etc.). In addition, all compulsory courses, including research proposal, thesis, and co-curricular activities **for both programmes** need to be included in the module descriptions (see above **Criterion 1.3 and 1.5**).

Criterion 4.2 Diploma and Diploma Supplement

Evidence:

- Self-Assessment Report (SAR)
- Samples of diploma supplement, transcript of records and certificate
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The graduates for each study program receive a diploma, transcript of records and a certificate or diploma supplement, called SKPI. The diploma supplement is prepared in both Indonesian and English, while the diploma and transcript are issued in Indonesian and can be translated upon request by contacting academic officers.

The student diploma is an official document that states details about the student's academic profile and the degree conferred upon successful completion of studies, including the graduation date. Additionally, the academic transcript for bachelor's programmes displays essential information such as the Cumulative Grade Point Average (CGPA) and the graduation predicate as well as individual grades attained in each course and detailed calculations of the student's final academic standing.

The Certificate Accompanying the Diploma (SKPI) is an official statement issued by the university containing information about the academic achievements or qualifications of the graduates. It includes specific information and specifies the alignment with the Indonesian National Qualifications Framework, the language of instruction, grading system, duration of study, type and program of advanced higher education, and insights into the higher education system. This document also supplies supplementary details regarding the graduate’s accomplishments throughout their term as a student, as well as their roles in students’ organization.

Based on the reviewed documentation, it has been confirmed by the experts that students of the **Bc-Phys** programme are issued with a Diploma Supplement and a Transcript of Records in English, both of which meet the expectations. However, it has come to light that the provided Diploma Supplement for **Bc-Math** contains identical information to that of the Physics programme. The actual Diploma Supplement for **Bc-Math** is still a pending submission. Furthermore, the experts note that the diploma supplements for both programmes under review do not contain information regarding the student's GPA relative to the cohort. The experts recommend that the GPA distribution of graduates be included in the diploma supplement to ensure fair transfer and recognition of grades for mobility students.

Criterion 4.3 Relevant Rules

Evidence:

- Self-Assessment Report (SAR)
- Academic Guide
- List of Regulations
- Discussions during the audit

Preliminary assessment and analysis of the experts:

The Academic Guide, published by the Academic Division of the university, contains all the policies relating to the admission and enrolment of new students, the educational system, administrative services and academic facilities. The Academic Department, Faculties and Programmes have carefully compiled and distributed the Academic Guide, making it available to all members of the academic community. The Academic Guide and the new regulations are published on the university's website and are therefore available to all stakeholders.

The experts confirm that the rights and obligations of both UIN Sunan Kalijaga and the students are clearly defined and binding. The students interviewed seem to be satisfied with the website and the academic intranet. They acknowledge that they can find all relevant course-related information. While the **Bc-Math** website is very informative and well-structured, including its English version, experts have suggested that the **Bc-Phys** website should be improved and completed. Especially in its English version, there is presently very little information about the research activities of the staff members, the structure and facilities of the department, external partnerships, etc.

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

UIN provides updated module handbooks. These seem to include all compulsory courses including the Research Proposal module in the 8th semester for the Physics study programme and the Thesis module for the Mathematics study program. The information about the form of examination (written, project, oral presentation) was also complemented. Furthermore, the module handbooks provided include recommended pre-requisites for each module. The experts appreciate that students are informed in which order they should take the courses when they need to rearrange their curriculum due to credit-point limitations, which is now made clear.

In addition, the experts note that there are also module descriptions for the mandatory co-curricular courses, such as English, but these are not integrated into the module handbook,

and it is hence unclear if they are merely for internal use or public documents that can easily be found by students. These also lack some essential information, such as workload or form of examination. Therefore, the experts conclude that the module handbook for the programmes needs to be reviewed and complemented and include the co-curricular activities. In this context, they also emphasise that a different official categorisation of the co-curricular activities or a more formal integration into the curriculum is not required, but only a transparent and easily retrievable description of the contents, learning outcomes, workload and examination of these co-curricular courses as for other modules.

The university has provided updated samples of the diploma supplement for both programmes. These include all information required including information about the student's GPA relative to the cohort.

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report (SAR)
- Website of Bc-Math: https://matematika.uin-suka.ac.id/en
- Website of Bc-Phys: https://fisika.uin-suka.ac.id/en
- Report on the results of monitoring and evaluation activities of Physics study programme 2023/2024
- Report of internal quality audit Mathematics study programme
- Regulations of Quality Management
- Student Satisfaction Survey Report for both programmes
- Student Workload Survey Result for both programmes
- Sample Tracer Study Questionnaire (Alumni and User Evaluation Form)
- Statistical data about the progress of studies
- Discussions during the audit

Preliminary assessment and analysis of the experts:
As stated in the SAR, UIN Sunan Kalijaga Yogyakarta's quality assurance system includes internal quality assurance (SPMI) and external quality assurance (SPME).

In terms of external quality assurance, in 2022 and 2023, the Mathematics and Physics programmes underwent quality assessment through accreditation by the National Accreditation Agency for Higher Education (BAN-PT) or LAMSAMA (Independent Accreditation Body for Natural and Formal Sciences). Both programmes under review have achieved “Excellent” accreditation status.

Internal quality audits (AMI) are conducted every semester to evaluate the quality plan of faculties and study programmes. The "Management Review Meeting" follows the AMI and generates improvement recommendations. A report is distributed to all relevant parties. Faculties and study programmes will follow up any improvements with "Follow-up audit activities" to ensure the findings have been addressed.

In addition, the University's Quality Assurance Agency conducts regular online satisfaction surveys involving teaching staff, education staff and students. The implementation of the study programme is evaluated through a service satisfaction survey for lecturers, education personnel and students.

At the end of each semester, students are invited to complete an online survey to evaluate their lecturers' performance. The Student Workload survey is conducted online at the same time as the satisfaction survey on lecturer performance (learning process). The survey results are evaluated and responded to by the head of the study programme. The Quality Assurance Institute, in conjunction with the Study Programme quality controller, then monitors the follow-up by the study programme. The student satisfaction survey is measured using the SERVQUAL (Service Quality) model, consisting of five dimensions: tangibles, reliability, responsiveness, assurance, and empathy in the Outcome-Based Education (OBE) document. The results are then evaluated and shared with the instructors of each course. Following this, a report on the Student Satisfaction Survey and the Student Workload Survey results for both programmes are published. To measure the achievement of PLOs for each course, periodic program learning outcomes assessment is conducted at the end of each semester. The results of these monitoring and evaluation processes are reported. Statistical data on monitoring and evaluation, as well as AMI results, are presented online.

The Tracer Study is run centrally at university level by CENDI. Graduate tracking activities are carried out annually via a website system (https://devalumni.uin-suka.ac.id/). The questionnaire items cover all core questions based on accreditation guidelines. The study results are analysed and published as the Sunan Kalijaga Tracer Study Book through the repository. Results are used by study programmes for curriculum and teaching evaluation and development, and to enhance collaboration with industry. CENDI and study programme heads conduct an evaluation of the Tracer Study every year to resolve previous constraints (Tracer Study Dissemination Roadshow).

During the discussions, the lecturers explain that the programme coordinators communicate the results of the evaluations to them at the end of the semester. They also receive a "Lecturer Performance Index" (1 to 4). The lecturers then discuss the results with students and via the student advisor, who meets regularly with students during the semester, also regarding examinations. The results are also published on the website.

The students interviewed expressed a high degree of satisfaction with the various methods of providing feedback, and they confirmed that they regularly complete multiple surveys pertaining to their study programme, the performance of their lecturers, and the workload. They appreciate the lecturers' willingness to discuss their feedback and are open to suggestions. In addition to the formal channels, students have reported the use of alternative

means of feedback, including group chats within the university system or WhatsApp groups organised by programmes. There is an online forum available for them to join, where they can exchange ideas and connect with alumni. Students interviewed expressed confidence that their feedback is duly considered. For instance, they highlighted the issue of unreliable internet connectivity during last year's classes. They conveyed their concerns through the designated channels, and the university responded promptly by making the necessary improvements. They can also request advice from the student union or report any concerns.

In conclusion, the expert group confirms that the overall quality management system is effective in identifying weaknesses and improving programmes. All stakeholders are involved in the process. The results of these processes are incorporated into the continuous development of the programme. Processes and responsibilities seem to be well defined for the further development of the programme. The results and any measures derived from the evaluations are communicated to the students.

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. Diploma Supplement for **Bc-Math**

E Comment of the Higher Education Institution (14.05.2025)

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

- Diploma Supplement for Bc-Math

The following quotes the comment of the institution:

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
1 (p.5)	The Faculty of Science and Technology at UIN Sunan Kalijaga Yogyakarta comprises seven undergraduate programmes and two Master's programmes among which are the Bachelor's programmes in Physics and Mathematics.	Faculty	An update is provided regarding the structure of academic programmes within the Faculty of Science and Technology at UIN Sunan Kalijaga Yogyakarta to reflect recent developments. As of the 2024/2025 academic year, the Faculty comprises **ten study programmes**, including **eight undergraduate** and **two Master's programmes**. The undergraduate programmes are: **Biology, Physics, Chemistry, Mathematics, Informatics, Industrial Engineering, Architecture**, and the newly established **Biomedical Sciences** programme, which officially commence operations in the 2024/2025 academic year. The Master's level includes programmes in **Informatics** and **Industrial Engineering**
2 (p.9)	However, they highlight that the employability of physics graduates has increased in the year 2024. Their goal is to improve the situation and achieve systematically higher results for close or at least moderate alignment. They also consider it important to offer alumni more op-	Physics	Regarding your suggestion to offer alumni more opportunities for research involvement, we are pleased to inform you that **several alumni have already been invited to collaborate with academic staff in the Physics Study Program**. These collaborations include **joint research projects and co-authorship of scientific articles**. The research topics are aligned with key areas of interest within the Physics study program, such as material physics, geophysic, physic instrumentation, and biophysic, ensuring relevance to both academic development and real-world applications. Some examples of alumni co-authorship include:

