ASIIN Seal

Accreditation Report

Bachelor's Degree Programme
Mathematics
Physics

Provided by
Salman Bin Abdulaziz University
(renamed Prinz Sattam Bin Abdulaziz University)

Version: 31st of March 2017

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]
Ba Mathematics		ASIIN	none	12
Ba Physics		ASIIN	none	13
Date of the contract: 02.11.2012 **Submission of the final version of the self-assessment report:** 23.12.2013 **Date of the onsite visit:** 25. / 26. February 2015 **at:** Al Kharj				
Peer panel: Prof. Dr. Rudolf Schmitz, RWTH Aachen University; Prof. Dr. Steffen Teichert, University of Applied Sciences Jena; Prof. Dr. Wolfgang Willems, Otto-von-Guericke University Magdeburg; Prof. Dr. Alexander Pott, Otto-von-Guericke University Magdeburg; Prof. Dr. Paul-Georg Becker, University of Applied Sciences Stuttgart; Dr. Michael Hauber, Freudenberg Forschungsdienste KG				
Representative of the ASIIN headquarter: Dr. Georg Ebertshäuser				
Responsible decision-making committee: Accreditation Commission for Degree Programmes				

[1] ASIIN Seal for degree programmes

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

Criteria used:	
European Standards and Guidelines as of 10.05.2005	
ASIIN General Criteria, as of 04.12.2014	
Subject-Specific Criteria of Technical Committee 12 – Mathematics as of 09.12.2011	
Subject-Specific Criteria of Technical Committee 13 – Physics as of 09.12.2011	

In order to facilitate the legibility of this document, only masculine noun forms will be used hereinafter. Any gender-specific terms used in this document apply to both women and men.

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Ba Mathematics	B.Sc.		6	Full time	no	8 Semester	212 ECTS	Every Semester / 2011
Ba Physics	B.Sc.		6	Full time	no	8 Semester	212 ECTS	Every Semester / 2011

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

A) Knowledge

Summary description of the knowledge to be acquired

1. Demonstrate in-depth knowledge of Mathematics, its scope, application, history, problems, methods, and usefulness to mankind both as a science and as an intellectual discipline.
2. Be able to read, write, understand mathematical proofs, and construct mathematical proofs as appropriate.
3. Demonstrate a sound conceptual understanding of Mathematics through the construction of mathematically rigorous and logically correct proofs.
4. Identify, formulate, and analyze real world problems with statistical or mathematical techniques.
5. Demonstrate mastery of the core concepts of Mathematics and its diversified branches.

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

6. Recognize the interdependency of different areas of mathematics, the connections between mathematics and other disciplines, and the historical context for the development of mathematical ideas.
7. Develop knowledge of the physical laws through materials of Applied Mathematics.

B) Cognitive Skills

Cognitive skills to be developed and level of performance expected

1. Utilize technology as an effective tool in investigating, understanding, and applying mathematics.

2. Be able to reason with and apply mathematical concepts, principles and methods; analyse and evaluate problems (both theoretical and practical) and plan strategies for their solution.

3. Communicate mathematics effectively to mathematical and non-mathematical audiences in oral, written, and multi-media form.

4. Demonstrate an appreciation of and enthusiasm for lifelong scientific inquiry, learning, and creativity.

5. Develop and write mathematical proofs.

6. Use appropriate technology to solve mathematical problems.

7. Understand and apply algorithms to solve problems.

C) Interpersonal Skills and Responsibility

Description of the level of interpersonal skills and capacity to carry responsibility to be developed

1. Be able to work collaboratively with others on projects requiring mathematical knowledge and input, to function effectively in a professional workplace related to mathematics, or in a graduate program.

2. Development of management skills and the use of time
3. Ability to self-renewal of information resources using different techniques.
4. The ability to assume the responsibilities of self-development
5. The ability to work individually and as part of a team and acquire leadership responsibilities.
6. Develop the necessary skills to learn effectively from different sources (e.g., references, scientific lectures and Web sites, etc.)

D) Communication, Information Technology and Numerical Skills

Description of the communication, IT and numerical skills to be developed

1. Communicate mathematics effectively to mathematical and non-mathematical audiences in oral, written, and multi-media form.
2. ICT for Learning

E) Psychomotor Skills

Description of the psychomotor skills to be developed and the level of performance required

1. Develop the quality of clear and organized written and verbal explanations of mathematical ideas.
2. Model and analyze real world problems by reformulating these problems in a mathematical context.
3. Solve mathematical problems independently
4. Realizing the importance and respecting the ethics of Mathematicians and scientific research in terms of precision and patience.
5. The development of their ability to respect the ethics of literature and scientific publications.

The following **curriculum** is presented:

Study level I: (Preparatory Year 1)

Course Code	Course Name	Credit Hours	Prerequisite
MAT 1050	Differential Calculus	3(3,1, 0)	
TC 1400	Computer Skills	3 (2, 1,0)	
Eng 1210	English Reading skills	3 (2, 2,0)	
Eng 1220	English Writing Skills	3 (2, 2,0)	
Eng 1230	English Conversation and listening skills	3 (2, 0,2)	
Total Credit Hours		**15**	

Study Level II: (Preparatory Year 2)

Course Code	Course Name	Credit Hours	Prerequi-site
Islam 101	Introduction of Islamic Culture	2 (2, 0,0)	
Arab 101	Arabic Language skills	2 (2, 0,0)	
MAT 1060	Integral Calculus	3(3,1, 0)	
Comm 1400	Communication skills	2 (2, 0,0)	
Eng 1604	Scientific English Language	3 (2, 0,1)	
Phys 1010	General Physics (1)	4 (3,1, 1)	
Total Credit Hours		**16**	

Study Level III:

Course Code	Course Name	Credit Hours	Prerequisites
MAT 2311	Infinite Series and Calculus Applications	3(3,1,0)	MAT 1060
MAT 2240	Algebra and Analytic Geometry	3(3,1,0)	MAT 1060
STAT 2010	Elementary Probability and Statistics	3(3,1,0)	MAT 1060
Phys 2180	General Physics for Students of Mathematics (2)	3(3,1,0)	Phys 1010
MAT 2301	Visual Programming of Mathematical Problem	3(3,1,0)	TC 1400
Islam 102	University Requirement	2(2,0,0)	------
Total Credit Hours		**17**	

Study Level IV:

Course Code	**Course Name**	**Credit Hours**	**Prerequisites**
Stat 2040	Statistical Methods	3(3,1,0)	Stat 2010
MAT 2250	Linear Algebra- I	3(3,1,0)	MAT 2240
MAT 2450	Abstract Algebra -I	3(3,1,0)	MAT 2240
MAT 2321	Actuarial Mathematics-I	3(2,0,0)	MAT 1060
MAT 2290	Mechanics	3(3,1,0)	MAT 1060
Islam 103	University Requirement	2(2,0,0)	
Total Credit Hours		**17**	

Study Level V:

Course Code	**Course Name**	**Credit Hours**	**Prerequisites**
MAT 3280	Linear Algebra- II	3(3,1,0)	MAT 2250
MAT 3320	Multivariable Calculus	3(3,1,0)	MAT 2311
MAT 3330	Ordinary Differential Equation- I	3(3,1,0)	MAT 2250 +MAT 2311
MAT 3370	Numerical Analysis	3(3,1,0)	MAT 2250 +MAT 2311
Stat 3280	Statistical Package	3(2,1,0)	Stat 2040
Islam 104	University Requirement	2(2,0,0)	
Total Credit Hours		**17**	

Study Level VI:

