

Akkreditierungsagentur
im Bereich Gesundheit und Soziales
Accreditation Agency in Health and Social Science



Assessment Report

**for the Application of
King Abdul-Aziz University, Jeddah, Saudi Arabia,
Faculty of Applied Medical Sciences,
Diagnostic Radiology Department,
for the Accreditation of the Bachelor Study Program
“Diagnostic Radiology”
(Bachelor of Science in Diagnostic Radiology)**

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1 Introduction into the accreditation procedure

King Abdul-Aziz University, Jeddah, Kingdom of Saudi Arabia has assigned the Accreditation Agency in Health and Social Science (hereinafter, the AHPGS) to implement the accreditation procedure of study programs.

The AHPGS is an interdisciplinary and multi-professional organization. Its mission is to evaluate and accredit bachelor and master programs in the fields of health and social sciences as well as in related domains.

Since 2004, the AHPGS is a member of the European Consortium for Accreditation (ECA). In 2006, the AHPGS joined the European Association for Quality Assurance in Higher Education (ENQA); in 2009, it became a full member of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE). Since 2012, the AHPGS is a member of the Network of Central and Eastern European Quality Assurance Agencies in Higher Education (CEENQA). Starting from 2009, the AHPGS is listed in the European Quality Assurance Register (EQAR). The AHPGS is accredited by the German Accreditation Council (currently until 2019).

The accreditation criteria of the AHPGS are the basis for the accreditation decision. These criteria can be found on the webpage of the AHPGS¹. The accreditation criteria are developed by the AHPGS in close accordance with the existing criteria and requirements valid in the Federal Republic of Germany and based on the “Standards and Guidelines for Quality Assurance in the European Higher Education Area” (ESG), established by the European Association for Quality Assurance in Higher Education (ENQA).

The decision regarding the accreditation of each study program of King Abdul-Aziz University is carried out by the Accreditation Commission of the AHPGS based on the following accreditation criteria:

1. Program aims and learning outcomes
2. Curriculum design
3. Personnel
4. Facilities and learning resources
5. Study process and student assessment
6. Program and quality management

¹ Visit the website of the AHPGS: <http://ahpgs.de/english/program-accreditation/>

The accreditation procedure is carried out in four steps:

I. The University's application

The AHPGS verifies the sufficiency of the documents submitted by the University, namely the self-evaluation report and its corresponding annexes. These are to fulfill the assessment spheres as well as the AHPGS standards. As a result, the AHPGS produces a summary (see below), which is to be approved by the University and subsequently made available to the expert group together with all other documentation.

II. Written review regarding the content of the program

Parallel to the first step, the main documents are reviewed by the expert group assigned by the accreditation commission of AHPGS. This is done in order to verify the compliance of the study program with the applicable accreditation criteria. Consequently, the experts comprise a short summary regarding the study program.

III. On-site visit (peer-review)

The experts carry out an on-site visit at the University. In the course of the visit, they hold discussions with various members of the University, including the University and the department administration, the program management, teachers and students. These discussions provide the experts with details about the study program beyond the written documents. The task of the expert group in the on-site visit is to verify and evaluate the objectives of the program and its projected study results, its structure, staff, material resources, course of studies and methods of assessment (selection of students, assessment of achievements, students' support), as well as of the program management (program administration, external assurance of study quality).

Following the on-site visit, the expert group issues an expert report for each study program. The expert report is based on the results of the visit, the written review of the study program and the documents submitted by the University. The expert reports are made available to the University for it to issue a response opinion.

The expert report, as well as the University's response opinion – together with the submitted documents – is submitted to the accreditation commission of the AHPGS for the final decision, which is formulated in three ways: accreditation, accreditation with conditions or denial of accreditation.

IV. The AHPGS decision regarding the accreditation

The accreditation commission of the AHPGS examines the documentation made available, namely the University's application, its annexes, the summary of the program, the expert report as well as the University's response opinion. These documents represent the basis for the decision regarding the accreditation of the study program by the Accreditation Commission of the AHPGS.

2 Overview

2.1 Procedure-related documents

The contract between the King Abdul-Aziz University, Jeddah, Saudi Arabia, (hereinafter “the University”) and the AHPGS was signed on 3 September 2014. The University submitted the program’s Self-Evaluation Report and other relevant documents to the AHPGS in electronic format on 25 September 2014. The AHPGS forwarded open questions and explanatory notes (hereinafter OQ) pertaining to the Self-Evaluation Report and its annexes to the University on 16 February 2015. On 11 March 2015, the University submitted the answers to the open questions and explanatory notes (hereinafter AOQ) to the AHPGS.