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	portunities for research work at the university		1. Frida Agung Rakhmadi, M.Sc and Rochan Rifai, M.Sc (Alumnus, currently pursuing further studies at Tunghai University Taiwan) https://iopscience.iop.org/article/10.1088/1742-6596/2945/1/012040/pdf 2. Ade Kurniawan, PhD and Rakha Saputra (Alumnus, currently a master's student at Ming Chi University, Taiwan) https://doi.org/10.1016/j.snb.2024.136091 3. Dr. Nita Handayani, M.Sc and Hilman Asyrafi (Alumnus, currently working at Department of Graphic Engineering, State Polytechnic of Creative Media, Makassar, Indonesia) https://pubs.aip.org/aip/acp/article-abstract/3210/1/020003/3310064/EEG-complexity-in-children-with-autism-spectrum 4. Dr. Widayanti, M.Si and Farahdina Zain (Alumnus,currently a master's student at Gadjah Mada University, Indonesia) https://www.scientific.net/KEM.990/2 5. Andi, M.Sc and Ahdian Azri Bustari (Alumnus) https://jurnal.untan.ac.id/index.php/jpositron/article/view/75655 6. Asih Melati, Ph.D and Galih Padmasari (Alumnus) https://link.springer.com/article/10.1007/s00339-022-05336-z
3 (p.9)	The rector and the UIN Suka management agree with this proposal and express their intention to develop Master's programmes in Mathematics and Physics in the future.	Faculty	Regarding these valuable reccomendation, The Rector and the University Senate of UIN Sunan Kalijaga have expressed full support for this initiative. Rather than establishing a stand-alone Master's in Physics at this stage, the university is advancing a multidisciplinary approach. The proposed Environmental Management Master programme integrates applied knowledge from Physics, Chemistry, and Biology, addressing complex environmental issues. Relevant physics content, particularly in areas such as disaster risk reduction and environmental monitoring, is embedded within the curriculum to ensure that graduates possess a strong scientific foundation to tackle real-world environmental challenges. We believe there is strong potential to establish a Master's programme in Physics, with a focus on Geophysics in the near future. Preliminary market analysis and benchmarking against regional institutions in the Yogyakarta region highlight a consistent

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			demand and strong student interest in the field. Notably, several prominent universities continue to admit large numbers of students into their Physics programmes, indicating a sustainable market. In this context, UIN Sunan Kalijaga views the development of a *Geophysics* Master's programme as a strategic initiative aligned with both institutional capacity and regional priorities. In parallel, regarding the development of a **Master's programme in Mathematics**, the Rector and the University Senate of UIN Sunan Kalijaga have formally agreed to establish the programme. **Currently, the necessary documentation is being prepared for submission to the Ministry of Religious Affairs through the SIAGA platform** (https://siaga.kemdiktisaintek.go.id/) as part of the official procedure for opening a new academic programme. This initiative reflects the university's ongoing commitment to advancing higher education in the mathematical sciences and supporting national academic and professional development. The proposal for the establishment of Master's programs in Mathematics and Environmental Management is available via the following link: **Mathematics Master's Programme Proposal** https://drive.google.com/file/d/1lJwyU_jpe5PHXLIb-C6NApmJus-wlk9u/view?usp=sharing **Environmental Management Master's Program Proposal** https://drive.google.com/file/d/1F79pwM4XcXEIIs-GkZ82M7mjVnXjfLmnQ/view?usp=sharing
4 (p.10)	During the audit, the experts discuss the possibility of introducing Master's degree	Faculty, Math and Physic Programs	We fully recognize the need to enhance the visibility and attractiveness of these fields, particularly among prospective students from diverse backgrounds.

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	courses within the faculty. The university management recognises the need to enhance the visibility and appeal of these disciplines, which they perceive as lacking in popularity among prospective students due to misperceptions and concerns surrounding their perceived complexity. To address this, they want to emphasise the importance and enjoyment of these fields, with a view to attracting a more diverse and interested student body.		Recognizing this challenge, the Physics and Mathematics study programs **have undertaken several strategic initiatives** to improve the visibility, appeal, and public understanding of these disciplines: 1. **School outreach**, where the Mathematics and Physics programs members, assisted by student teams regularly conduct outreach visits to secondary and high schools. Lecturers and students deliver interactive presentations, engage directly with students, and provide information about the excitement and real-world relevance of Physics and Mathematics. 2. Several **engagement promotions** hosted by both programs have annually been organized such as in the physics program **has the annual Fisika Festival (2022)** https://fisika.uin-suka.ac.id/id/berita/detail/6690/fisika-festival-2022-prodi-fisika-uin-sunan-kalijaga-yogyakarta **and 2023** https://fisika.uin-suka.ac.id/id/liputan/detail/3130/sukses-fisika-festival-2023-k-pop-dan-photon. The festival features a range of interactive and competitive activities, such as A **Physics Olympiad**, A **Poster Competition**, and An **Open Laboratory** session for high school teachers and students to explore experiments and engage with university-level facilities 3. In alignment with the Physics study program, **the Mathematics study program** has also undertaken a series of strategic efforts to improve visibility and promote mathematics as a dynamic and relevant discipline including an annual event called **Gebyar Matematika** **https://uin-suka.ac.id/index.php/id/berita/detail/759/gebyar-matematika-nasional-uin-sunan-kalijaga** with its features a **Mathematics Olympiad**. The event is designed to build excitement around mathematics and develop critical thinking and problem-solving skills in a competitive yet supportive environment. Another program called **"Get to Know Closer About**

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			Mathematics" Program: This recurring outreach initiative, held in **2023** https://matematika.uin-suka.ac.id/id/berita/detail/8643/kegiatan-get-to-know-closer-about-mathematics-di-ma-unggulan-pondok-pesantren-al-imdad-bantul-yogyakarta**; 2024** https://matematika.uin-suka.ac.id/id/berita/detail/10720/kegiatan-get-to-know-closer-about-mathematics-di-sma-muhammadiyah-4-yogyakarta **and 2025** https://matematika.uin-suka.ac.id/id/berita/detail/12561/get-to-know-closer-about-mathematics-di-man3bantul , that aims to **promote the Mathematics program to high school students** by offering interactive sessions, introductory lectures, and first hand exposure to university life. 4. **Community Development Programs** where the department teams engage in community service activities, particularly in collaboration with **Islamic boarding schools** (*pesantren*). For example, in **Temanggung**, https://matematika.uin-suka.ac.id/id/berita/detail/11053/pengabdian-masyarakat-pengukuran-arah-kiblat-di-pondok-pesantren-nida-al-quran-kedu-temanggung. Mathematics lecturers and students provide enrichment classes in mathematics and practical applications relevant to the students' religious lives includes **teaching students and teachers how to accurately determine the Qibla direction using mathematical techniques.** 5. Both programs **promote international academic mobility** by informing high school students about opportunities to study abroad during university. These sessions aim to broaden perspectives and boost motivation for higher education. Also, highlight that Math and Phy programs can facilitate their global exposure opportunities, evidenced by students from both programs who have participated in mobility programs to institutions i**n Malaysia (UUM)** https://saintek.uin-

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			suka.ac.id/id/show/berita/12189/three-students-from-the-faculty-of-science-and-technology-participate-in-the-asean-student-mobility-programme-2025-in-malaysia; and **UTHM** https://saintek.uin-suka.ac.id/id/show/berita/10470/program-international-student-mobility-mahasiswa-fakultas-sains-dan-teknologi-semester-genap-tahun-2024-ke-thailand-dan-malaysia, while documentation in **PSU Thailand** can be accessed through this link https://saintek.uin-suka.ac.id/en/show/berita/12223/student-mobility-program-2024-to-psu-thailand-bridging-science-and-tradition
5 (p.10)	However, in comparing the PLOs in the different documents, the expert group found that the wording, numbering and classification of the PLOs in the two programmes under review are not congruent across all documents.	Mathematics and Physic	We appreciate the expert's valuable feedback on the formulation of the PLOs for the Bc-Math and Bc-Phy study programmes. Following this, **both study programmes have taken corrective action** to ensure full congruence across all official documents. Each programme now includes a total of 9 PLOs, which are consistently reflected in the updated website, curriculum handbook, and diploma supplement. These updates ensure clarity and transparency for all stakeholders. The updated formulation of the Programme Learning Outcomes (PLOs) for each study programme—reflected in the website, curriculum handbook, and diploma supplement—can be accessed through the following links: 1. Bc-Math Official website: https://matematika.uin-suka.ac.id/en/page/prodi/3589-PROGRAMME-LEARNING-OUTCOMES Curriculum handbook (page 10) https://bit.ly/Curriculum_Math

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			Diploma supplement: https://bit.ly/Dipl_Supplement_Math 2. Bc-Phys Official website: https://fisika.uin-suka.ac.id/en/page/prodi/3598-PROGRAMME-LEARNING-OUTCOMES Curriculum handbook (page 4) https://drive.google.com/file/d/1AeH1pwk3l53l_qslzYxq4YTHqcZ77Skk/view Diploma supplement: https://bit.ly/44pmhPl
6 (p.11)	In addition, as students wish to continue their studies at the same university, the experts consider that a strategy should be developed for opening Master's degrees **in both areas, mathematics and physics**, (e.g. by improving the research environment and support, supporting the further qualification of teaching staff, etc.).	Mathematics and Physics	Point 3 of our Response to the Expert Recommendation List mentions that the **Mathematics and Physics study programs have already prepared proposals** for their respective Master's programs. The **Mathematics Study Program has already submitted a formal proposal** for a Master's degree program through the official **SIAGA (Sistem Informasi dan Administrasi Pendidikan Tinggi)** website, as part of the formal process required by the national higher education authority to open a new study program. For the **Physics Study Program**, while a dedicated Master's program is still in preparation, **relevant physical sciences knowledge** is currently **incorporated into the interdisciplinary Master's Program in Environmental Management**. This approach enables students interested in applied physics to pursue further studies while the institution actively develops a standalone Master's program in physics.