Course Code	**Course Name**	**Credit Hours**	**Prerequisites**
MAT 3340	Ordinary Differential Equation -II	3(3,1,0)	MAT 3330 + MAT 3320
MAT 3350	Vector Analysis	3(3,1,0)	MAT 3320
MAT 3460	Real Analysis- I	3(3,1,0)	MAT 3330 + MAT 2240 + MAT 3320
MAT 3510	Mathematical Package	3(2,1,0)	MAT 3330 +MAT 2301
	Free Course	3(3,1,0)	
	Elective Course from within the Department of Mathematics	3(3,1,0)	
Total Credit		**18**	

Hours			

Study Level VII:

Course Code	Course Name	Credit Hours	Prerequisites
MAT 4360	Introduction to Partial Differential Equations	3(3,1,0)	MAT 3330 + MAT 3320
MAT 4430	Introduction to Topology	3(3,1,0)	MAT 3460
MAT 4450	Abstract Algebra -II	3(3,1,0)	MAT 2450
	Elective Course from within the Department of Mathematics	3(3,1,0)	Depending on the chosen course
	Elective Course from outside the Department of Mathematics	3(3,1,0)	Depending on the chosen course
	Free Course	3(3,1,0)	
Total Credit Hours		**18**	

Study Level VIII:

Course Code	Course Name	Credit Hours	Prerequisites
MAT 4820	Graduation Project	3(2,1,0)	MAT 4430
MAT 4350	Complex Analysis	3(3,1,0)	MAT 3330 + MAT 3320
	Elective Course from within the Department of Mathematics	3(3,1,0)	Depending on the chosen course
	Elective Course from within the Department of Mathematics	3(3,1,0)	Depending on the chosen course
	Elective Course from within the Department of Mathematics	3(3,1,0)	Depending on the chosen course
MAT 4620	Ethics	1(1,0,0)	MAT 3460
Arab 103	University Requirement	2(2,0,0)	
Total Credit Hours		**18**	

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

Graduates must acquire skills in the following:

Knowledge Skills

1. Acquire general and fundamental concepts in Physics and related fields including mathematics, chemistry and information technology.
2. The related basic scientific facts, concepts, principles and techniques in Physics.
3. The theories and methods applied for interpreting and analyzing data related to discipline.
4. The relation between the studied topics and the environment.

Cognitive Skills

1. Application of methods and/or theories of elctromagnetism, Thermodynamics, Quantum Mechanics, Statistical Physics, Solid State Physics, Nuclear Physics and related subjects.
2. Recognize and using subject- specific theories, concepts and principals of physics theoretically and practically.
3. Analysis and interpret experimental results in Physics and related field data.
4. Use laws and principles of Physics to solve problems and analyze physical phenomena.

Interpersonal Skills and Responsibility

1. Synthesize information in order to draw logical conclusions.
2. The work in groups as a team work.
3. Take up responsibility.

Communication, Information Technology and Numerical Skills

1. Demonstrate the ability to present ideas, plans, and data in appropriate written formats for effective communicate with various audience
2. Apply the basic knowledge of computer.

3. Use the computer for analysing and processing the experimental data
4. Use of computer in search for additional knowledge and in producing lab reports and assignments.

Psychomotor Skills

1. Collect, record and analyze data using appropriate techniques in the laboratory.
2. Competence in the use of relevant laboratory equipment and the ability to master, with appropriate training new experimental techniques.
3. Ability to carry out a research work and writing scientific or professional reports.

The following **curriculum** is presented:

Level one

Code No.	Course Title	No. of Units	No. of hours/Week		
			Lect.	Tutorial	Exp
Math 1050	Calculus I	3 (3, 1, 0)	3	1	0
Eng 1210	Reading Skill	3 (2, 0, 2)	2	0	2
Eng 1220	Writing Skill	3 (2, 2, 0)	2	2	0
Eng 1230	Listening Skills	3 (2, 0, 2)	2	0	2
Tech 1400	Principal of computer	3 (3, 0, 1)	3	0	1
Total		**15 (12, 3, 5)**	**12**	**3**	**5**

Level Two

Code No.	Course Title	No. of Units	No. of hours/Week		
			Lect.	Tutorial	Lab
Islam 101	Introduction to Islamic Culture	2 (2, 0, 0)	2	0	0
Arab 101	Arabic Language Skills	2 (2, 0, 0)	2	0	0
Phys 1010	General physics (1)	4 (3, 1, 1)	3	1	1
Math 1060	Calculus 2 (Integration)	3 (3, 1, 0)	3	1	0
Sci 1400	Communication skills	2 (2, 0, 0)	2	0	0
Eng 1604	English for Science	3 (2, 0, 1)	2	0	1
Total		**16 (14, 2, 2)**	**14**	**2**	**2**

Level Three

Code No.	Course Title	No. of Units	No. of hours/Week		
			Lect.	Tut.	Lab
Chem 2010	General Chemistry (1)	4 (3 ,0 ,1)	3	0	1

Phys 2110	Optics (1)	3 (3 ,1, 0)	3	1	0
Phys 2140	Classical mechanics (1)	3 (3 ,1, 0)	3	1	0
Phys 2190	Electricity and Optics Lab.	2 (0 ,0, 2)	0	0	2
Phys 2210	Electromagnetism (1)	3 (3, 1, 0)	3	1	0
Math 2230	Algebra and Analytical Geometry for Physics and Statistic	3 (3 ,1, 0)	3	1	0
Total		18 (15,4, 3)	15	4	3

Level four

Code No.	Course Title	No. of Units	No. of hours/Week		
			Lect.	Tut.	Lab
Phys 2230	Modern Physics	3 (3 , 1 , 0)	3	1	0
Phys 2250	Optics (2)	3 (3 , 1 , 0)	3	1	0
Phys 2410	Thermodynamics	3 (3 , 1 , 0)	3	1	0
Phys 2930	Optics Lab.	2 (0 , 0 , 2)	0	0	2
Math 3320	Calculus III	3 (3 , 1 , 0)	3	1	0
Chem 2170 or Chem 2470	Selective course from outside the department	2 (2 , 0, 0)	2	0	0
	University pr-requisites	2 (2 , 0, 0)	2	0	0
Total		18 (16, 4, 2)	16	4	2

Level Five

Code No.	Course Title	No. of Units	No. of hours/Week		
			Lect.	Tut.	Lab
Phys 3010	Mathematical Physics (1)	3 (3 , 1 , 0)	3	1	0
Phys 3150	Classical mechanics (2)	3 (3 , 1 , 0)	3	1	0
Phys 3230	Electromagnetism (2)	3 (3 , 1 , 0)	3	1	0
Math 3410	Differential equation For Physics	3 (3 , 1, 0)	3	1	0
Phys 3920	Electromagnetic Lab.	2 (0 , 0 , 2)	0	0	2
	University pr-requisites	2 (2 , 0, 0)	2	0	0
	Free Course	3	3	0	0
Total		19 (17, 4, 2)	17	4	2

Level six

Code No.	Course Title	No. of Units	No. of hours/Week		
			Lect.	Tuto-rial	Lab
Phys 3020	Mathematical Physics (2)	3 (3 , 1 , 0)	3	1	0
Phys 3420	Statistical Physics (1)	3 (3 , 1 , 0)	3	1	0
Phys 3560	Quantum Mechanics (1)	3 (3 , 1 , 0)	3	1	0

Phys 3710	Solid state Physics (1)	3 (3 , 1 , 0)	3	1	0
Phys 3950	Solid State Physics Lab.	2 (0 , 0 , 2)	0	0	2
	Free course	3	3		
Total		17(15, 4, 2)	15	4	2