This document presents the summary and the assessment of the bachelor study program “Diagnostic Radiology”.

The application documentation submitted by the University follows the outline recommended by the AHPGS. Together with the Self-Evaluation Report, the University provided the following documents specific for the program:

Annex	Description
1	Program description
2	Course description
3	Key performance indicators of the program and assessment table
4	Course overview
5	Study plan
6	Student experience survey (SES)
7	CV of the teaching staff
8	Diagnostic Radiology Department description

Table 1. Documents specific for the program “Diagnostic Radiology”

Alongside the program-specific documents, the following documents pertain to all study programs submitted by the University for accreditation:

Annex	Description
A	King Abdul-Aziz University student charter of rights and duties
B	Mechanisms of students’ admission in faculties and departments after the preparation year
C	King Abdul-Aziz University regulations for examinations and transfer from one university to another
D	Teaching staff appointment regulations
E	Declaration about equipment provision

Table 2. Documents common for all study programs submitted for accreditation

The Self-Evaluation Report, the open questions (OQ) and the answer to the open questions (AOQ) as well as the additional documents build the basis for the

present summary. The layout bears no significance, as it solely reflects the standards agreed within the University.

2.2 Study program

2.2.1 Structural data of the study program

University	King Abdul-Aziz University
Faculty/Department	Faculty of Applied Medical Sciences Diagnostic Radiology Department
Title of the study program	“Diagnostic Radiology”
Degree awarded	Bachelor of Science in Diagnostic Radiology
Language of instruction	English
Form of studies	Full-time
Organizational structure	Sunday-Thursday
Period of education	4 years (8 semesters) + 1 year (12 months) of internship
Workload of the program according to the University system of ‘study units’	137 study units
Study units ² /hours	1 study unit = 1 lecture hour 1 study unit = 2 practical class hours 1 study unit = 2 clinical practice hours 0 study unit = 1 tutorial hour
Study units for the final pa- per/ final research project	2 study units
Beginning of the study pro- gram	Academic year 2005-2006
Time of admission	Annually from June to August
Male/female students	Male and female
Number of available places on the program	30 15 for female and 15 for male students
Number of students admitted to program in the academic year 2014/2015	44 28 female and 16 male students
Number of graduates In the academic year 2013/2014	38 28 female and 10 male students
Particular enrollment condi-	For the preparatory year:

² The number of study units is determined by the amount of contact hours per week.

Admission requirements	<ul style="list-style-type: none"> - General secondary school certificate or equivalent - General Aptitude Test (“Qudrat”) - General Achievement Test (“Tahseely”) For the department: <ul style="list-style-type: none"> - Completion of the preparatory year - Medical investigation - Interview by the department admission committee
Tuition fees	No fees for students; all expenses are covered by the Ministry of Higher Education.

Table 3. Structural data of the program “Diagnostic radiology”

As other study programs offered at King Abdul-Aziz University, the program “Diagnostic Radiology” consists of three types of courses:

- University requirement courses; they are obligatory for all students enrolled at the University and are taught mainly in the second and third years of study in the program.
- Faculty requirement courses; they are obligatory for students of a certain faculty and specialization and are usually offered in the preparatory year and also at the beginning of the second year of studies.

These two types are offered by or in association with other programs, departments, and faculties of the University.

- Department requirement courses; they are specific for the program and are taught by the teaching staff of the Department.

All students enrolled at the University have to complete the first year of studies, which is also called *the preparatory year*. This initial period prepares students for further specialization in the chosen sphere of health care services. The preparatory year takes place in the premises of the Faculty of Science, whereas for the other three years students are engaged at the Faculty of Applied Medical Sciences. According to the University, the preparatory year entails two tracks or directions with equal share of the study load: scientific and humanistic. Students planning to pursue their studies in the Faculty of Applied Medical Sciences, have to register for the scientific track (AOQ 7).

Clinical practice starts with the 1st semester of the 3rd year and is then taught each semester until the end of the program. Each clinical practice course is worth of 3 study units, which in total constitutes 12 study units for the whole program. Besides, subspecialty courses like Nuclear Medicine Technique and Ultrasonography offer one credit unit of clinical practice as well. Upon completion of all academic courses and acquisition of 137 study units, students can start the obligatory intern-

ship year. Students can complete the internship at the University Hospital and, partially or fully, at other recognized health care institutions and research centers. If students want to do their internship at a health care institution other than the University Hospital, they have to submit a signed application together with the conformation of the hosting institute as well as a list of complementary documents (see AOQ 25).