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			In parallel, the **Faculty of Science and Technology** is actively strengthening its capacity to support post-graduate education by (1) **Improving the qualifications and competencies of academic staff**, including support for doctoral studies and international collaboration; (2) **Implementing a fast-track strategy for promotion to full professorship**, with targeted initiatives such as Regular **academic writing workshops** focused on publishing in reputable journals (https://saintek.uin-suka.ac.id/id/show/berita/5819/fakultas-sains-dan-teknologi-gelar-workshop-penulisan-jurnal-bereputasi); (3) periodic **grant proposal writing workshops** (https://saintek.uin-suka.ac.id/id/show/berita/8925/workshop-penulisan-karya-ilmiah-dan-proposal-hibah-untuk-peningkatan-mutu-lembaga-di-uin-sunan-kalijaga-yogyakarta) to boost research competitiveness and funding acquisition. These strategic actions form part of our long-term academic development plan to establish and sustain high-quality Master's programs in both disciplines. In support of launching the **Master's Program in Environmental Management**, faculty have undertaken the following preparations: 1. **Academic Staff Mapping**: Currently, there are 3 fully Professors and 3 Assist.Professors. The faculty aims to increase the number of Assoc. Professors to 3 by the end of this year. 2. **Laboratory Facilities**: The program is supported by well-established laboratories, including: a. Biogeography and Computation Laboratory b. Ecology Laboratory c. Environmental Laboratory d. Microbiology Laboratory e. Genetics and Molecular Biology Laboratory f. Human Anatomy-Physiology Laboratory

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			g. Biochemistry Laboratory h. Bioinformatics & Computation Laboratory i. Pharmacy & Natural Materials Laboratory For the **Master's Program in Mathematics**, the following preparations are in place: 1. **Faculty Development**: Six lecturers hold doctoral (S3) degrees, with two more pursuing their doctoral studies. 2. **Academic Rank Planning**: Presently, the department has 1 Professor, 4 Associate Professors, 7 Assistant Professors, and 3 Lecturers. The target is to increase to 2 Professors, 6 Associate Professors, and maintain 7 Assistant Professors. 3. **Laboratory Facilities**: The department operates dedicated labs, including: a. Statistics Laboratory b. Applied Mathematics Laboratory c. Algebra Laboratory d. Analysis Laboratory e. Research and Development Laboratory f. Further information on laboratory facilities: Mathematics Laboratories 4. **Teaching Facilities**: The program is supported by fully equipped lecture rooms. Details are available at Mathematics Facilities.
7 (p.14)	Firstly, the experts note that some module descriptions are missing in the module hand- books, such as the Research Proposal in the 8th semester of the Bc-Phys or the Thesis in the 8th semester of the Bc-Math. These must still be supplied later.	Mathematics and Physics	We have updated the module handbooks to **i**nclude the ***Research Proposal*** **module** in the 8th semester for the Physics study program and the ***Thesis*** **module** for the Mathematics study program. The updated handbooks are now available at the following link: Physics program: https://fisika.uin-suka.ac.id/en/page/prodi/3496-MODULE-HAND-BOOK Mathematics program:

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			https://matematika.uin-suka.ac.id/en/page/prodi/3839-Curriculum
8 (p.14)	The experts believe that it is imperative to include prerequisites for the individual modules in the Physics programme in order to enable the students to structure their studies in an adequate manner	Physics	We sincerely appreciate the experts' valuable feedback. In practice, **several courses within the Physics programme already have prerequisite requirements**. For instance, *Elementary Physics 2* requires successful completion of *Elementary Physics 1*, and *Electromagnetics 2* is built upon the foundation provided in *Electromagnetics 1*. These prerequisites are considered during course registration and academic advising. To further enhance clarity and accessibility, the complete module descriptions—along with stated prerequisites where applicable—are published on our official website https://fisika.uin-suka.ac.id/en/page/prodi/3496-MODULE-HANDBOOK and made freely accessible to all students. The specific files for the two example courses mentioned are also available via the provided link.
9 (p.14)	In addition, according to the Bc-Phys curriculum structure, there are only 4 credits (6 ECTS) allocated for laboratory/practical work in compulsory courses until the end of the 5th se- mester, partially in applied theoretical classes such as “Computational Physics”, and no	Physics	In the 2020 curriculum, laboratory components were embedded within theoretical courses—such as *Computational Physics*—as part of an integrated approach to strengthen conceptual understanding through applied activities. However, based on internal evaluations and feedback from stakeholders, the 2024 curriculum has introduced stand-alone laboratory courses starting from the earlier semesters. As detailed in the 2024 curriculum document https://drive.google.com/file/d/18VkpdkZBx4OpTLmN9tWq2EG5cprQvBI/view?usp=sharing (pp. 105–108), each practical lab course is now assigned

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	dedicated laboratory courses.		one credit (equivalent to 1.5 ECTS). Hence, **the total number of credits** dedicated to **laboratory/practical work** has **increased** significantly **to 40 credits (60 ECTS) in the 2024 curriculum, compared to 34 credits (51 ECTS) in the 2020 curriculum**. This revision provides students with more structured and comprehensive hands-on experience throughout their studies. The curriculum changes of 2020 and 2024 are available at this link https://docs.google.com/spreadsheets/d/1uP-bUpZ3ZRMz0NH1Cpk_gSwhzO7mL7X94/edit?usp=sharing&ouid=108732225125055446123&rtpof=true&sd=true

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
10 (p.14)	Concerning Bc-Math, the experts note that some of the modules in the first year are very elementary, as evidenced by the questions on the sample exams provided. The programme coordinators explain that this is only at the beginning of the programme, as an introduction and refresher of school subjects. Nevertheless, the experts recommend the introduction of tutorials or bridging courses before the study or during the first semester to refresh basic mathematical topics from school and to ensure that all students are at the same level at the beginning of their studies.	Mathematics	We thank the experts for their insightful recommendations. The Mathematics Study Program has conducted a **comprehensive review of the module handbook** to ensure that the **learning outcomes align with the expected undergraduate qualifications**. Key improvements include **revising Course Learning Outcomes (CLOs)** to incorporate **higher-order thinking skills (HOTS)** and e**nhancing course content**. Please access the revision via the link provided https://bit.ly/Revision_ModuleHandbook. To further support the attainment of these qualifications and the effective integration of HOTS, the program has established **a peer-mentoring initiative program** where student tutors assist and mentor their peers throughout the learning process. This program is conducted every semester outside of the regular class schedule. The process begins with the identification of courses that require additional academic support, based on their level of difficulty and student performance. This identification is carried out by the programme coordinator and teams. **Once the courses are identified**, **students are selected as peer tutors** based on specific academic requirements: a minimum GPA of 3.5 and an “A” grade in the course they will tutor. These peer mentors conduct small-group tutorials designed to reinforce key concepts and improve student comprehension of challenging material. The tutorial programme has proven to be very helpful for students, particularly in strengthening their understanding of mathematical course content and improving academic performance. To acknowledge

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			their contribution, **peer tutors receive** an **official certificate of appreciation** https://bit.ly/Tutorial_Certificate and a **Dean's decree** as formal recognition https://bit.ly/Deans_decree_Tutor Following expert recommendations, we will enhance the programme by including **selected school-level math topics in the mentoring materials.** These will be delivered through a bridging component before or early in the first semester to ensure all students share a common foundation, supporting readiness and easing the transition to university-level mathematics.
11 (p.15)	However, they believe that the electives for both programmes	Mathematics and Physics	Thank you for your feedback regarding the structure of elective courses in both programmes.

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	could be better structured and conclude that for both programmes the electives should be grouped according to the available specialisa- tions.		**In the 2020 curriculum**, elective courses in both programmes **have been organized** to align with **student interests and specialization areas**. **In the Physics programme**, electives are structured into key fields such as *Material Physics*, *Geophysics*, *Biophysics and Medical Physics*, and *Instrumentation Electronics*, as detailed in the 2020 curriculum book (pp. 67–74) https://drive.google.com/drive/folders/1yejq43w3kZjNiQHsEGz4VVRs_gScC52k https://docs.google.com/spreadsheets/d/1uPbUpZ3ZRMz0NH1Cpk_gSwhzO7mL7X94/edit?usp=sharing&ouid=108732225125055446123&rtpof=true&sd=true Similarly, **the Mathematics programme** has also structured its electives around student interests, including specializations in *Algebra*, *Analysis*, *Applied Mathematics*, and *Statistics*, as described in the 2020 curriculum document (pp. 9–10). https://bit.ly/Curriculum_Math This structured approach is intended to **provide clearer academic pathways** and to **better support students in developing expertise** aligned with their career aspirations.
12 (p.15)	Furthermore, regarding the Bc-Math, the experts believe that the collaboration with the industry (public and private institutions and companies	Mathematics	We sincerely appreciate the expert's recommendation about this matter. The Faculty of Science and Technology has proactively established numerous partnerships with both **national and international institutions, including**

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	in Indonesia and abroad) should be strengthened in order to improve the skills of lecturers and students and possibilities for students' professional future.		**academic and industry partners**. These collaborations span across all study programs within the faculty, including the Mathematics Study Program. **National partners** include BRIN (National Research and Innovation Agency), the Indonesian Young Scientist Association (IYSA), Zetta Byte PTE LTD, PT Huawei Tech Investment, PT Weslic Indonesia Neotech, PT Semesta Ruang Inovasi (Sevenpion), Dicoding Indonesia, and Cataliz. **International partnerships** include Indeed Research Group (Switch: The Data-Driven Collaborative Decision Making in Complex Industrial Systems), the School of Business, Social & Decision Sciences at Constructor University, Prince of Songkla University (Thailand), Universiti Tun Hussein Onn Malaysia (UTHM), Universiti Malaysia Pahang (UMP), and many others. Documentation of MoU partnership can be accessed through this link https://bit.ly/MoU_Data The Mathematics Study Program actively implements these partnerships through a variety of programs. In 2025, the program is organizing several key activities, including a public lecture titled **"Overview of MATLAB and Simulink for Artificial Intelligence"**, in collaboration with PechSource Systems and Ascendas Systems Group (https://matematika.uin-suka.ac.id/en/berita/detail/11870/public-lecture-overview-of-matlab-and-simulink-for-artificial-i) Additionally, the Mathematics Study Program and **PT Solusi Digital Kreasindo** (industry partner) will jointly host a **Hands-on/Virtual Workshop on Tableau in May 2025**. This activity serves as preparation for the upcoming **collaborative event**—the **National Data Visualization Competition**, which is open to both undergraduate and graduate partici-

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			pants nationwide. The submission phase is scheduled for May 2025, and the grand final is planned for November 2025 https://matematika.uin-suka.ac.id/en/berita/detail/12653/uin-sunan-kalijaga-hosts-indonesian-vizz-idol-the-first-and-biggest-student-data-visualization-competition-in-indonesia. These initiatives aim to foster practical skills in data analysis and visualization, thus enhancing students' readiness for industry demands.
13 (p.16)	However, a majority of the students feel that the financial support is not enough for a semester abroad. They also explain that the number of students selected for the mobility programme offered by UIN Suka is very low and that the faculty should increase the number of students selected to go abroad. Furthermore, as mentioned above, the majority of students interviewed stated that they would prefer to see more emphasis on **developing English skills** in the classroom.	Faculty, Phy and Math Programs	Thank you for highlighting these important concerns. We acknowledge the increasing need for **international mobility** among our students and the necessity to enhance their global experiences. Despite budget efficiency measures in some areas, the institution has not reduced the budget for student mobility. For 2025, we aim to double the funding for outbound student mobility. In 2024, we sent five students with a budget of 25 million IDR (approximately 1,505 USD), and this year (2025), we plan to send seven students with a budget of 43 million IDR (approximately 2,598 USD). In 2026, the faculty targeted sending eight students with a budget of 60 million IDR (around 3,626 USD), including additional campuses and destination countries, such as Yangzhou University (YZU), China, and Ming Chi University of Technology, Taiwan. The budget planning for student mobility can be viewed through this link https://drive.google.com/drive/folders/15S1B9qA764cP_hDOkAgYDomLpVuh5G5E We discussed this program with a representative of YZU when they visited the Faculty of Science and Technology in December 2024 (https://saintek.uin-suka.ac.id/en/show/berita/12436/collaboration-initiation-visit-of-the-yangzhou-university-china-