Level seven

Code No.	Course Title	No. of Units	No. of hours/Week		
			Lect.	Tut.	Lab
Phys 4240	Analogue electronics	3 (2, 1, 1)	2	1	1
Phys 4560	Quantum Mechanics (2)	3 (3, 1, 0)	3	1	0
Phys 4960	Modern Physics Lab	2 (0, 0, 2)	0	0	2
	Selective course	3 (3, 1, 0)	3	1	0
	Selective course	3 (3, 1, 0)	3	1	0
	University pr-requisites	2 (2, 0, 0)	2	0	0
Total		16 (13, 4, 3)	13	4	3

Level eight

Code No.	Course Title	No. of Units	No. of hours/Week		
			Lect.	Tut.	Lab
Phys 4010	Ethics	1 (1 , 0, 0)	1	0	0
Phys 4050	Computational Physics	3 (2 , 1, 1)	2	1	1
Phys 4990	Project	2 (0 , 0, 2)	0	0	2
	Selective course	3 (3 , 1, 0)	3	1	0
	Selective course	3 (3 , 1, 0)	3	1	0
	Selective course	3 (3 , 1, 0)	3	1	0
	University pr-requisites	2 (2 , 0, 0)	2	0	0
Total		17 (14, 4, 3)	14	4	3

C Peer Report for the ASIIN Seal

1. The Degree Programme: Concept, content & implementation

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

Evidence:

- Self Study Report
- Department Handbook
- Objectives Matrix

Preliminary assessment and analysis of the peers:
The peers found the aims and intended learning outcomes for both degree programmes to be well defined and well described. The aims and intended learning outcomes are in the view of the peers fully compatible with the learning outcome examples from the Subject Specific Criteria of the Technical Committees 12 – Mathematics and 13 – Physics of ASIIN respectively. The intended learning outcomes do reflect the level of academic qualification aimed at, i.e. the level six according to the European Qualification Framework.

The peers judged the intended learning outcomes to be valid and achievable. The peers especially lauded the quality assurance system and regulations of the HEI which control and reflect the aims and intended learning outcomes on a regular basis and introduce necessary adjustments. Although the peers did not find any direct involvement of the relevant stakeholders – especially students and employers – in the formulation of the intended learning outcomes, they deemed the intended learning outcomes to be reflecting the needs and demands of the stakeholders nonetheless. This was also underlined by the high level of satisfaction which the students showed towards the degree programmes.

The peers expressed the opinion that the qualification profiles of the degree programmes enable the students to take up an occupation which corresponds to their qualification. The HEI declared that most of the graduates in both degree programmes find a job easily, in the private, as well as in the state owned sector. The HEI has good contacts to the local and regional industries which take in the greater part of the degree programmes' gradu-

ates. The students confirmed this generally positive outlook on job market perspectives and named a wide variety of employments they would seek after graduation.

The peers noted that the general aims of the degree programme Mathematics are described in the department handbook which is available online for interested stakeholders. However the complete set of intended learning outcomes for both degree programmes are not publicized and anchored in a manner that all relevant stakeholders – especially the students – can rely on them. The peers deemed it therefore necessary that the HEI publishes the intended learning outcomes in an appropriate form.

Criterion 1.2 Name of the degree programme

Evidence:

- Self Study Report

Preliminary assessment and analysis of the peers:
The audit team opined that the names of the degree programmes properly reflect the intended aims and learning outcomes. The English names of the degree programmes imply to relevant stakeholders that the modules of the programmes are entirely taught in English language and that graduates from the degree programmes can master the English language to a degree that allows them actively to take part in scientific exchange of views and ideas in that language. The module descriptions underpin this claim by stating that English is the common course language. The peers noted that the English language skills of the students are limited. They deemed that English language proficiency for most of the students is not given at the required level for English language degree programmes (see C-2-3). To prevent misunderstandings and failed expectations in the case that a graduate of the degree programmes applies for a subsequent Master's degree programme at an international university, the auditors judged it necessary that the names of the degree programmes properly reflect the main language of the degree programmes. This applies also to the description of the course language in the module descriptions.

Criterion 1.3 Curriculum

Evidence:

- Self Study Report
- Objectives Matrix
- Modules Descriptions
- Study Plans

Preliminary assessment and analysis of the peers:
The peers asked the programme coordinators why real analysis is taught on level six after differential creation in the Bachelor's degree programme mathematics. The HEI representatives explained that the concept of the programme is to teach the calculating skills first and afterwards the related theoretical framework. The audit team could follow this reasoning and had no further questions.

Regarding the practical learning components in the Bachelor's degree programme Physics the auditors wanted to know if the practical leaning was enough to ensure that the students can really master all relevant skills. The programme coordinators expressed their own wish for more laboratory courses in certain areas of studies. The HEI cannot change this issue immediately because the ministry of education requires a five year period of study implementation before alterations are allowed. The peer panel noted that the HEI is aware of a certain need to increase the amount of practical learning. Because the quality assurance system and procedures of the HEI are exceptionally good the auditors trusted the ability of the HEI to do the further steps in the process and saw no need for further action.

The peers were informed that soft skills and personal development were included in the regular teaching methods throughout the curricula. The students showed their content with structure and subjects of the curricula. The peers came to the overall conclusion that the curricula in both degree programmes are comprehensive and sound and allow the students to achieve the intended learning outcomes. However, for the Bachelor's degree programme Mathematics the peers gained the impression from the documentation that the work of students with scientific literature is introduced relatively late in the curriculum, and the use of oral presentation practice could be increased. The students confirmed this impression of the peers. The auditors therefore recommended to the HEI to bring the students earlier in the curriculum to work actively with scientific literature and to increase the use of oral presentation throughout the curriculum.

The auditors deemed that the overall objectives and intended learning outcomes for the degree programme are systematically substantiated and updated in its individual modules. It is clear which knowledge, skills and competences students will acquire in each module.

Criterion 1.4 Admission requirements

Evidence:

- Self Study Report
- Regulations and Procedures of the Higher Education Council

Preliminary assessment and analysis of the peers:
The peers were informed that school graduates apply for a certain university first, without immediately deciding on a specific subject to choose. Their average middle school grades decide upon to which university they are admitted. The first year is a preparatory year and as such not part of the degree programmes. After the preparatory year the students choose their subject, to which they are admitted provided their performance during the preparatory year had been satisfactory. The regulations for this admission procedure are laid down in the publicly available "Regulations and Procedures of the Higher Education Council" and apply to all HEIs in the country.

The peers noted that admission to the degree programmes is possible in every semester and wondered if the HEI has the resources necessary to guarantee this frequent intake. The programme coordinators and representatives of the HEI's leadership declared that the necessary resources are available to conduct all courses every semester so that the start of the degree programmes in every semester is really possible. The students confirmed this statement of the HEI. The auditors were impressed by this student friendly but resources intensive provision.

All in all the peers judged the admission regulations to be binding, transparent and the same for all students. In the view of the auditors support the admission requirements the attainment of the intended learning outcomes.

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

1.1. The peers appreciate that the HEI is going to publish the intended learning outcomes in an appropriate way. Until then they cling on their primary assessment and the respective requirement.

1.2. The peers note that the names of the study programs should be discussed at a responsible level. They repeat that it is necessary that the programs reflect the main language of the courses. In so far they hold on their primary assessment and the respective requirement.

1.3. The peers think that the introduction of scientific literature from level 5 onwards is a suitable solution and should improve the scientific skills of the students.

Taking the statement of the HEI into account the peers assess criterion 1 to be partly fulfilled.