Students graduate from the program and receive the title 'Bachelor of Science in Diagnostic Radiology' after they have obtained all obligatory 137 study units, completed all courses with the minimum grade "D" (60% of performance) or better and successfully accomplished the internship year (Self-Evaluation Report 1.1.6).

2.2.2 Qualification objectives and employment opportunities

The main objective of the program "Diagnostic Radiology" is to train specialists in medical imaging technologies and thus meet the growing demand for this profession in Saudi labor market. The program is aimed at preparing graduates with the abilities to assess, plan and implement proper diagnosis based on image techniques and procedures according to the needs and health condition of patients. Another goal of the program is to develop tools and strategies to align with international standards (Self-Evaluation Report 1.3.1, Annex 1).

By the end of their studies, graduates are expected to apply their knowledge in Anatomy, Physiology, positioning, and Radiographic techniques when demonstrating anatomical structures on a radiograph or imaging receptor. Furthermore, they will be able to determine various factors of patients' exposure to radiation in order to achieve optimum techniques for image taking. These techniques are based on the principles of protection of patients and students themselves from radiation. The program requires that students learn to recognize human emergency conditions and to initiate first aid actions and life support procedures. Students are trained to take independent decisions and perform medical imaging procedures with discretion (Self-Evaluation Report 1.3.3).

With regard to cognitive skills, the program envisages students' acquisition of critical thinking and problem-solving skills. Students are trained to demonstrate professional communication skills with patients, their colleges and other personnel of health care institutions. They are prepared to professionally integrate into health care teams. The program aims to endow its students with the understanding of the importance of lifelong learning. Students of the program are required to maintain standards of hygiene and follow the safety measures throughout the whole period of studies and training.

With regard to research-related skills, the program strives to contribute to research development in medical imaging and the relevant areas of medical care. The program curriculum includes a course *Student Project*, where students are supposed to suggest a research topic in such areas as X-Ray and contrast media, computed tomography, magnetic resonance imaging, mammography, angiography, ultrasound, nuclear medicine or radiation therapy.

According to the University, graduates of the program “Diagnostic Radiology” can find employment in various health care institutions, research centers as well as in the sphere of education (Self-Evaluation Report, 1.4.1). Governmental hospitals are considered as the main employers, but graduates can also work in private clinics, diagnostic imaging centers and physicians’ offices. Furthermore, they can apply for scholarships offered by the University for postgraduate studies abroad (AOQ 54).

The Faculty of Applied Medical Sciences has initiated the concept of the Alumni Unit, whose function is to maintain contact with its graduate students and to continuously update the information on their professional development. Thus, the Alumni Unit conducts an annual survey where students are requested to inform about their current position (working, studying or neither), and provide relevant details (see the Alumni Survey in AOQ, Annex 1).

With regard to the current situation in the labor market, the University explains that demand for health care services has noticeably increased in Saudi Arabia. In 2012, the government has increased the healthcare budget by 26%. This fact has created employment positions for Saudi specialists in medical radiology technologists, according to the Health Council of Saudi Arabia. Due to the continuous growth of the population, the existing demand for medical care professionals is expected to increase respectively in the coming years.

2.2.3 Modularization and exam system

The regulated study period in the bachelor’s degree program “Diagnostic Radiology” is 4 years (8 semesters) followed by 1 year of clinical practice. One semester lasts for 15 weeks followed by 3 weeks for examinations; the first semester of an academic year is taught from September to January and the second semester is taught from February to June. The program consists of 48 courses³, of which 31 (65%) are program specific courses and 17 (35%) are courses studied together

³ When compared to the European system of modularization, the University allocates credits to each course individually, therefore it is recommended to use the term ‘course’ instead of ‘module’ in this procedure, though 54 program courses can be indeed grouped into a number of modules based on the departments offering these courses.

with students of other programs. Out of 17 courses, 7 are faculty requirement courses and 10 are university requirement courses (Annex 8, page 12). The number of courses per semester varies from 5 to 7.

By the end of their studies, students have to acquire 137 study units, of which 91 are awarded for the department requirement courses, 26 are awarded for the university requirement courses and 20 for the faculty requirement courses, and (Annex 5).