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			team-to-uin-sunan-kalijaga-and-the-faculty-of-science-and-technology). Meanwhile, discussions with Ming Chi University are ongoing informally through Dr. Ade Kurniawan, one of our physics lecturers who has previously collaborated with the university on research https://doi.org/10.1016/j.sna.2024.116116. . Regarding the initiatives by the Physics and Mathematics programs to support students' English proficiency, in **the Physics program, several efforts have been implemented**, including: offering bilingual instruction in courses like *Basic Properties of Materials and Lab Management*, taught by Dr. Asih Melati https://drive.google.com/file/d/1XY1KoMkp-iCE4UBfWI8oM6qIbtf4BYWH/view?usp=sharing. Students, particularly those in *Geophysics*, are trained to write and publish articles in English-language journals, such as the works of 1. Zeni Rahmawati https://journal.upgris.ac.id/index.php/asset/article/view/v6i2.18163. 2. Rezal Prihatin https://ipr.unram.ac.id/index.php/ipr/article/view/317 3. Ahdian Azri Buhtari https://jurnal.untan.ac.id/index.php/jpositron/article/view/75655 Similarly, the Mathematics Program has implemented several initiatives to support English proficiency, including: 1. Offering courses in English, such as Graph Theory, and bilingual courses like Advanced Linear Algebra and Ring Theory. The evidence of the module handbook, teaching materials, and student assignments https://bit.ly/GraphTheory_Saif 2. Encouraging participation in international seminars, such as Yogi Anggara at the *International Conference on Science and Engineering* (ICSE) https://www.atlantis-press.com/proceedings/icse-uin-suka-21/125966884 3. Promoting publications in English-language journals, such as Zuva Amalina Zain's article in

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			Barekeng Journal (Scopus Q4) https://ojs3.unpatti.ac.id/index.php/barekeng/article/view/14667 4. Supporting student mobility programs, like Dea Iswara's participation in the ASEAN Future Innovator Challenge and ASEAN Student Mobility Programme in UUM (Universiti Utara Malaysia) https://matematika.uin-suka.ac.id/en/berita/detail/12190/three-students-from-the-faculty-of-science-and-technology-partic Faculty fully supports the student mobility program at several universities overseas, such as PSU Thailand and Malaysia, which enhances their English skills. Examples include: 1. Widha Putri to UTHM Malaysia https://saintek.uin-suka.ac.id/id/berita/detail/9273/student-mobility-fst-2023-halal-scientist-program-di-international-institute-for-halal-research-training-inhart 2. Priyo Prasetyo to PSU Thailand https://drive.google.com/file/d/1p49NY-hrhZhmuy4XGram8kY-jeEqBKP6AB/view?usp=drive_link 3. Virginia Fahreza, Koddam Rukadi Lubis, and Rakha Saputra https://drive.google.com/file/d/11z9MrjgCb7e334nZ2NIg4RoWtg7OOFLy/view?usp=sharing
14 (p.16-17)	However, on the basis of student feedback, they believe that UIN Suka should improve its internationalisation strategy by promoting English language in lec- tures, providing more support for international student mobility, and increasing exchanges	Faculty, Math and Physic Programs	As mentioned in **point 13** of the recommendation list from experts, the internationalization strategy has been taken through the use of English in learning activities; each study program is currently preparing a pilot International Undergraduate Program (conducted fully in English). This initiative aligns with the internationalization program set by the Rector, as stated in the Rector's Letter No. B-1502.1/Un.02/TU.01.1/04/2025. https://drive.google.com/file/d/19Ub-hfC1N3ALEJMjZrx3x3zUHUof-MsrdR/view?usp=drive_link regarding the Internationalization Specialization Program, study programs are formulating their internationalization

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	with foreign institutions and lecturers.		strategies through the development of international classes, double degree, and joint degree programs. This internationalization program is supported by the Guidelines for the Implementation of International Classes (Buku Pedoman Penyelenggaraan Kelas Internasional), which provides a framework for organizing and managing international class programs effectively. (https://drive.google.com/file/d/17p2tRYG2Oec8KQMZ-orjepe_d_c39MTM/view?usp=sharing), guidelines for joint dan double degree https://drive.google.com/file/d/1yJYnRU6z4iH-pHbbM9LqP9YJLqd1HB1_e/view?usp=drive_link and guidelines for Learning System of UIN Sunan Kalijaga for International Student (https://drive.google.com/file/d/1t0teunkTuP9eKyptkafASdyc4xyU56Q0/view?usp=sharing) The Dean of the Faculty of Science and Technology has submitted to the Rector the proposed specialization plans for each study program related to the internationalization program. The Mathematics and Physics study programs have identified Joint Degree programs as their chosen path for internationalization. Here is the link to the supporting document outlining the internationalization plan: https://bit.ly/International_Program To support the program, the Mathematics Study Program has implemented several initiatives to enhance English proficiency, including:

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			1. Conducting several courses using English as the medium of instruction, such as Graph Theory, Advanced Algebra, Advanced Linear Algebra, and Ring Theory. (Proof: PPT slides/teaching materials in English). 2. Students attended international conferences, for example : Yogi Anggara (https://www.atlantis-press.com/proceedings/icse-uin-suka-21/125966884) 3. Students have published in international journals, including Zuva Amalina Zain, who published in the Barekeng Journal, which is indexed by Scopus Q3. (https://ojs3.unpatti.ac.id/index.php/barekeng/article/view/14667) 4. Participated in the ASEAN Future Innovator Challenge as part of the ASEAN Student Mobility Programme, represented by Dea Iswara, who actively took part in the event. (Proof of participation can be attached or linked if available.) (https://matematika.uin-suka.ac.id/en/berita/detail/12190/three-students-from-the-faculty-of-science-and-technology-partic) In addition, the Mathematics Study Program has organized public lectures featuring international speakers from various renowned institutions, including: ● California State Polytechnic University, Pomona, USA ● Khalifa University, United Arab Emirates ● Nanyang Technological University (NTU), Singapore ● Universiti Teknologi Malaysia (UTM) ● Nara Women's University, Japan These activities are part of the program's efforts to strengthen international academic exposure for students and faculty (https://matematika.uin-suka.ac.id/en/page/prodi/3802-International-Guest-Lectures) **Physics Study Program:**

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			In the courses *Fundamental Properties of Materials and Laboratory Management*, the lecturer Dr. Asih Melati has conducted teaching using a bilingual approach—in both Indonesian and English. https://drive.google.com/file/d/1XY1KoMkp-iCE4UBfWI8oM6qIbtf4BYWH/view?usp=sharing https://drive.google.com/file/d/1rzkBVEX-LpN7phdGu80oU043ijviD8l0d/view?usp=sharing Students who are working on their thesis (for example, students with a focus on *Geophysics*) are trained to write articles in English and have them published in national journals that use English as the language of publication. 1. Zeni Rahmawati https://journal.upgris.ac.id/index.php/asset/article/view/v6i2.18163 2. Rezal Prihatin https://ipr.unram.ac.id/index.php/ipr/article/view/317 3. Ahdian Azri Buhtari https://jurnal.untan.ac.id/index.php/jpositron/article/view/75655 The program has sent students to participate in student mobility programs at PSU Thailand and Malaysia, which has significantly enhanced their English language skills. Examples: 1.Widha Putri ke Malaysia https://saintek.uin-suka.ac.id/id/berita/detail/9273/student-mobility-fst-2023-halal-scientist-program-di-international-institute-for-halal-research-training-inhart 2. Priyo Prasetyo ke Thailand. (https://drive.google.com/file/d/1p49NY-hrhZhmuy4XGram8kY-jeEqBKP6AB/view?usp=drive_link

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			3. Virginia fahreza, koddamRukadi Lubis, Rakha saputra https://drive.google.com/file/d/1EU-amtLyDDQBr0OZ_2GTEeZt27J28lOSB/view?usp=sharing
15 (p.20)	However, the experts conclude that the co-curricular activities (religious and Indonesian mentoring Programme (PPKK), Arabic and English language training and information technology training) in both programmes need to be awarded with credits, as they are compulsory components of the study programmes.	Faculty, Math and Physic	Some co-curricular activities are actually part of the Faculty and University policies, serving as **a bridging course** for the implementation of **one of the core values of UIN Sunan Kalijaga Yogyakarta (integration and interconnection)**. These co-curricular activities have been in place since 2005. This initiative aims to achieve the quality targets of UIN Sunan Kalijaga Yogyakarta (Arabic and English language training and information technology training). Since this is a university policy, we will propose to the LPM and the university to review this policy for inclusion in the curriculum. In fact, some of these activities have already been accommodated and are listed in the supplementary document. Upon graduation, students will not only receive their diploma and transcript, but also a supplementary document that outlines their skills. Here is the proof with the link to the supplementary document: https://bit.ly/Dipl_Supplement_Math https://bit.ly/44pmhPI
16 (P.20)	The successful completion of such activities is recognised with the "Certificate of Accompanying Diploma". During the audit, the experts ask about the reasons for not awarding credits in these mandatory co-	Physics	Based on input from ASIIN experts, we revised the 2024 Physics Study Program curriculum by adding English language courses for semester 3. Link to the 2024 Physics Study Program curriculum document: (page 121) https://drive.google.com/file/d/18VkpdkZBx4OpT_LmN9tWq2EG5cprQvBI/view?usp=sharing

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	curricular courses, although some of them, such as English language in Bc-Phys, contribute directly to certain PLOs. The programme coordinators explain that this is based on university regulations		
17 (p.22)	In addition, for both programmes, the training of scientific English needs to be enhanced and explicitly included in the module descriptions (for example, presentations in English, research proposal etc.).	Mathematics and Physics	The Mathematics Study Program offers a course that has been conducted using English as the medium of instruction, specifically the *Graph Theory* course. The module handbook *Graph Theory* course, project report of student, group/individual assignment, and presentation slide is available at bit.ly/GraphTheory_Saif In addition, several lecturers have conducted courses using both Indonesian and English as the medium of instruction (Bilingual), such as the *Advanced Linear Algebra* and *Theory of Rings* courses. The learning description has been enhanced with a portfolio in the Course Program component. In the portfolio document, explanations of student learning experiences in English can be found in the sub-CLO, assessment, and learning method columns. Here is the module handbook for the *Advanced Linear Algebra* course: https://drive.google.com/file/d/1LNa4Un-TzgtCAqILwawWX0G5wuMmGzYYk/view?usp=sharing