2. The degree programme: structures, methods and implementation

Criterion 2.1 Structure and modules

Evidence:

- Self Study Report
- Objectives Matrix
- Module Descriptions
- Sample Curricula
- Regulations and Procedures of the Higher Education Council

Preliminary assessment and analysis of the peers:
The peers lauded the modularization of the degree programmes. They found the curricula to be comprehensive, well implemented, and up to European or International standards, both in terms of contents and of structure. The fact that the degree programmes can be started in every semester, and that therefore every course is held in every semester, makes it easy for the students to complete the degree programmes without exceeding the regular course duration on the organisational level. In the view of the peers there are a good number of elective modules in both degree programmes which allow the students to form their own focus of studies.

The auditors noted that it is possible for the students to spend a semester at another HEI or abroad without loss of time. Rules for the recognition of achievements obtained at a HEI abroad or at another national HEI are in place in the " Regulations and Procedures of the Higher Education Council".

The peers opined that all parts of the curricula, including lab works and other practical work, are well integrated in the structure of both degree programmes.

Criterion 2.2 Work load and credits

Evidence:

- Self Study Report
- Objectives Matrix
- Module Descriptions
- Sample Curricula
- Regulations and Procedures of the Higher Education Council

- Statistical Data from Student Surveys

Preliminary assessment and analysis of the peers:
The peer panel noted that the drop-out rates in both degree programmes are relatively high. The programme coordinators declared that some students leave the university without finishing their studies because they have good job opportunities nonetheless and do not feel the need for a graduation. The students explained to the peers that the drop-outs normally are not because of too high workload or insufficient support. On the contrary, the students pointed out that the advisors care for each individual student with problems in the course of studies and try to lend assistance and help to overcome difficulties. Besides, the students explained that they spend 35 to 40 hours on average per week on courses and self-study. The auditors recognized that the reasons for students' drop-outs in the both degree programmes are individual and cannot be attributed to the structure of the degree programmes. The workload as expressed by the students seemed to the peers as moderate and manageable.

The peers perceived a great variety between national credit hours and ECTS in the Bachelor's degree programme Mathematics. For example, the module "Linear Algebra" with 168 hours has 3 credit hours and 6 ECTS; while the module "Actuarial Mathematics" has 112 hours and 4 ECTS, but still 3 credit hours; the module "Abstract Algebra" has 140 hours and 5 ECTS, but still 3 credit hours. The programme coordinators explained that the credit hour system does not reflect the actual overall workload of the students, but the ECTS does. The peers learned that the calculation of the ECTS by the HEI is correct and represents adequately the workload of the students. For the better and more transparent information of the students regarding the actual overall workload of the degree programmes the peers suggested to the HEI to use the ECTS instead of the national credit hours. The peers noted also that the field training is not included in the distribution of credit points although it is a compulsory component of the degree programmes. The auditors judged that all the work done by students has to be appropriately represented within the credit point system, and that for all compulsory components of the programme credit points must be awarded.

Criterion 2.3 Teaching methodology

Evidence:

- Self Study Report
- Module Descriptions

Preliminary assessment and analysis of the peers:
The peers found the teaching methods used all in all to support the achievement of the intended learning outcomes. The auditors deemed the lecture based learning and self study well balanced. The size of seminars and lectures is in the view of the peers very good with usually 10 students for a seminar and not more than 30 students in a lecture. As already has been described in C-1-3 the peers recommended to the HEI to bring the students of the Bachelor's degree programme Mathematics earlier in the curriculum to work actively with scientific literature and to increase the use of oral presentation throughout the curriculum.

The auditors noted that according to the module descriptions the degree programmes are taught in English and requested further information, since they perceived that the English language skills of the students are limited. Most of the students are not able to express their views adequately in English. The peers expressed their concern that graduates from the degree programmes would not be able to successfully study in a Master's degree programme at an international university or work successfully in an international company in which the daily language is English. The programme coordinators and the teaching staff explained that the textbooks used are all in English language and that the teachers use English for written communication on blackboards, in presentations and papers. The language used for oral teaching is a mixture of English and Arabic, where Arabic language is used when the students cannot comprehend the contents in English language. The programme coordinators admitted that the English language skills of the students are a problem that they are aware of and that they are trying to solve step by step. During the preparatory year English is taught to the students. The peers noted that the HEI is aware of the deficiencies and has already initiated steps to improve the situation. Still, the peers recommended to the HEI to further improve the English language skills of the students (see also C-1-2).

Criterion 2.4 Support and assistance

Evidence:

- Self Study Report
- Statistical Data from Student Surveys

Preliminary assessment and analysis of the peers:
The peers found that the students are very satisfied with the level of support and advice provided by the HEI. The peers noticed the very good relationship between students and teachers. The students pointed out that the HEI responds quickly and with good results to any complaint from the side of the students. The auditors were astonished to find in the students' survey that 21% of the students are never satisfied with the registration service

for academic courses and inquired about the background. The students and programme coordinators explained that this problem has already been solved. The complaint was about the online registration process for courses which experienced technical difficulties in the past that have been solved by now. The auditors approvingly took this as an example for the good working quality assurance system of the HEI.

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

2.2. The peers note that the national credit point system is based only on contact hours. They note as well that this system is used according to the legal requirements of the Saudi Ministry of Education. In so far they understand that a general change to the European Credit Point System is difficult to enforce. Nevertheless they deem it to be crucial that all the work done by students is represented with credit points. In so far they think that at least the ECTS equivalents should be used along with the national credit system.

2.3. The peers are aware that the HEI spends efforts to improve the students' English skills. Nevertheless they deem that the result of those efforts should be discussed at the latest on occasion of the reaccreditation. In so far they cling to their primary assessment and the respective recommendation.

Taking the statement of the HEI into account the peers assess criterion 2 to be partly fulfilled.

3. Exams: System, concept and organisation

Criterion 3 Exams: System, concept and organisation

Evidence:

- Self Study Report
- Module Descriptions
- Regulations and Procedures of the Higher Education Council
- Statistical Data from Student Surveys

Preliminary assessment and analysis of the peers:

The peers deemed the examination regulations and practice all in all satisfactory. The exams reflect the learning outcomes covered by a module and offer students continuous feedback on their study progress. The auditors found that for every module a suitable form of assessment has been defined. If a student fails to pass an examination he can

retake it in the following semester. If a student fails to pass an examination he cannot attend following modules that have the failed module as a prerequisite. However, not related modules can still be attended, so that no serious delay is incurred. The number of retakes for an examination is unlimited. But a student has to complete his degree programme within seven years, otherwise he will be exmatriculated.

The peers learned that the final semester in both degree programmes contains the graduation project which consists of basic research and scientific work. After six to seven weeks the student writes a scientific report which is assessed by a graduation committee. Every student has to hold a presentation before the graduation committee. The final mark of the graduation project and thesis is weighed 50% for the presentation and 50% for the report. According to the explanation of the programme coordinators the contact hours spent on a graduation project by the teacher are four hours now, and will increase to eight hours in the future. The students can do the graduation project in groups together and write the graduation report in groups, too. In this case, every student has to defend his own part before the graduation committee. The programme coordinators and the students expressed their view that they have good experience with this regulation and that the teachers can sort out, which part of a graduation thesis has been done by which student. However, the peers were not convinced that the individual part of a student in a graduation thesis is always clearly discernible. The peers voiced no objection against group work in the graduation thesis, but pointed out towards the HEI that if the graduation thesis is done by a group of students it must be ensured that the individual parts can be identified. The peers judged that the scope of the graduation thesis with six to seven weeks time and four contact hours (in future eight) of the supervisor is not enough to ensure a quality level sufficient for the Bachelor's degree level, especially since the graduation project and thesis may be done in groups. The inspection of the graduation projects during the sit-visit underlined this assumption. Therefore, the peers pointed out towards the HEI that the graduation thesis must reflect the level of the qualification sought.