The first year of studies (the preparatory year) comprises introductory courses in Biology, Physics, and Chemistry. Furthermore, the objective of this year is to solidify and broaden students' knowledge of English language, as well as to provide them with additional skills in computer science, statistics, and communication. The preparatory year consists of the university and faculty requirement courses, which are assembled according to the requirements of further specialization (Self-Evaluation Report, 1.2.2). The preparatory year courses are offered by the Faculties of Science, Medicine and Pharmacy.

Preparatory year				
Sem.	Course title	Th.	Pr.	Cr.
1	General Mathematics	3	-	3
	General Physics	3	-	3
	English Language (1)	3	-	3
	Introduction to Computers	3	-	3
Total:		12	0	12
2	General Statistics	3	-	3
	General Chemistry	3	-	3
	English language (2)	3	-	3
	General Biology	3	-	3
	Communication Skills	3	-	3
Total:		15	0	15
Th.- theory; Pr.- practice; Cr.- total amount of study units in one course				

Table 4: Preparatory year courses (1st year of studies)

The following three years of the program focus on specialization courses. At the same time students continue attending the mandatory and selective university and the faculty requirement courses (Annex 5):

Sem.	Course title	Th.	Pr.	Cr.
3	Physiology	2	-	2
	Anatomy	2	1	3
	X-Ray Physics and Equipment	3	-	3
	Computers and Imaging Modalities	2	1	3

	Radiobiology and Radiation Protection	3	-	3
	Medical Ethics & Patient Care	2	-	2
	Islamic Studies 1	2	-	2
Total:		16	2	18
4	Radiographic Anatomy	2	1	3
	Nuclear Medicine Physics and Equipment	3	-	3
	Image Recording Quality Assurance and PACS	2	1	3
	Radiographic Technique 1	2	1	3
	Radiographic Technique 2	2	1	3
	Islamic studies 2	2	-	2
Total:		13	4	17
5	Sectional anatomy	2	1	3
	Ultrasound Physics and Equipment	3	-	3
	Radiographic Technique 3	2	1	3
	Radiography Clinical Practice 1	-	3	3
	Nuclear Medicine Technique 1	2	1	3
	Islamic Studies 3	2	-	2
	Arabic Language 1	3	-	3
Total:		14	6	20
6	Radiographic Technique 4	2	1	3
	Radiography Clinical Practice 2	-	3	3
	Nuclear Medicine Technique 2	2	1	3
	Computed Tomography 1	2	1	3
	Ultrasonography 1	2	1	3
	Islamic Studies 4	2	-	2
	Arabic Language 2	3	-	3
Total:		13	7	20
7	Radiographic Pathology	4	-	4
	Radiographic Technique 5	2	1	3
	Radiography Clinical Practice 3	-	3	3
	Computed Tomography 2	1	2	3
	Magnetic Resonance Imaging 1	3	-	3
	Student Project	2	-	2
Total:		12	6	18
8	Radiotherapy Physics and Equipment	2	1	3
	Radiographic Technique 6	2	1	3
	Radiography Clinical Practice 4	-	3	3
	Ultrasonography 2	2	1	3
	Magnetic Resonance Imaging 2	-	3	3
	Radiology Administration	2	-	2
Total:		8	9	17

Total amount of study units for the whole program:	137
Th.- theory; Pr.- practice; Cr.- total amount of study units in one course	

Table 5: Overview of the main study period of the program “Diagnostic Radiology”

Annex 2 contains a detailed description of each course included into the curriculum of the program. This description covers the following aspects: course title, amount of study units, faculties responsible for the course, pre-requisites to be admitted to the course, objectives, lecture topics timetable, practical topics timetable, course components, knowledge and skills to be acquired, methods of student assessment, and learning resources.

Apart from courses designed particularly for the specialty of “Diagnostic Radiology”, the program includes also the university requirement courses that are mandatory for all students of the University and the faculty requirement courses that are mandatory for all students of the Faculty of Applied Medical Sciences. Hence, the university requirement courses, such as *Islamic Studies* and *Arabic language* are offered by the Faculty of Arts and Humanities, whereas *Computer Science* and *Communication Skills* are offered by the Faculty of Computing and Information Technology. Among the faculty requirement courses, *Anatomy* and *Physiology* are taught in cooperation with the Faculty of Medicine, while *Mathematics*, *General Physics*, *Biology*, *Chemistry* and *Statistics* are taught by the Faculty of Sciences (AOQ 42).