E Comment of the Higher Education Institution (14.05.2025)

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			The course *Theory of Rings* requires students to complete assignments in English. Here is the proof: https://bit.ly/HWRingTheory The Physics Study Program offers a course that has been conducted using English as the medium of instruction, specifically the Applied Science course. The module handbook *Applied Science*, project report of student, group/individual assignment, and presentation slide is available at https://bit.ly/4kbCMn9 In addition, several lecturers have conducted courses using both Indonesian and English as the medium of instruction (Bilingual), such as the courses on *Management and Lab Work*, as well as the *Fundamentals of Materials*. The learning description has been enhanced with a portfolio in the Course Program component. In the portfolio document, explanations of student learning experiences in English can be found in the sub-CLO, assessment, and learning method columns. The module handbook, project report of students, group/individual assignments, and presentation slides are available at: https://drive.google.com/file/d/1SLi_Iy4_YHGP-pYu8mCRwdm20pI_FrEAL/view?usp=sharing

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			https://drive.google.com/drive/folders/13LwoffmSfgWU71sLorTZZxmJSIyO4P9q?usp=sharing
18 (p.24)	The module handbooks provided by the UIN Suka for both programmes under review specify the weight for each assessment and the determination of the final letter grade based on the overall score. However, the experts note that the examination forms (e.g. written or oral) are not specified there (see below Criterium 4.1).		All handbook modules have been updated with the assessment types added in the assessment table section (oral, written, or practical). For example: Course: *Elementary Physics 1* https://fisika.uin-suka.ac.id/en/page/prodi/3496-MODULE-HANDBOOK The Mathematics Study Program has revised all handbook modules based on recommendations from experts. The assessment column now includes the types of assessments, namely oral, written, or practical. Additionally, it is equipped with a written assessment form and an oral presentation rubric. Here is the link: https://bit.ly/Revision_ModuleHandbook
19 (p.27-28)	Some of them have been able to visit international conferences and secure additional funding independently. However, the majority of the lecturers feel that they need more support from UIN Suka for research, for visiting international conferences and	Faculty, Math and Physic Programs	The faculty provides full support for international conferences held domestically, such as ICSE (https://icse.uin-suka.ac.id/), where FST lecturers are fully supported (including free registration and publication fees). As for attendance at international conferences abroad, FST provides support for the registration fee. Moving forward, there will be a policy to allocate a budget to support more lecturers in attending both domestic and international conferences. In addition, collaboration with several research institutions that can attract international research

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	for international collaboration.		funding will be enhanced. The Research and Community Service Institute of UIN Sunan Kalijaga and the Ministry of Religious Affairs have opened several schemes, including: collaborative research between national and international universities, sabbatical leave, and sandwich programs. Several Mathematics lecturers have been involved in international collaborations, including: 1. Sandwich Program: Mr. Wahid Mustofa participated at Tilburg University, Netherlands, and Mrs. Khurul Wardati participated at Malaga University, Spain. 2. Centre International de Mathématiques Pures et Appliquées (CIMPA) School: Attended by Mr. Zaki Riyanto and Mrs. Khurul Wardati. 3. Zaki Riyanto: Participant of The Summer School on Aspects of Optimization at the University of Klagenfurt, Austria. 4. Zaki Riyanto: Participant of The IACR-SEAMS School on Cryptography: Foundations and New Directions, held at the Vietnam Institute for Advanced Study in Mathematics (VIASM), Hanoi University of Science and Technology, Hanoi, Vietnam. 5. Zaki Riyanto: Participant of The CIMPA-ICTP Research School on Lattices and Applications to Cryptography and Coding Theory, at Saigon University, Ho Chi Minh City, Vietnam. 6. Zaki Riyanto: Participant of The DAAD Spring School on Combinatorial Stochastic Processes, held at the Vietnam Institute for Advanced Study in Mathematics (VIASM), Hanoi University of Science and Technology, Hanoi, Vietnam. 7. Zaki Riyanto: Participant of The SEAMS School on Algebras and Their Applications (Quantum Physics, Cryptography, and Statistics), at INSPEM Universiti Putra Malaysia (UPM), Malaysia.

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			Several Physics lecturers have been involved in international collaborations, including: 1. Sandwich Program: Mr. Thaqibul Fikri Niyartama participated in this program to Australia. 2. Training and Postdoc Program: Mrs. Asih Melati participated in a French Language Course at IFI Tamrin. 3. Study Preparation Training for Overseas Studies: Ms. Sri Hidayati participated in the study preparation training at UIN Ar-Raniry Aceh through the Indonesia Bangkit scholarship scheme. http://bit.ly/43e4RTX
20 (p. 28)	In addition, regarding the **Bc-Phys**, the lecturers consider the enhancement of the equipment in the labs essential, in order to be able to publish in renowned journals and carry research at an internationally competitive level (see section 3.3).	Physics	The Physics Study Program has started identifying priority areas/studies for the lab upgrade process and has actively competed for funding from the Ministry of Religious Affairs (Kemenag)/government, institutional budgets (LPPM), and industry partners (https://elokarsa.com/) to support the procurement of modern laboratory equipment (such as X-ray multimeters, ACT phantoms, mammography phantoms, and Indonesian seismographs), here is an example of evidence for the procurement of the latest laboratory equipment. https://e-katalog.lkpp.go.id/katalog/produk/detail/2370905?lang=en&type=general https://e-katalog.lkpp.go.id/katalog/produk/detail/2371240?lang=en&type=general https://e-katalog.lkpp.go.id/katalog/produk/detail/2885783?type=general https://e-katalog.lkpp.go.id/katalog/produk/detail/76411677?lang=id&type=general Physics lecturers Dr. Nita Handayani and Dr. Asih Melati have conducted collaborative research with international partners.

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			Dr. Nita Handayani, M.Si https://pubs.aip.org/aip/acp/article-abstract/3210/1/020003/3310064/EEG-complexity-in-children-with-autism-spectrum Dr. Asih Melati, M.Sc https://onlineli-brary.wiley.com/doi/abs/10.1002/app.54430
21 (p.28)	However, the experts conclude that the faculty should develop a strategy to increase its research strength in order to gain a stronger international reputation (e.g. publications in impactful interna-tional journals and presentations at international conferences, acquisition of funding for research activities and equipment in physics laboratories, more national and international collaborations).	Faculty	Achieving greater visibility in the global community requires long-term commitment and strategic steps. The following are some of the strategic steps: 1. Incentives for International Publications: the university provides rewards for publications in reputable international journals. 2. Support for International Conference Participation: The faculty and university provide financial and administrative support to facilitate the participation of academic staff and students in international conferences 3. Research Funding Schemes: through the Research and Community Service Institute (LPPM), the university offers several research schemes for lecturers, staff, and students https://lppm.uin-suka.ac.id/id/pengumuman/detail/4748/perpanjangan-hibah-penelitian-boptn-dan-blu-tahun-2025 4. International Research Collaboration and Networking: including co-supervision arrangements and joint research projects with partner universities abroad, and joint research. These efforts are formalized through Memorandums of Understanding (MoUs) https://onlineli-brary.wiley.com/doi/abs/10.1002/app.54430
22 (P.28)	In addition, the experts draw attention to the composition of the teaching staff, especially for the Bc-	Physics	Several factors contribute to the fact that the careers of lecturers in the Physics Study Program are still in the early career stages (Assistant Professors and Lecturers): the recruitment of new lecturers for

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	Phys, which consists almost entirely of Assistant Professors and Lecturers at very junior career levels. The representatives of the faculty and rectorate acknowledge the momentary situation but emphasise that several promotions to more senior levels have already been initiated or are foreseen in the near future		rejuvenation within the program, and some are currently in the process of advancing to higher career levels, in contrast, others have just completed their doctoral studies and are working towards higher academic positions. However, the Faculty of Science and Technology (FST) and the UIN Sunan Kalijaga have taken steps and initiated a series of academic promotions and capacity-building initiatives to support the professional advancement of these staff members. One of the proactive steps taken by the institution is **Structured Career Development Support**: This program regularly organizes career development workshops through the Faculty of Science and technology. These workshops guide academic staff on the national promotion system, research publication strategies, academic portfolio preparation, and professional development pathways. Most recently, a dedicated workshop on academic career development was held on March 19, 2025, at the Faculty of Science and Technology. The event focused on promotion requirements, publication strategies, academic portfolio development, and national regulations for academic advancement. https://saintek.uin-suka.ac.id/id/show/berita/12502/rapat-pendampingan-pengembangan-karir-dosen These efforts will strengthen the academic profile of the Physics Study Program in the future.
23 (p.29)	According to the report on the results of the "Monitoring and evaluation of the lecturer performance, overall teaching per-	Mathematics	Each semester, the Mathematics Study Program conducts monitoring and evaluation of the learning process, covering the following aspects: lecturer attendance (K1), timeliness of grade submission by lecturers (K2), and student evaluation of teaching performance (K3). (https://matematika.uin-

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	formance of all lecturers in both programmes falls into the "good" category. However, regarding the timeliness of grade submission in the Mathematics programme, the score is still 2.92. This means that, on average, lecturers submit grades 8-11 working days after the exam.		suka.ac.id/en/page/prodi/3815-Monitoring-and-Evaluation). The evaluation results over the past three years (Academic Years 2021-2022, 2022-2023, and 2023-2024) show that the scores for the three aspects—K1, K2, and K3—ranged from 3 to 4 (excellent criteria). In the monitoring and evaluation of the odd semester for the 2024-2025 Academic Year, the evaluation results showed that some lecturers submitted grades 8 to 11 days after the exams. This delay occurred because the lecturers involved are currently pursuing their PhD studies. Based on the evaluation results, for the 2025-2026 Academic Year, the teaching load of lecturers pursuing their PhD studies will be reduced, as they need to focus on completing their doctoral studies.
24 (p.31)	However, as mentioned above (see 3.1), the experts believe that a strategy to enhance the research strength should be developed in order to gain a stronger international reputation and provide the basis for the future establishment of research-focused Master's programmes.	Faculty	In line with this recommendation, our institution has undertaken several strategic initiatives to build a well-defined and sustainable research framework. These efforts are supported by coordinated funding and planning at multiple levels: 1. **The Ministry of Religious Affairs** has consistently supported our research infrastructure through a dedicated laboratory revitalization fund. From 2016 to 2024, approximately IDR 1 billion (around 60,406 USD) has been allocated annually to enhance the quality and functionality of our laboratories. 2. **UIN Sunan Kalijaga** reinforced this effort in 2024 by allocating nearly IDR 4 billion (approximately 241,626 USD) specifically for re-

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	This strategy should also encompass the enhancement of equipment in the Physics laboratories.		vitalizing and modernizing laboratory facilities, reflecting the university's strong commitment to research excellence. 3. **The Faculty of Science and Technology** has also maintained an annual allocation of approximately IDR 300 million (around 18,122 USD) for laboratory maintenance to ensure continuous operability and safety standards supporting ongoing research activities.
25 (p.31)	In addition, regarding the Bc-Math, cooperation with external partners/industry (public and private institutions and companies, national and international) should be strengthened in order to improve the capacity of the teaching staff.	Mathematics	The Mathematics Study Program has established collaborations with several partners, both national and international institutions. Evidence of national collaboration can be found at the following link: https://matematika.uin-suka.ac.id/en/page/prodi/3803-National-Guest-Lectures Evidence of international collaboration can be found at the following link: https://matematika.uin-suka.ac.id/en/page/prodi/3802-International-Guest-Lectures . Partnerships for internship/field practice activities have been established with the Manpower and Transmigration Office of Yogyakarta Province (Disnakertrans DIY), Yogyakarta City Statistics Bureau (BPS), National Land Agency (BPN DIY), Regional Development Planning Agency (Bappeda DIY), Department of Agriculture and Food Security, Department of Education, Youth and Sports of DIY, and the Environmental and Forestry Service (DLHK DIY). Currently, the Mathematics Study Program is exploring a collaboration with the Statistics Bureau of Yogyakarta Province (BPS DIY) for internships (fieldwork), community service (PkM), and the Practitioner Teaching program (Praktisi Mengajar).