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

With respect to the statement of the HEI, the peers point out, that they didn´t tend to criticize group projects at graduate level in general. They repeat that it is just necessary to expel the individual parts of the projects.

Furthermore the peers repeat the necessity, that the graduation thesis reflects the level of the qualification sought.

Taking the statement of the HEI into account the peers cling on their primary assessment and the respective requirements. They assess criterion 3 to be partly fulfilled.

4. Resources

Criterion 4.1 Staff

Evidence:

- Self Study Report
- Staff Handbook
- List of Research Publications

Preliminary assessment and analysis of the peers:

The peer panel noted approvingly the very good personnel resources of the department, which enables the HEI to allow an intake of new students every semester. The auditors found the staff to be well qualified and aptly composed for sustaining the degree programmes. The students expressed a high level of satisfaction with the teaching staff both with regard to teaching quality as well as support and advice for students.

The peers noted that according to the provided list of research activities the number of scientific publications has been declining throughout the last few years. The programme coordinators declared that the Physics department holds the first rank with regard to research activities and publications in the HEI and that the Mathematics department is strong, too. There could be various reasons for a temporary decline in the number of publications, e.g. teachers are paid extra money when they take over additional teaching responsibilities leading to higher teaching workload and reducing time spent on research. The dean has already announced a new incentives system for encouraging professors to publish more in international ranked journals. The peers judged this measure to be sufficient to foster publication activities in the future. They additionally inquired about the teaching workload of the teaching staff. The programme coordinators explained that a full professor teaches 10 hours a week, an associate professor 12 hours, an assistance professor has a teaching workload of 14 hours per week, a lecturer of 16 hours. To advance to the next higher level a teacher has to publish a fixed number of articles in a ranked journal. Thus, academic career progress is linked to a set procedure and is not dependent on open positions. If a teacher fulfils the criteria for the next higher level, he will be promoted.

Criterion 4.2 Staff development

Evidence:

- Self Study Report
- Discussion with the teaching staff

Preliminary assessment and analysis of the peers:

The peers found that the teaching staff of the HEI has ample opportunities for further developing their professional and teaching skills, and that the teaching staff uses these opportunities frequently and on a regular basis.

Criterion 4.3 Funds and equipment

Evidence:

- Self Study Report
- Discussion with the HEI leadership and programme representatives

Preliminary assessment and analysis of the peers:

The HEI leadership pointed out that the departments of Physics and Mathematics belong to the main and basic faculties of the HEI providing many services for neighbouring disciplines. E.g. the Physics department serves the Engineering, Computer Sciences and Medical programmes, the Mathematics departments serves the Business, IT, Pharmacy, Medicine, and Engineering programmes. About 50% of the capacity of the two departments is used for the export of teaching services for other departments. Accordingly, the two departments are well funded and play a central role in the organisation of the HEI and their degree programmes. The Physics department will complete a new central laboratory at the faculty in about three month time, which will be used by other natural sciences, too.

The teaching staff and programme coordinators expressed their opinion that research and teaching facilities will be excellent after completion of the new laboratory. Right now conditions are satisfactory, but could be further improved. The programme coordinators explained that funds are sufficient to sustain the degree programmes. During the last three years funds have been increased significantly. This improved also the quality of the library which had suffered from a lack of text books for undergraduate students. The library resources have been improved by now. The teaching staff and also the students are satisfied with the amount and quality of rooms, laboratories, equipment, and laboratory resources. The peers convinced themselves on a visit of the departments and their facilities of the good resources in rooms, laboratories and equipment.

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

The peers appreciate that further steps will be taken to enhance the faculty members research activities.

All in all the peers deem criterion 4 to be fulfilled.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Self Study Report
- Module descriptions

Preliminary assessment and analysis of the peers:
The auditors found that the module descriptions are accessible to all students and teaching staff. The module descriptions contain all the necessary information as prescribed by the ASIIN criterion. The peers deemed the module descriptions of a general high quality. With view to the English language skills of the students, it is most important to correct the description of the course language for the modules. Only if a module is really completely taught in English language it can be labelled as such. The auditors pointed out to the HEI that the following corrections and amendments have to be done: to adapt the description of the course language; to integrate all relevant information on the modules that are scattered in different places now in the module description; to better match the module titles with the module contents; to revise the numbering of literature; and to seek out and correct minor mistakes throughout the module handbook.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Self Study Report
- Sample Diploma Supplement
- Sample Transcript of Records

Preliminary assessment and analysis of the peers:
The peers noted that a diploma is issued after graduation together with a Diploma Supplement printed in English language. These documents provide information about the individual modules, the grades achieved, the final mark and the calculation of the final

mark. Information about the student's qualification profile (in terms of the aims of the degree programme) and the classification of the degree programme with regard to its applicable education system are lacking. Statistical data as set forth in the ECTS Users' Guide to allow readers to categorise the individual result is also not included in the documents. The auditors pointed out towards the HEI that this missing information has to be included in the Diploma Supplement.

Criterion 5.3 Relevant rules

Evidence:

- Regulations and Procedures of the Higher Education Council

Preliminary assessment and analysis of the peers:
The peers judged that the rights and duties of both the higher education institution and students are clearly defined and binding. All relevant course-related information is available in the language of the degree programme and accessible for anyone involved.

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

5.1. The peers appreciate that a rework of the module description already has started. Nevertheless they want to see the result of these efforts and cling on their primary assessment and the respective requirement.

5.2. The peers note that the HEI sees the need to supplement the Diploma Supplement with the missing information. In so far they appreciate the effort to get the consent of the competent authorities. Nevertheless they cling on their primary assessment and the respective requirement.

Taking the statement of the HEI into account the peers deem criterion 5 to be partly fulfilled.

6. Quality management: quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:

- Self Study Report
- Sample Surveys

- Result Statistics
- Students' survey results

Preliminary assessment and analysis of the peers:
The peers approved of the high quality of the documentation the HEI has provided for the accreditation procedure. The auditors lauded that the documentation and the programme coordinators and HEI's representatives addressed and identified problems in the degree programmes and room for improvement in an open manner. An elaborate system of quality assurance and assessment is in place, which includes the peer review of the degree programmes by professors of international HEIs, surveys of the mission statement (intended learning outcomes), the programme administration, students' satisfaction and other items. The peer panel noted during the course of the audit visit and the discussions with various groups of stakeholders that a lot of shortcomings identified in the written Self Study Report have already been eliminated in the time period between sending the report to ASIIN and the audit at the HEI. This shows in the view of the peers better than anything else that the HEI has a well functioning and well organized quality assurance system that constantly checks all relevant factors, seeks out room for improvement, and takes appropriate action to solve problems and take the degree programmes on a higher quality level. Not surprisingly, the students named the level of responsiveness, improvement, and progress as one of the most positive aspects of their experience studying at the HEI.

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

The peers deem criterion 6 to be fulfilled.

D Additional Documents

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

No additional documents needed.

E Comment of the Higher Education Institution (04.05.2015)

Kingdom of Saudi Arabia

MINISTRY OF EDUCATION
PRINCE SATTAM BIN ABDULAZIZ UNIVERSITY
COLLEGE OF SCIENCE AND HUMANITIES

RESPONSE OF THE HIGHER EDUCATION INSTITUTION **(HEI)**
TO
ASIIN SEAL - ACCREDITATION REPORT

Response to recommendations and comments of the peers:

Criteria 1.1: "…..*The peers deemed it therefore necessary that the HEI publishes the intended learning outcomes in an appropriate form.*"

Response:

Our concerned departments have already tackled this issue and started publishing the learning outcome, the department handbook, the college handbook, the university manual in addition to other items Online. All the internal and external stakeholders are made aware of the ILO program details.