There is no cooperation with other national or international universities (Self-Evaluation Report 1.2.2). The program curriculum is said to be developed and implemented in correlation with the content and structure of similar B.Sc. programs offered at internationally recognized Universities, such as Thomas Jefferson University in the USA, University of Alshariqa in the United Arab Emirates, and Sudan University of Science and Technology.

The Department ensures to achieve the objectives of both program-specific courses and of those studied together with other units of the University by means of discussions of learning objectives and examination measures with other departments during various meetings. Furthermore, the Department of Diagnostic Radiology prepares course portfolios and annual academic reports. Students are required to participate in course evaluation surveys at the end of each semester (see the forms of student evaluation surveys in AOQ, Annex 1). Efficiency and suitability of the program objectives and learning outcomes are ensured also by the fact that the program is regularly evaluated by an Advisory Committee consisting of an external consultant from another university and representatives of health care institutions hiring the program graduates (AOQ 58).

Didactic concepts and methods of teaching used in the program include lectures, seminars, case studies, homework assignments, presentations, practical experiences and practice classes for analyses and observations, report writing, solving problems in groups, individual and group presentations (For details see the course descriptions in Annex 2). It is claimed that these methods contribute to the development of students' critical thinking as well as their independent learning and working capacities.

Concerning the integration of electronic and multimedia forms of instruction and learning, it is stated that members of the teaching staff use power point presentations, smart boards, laboratory computers in lectures and practical sessions (Self-Evaluation Report 1.2.5).

Practical/clinical experience constitutes a considerable part of the study program structure and is integrated into the program through *Radiography Clinical Practice I, II, III and IV* offered in the 3rd and 4th year of study. Each course is awarded 3 study units. Clinical practice classes are carried out in skills laboratories of the Department with the help of imaging phantoms.

Students of the program are engaged in research in the first half of the 4th year of studies through the course Student Research. A research project enable students to apply their knowledge of basic sciences, mathematics, computational methods and diagnostic radiology principles in practice, to evaluate diagnostic radiology problems and find the optimal solution to them, further enhance their communication skills and take part in a group work (Annex 1). This final research work is awarded with 2 study units. Upon completion of the course, students are encouraged to write a report about the work they have performed or make a poster for the annual meeting of Applied Medical Sciences students. In the last meeting, 6 out of 36 oral presentations and 10 out of 37 posters have been prepared and performed by the students of the program "Diagnostic Radiology" (AOQ 47).

After the completion of all courses and study requirements, students can begin their clinical internship year (12 months) either at the University Hospital or at the hospital of Saudi Ministry of Health. The internship starts at the beginning of August and ends by July of the next year. Students work for 5 days a week, 8 hours a day. They are supervised and guided by a hospital supervisor and an internship coordinator from the Diagnostic Radiology Department.

The internship is divided into 3 parts (see AOQ, Annex 3). The first part focuses on general diagnostic radiography (2 months). The second part envisages training in four (out of seven) sub-specialties, among them computed tomography, magnetic

resonance imaging, mammography (female students only), ultrasound, DVI and nuclear medicine (2 months each, 8 months in total). The last third part of the internship is dedicated for elective specialty training in one of the mentioned sub-specialties (2 months).

The *Intern Logbook* of the Department of Diagnostic Radiology includes information on the structure, aimed competencies and skills, requirements, evaluation methods applied during the internship year. Thus, program graduates are expected to be able to perform all radiographic techniques independently, to interpret relevant radiographic images, to collect and correctly convey the image results to colleges and patients. Besides, clinical internship aims to solidify students' sense of professional responsibility and to improve their skills of professional communication (for more details, see AOQ 49).

Students' performance in each rotation is assessed by the hospital supervisors in a formative evaluation form and a summative evaluation form. The formative evaluation form is completed during the rotation and it evaluates students' achievements in certain competences in terms of "outstanding", "average" and "below average". The summative evaluation form is completed by the end of the rotation and is then submitted to the program internship coordinator online through the website of the University. This form includes the hospital supervisors' comments on strengths, limitations and areas of improvement of each student. According to the Logbook, students are also required to fill in and submit a feedback form after the completion of every internship rotation (AOQ, Annex 3).

The correlation between the internship outcomes and the learning objectives of the program is maintained with the help of the Intern Logbook and evaluation forms included in it. Furthermore, it is ensured by the fact that there are several bodies involved in the supervision of students' progress during the internship: the department chairman, the department internship coordinator and the hospital supervisor (AOQ 54).