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			In addition, the Mathematics Study Program will strengthen collaboration with both national and international universities. In October 2025, the Math study program **will co-organize an upcoming joint workshop on Applied Mathematics** in partnership with Universitas Negeri Yogyakarta (UNY), Universitas Gadjah Mada (UGM), Universitas Negeri Surabaya (UNESA), and Nara Women's University, Japan. This activity is a follow-up to the **visiting professor program** featuring Prof. Fugo Takasu, Ph.D from Nara Women's University Japan to the Math-study program. The news link is as follow: https://matematika.uin-suka.ac.id/en/berita/detail/11398/visiting-professor-introduction-to-mathematical-modelling-using-python The Mathematics Study Program will further strengthen its collaboration with external partners, as this point has become a Key Performance Indicator (IKU) for the Study Program.
26 (p.32)	However, with regard to Bc-Phys, the module descriptions do not include recommended prerequisites for all modules after the first semester. It is the opinion of the experts that including these prerequisites for the individual modules in the Physics programme is imperative in order to	Physic	All module handbooks have been completed with information on prerequisite courses. This update aims to clarify the logical sequencing of course content and to assist students in making informed decisions when selecting modules. The updated documentation will be made available to students and academic advisors to support effective study planning. https://fisika.uin-suka.ac.id/en/page/prodi/3496-MODULE-HANDBOOK

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	enable students to plan their studies and individual curricula in an adequate manner. (see above Criterion 1.3.).		
27 (p.32)	In addition, all compulsory courses, including research proposal, thesis, and co-curricular activities for both programmes need to be included in the module descriptions (see above Criterion 1.3 and 1.5).	Mathematics and Physics	The Mathematics Study Program has completed all module handbooks based on expert recommendations. The revised module handbooks for compulsory courses can be found at the following link: https://bit.ly/Compulsory_Course_BcMath The module handbook for the proposal course has been completed with an assessment rubric. https://bit.ly/Proposal_Course_BcMath The thesis module handbook has also been provided with an assessment rubric. https://bit.ly/Thesis_Course_Bc_Math Meanwhile, the link to the module handbooks for co-curricular activities can be found at the following link: https://bit.ly/Co_Curricular
28 (p.32)	However, the specific form of examination for each	Mathematics and Physics	The Mathematics study program has revised all module handbooks in accordance with expert recommendations. The assessment column has been updated to include the type of assessment: oral, written, or practical. In addition, the module hand-

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	assessment (e.g. written or oral) is not included. It is therefore essential that the examination forms be specified in the module descriptions for both programmes. The form must be appropriate to assess the full breadth of the module learning outcomes.		books have been complemented with an assessment form for written exams and a scoring rubric for oral presentations. The link is provided below: https://bit.ly/Revision_ModuleHandbook All module handbooks have been updated with the type of assessment (oral, written, or practical) in the assessment table. Example: Applied Science Course: https://fisika.uin-suka.ac.id/en/page/prodi/3496-MODULE-HANDBOOK In the portfolio document, the description of students' learning experiences in English can be found in the columns for sub-CPL (sub-LO), assessment, and learning method. Example of module handbook: https://drive.google.com/file/d/1SLi_Iy4_YHGP-pYu8mCRwdm20pI_FrEAL/view?usp=sharing
29 (p. 32)	All compulsory courses, including research proposal, thesis, and co-curricular activities **for both programmes** need to be included in the module descriptions (see above **Criterion 1.3 and 1.5**)	Mathematics and Physics	All compulsory courses already have complete module handbooks. Meanwhile, for several co-curricular activities, the module handbooks have been prepared for the following: ● PPKK ● Arabic Language ● English Language ● Information and Communication Technology (ICT) Training

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			Module description of all above mentioned co-curricular courses in both study programs is available in this following link: https://bit.ly/Co_Curricular
30 (p.33)	However, it has come to light that the provided Diploma Supplement for **Bc-Math** contains identical information to that of the Physics programme. The actual Diploma Supplement for **Bc-Math** is still a pending sub-mission Furthermore, the experts note that the diploma supplements for both programmes under review do not contain information regarding the student's GPA relative to the cohort. The experts recommend that the GPA distribution of graduates be included in the diploma supplement to ensure fair transfer and recognition of grades for mobility students.	Mathematics and Physics	UIN Sunan Kalijaga Yogyakarta has been providing three documents to alumni, namely the diploma, academic transcript, and SKPI (Certificate of Diploma Supplement). Regarding the system for writing the Diploma, Academic Transcript, and SKPI, it has been implemented in accordance with the applicable laws and regulations, namely: (a) Regulation of the Minister of Religious Affairs of the Republic of Indonesia No. 17 of 2020 concerning Diplomas, Competency Certificates, and Professional Certificates in Religious Higher Education. https://drive.google.com/file/d/1xqOXUPg3FMs7_AHgZg2u0foZFH3W4uUw/view?usp=sharing (b) Regulation of the Minister of Education, Culture, Research, and Technology No. 6 of 2022 concerning Diplomas, Competency Certificates, Professional Certificates, Degrees, and Equivalence of Diplomas from Foreign Higher Education Institutions. https://drive.google.com/file/d/1F2Z7oHA-Ret2q9HPCDIr-z-eTmqdp9hsI/view?usp=sharing This regulation has been updated with the Regulation of the Minister of Education, Culture, Research, and Technology No. 50 of 2024 concerning Diplomas, Competency Certificates, and Professional Certificates at the Higher Education Level.

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
			https://drive.google.com/file/d/1Pcxm-3QUn-HnOn1Ibdti01zePBKsug7Q9/view?usp=sharing The summary of the GPA (Cumulative Achievement Index) data for graduates in each graduation batch has been documented in the Bachelor's, Master's, and Doctoral Graduation Book for each Graduation Period. For example: https://drive.google.com/file/d/1VE-keT_JdlyP7cT1SBgimU51irW2qgErj/view?usp=sharing (See Table 3,4,5,6,7 dan 8). Based on the assessor's input regarding the need to make supplementary documents to complement diplomas, transcripts of grades and certificates accompanying diplomas, we have provided a diploma supplement by including the distribution of GPA graduates. As an example of a sample document generated from the academic information system. https://bit.ly/Dipl_Supplement_Math https://bit.ly/44pmhPI
31 (p.34)	experts have suggested that the Bc-Phys the website should be improved and completed. Especially in its English version, there is presently very little information about the research activities of the staff members, the	Physics	The official website of the Physics Study Program is currently under development. Several features have already been added, including the research menu, facilities, partnerships, and information about the study program, https://fisika.uin-suka.ac.id/en.

No	Comments from ASIIN Expert	Programme	Explanations from the University to clarify the ASIIN comments
	structure and facilities of the department, external partnerships, etc.		
32	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. Diploma Supplement for Bc-Math	Mathematics	The Mathematics and Physics study programs have provided a Diploma Supplement for graduates. This document is included in addition to the Diploma and Academic Transcript. Based on input from experts, the Diploma Supplement has been updated to include information about the student's GPA relative to the cohort. The supporting evidence is attached as follows: https://bit.ly/Dipl_Supplement_Math https://bit.ly/44pmhPI

F Summary: Expert recommendations (23.05.2025)

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

Degree Programme	ASIIN Seal	Maximum duration of accreditation
Ba Mathematics	With requirements for one year	30.09.2030
Ba Physics	With requirements for one year	30.09.2030

Requirements

For all degree programmes

A 1. (ASIIN 1.3, 1.5, 4.1) Ensure that co-curricular activities are awarded ECTS credits and incorporated into the module descriptions, as they are mandatory components of the programmes.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to group the electives according to the available specializations.

E 2. (ASIIN 1.3) It is recommended to develop a strategy for opening Master's degree programmes in the respective areas (e.g. by improving the research strength) to enable students to continue their studies at the university.

E 3. (ASIIN 1.3, 4.1) It is recommended to enhance training of scientific English especially concerning the professional language in mathematics and physics and to explicitly include information about this in the module descriptions.

E 4. (ASIIN 1.3, 3.1) It is recommended to enhance the internationalization strategy by increased use of English language in the lectures, stronger support for international

mobility of the teaching staff and students, as well as more exchange and cooperation with foreign institutions and lecturers.

For The Bachelor's Programme Physics

E 5. (ASIIN 1.3) It is recommended to improve practical experimental skills by more focus on laboratory work.

E 6. (ASIIN 3.1) It is recommended to develop a strategy to enhance the research strength to get stronger international reputation (e.g. more support for international journal publications and participation at international conferences, funding for research activities and equipment in Physics labs, national and international collaborations with access to research facilities).

E 7. (ASIIN 4.3) It is recommended to improve the contents and structure of the website for the Physics programme.

For The Bachelor's Programme Mathematics

E 8. (ASIIN 3.3) It is recommended to increase the cooperation with external partners and/or industry (public and private institutions and companies, national and international) to improve students' skills and career opportunities.

G Comment of the Technical Committees

Technical Committee 12 – Mathematics (05.06.2025)

Assessment and analysis for the award of the ASIIN seal:

The technical committee follows the assessment of the experts without changes.