Criteria 1.2: *"…..the auditors judged that the names of the degree* ***programmes*** *properly reflect the main language of the degree* ***programmes****……"*

Response:

The suggestion of the audit team is well taken into consideration and will be reviewed at a responsible level.

Criteria:1.3: "…..However, for the Bachelor's degree ***programme*** *Mathematics, the peers gained the impression from the documentation that the work of scientific literature is introduced relatively late in the curriculum and the use of oral presentation practice could be increased.…."*

Response:

The mathematics departmental council has approved the introduction of the scientific literature from Level 5 onwards and also agreed to train students in seminars and internally assess their learning outcomes.

Criteria 2.2: "…..the peers suggested to the HEI to use the ECTS instead of the national credit hours. The peers noted also that the field training is not included in the distribution of credit points…."

Response:

- The Credit Point System as limited by a maximum of 136 credits (comparable to 180-210 credits at international level) is observed as per the directives of the Saudi Ministry of Education. The system is primarily based on practical contact hours in contrast with European Credit Transfer System (ECTS) which is calculated based on the total workload of a given course in the module handbook.

- The departments specify the time required for each course depending on whether it is lecture, tutorial, self-study, practical or fieldwork hours stated due to the nature of the course and program specifications. Accordingly, students are made aware of the total time required to complete a particular course.

- HEI will initiate procedures to communicate with the competent authority and publish the ECTS equivalents along with the national credit system to serve best the students' interests.

- With regard to awarding credit points for field training, a suitable action will be initiated for securing the approval of the concerned authority.

Criteria 2.3: "……still the peers recommended to the HEI to further improve the English language skills of the students."

Response:

- Relevant practical actions have been initiated and they are being implemented along with a strategic plan for improving the students' English language skills gradually.

- Preparatory year program was started in 2011-2012 and subsequently a separate Deanship was instituted to ensure effective administration and supervision of the Program.

- Steps will be initiated to review the course description of the four English acquisition skills: reading, writing, speaking and listening. English for specific purpose (ESP) will be adopted to promote and meet the students 'linguistic skills and requirements in both math and physics.

- The faculty members will encourage students to communicate in English and conduct interactive communication session during the lecture in English.

Criteria-3: The peers opined that the group project at graduate level is acceptable so long as the individual contribution can be assessed correctly.

Response:

- The HEI feels that the comments of the Peers are well accounted for and further methods such as assigning projects to students on individual basis will be implemented.

- Steps will also be taken to secure the approval of the competent authority for increasing the contact and credit hours upon reviewing the math and physics Study Plan.

Criteria-4.1: The peers have observed satisfactory level of staff in position but at the same time expressed their concern in the decline of number of publications in the past couple of years.

Response:

Prince Sattam Bin Abdulaziz University encourages research activities of the faculty members not only by granting funds for research but also through rewarding outstanding published works by researchers. Experienced and Talented Research faculty members are to be appointed to enhance the research activities. Moreover, promotions are granted to existing faculty members taking into account the number of publications. Additional steps have been taken to establish a state of the art Central Scientific Laboratory in the College of Science to further encourage research activities.

Criteria 5.1,: "……..the following corrections and amendments have to be done: to adapt the description of the course language; to integrate all relevant information on the modules that are scattered in different places now in the module description; to better match the module titles with the module contents; to revise the numbering of literature; and to seek out and correct minor mistakes throughout the module handbook."

Response:

In order to incorporate necessary amendments in the module handbook and to ensure that the Module Handbook is free of errors, relevant procedures have been initiated.

Criteria 5.2: *" …..Information about the student's qualification profile (in terms of the aims of the degree **programme**) and the classification of the degree **programme** with regard to its applicable education system are lacking. Statistical data as set forth in the ECTS Users' Guide to allow readers to **categorise** the individual result is also not included in the documents. The auditors pointed out towards the HEI that this missing information has to be included in the Diploma Supplement."*

Response:

Action will be initiated for securing the approval of the concerned authority towards incorporating all the missing information in the student's qualification profile pertinent to the objectives of a given academic program. Classifying the individual result and the applicability of the education system are also accounted for.

F Summary: Peer recommendations (05.05.2015)

Taking into account the additional information and the comments given by May 4th 2015 the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	Accreditation Council seal (AR)	Maximum duration of accreditation
Ba Mathematics	With requirements for one year	30.09.2021
Ba Physics	With requirements for one year	30.09.2021

Requirements

For all degree programs

A 1. (ASIIN 1) The intended learning outcomes have to be published in such a legal form that the students may rely on them.

A 2. (ASIIN 1.2) The name of the degree program has to reflect the main language of the degree program.

A 3. (ASIIN 2.2) All the work done by students has to be appropriately represented within the credit point system. For all compulsory components of the program credit points must be awarded (field training).

A 4. (ASIIN 3) The graduation thesis must reflect the level of the qualification sought.

A 5. (ASIIN 3) If the graduation thesis is done by a group of students it must be ensured that the individual parts can be identified.

A 6. (ASIIN 5.1) The module descriptions have to be revised and updated according to the points mentioned in the report (specification of course language, integration of all relevant information, matching of module titles and contents, numbering of literature, revision of minor mistakes).

A 7. (ASIIN 5.2) A program-specific Diploma Supplement has to be prepared and handed out to students on a regular basis providing information about the objectives, intended learning outcomes, structure and level of the degree, as well as about an individual's performance. It must also explain the national educational system in order to foster comprehensibility and comparability between the educational systems.

Recommendations

For all degree programes

E 1. (ASIIN 2.3) It is recommended to further improve the English language skills of the students.

For the Bachelor's degree program Mathematics

E 2. (ASIIN 1.3) It is recommended to bring the students earlier in the curriculum to work actively with scientific literature and to increase the use of oral presentation throughout the curriculum.

G Comment of the Technical Committees

Technical Committee 12- Mathematics (08.06.2015)

Assessment and analysis for the award of the ASIIN seal:

The technical committee discusses the procedure. It takes note that the curriculum comprises modules concerning Islamic culture as compulsory components. As the respective module descriptions are not available, the technical committee emphasizes explicitly that the recommended resolution exclusively refers to the subject specific content. Thereby the technical committee assumes, that content and objectives of the non-subject specific courses are not inconsistent with the Charta of fundamental rights of the United Nations as well as an unimpeded practice of free scientific work.

Moreover the technical committee deems the assessment of the peers as well as the proposed requirements and recommendations adequate

The technical committee 12 – Mathematics recommends the award of the seal as follows

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditaiton
Ba Mathematics	With requiremen	n.a.	30.09.2021

Technical Committee 13- Physics (10.06.2015)

Assessment and analysis for the award of the ASIIN seal:

The technical committee discusses the procedure. It questions how the HEI will be able to proof the required elevation of the level of the Bachelor thesis. The expression “level of the qualification sought” appears moreover to be rather unspecific. To better stress the intention of this requirement the technical committee suggests to modify the wording as follows:

It has to be assured that the graduation project represents an independent scientific work on the Bachelor level. This has to be documented in the module descriptions.

As this term is used in the official documents of the HEI the technical committee furthermore recommends to replace the term “graduation thesis” by “graduation project”.

In all other points it deems the assessment of the peers as well as the proposed requirements and recommendations adequate.

The technical committee 13 – Physics recommends the award of the seal as follows

Degree Programme	ASIIN-seal	Subject-specific label	Maximum duration of accreditaiton
Bachelor Physics	with requirements	n.a.	30.09.2021

A 4. (ASIIN 3) It has to be assured that the graduation project represents an independent scientific work on the Bachelor level. This has to be documented in the module descriptions.