The program states to implement a skill-oriented examination system that complies with the intended educational objectives and outcomes. Course instructors are responsible for the preparation of the final examinations taken at the end of each course. According to the University's regulations, the Faculty Board has the right to determine the examiner, with the recommendation of the Head of the Department (Annex C, Art.33).

Regarding the examination system applied in the Faculty of Applied Medical Sciences, students' performance in the program courses is evaluated through such

methods as written quizzes, practical exams, oral presentations, written assignments, tests, essays, and home assignments. These methods can be grouped into two kinds of knowledge assessment procedures:

- Continuous assessments methods, such as assignments, in-class activities, written quizzes, presentations, and case-studies, which are carried out during the semester.
- Final examinations, which are carried out at the end of each semester and which usually consist of 1 written exam, and 1 practical exam held after the 15th week of the semester (Self-Evaluation Report 1.2.3).

The percentage ratio of continuous and final assessments varies from 40 to 60%, depending on the course requirements (for details see Annex 2).

Furthermore, the students have to pass clinical exams, which are taken in the 3rd and primarily in the 4th year of studies and are conducted during the regular examination periods. Clinical exams are prepared by course instructors; completion of these exams is required for the completion of the whole course (AOQ 9).

According to the University examination regulations (Annex C), students can be allowed to complete the course requirements in the following semester upon the recommendation of the course instructor and the subsequent approval of the Department Council. In that case, students' academic record for the course is temporarily estimated as 'incomplete' (IC) and is added to the GPA (grade point average) after they have completed the course. If students do not manage to complete the course, they record for the course will be estimated as 'fail' (F).

Re-examinations or reset examinations take place once a year before the first semester of the following academic year, in other words in late August. In contrast to the regular way of calculating students final grade for a course (40% for continuous evaluations and 60% for final exams), results of re-examination determine students' grade to 100%. Furthermore, regardless of students' achievements in the re-examination, they can only obtain the grade D (acceptable), which corresponds to 60% of performance (AOQ 10).

As the University indicates, if students fail in several courses, they are allowed to take re-set examinations and if they fail these exams, students have to repeat the course. If students fail again, they have a chance to take one more re-set exam, failure of which will be followed by the exclusion from the University. Hence, every student has 4 attempts to pass any course of the program (AOQ 8).

The University states that all students have the right to appeal with regard to examination results. In that case, they should, first, approach the course instructor

and look at the exam together. If students still disagree with the grade, they can refer to the Head of the Department, who will then assign a member of the department to reassess their examination (AOQ 11).

Students' academic performance in the program "Diagnostics Radiology" is evaluated according to the following grading scale applied at the University:

Estimate	Code	Rate from 5	Rate from 4
Super Excellent	A+	5.00	4.00
Excellent	A	4.75	3.75
Super Very Good	B+	4.50	3.50
Very Good	B	4.00	3.00
Super Good	C+	3.50	2.50
Good	C	3.00	2.00
Super Accepted	D+	2.50	1.50
Acceptable	D	2.00	1.00
Failed	F	1.00	0.00

Table 6: Grading scale

With regard to the compensation measures for students with disabilities and chronic illnesses, the University assures to support them in laboratory classes, registration processes, printing of necessary material and also to supervise them during exams and ceremonies. This is done by the employees of the Special Needs Center and volunteers as well as exam tutors. The Student Disability Services at the Faculty of Applied Sciences claims to provide fair learning opportunities for students with special needs. The Diagnostic Radiology Department states that there have not been any students with disabilities in the program (Self-Evaluation Report, 1.2.3).

2.2.4 Admission requirements

There are two admission procedures at the University: first, students apply for a place in the preparatory year and, second, they apply for a place in one of the departments of the Faculty of Applied Medical Sciences. Admission to the department means that students automatically continue their education in the 2nd year of the program (by that time, students have already finished the 1st year of studies in the preparatory year). Both procedures take place in the time period from June to August.

In order to be admitted to the preparatory year at the University, applicants have to submit a general secondary school certificate or an equivalent and their scores in 2 standard national exams:

- General Aptitude Test ("Qudrat") measures critical thinking skills

- General Achievement Test (“Tahseely”) measures knowledge in Mathematics, Physics, Chemistry, Biology and English Language

Applicants are admitted to the preparatory year based on their achievements in these tests. The total score of an applicant is calculated according to the percentage distribution of scores: 50% is defined by the school certificate grade, 25% by score in the general aptitude test and 25% by the score in the achievement test. The preparatory year enrollment conditions are regulated by the University Dean-ship of Admission and Registration and the College.