The Technical Committee 12 – Mathematics recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Mathematics	With requirements for one year	30.09.2030	–	–

Technical Committee 13 – Physics (16.06.2025)

Assessment and analysis for the award of the ASIIN seal:

The TC discusses the procedure and, particularly, the curriculum of the Bachelor's programme Physics. The members note that the curriculum does not include some of the basic areas required by the ASIIN-SSC of the TC 13 –Physics. A review of the curriculum revealed that basic aspects of molecular and elementary particle physics are missing and do not appear to be included in any other modules. The members also agree that it should be clear that no new modules are expected. It is sufficient if relevant topics are covered in existing

modules such as Quantum Physics or Nuclear Physics and this is demonstrated in the module descriptions. Therefore, the TC proposes to add the following requirement:

A 2. (ASIIN 1.3) Ensure that the existing modules cover the fundamentals of molecular and elementary particle physics in accordance with ASIIN-SSC TC 13.

The Technical Committee 13 – Physics recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Physics	With requirements for one year	30.09.2030	–	–

H Decision of the Accreditation Commission (27.06.2025)

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

The accreditation commission follows the assessment of the experts and the changes proposed by the Technical Committee 13 - Physics.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN Seal	Maximum duration of accreditation
Ba Mathematics	With requirements for one year	30.09.2030
Ba Physics	With requirements for one year	30.09.2030

Requirements

For all degree programmes

A 1. (ASIIN 1.3, 1.5, 4.1) Ensure that co-curricular activities are awarded ECTS credits and incorporated into the module descriptions, as they are mandatory components of the programmes.

For The Bachelor's Programme Physics

A 2. (ASIIN 1.3) Ensure that the existing modules cover the fundamentals of molecular and elementary particle physics in accordance with ASIIN-SSC TC 13.

Recommendations

For all degree programmes

E 1. (ASIIN 1.3) It is recommended to group the electives according to the available specializations.

E 2. (ASIIN 1.3) It is recommended to develop a strategy for opening Master's degree programmes in the respective areas (e.g. by improving the research strength) to enable students to continue their studies at the university.

E 3. (ASIIN 1.3, 4.1) It is recommended to enhance training of scientific English especially concerning the professional language in mathematics and physics and to explicitly include information about this in the module descriptions.

E 4. (ASIIN 1.3, 3.1) It is recommended to enhance the internationalization strategy by increased use of English language in the lectures, stronger support for international mobility of the teaching staff and students, as well as more exchange and cooperation with foreign institutions and lecturers.

For The Bachelor's Programme Physics

E 5. (ASIIN 1.3) It is recommended to improve practical experimental skills by more focus on laboratory work.

E 6. (ASIIN 3.1) It is recommended to develop a strategy to enhance the research strength to get stronger international reputation (e.g. more support for international journal publications and participation at international conferences, funding for research activities and equipment in Physics labs, national and international collaborations with access to research facilities).

E 7. (ASIIN 4.3) It is recommended to improve the contents and structure of the website for the Physics programme.

For The Bachelor's Programme Mathematics

E 8. (ASIIN 3.3) It is recommended to increase the cooperation with external partners and/or industry (public and private institutions and companies, national and international) to improve students' skills and career opportunities.

Appendix: Programme Learning Outcomes and Curricula

According to the website, the following **objectives (PEO)** and **learning outcomes (PLO) (intended qualifications profile)** shall be achieved by the **Bachelor degree programme Mathematics**:

"PEO1. Mastering mathematics, both in theory and application, and its integration with Islamic values, especially in the areas of Islamic calendar calculations, astronomical observations, and Islamic finance.

PEO2. Having the ability to apply mathematical concepts to solve problems, analyse issues mathematically, and communicate the results of problem solving integrated with Islamic values.

PEO3. Having the ability to solve problems in the industry by utilizing mathematical approaches and fundamental Islamic principles with the assistance of software.

PEO4. Possessing noble character traits (akhlakul karimah) such as a strong work ethic, a sense of responsibility, honesty, skilful communication, and being a lifelong learner.

These four PEOs are further formulated into several PLOs as follows:

PLO1. Having the ability to internalize Islamic values and practice the principles of Pancasila in national and state life.

PLO2. Having the ability to apply logical, critical, systematic, and innovative thinking in identifying mathematical problems and subsequently develop or implement them in the field of science and/or technology.

PLO3. Having integrity, a sense of responsibility, the ability to implement/practice mathematics, collaborate, and communicate ideas both verbally and in writing.

PLO4. Mastering theoretical mathematical concepts including algebra, analysis, applied mathematics, and statistics.

PLO5. Mastering the principles of mathematical modelling, linear programming, differential equations, and numerical methods to formulate mathematical hypotheses and solve simple mathematical problems procedural/computational understanding to a broader understanding encompassing exploration, logical reasoning, generalization, abstraction, and proving mathematical statements using methods known to the students.

PLO7. Having the ability to observe, identify, formulate, and solve problems using mathematical approaches with or without the assistance of a computer.

PLO8. Having the ability to identify and think in a structured manner to resolve or generalize simple mathematical problems.

PLO9. Having the ability to apply the concept of integration-interconnection between Islamic studies and mathematics, especially in the areas of Islamic calendar calculations, astronomical observations, and Sharia economics.

Following curriculum is presented for the **Bachelor Mathematics programme**:

Code	Course Name	Credit	ECTS	Workload	
				Hours in Class	Hours Self Study
1st semester					
NAS410001	*Pancasila*	2	3	26.66	64
USK411001	Introduction to Islamic Studies	4	6	53.32	128
MAT414001	Differential Calculus	3	4.5	39.99	96
MAT414002	Mathematical Logic and Sets	3	4.5	39.99	96
MAT414003	Elementary Linear Algebra	3	4.5	39.99	96
MAT414004	Plane Geometry	2	3	26.66	64
MAT414005	Algorithms and Programming	2	3	26.66	64
MAT414006	Algorithms and Programming Laboratory	1	1.5	13.33	32
Subtotal		20	30	266.6	640
2nd semester					
NAS410002	Citizenship	2	3	26.66	64
NAS410003	Indonesian	2	3	26.66	64
USK411002	*Ulum Al-Quran*	2	3	26.66	64
USK411003	*Ulum Al-Hadist*	2	3	26.66	64
MAT414007	Integral Calculus	3	4.5	39.99	96
MAT414008	Solid Geometry	2	3	26.66	64
MAT414009	Linear Program	2	3	26.66	64
MAT414010	Linear Program Laboratory	1	1.5	13.33	32
MAT414011	Statistical Method	3	4.5	39.99	96
MAT414012	Statistical Method Laboratory	1	1.5	13.33	32
Subtotal		20	30	266.6	640

Code	Course Name	Credit	ECTS	Workload	
				Hours in Class	Hours Self Study
3rd semester					
USK411004	Islam and Science	2	3	26.66	64
USK411005	Islam and Humanities Social Science	2	3	26.66	64
MAT414013	Multivariable Calculus	3	4.5	39.99	96
MAT414014	Introduction to Algebra Structure	4	6	53.32	128
MAT414015	Elementary Differential Equations	3	4.5	39.99	96
MAT414016	Discrete Mathematics	3	4.5	39.99	96
MAT414017	Numerical Method	2	3	26.66	64
MAT414018	Numerical Method Laboratory	1	1.5	13.33	32
MAT414019	Probability Theory	3	4.5	39.99	96
Subtotal		23	34.5	306.59	736
4th semester					
USK411006	Islam Civilization	2	3	26.66	64
MAT414020	Advanced Calculus	3	4.5	39.99	96
MAT414021	Introduction to Real Analysis	4	6	53.32	128
MAT414022	Partial Differential Equations	3	4.5	39.99	96
MAT414023	Linear Algebra	2	3	26.66	64
MAT414024	Introduction to Mathematics Model	3	4.5	39.99	96
MAT414025	Introduction to Mathematical Statistics	3	4.5	39.99	96
MAT414026	Complex Variable Functions	3	4.5	39.99	96
Subtotal		23	34.5	306.59	736
5th semester					
MAT425027	*Ushul Fiqh/Fiqh*	2	3	26.66	64
MAT425028	Islam Finance	2	3	26.66	64
MAT425029	Astronomy	2	3	26.66	64

Code	Course Name	Credit	ECTS	Workload	
				Hours in Class	Hours Self Study
MAT425030	Financial Mathematics	3	4.5	39.99	96
MAT425031	Introduction to Functional Analysis	3	4.5	39.99	96
MAT425032	Advanced Complex Variable Function	3	4.5	39.99	96
MAT425033	Introduction to Number Theory	3	4.5	39.99	96
MAT425034	Operations Research	2	3	26.66	64
MAT425035	Operations Research Laboratory	1	1.5	13.33	32
MAT425036	Biological Mathematics	3	4.5	39.99	96
MAT425037	Applied Regression Analysis	2	3	26.66	64
MAT425038	Applied Regression Analysis Laboratory	1	1.5	13.33	32
MAT425039	Multivariate Analysis	2	3	26.66	64
MAT425040	Multivariate Analysis Laboratory	1	1.5	13.33	32
MAT425041	Vektor Analysis	3	4.5	39.99	96
MAT425042	Applied Linear Algebra	3	4.5	39.99	96
MAT425043	Data Analysis	2	3	26.66	64
MAT425044	Data Analysis Laboratory	1	1.5	13.33	32
MAT425045	Experimental Design	3	4.5	39.99	96
MAT425046	Sample Survey Method	3	4.5	39.99	96
MAT425047	Fuzzy Logic	3	4.5	39.99	96
MAT425048	Introduction to Financial Statistics	3	4.5	39.99	96
MAT425049	Dynamic System	3	4.5	39.99	96
MAT425050	Data Basis	3	4.5	39.99	96
MAT425051	Statistical Computing	3	4.5	39.99	96
MAT425052	Analytical Geometry	3	4.5	39.99	96
Subtotal/ Max Credit		63/20	94.5	839.79	2016
6th semester					
MAT425053	Mathematical *Hisab Rukyat*	3	4.5	39.99	96
MAT425054	Sharia Economics Mathematics	3	4.5	39.99	96
MAT425055	Spherical Trigonometry	3	4.5	39.99	96
MAT425056	Advanced Linear Algebra	3	4.5	39.99	96
MAT425057	Ring Theory	3	4.5	39.99	96
MAT425058	Graf Theory	3	4.5	39.99	96
MAT425059	Time Series Analysis	3	4.5	39.99	96
MAT425060	Set Theory	3	4.5	39.99	96