A 5. (ASIIN 3) If the graduation project is done by a group of students it must be ensured that the individual parts can be identified.

H Decision of the Accreditation Commission

26.06.2015

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

The accreditation commission reviewed and discussed the procedure and the accreditation report. It took note that the descriptions of most of the non-subject specific modules (e.g. Introduction to Islamic Culture, Arabic language skills etc.) weren´t available throughout the procedure. The accreditation commission deems it necessary to consider all modules of a program for the accreditation decision. Therefore the HEI should be asked to deliver the descriptions of the following modules as well in Arabic as in English translations in addition:

- Bachelor Mathematics: Islam 101, Arab 101, Comm 1400, Islam 102, Islam 103, Islam 104, Arab 103
- Bachelor Physics: Islam 101, Arab 101, Sci 1400

In consideration of the additional information a final decision is planned for the next session of the accreditation commission on September 26th.

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

Degree Programme	ASIIN-Seal	Subject specific lable	Maximum duration of accreditation
Ba Mathematics	Postponed 09/2015	n.a.	--
Ba Physics	Postponed 09/2015	n.a.	--

26.09.2015

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

The accreditation commission discusses the procedure. To clarify the circumstances it decides minor editorial modifications in requirements 1, 3, 4, 5, 6 and recommendation 2. In all other points the accreditation commission follows the recommendation for a deci-

sion of the peer panel. However, it emphasizes that the decision exclusively refers to the subject specific content and explicitly not to the modules Islam 101-104, Arab 101 and 103, Comm 1400 and SCI 1400.

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ba Mathematics	With requirements	n.a.	30.09.2021
Ba Physics	With requirements	n.a.	30.09.2021

Requirements
For all degree Programmes

A 1. (ASIIN 1) The intended learning outcomes have to be published in binding form.

A 2. (ASIIN 1.2) The name of the degree programme has to reflect the main language of the degree programme.

A 3. (ASIIN 2.2) All work done by students has to be appropriately represented within the ECTS credit point system. For the compulsory field trainings ECTS points must be awarded.

A 4. (ASIIN 3) It has to be assured that the graduation project is implemented as an independent scientific work on Bachelor level.

A 5. (ASIIN 3) If the graduation project is done by a group of students it must be ensured that the individual contribution of each student can be identified.

A 6. (ASIIN 5.1) The module descriptions have to be revised and updated according to the points mentioned in the report (specification of course language, integration of all relevant information, matching of module titles and contents, literature, revision of minor mistakes).

A 7. (ASIIN 5.2) A program-specific Diploma Supplement has to be prepared and handed out to students on a regular basis providing information about the objectives, intended learning outcomes, structure and level of the degree, as well as about an individual's performance. It must also explain the national educational system in order to foster comprehensibility and comparability between the educational systems.

Recommendations
For all degree programmes

E 1. (ASIIN 2.3) It is recommended to further improve the English language skills of the students.

For the Bachelor's degree programme Mathematics

E 2. (ASIIN 1.3) It is recommended to make students work actively with scientific literature earlier on in the programme and to increase the use of oral presentations throughout the programme.

I Fulfilment of Requirements (30.09.2016)

Analysis of the peers and the Technical Committees

Requirements

For all degree programmes

A 1. (ASIIN 1) The intended learning outcomes have to be published in binding form.

First Treatment	
Peers	Fullfilled Justification: The intended learning outcomes are now published on the universities website.
TC 12	Fulfilled Justification: The intended learning outcomes are now published on the universities website.
TC 13	Fulfilled Justification: The intended learning outcomes are now published on the universities website.

A 2. (ASIIN 1.2) The name of the degree programme has to reflect the main language of the degree programme.

First Treatment	
Peers	Fulfilled Justification: The names of the degree programs have been supplemented by “Medium of Instruction English”.
TC 12	Fulfilled Justification: As far as the supposed inconsistency between the name of the degree program and the course language is concerned, the technical committee assesses it comprehensible, that students and lecturers from times to times switch into the native language. Insofar the technical committee thinks it would be not expedient to change the title of the degree program in Arabic. Insofar the technical committee assesses requirement two to be fulfilled. Nevertheless the technical committee deems it necessary to continuously improve the students’ English skill
TC 13	Fulfilled Justification: As far as the supposed inconsistency between the name of the degree program and the course language is concerned, the technical committee assesses it comprehensible, that

	students and lecturers from times to times switch into the native language. Insofar the technical committee thinks it would be not expedient to change the title of the degree program in Arabic. Insofar the technical committee assesses requirement two to be fulfilled. Nevertheless the technical committee deems it necessary to continuously improve the students' English skill

A 3. (ASIIN 2.2) All work done by students has to be appropriately represented within the ECTS credit point system. For the compulsory field trainings ECTS points must be awarded.

First Treatment	
Peers	Partly fullfiled Justification: The ECTS credit point system is used in the module description as well as in the study plans. However, the conversion factor differs: 3 Saudi Credit Points equal between 4 and 6 ECTS Credits. In terms of the field training 2 Saudi Credit points equal 8 ECTS Credits.
TC 12	Fulfilled Justification: As the Saudi Credit point system only reflects the contact hours, the technical committee understands that the conversion factor into the ECT-System differs. Thus it estimates requirement three to be fulfilled.
TC 13	Fulfilled Justification: As the Saudi Credit point system only reflects the contact hours, the technical committee understands that the conversion factor into the ECT-System differs. Thus it estimates requirement three to be fulfilled.

A 4. (ASIIN 3) It has to be assured that the graduation project is implemented as an independent scientific work on Bachelor level.

First Treatment	
Peers	Partly fulfilled Justification: The listed titles of graduation projects seem to be appropriate for a Bachelors program. By increasing the contact hours with the supervisor and mandatory presentations on the working progress the HEI tries to ensure the quality of the projects. The auditors point out that the implementation of the projects remains still unclear and should be carefully checked in the course

	of a reaccreditation.
TC 12	partly fulfilled Justification: In terms of the disputed scientific level of the degree theses, the technical committee takes note that the HEI tries to closely monitor the quality of the graduation projects. In principle, the technical committee assesses requirement four to be fulfilled. As the peers it deems it nevertheless necessary to indicate in the decision letter, that the implementation of the final theses will be closely checked on occasion of the reaccreditation.
TC 13	partly fulfilled Justification: In terms of the disputed scientific level of the degree theses, the technical committee takes note that the HEI tries to closely monitor the quality of the graduation projects. In principle, the technical committee assesses requirement four to be fulfilled. As the peers it deems it nevertheless necessary to indicate in the decision letter, that the implementation of the final theses will be closely checked on occasion of the reaccreditation.

A 5. (ASIIN 3) If the graduation project is done by a group of students it must be ensured that the individual contribution of each student can be identified.

First Treatment	
Peers	Fullfilled Justification: The role of each student within a graduation thesis should be identified and certificated by the supervisor and approved by the department. Samples of these certifications are available. .
TC 12	Fulfilled Justification: The role of each student within a graduation thesis should be identified and certificated by the supervisor and approved by the department. Samples of these certifications are available.
TC 13	Fulfilled Justification: The role of each student within a graduation thesis should be identified and certificated by the supervisor and ap-

	proved by the department. Samples of these certifications are available.

A 6. (ASIIN 5.1) The module descriptions have to be revised and updated according to the points mentioned in the report (specification of course language, integration of all relevant information, matching of module titles and contents, literature, revision of minor mistakes).