To be admitted to the Faculty, in other words to the second year of the program, students have to complete the preparatory year with an average grade not lower than 2.00 out of 4.00. Furthermore, students need to show interest in working in a hospital environment and in dealing with patients. Finally, they have to pass the medical investigation, meaning that students must declare whether they suffer from contagious diseases, diabetic disorders and whether they have any restrictions in physical abilities, which might prevent them from fulfilling the requirements of the study program. The same admission regulation applies to foreign students as well (AOQ 3).

Students' Admission to the Faculty is determined by three factors: 1) competition based on students' average grade for the preparatory year, 2) enrollment capacity of the Faculty, and 3) by the admission standards of the Faculty Board (Annex B). Students have to apply through the University e-service system “ODUS PLUS” within a given period of time after the completion of the preparatory year.

According to the requirements of the Faculty of Applied Medical Sciences, male students are admitted to the program with the grade 4.00 – 5.00 and female students with the grade 4.50 – 5.00. Such a difference in the admission grade is explained with the fact that there are more female students than male so the University strives to provide equal chances for both groups of students (AOQ 4).

After enrollment to the Faculty, students choose three programs from those offered in the Faculty and determine the degree of priority of these programs. As the final step, applicants are interviewed by the Admission Committee of the relevant department, where they are expected to reveal enthusiasm for working in the chosen sphere of medical care.

With regard to the transfer regulations of the University, students from other higher education institutions are accepted if they transfer from an accredited faculty or university, if they do not have a record of dismissal from the previous university for disciplinary reasons and if their cumulative average grade is not less than 3 (out of

5) or 2 (out of 4), or constitutes 75% of the maximum performance. Besides, students transferred from other universities have to complete at least 50% of the program in order to graduate from King Abdul-Aziz University (Annex C).

According to the University, the Faculty of Applied Medical Sciences requires applicants to be physically fit. When students receive an injury or develop any disabilities after the admission to the respective programs, they have the opportunity to transfer to another program or faculty of the University according to the applied transfer regulations (AOQ 18). According to the Self-Evaluation Report, section 1.5.2, the University offers special parking lots and lifts accessible on all floors for students with disabilities. There have not yet been any students with disabilities in the Department of Diagnostic Radiology.

2.3 Study conditions and quality assurance

2.3.1 Human resources

The teaching staff of the bachelor's degree program "Diagnostic Radiology" comprises 14 members, of whom 11 are full-time University teachers and 3 are part-time adjunct teachers. Among the full-time teaching staff, there is 1 associate professor, 7 assistant professors, and 3 lecturers. Among the part-time teaching staff, there are 2 assistant professors and 1 lecturer.

The majority of full-time staff members are involved in teaching of 3 or 4 courses. Full-time instructors teach approximately 68% of the curriculum, whereas part-time instructors teach 32%. The average amount of teaching load constitutes 16 hours per week for demonstrators, 14 hours per week for assistant professors, and 12 hours per week for associate professors.

According to the Saudi National Commission for Academic Accreditation and Assessment (NCAAA), the ideal student-teacher ratio on the program should be 8:1, i.e. eight students per one teacher (Annex 3). At the moment, there are in total 116 students studying in the department of Diagnostic Radiology. Taking into consideration the amount of full-time teaching staff, the actual student-teacher ratio constitutes 116:11, which is equal to 10-11 students per one teacher. Hence, according to the standards of the University the program needs from 3 to 4 more teachers.

With regard to the aspect of selection of the teaching staff, it is emphasized that the Department and the University in general have an established system of recruitment for academic positions. According to the University regulations (Annex D), open positions are publicly announced in local and international newspapers.

As the main selection criteria, the University names the academic degree, teaching and work experience in the relevant field, amount of publications and reference letters. Furthermore, applicants for an academic position have to pass an interview by the department committee and then by the faculty committee, after which the University Scientific Council takes the final decision (AOQ 19).

Promotion to a higher position is only possible for PhD holders who work at the department as assistant professors. Having worked for at least 4 years at the University, they can be advanced to the position of an associate and a full professor. Promotion criteria include the length of working in the initial position, scientific activity and number of publications. Thus, an assistant professor has to have 4 publications whereas an associate professor is required to complete 6 publications. Applications for promotion are then submitted to the department chairman upon whose approval the application is forwarded to the faculty vice-dean for post-graduate studies, who reviews and then forwards the documents to the University central committee for promotion (AOQ 20).