Code	Course Name	Credit	ECTS	Workload	
				Hours in Class	Hours Self Study
MAT425061	Game Theory	3	4.5	39.99	96
MAT425062	Cryptography	3	4.5	39.99	96
MAT425063	Engineering Mathematics	3	4.5	39.99	96
MAT425064	Statistical Quality Control	3	4.5	39.99	96
MAT425065	Non Parametric Statistics	2	3	26.66	64
MAT425066	Non Parametric Statistics Laboratory	1	1.5	13.33	32
MAT425067	Introduction to Topology	3	4.5	39.99	96
MAT425068	Optimization Theory	3	4.5	39.99	96
MAT425069	Categorical Data Analysis	2	3	26.66	64
MAT425070	Categorical Data Analysis Laboratory	1	1.5	13.33	32
MAT425071	Introduction to Theory Modul	3	4.5	39.99	96
MAT425072	Algorithm Analysis	3	4.5	39.99	96
MAT425073	Capita Selecta of Applied Mathematics	3	4.5	39.99	96
MAT425074	Coding Theory	3	4.5	39.99	96
MAT425075	Capita Selecta Statistics	3	4.5	39.99	96
MAT425076	Non-Linear Dynamics and Bifurcation	3	4.5	39.99	96
MAT425077	Stochastic Process	3	4.5	39.99	96
MAT425078	Algebra Computing	3	4.5	39.99	96
Subtotal/Max Credit		72/20	108	959.76	2304
7th semester					
MAT425079	Final Project Proposal	3	4.5	39.99	96
MAT425080	Finite Group Theory	3	4.5	39.99	96
MAT425040	Multivariate Analysis Laboratory	1	1.5	13.33	32
MAT425081	Introduction to Actuarial Mathematics	3	4.5	39.99	96
MAT425082	Capita Selecta Analysis	3	4.5	39.99	96
MAT425083	Introduction to Systems and Control Theory	3	4.5	39.99	96
MAT425084	Introduction to Size Theory and Lebesgue Integrals	3	4.5	39.99	96
MAT425085	Capita Selecta Algebra	3	4.5	39.99	96
MAT425086	Computational Theory	3	4.5	39.99	96
MAT425087	Representation Theory	3	4.5	39.99	96
MAT425088	Derivative Finance	3	4.5	39.99	96
USK412001	Community Service	4	6	53.32	128
Subtotal/ Max Credit		35/20	52.5	466.55	1120
8th Semester					
USK413004	Final Project	4	6	53.32	128
Minimum Number of Credits		150	225	1999.5	4800

According to the website, the following **objectives (PEO)** and **learning outcomes (PLO) (intended qualifications profile)** shall be achieved by the **Bachelor degree programme Physics**:

PEO1. Mastering the knowledge and methodology of physics and having the ability to apply them to solve problems in professional tasks.

PEO2. Having the ability to continuously develop knowledge for further study, whether through formal or informal education.

PEO3. Having the ability to follow the development of physics and technology based on scientific methods and ethics.

PEO4. Having the ability to communicate ideas verbally and in writing, both in scientific and popular contexts, as well as being able to take appropriate initiatives and lead work groups in related fields.

The PLOs of Bc-Phys are elaborated based on the PEOs, as follows:

PLO1. Having a religious attitude and being able to internalize Islamic values, as well as practice the values of Pancasila in national life.

PLO2. Mastering the theoretical concepts of classical and modern physics, applying them in the field of technology, and integrating them with Islamic values.

PLO3. Mastering mathematical, computational, and instrumental methods to solve physics problems and apply their knowledge to broader fields.

PLO4. Applying logical, critical, systematic, and innovative thinking to solve problems for the development or implementation of science and/or technology in accordance with the field of physics.

PLO5. Having soft skills, integrity, a sense of responsibility, teamwork ability, adaptability, and the capability to communicate ideas verbally and in writing.

PLO6. Having the characteristics of a lifelong learner and possessing proficiency in foreign languages.

PLO7. Having the ability to formulate and analyse scientific research related to physics or broader fields based on knowledge and mathematical methods.

PLO8. Having the ability to present and disseminate the results of research in the form of scientific works according to established scientific principles.

PLO9. Mastering the basic principles of experiments and measurement methods in physics for formulating physical phenomena based on observation and data analysis.

The following **curriculum** is presented for the **Bachelor in Physics**:

1st Semester

NO	COURSE ID	COURSE	CREDIT	COURSE TYPE
1	FIS415004	Algorithms and Programming	2	Compulsory
2	NAS410002	Citizenship	2	Compulsory
3	NAS410001	Pancasila	2	Compulsory
4	FIS415005	Elementary Mathematics	3	Compulsory
5	FIS415003	Measurement and Instrumentation	3	Compulsory
6	FIS414001	Elementary Physics I	4	Compulsory
7	FIS414002	Mathematical Physics I	4	Compulsory

2nd Semester

NO	COURSE ID	COURSE	CREDIT	COURSE TYPE
1	NAS410003	Indonesian	2	Compulsory
2	FIS414007	Analog Electronics	3	Compulsory
3	FIS414009	Mechanics I	3	Compulsory
4	FIS414006	Elementary Physics II	4	Compulsory
5	FIS414008	Mathematical Physics II	4	Compulsory
6	FIS411001	Introduction to Islamic Studies	4	Compulsory

3rd Semester

NO	COURSE ID	COURSE	CREDIT	COURSE TYPE
1	USK411003	Ulumul Hadith	2	Compulsory
2	USK411002	Ulumul Qur'an	2	Compulsory
3	FIS414011	Digital Electronics	3	Compulsory
4	FIS414013	Electromagnetics I	3	Compulsory
5	FIS414010	Mechanics II	3	Compulsory
6	FIS415021	Applied Science	3	Compulsory
7	FIS414014	Computational Physics	4	Compulsory
8	FIS414012	Modern Physics	4	Compulsory

4th Semester

NO	COURSE ID	COURSE	CREDIT	COURSE TYPE
1	USK411005	Islam and Humanities Social Sciences	2	Compulsory
2	USK411004	Islam and Science	2	Compulsory
3	USK411006	Islamic Civilization	2	Compulsory
4	FIS414040	Atomic and Nuclear Physics	3	Compulsory
5	FIS414017	Quantum Physics I	3	Compulsory
6	FIS414015	Optics and Waves	4	Compulsory
7	FIS424034	Physic and Technology of Semiconductors	2	Elective
8	FIS424028	Geophysics	2	Elective
9	FIS424022	Introduction to Biophysics	2	Elective
10	FIS424024	Anatomy and Physiology	3	Elective
11	FIS424047	Evaluation and Calibration of Measuring Instruments	3	Elective
12	FIS424027	Geology	3	Elective
13	FIS424032	Basic Properties of Material	3	Elective
14	FIS424026	Design and Modeling of Instrumentation	4	Elective

5th Semester

NO	COURSE ID	COURSE	CREDIT	COURSE TYPE
1	FIS414019	Thermodynamics	2	Compulsory
2	FIS414018	Quantum Physics II	3	Compulsory
3	FIS414020	Electromagnetics II	3	Compulsory
4	FIS425036	Advance Material Energy	2	Elective
5	FIS425037	Business Management	2	Elective
6	FIS425035	Smart Materials	2	Elective
7	FIS424031	Geographic Information System	2	Elective
8	FIS424077	Volcanology	2	Elective
9	FIS425023	Neural System Biophysics	3	Elective
10	FIS424081	Biomaterials and Biosensors	3	Elective
11	FIS424043	Dosimetry and Radiation Protection	3	Elective
12	FIS425053	Seismic Exploration	3	Elective
13	FIS424057	Crystal Physics	3	Elective
14	FIS424045	Medical Physics	3	Elective
15	FIS424056	Environmental Geophysics and Earth Disasters	3	Elective
16	FIS424030	Structural Geology	3	Elective
17	FIS424033	Interaction of Electromagnetic Wave with Materials	3	Elective
18	FIS424063	Computational Biophysics	3	Elective
19	FIS425051	Geoelectrical and Electromagnetic Method	3	Elective
20	FIS424050	Test Method	3	Elective
21	FIS424048	Microcontroller and Microcomputer	3	Elective
22	FIS424059	Nano science and Nano Technology	3	Elective
23	FIS424058	Introduction of Material Chemistry	3	Elective
24	FIS425068	Control System	3	Elective
25	FIS425071	Telemetry System	3	Elective
26	FIS424025	Sensors and Signal Conditioning	4	Elective

6th Semester

NO	COURSE ID	COURSE	CREDIT	COURSE TYPE
1	FIS414039	Statistical Physics	2	Compulsory
2	FIS415062	Enterpreneur	3	Compulsory
3	FIS414038	Solid-State Physics	3	Compulsory
4	FIS415041	Laboratory management	3	Compulsory
5	FIS415016	Research Methods	4	Compulsory
6	FIS425079	Exploration Geophysics for Oil and Gas	2	Elective
7	FIS425078	Fieldwork	2	Elective
8	FIS425054	Geothermal Exploration	3	Elective
9	FIS424055	Rock Physics	3	Elective
10	FIS424046	Physics of Radiology	3	Elective
11	FIS425073	Instrumentation of Halal Product Guarantee	3	Elective
12	FIS425072	Medical Instrumentation	3	Elective
13	FIS424060	Materials Characterization	3	Elective
14	FIS424085	Computational Material	3	Elective
15	FIS425044	Computational Neuroscience I	3	Elective
16	FIS424049	Management of Instrumentation Project	3	Elective
17	FIS425084	Composite Material	3	Elective
18	FIS425083	Magnetic and Dielectric Materials	3	Elective
19	FIS425052	Gravity and Magnetic Method	3	Elective
20	FIS425042	Neural Network Modelling	3	Elective
21	FIS424082	Experiment of Material Physics	3	Elective
22	FIS425069	Robotics	3	Elective
23	FIS424029	Seismology	3	Elective
24	FIS425070	Image Instrumentation System	3	Elective

7th Semester

NO	COURSE ID	COURSE	CREDIT	COURSE TYPE
1	USK412001	Community Services	4	Compulsory
2	FIS415061	Internship	4	Compulsory
3	FIS425076	Exploration Management	2	Elective
4	FIS425064	Physics of Nuclear Medicine	3	Elective
5	FIS425067	Physics of Medical Imaging	3	Elective
6	FIS425066	Physics of Radiotherapy	3	Elective
7	FIS425087	Capita Selecta I	3	Elective
8	FIS425088	Capita Selecta II	3	Elective
9	FIS425089	Capita Selecta III	3	Elective
10	FIS425065	Computational Neuroscience II	3	Elective
11	FIS425080	Geophysical Project Management	3	Elective
12	FIS425075	Inversion Method	3	Elective
13	FIS424074	Earth Disasters Mitigation	3	Elective

8th Semester

NO	COURSE ID	COURSE	CREDIT	COURSE TYPE
1	FIS415086	Research Proposal	2	Compulsory
2	USK413004	Final Project	4	Compulsory