First Treatment	
Peers	Partly fulfilled Justification: The module descriptions reveal still some shortcomings. E.g. Missing differentiation between learning outcomes and content (e.g. Thermodynamics, Electrodynamics), Mismatch between title and content (e.g. Abstract Algebra I, Algebra and Analytic geometry).
TC 12	not fulfilled Justification: In terms of the module description for the Bachelor Mathematics the technical committee takes note that the peers detected in several cases a mismatch between the module title and the teaching content/learning outcomes (e.g. Abstract Algebra I, Algebra and Analytic geometry). The technical committee determines this issue as a serious problem that should be fixed in a medium term. As the examples mentioned above are only the result of a random check of the module handbook, the technical committee deems it necessary to carefully check *all* module descriptions in this respect. In sum the technical committee assesses the respective requirement six to be not fulfilled.
TC 13	not fulfilled Justification: The description of the graduation project is missing.

A 7. (ASIIN 5.2) A program-specific Diploma Supplement has to be prepared and handed out to students on a regular basis providing information about the objectives, intended learning outcomes, structure and level of the degree, as well as about an individual's performance. It must also explain the national educational system in order to foster comprehensibility and comparability between the educational systems.

First Treatment	
Peers	Fulfilled

	Vote: By majority Justification: For both programs program specific diploma supplements are available. The sample copies contain the required information. One peer points out, that according to the diploma supplements English is still the only language of instruction (cf. also requirement 2)
TC 12	Fulfilled Justification: For the bachelor Mathematics a subject specific diploma supplement is available.
TC 13	not fulfilled Justification: The graduation project isn´t shown.

Decision of the Accreditation Committee (30.09.2016)

The accreditation commission follows the proposal of the technical committees and assesses requirement 6 for the Bachelor Mathematics and requirements 6 and 7 for the Bachelor Physics to be not fulfilled. In terms of requirement 4 the accreditation commission decides (as suggested by the technical committees) to point out in the decision letter, that the implementation of the degree theses will be closely monitored on occasion of the re-accreditation.

The accreditation commission for degree programs decides the prolongation of the accreditation as follows:

Degree Programm	**ASIIN – Seal**	**Subject specific lable**	**Maximum duration of accreditation**
Ba Physics	Requirements 6, 7 not fullfilled*	n/a	30.09.2020
Ba Mathematics	Requirement 6 not fullfilled*	n/a	30.09.2020

* It is pointed out that the implementation of the Bachelor theses will be closely monitored on occasion of the re-accreditation.

J Fulfilment of Requirements (31.03.2017)

Analysis of the peers and the Technical Committees (March 2017)

Requirements

A 6. (ASIIN 5.1) The module descriptions have to be revised and updated according to the points mentioned in the report (specification of course language, integration of all relevant information, matching of module titles and contents, literature, revision of minor mistakes).

First Treatment	
Peers	Partly fulfilled Justification: The module descriptions reveal still some shortcomings. E.g. Missing differentiation between learning outcomes and content (e.g. Thermodynamics, Electrodynamics), Mismatch between title and content (e.g. Abstract Algebra I, Algebra and Analytic geometry).
TC 12	not fulfilled Justification: In terms of the module description for the Bachelor Mathematics the technical committee takes note that the peers detected in several cases a mismatch between the module title and the teaching content/learning outcomes (e.g. Abstract Algebra I, Algebra and Analytic geometry). The technical committee determines this issue as a serious problem that should be fixed in a medium term. As the examples mentioned above are only the result of a random check of the module handbook, the technical committee deems it necessary to carefully check *all* module descriptions in this respect. In sum the technical committee assesses the respective requirement six to be not fulfilled.
TC 13	not fulfilled Justification: The description of the graduation project is missing.
AC	not fulfilled Justification: The accreditation commission follows the assessment of the technical committees.

Second Treatment	
Peers	partly fulfilled Justification: <u>Ba Physics:</u> The description of the degree thesis is meanwhile available. Nevertheless the peers criticize the following issues: a.) With only four ECTS points the degree thesis is rather underrated b.) According to the module description the estimated workload refers to substantial part to "face to face teaching" (36 hours). The actual degree thesis is even indicated as "short essay" The peers assess the requirement to be fulfilled, but deeply recommend to indicate in the decision later, that the needed further-development of the level of the degree thesis will be closely checked on occasion of the re-accreditation. ***** <u>Ba Mathematics:</u> The module descriptions have been revised, but reveal nevertheless still certain inconsistencies between module titles and teaching content / learning objectives. E.g.: a.) The module "Algebra and Analytic Geomentry" contains nearly solely topics of mathematical logic b.) The module "Number Theory" contains to a large extend topics of algebraic graves The peers deem it disproportional to withdraw the accreditation because of this issue. They assess the respective requirement therefore to be partly fulfilled. The remaining shortcomings should be perhaps indicated in the decision letter.
TC 12	Fulfilled (indication in decision letter) Justification: The members of the Technical Committee can basically follow the assessment of the peers regarding requirement 6 considering it disproportional to withdraw the accreditation because of the inconsistency of the module titles and teaching content and/or learning objectives. Nevertheless, it seems that the module descriptions have not been amended significantly in the meantime (if any changes have been made at all). The TC assesses the respective requirement therefore to be partly fulfilled. The Technical Committee suggests informing the HEI on the remaining shortcomings in the decision letter.
TC 13	Fulfilled (indication in the decision letter)

	Justification: Despite the fact, that on occasion of the first treatment of this case in November 2016 the HEI has proven considerable efforts to monitor quality and level of the degree theses of both programs, the technical committee agrees with the peers, that with only four credit points the degree thesis is still underrated. Thus, the technical committee deems it desirable to increase the scope of the degree thesis. It supports the proposal of the peer panel to indicate this issue in the decision letter.

A 7. (ASIIN 5.2) A program-specific Diploma Supplement has to be prepared and handed out to students on a regular basis providing information about the objectives, intended learning outcomes, structure and level of the degree, as well as about an individual's performance. It must also explain the national educational system in order to foster comprehensibility and comparability between the educational systems.

First Treatment	
Peers	Fulfilled Justification: For both programs program specific diploma supplements are available. The sample copies contain the required information. One peer points out, that according to the diploma supplements English is still the only language of instruction (cf. also requirement 2)
TC 12	Fulfilled Justification: For the bachelor Mathematics a subject specific diploma supplement is available.
TC 13	not fulfilled Justification: The graduation project isn´t shown.
AC	Fulfilled (Ba Mathematics)/not fulfilled (Ba Physics) Justification: The accreditation commission follows the assessment of the technical committees.
Second Treatment	
Peers	fulfilled Justification: The Diploma Supplement meanwhile reveals the title of the degree thesis
TC 13	fulfilled Justification: The technical committee follows the assessment of the peers.

Decision of the Accreditation Commission (31.03.2017)

Assessment:

The accreditation commission follows the assessment of peers and technical committees and judges the remaining requirements to be fulfilled. Furthermore it decides to indicate the remaining shortcomings and concerns in the decision letter in the recommended form. As not only the Bachelor Thesis Physics but also the Bachelor Thesis Mathematic values only four ECTS points, the respective indication should refer to both programs.

The accreditation commission for degree programs decides the prolongation of the accreditation as follows:

Degree Programm	**ASIIN – Seal**	**Subject specific lable**	**Maximum duration of accreditation**
Ba Physics	Requirements 6, 7 fullfilled*	n/a	30.09.2021
Ba Mathematics	Requirement 6 fullfilled* / **	n/a	30.09.2021

The Accreditation Committee for Degree Programmes decides to include the following reference into the notifying letter to the HEI:

* The scope of the degree thesis should be increased. This will be checked on occasion of the re-accreditation.

** The module descriptions have been revised, but reveal nevertheless still certain inconsistencies between module titles and teaching content / learning objectives. Thus, a further revision of the module descriptions is considered to be necessary. This issue will be closely monitored on occasion of the re-accreditation.