It is stated that the Faculty offers the teaching members of the institution various seminars and workshops to develop as well as learn new methods and techniques of teaching. There is a Center for Teaching and Learning Development⁴ within the University, which holds periodical workshops on optimization of teaching and education technologies, student assessment methods, creation of better learning environment, and other topics relevant to the professional development of the Faculty and the University in general. Moreover, faculty members are encouraged to attend national and international conferences and meetings (Self-Evaluation Report, 2.1.3). Information about the research activities of the teaching staff of the Diagnostic Radiology Department is provided in AOQ 57.

As for further human resources in the Department, there are 2 clinical instructors, 7 technicians, 2 members of the administrative staff.

2.3.2 Facilities

As indicated in the Self-Evaluation Report, 2.3.1, the Department of Diagnostic Radiology has 5 lecture rooms in male section and 2 rooms in female section with the capacity from 30 to 94 seats. Lecture rooms are equipped with a data show, computers with internet, vertical stands and smart boards. There are two spacious seminar rooms, 1 in the female and 1 in the male section. Besides, the program has 4 radiology laboratories (for details about their equipment, see the Self-Evaluation Report 2.3.1). Students conduct practical experiences in real-life situa-

⁴ Visit the website: http://ctld.kau.edu.sa/Default.aspx?Site_ID=322&Lng=EN (24.03.2015)

tions in the radiology department of King Abdul-Aziz University Hospital under the supervision of qualified radiology technologists.

Students of the Department can use the resources of the Central Library, the library at King Fahd Center for Medical Research and the library of King Abdul-Aziz university Hospital. The Medical Library of the University has female and male sections.

The branch libraries include: male medical center library in the male campus, female medical center library in the female campus and the library of the University Hospital (AOQ 22). Access to the digital library resources is possible with a Student ID 24 hours a day⁵. Students of the program have access to the central Library and the branch libraries during the following hours:

Library	General opening hours	Opening hours for female students only
The central Library	- Sunday to Thursday: 7:30 – 22:00 - Saturday: 17:00 – 21:00	- Saturday: 9:00 – 15:00
The branch libraries	- Sunday to Thursday: 7:30 – 21:30	

Table 7: Opening hours of the libraries

Concerning the acquisition of program-related learning material, it is annually selected according to the requirements of the teaching staff. The list of necessary literature is then submitted to the library administration responsible for purchase of library units.

With regard to computer and media equipment, the program applies the Picture Archiving and Communication System (PACS) used for short- and long-term storage, management, display and distribution of images. Students can connect to PACS through private computers (for more details about PACS, see the Self-Evaluation Report 2.3.3). Internet is available for teachers and students through their university ID number.

The main source of financial support for the King Abdul-Aziz University is the Ministry of Higher Education of Saudi Arabia. The Faculty of Applied Medical Sciences is annually granted a certain amount of funds, which is then distributed to its departments and other units. Financial support for research projects is granted by research organizations, such as Deanship of Scientific Research of KAU, king

⁵ The University digital library: http://library.kau.edu.sa/Default.aspx?Site_ID=212&lng=EN (24.03.2015)

Fahd Research Centre, and King Abdul-Aziz City for Science and Technology (Self-Evaluation Report, 2.3.4).

Together with the Self-Evaluation Report, the University has submitted a Declaration where the Dean of the Faculty of Applied Medical Sciences announces that the King Abdul-Aziz University and the Faculty are committed to provide students with facilities and equipment necessary for education in study programs, including those of “Clinical Nutrition”, “Diagnostic Radiology”, and Physical Therapy” (see Annex A).

2.3.3 Quality assurance

Quality management is maintained at the King Abdul-Aziz University by the University Secretary for Development, which was established in 2004. The main function of the Secretary for Development is to supervise and manage co-working of the following departments and bodies of the University: Academic Assessment Unit (AAU), Total Quality Management Unit (TQM), and Center for University Education Development, Academic Accreditation Unit, Administrative Development Department, and the Strategic Planning Department (Self-Evaluation Report 1.6.1).

The AAU is responsible for design and review of electronic questionnaires, data analyses and their report as well as for the conduct of workshops and research consultations. The TQM Unit is an advisory body that focuses on planning implementation and evaluation of quality assurance and development procedures. The Academic Accreditation Unit develops accreditation policies, reviews academic accreditation mechanisms, and determines the requirements to international accreditation bodies and etc. The Administrative Development Department promotes the application of national and international standards of quality management systems as part of the professional conduct of the University employees. The Center for University Education Development supports and encourages professional growth of academic instructors and the improvement of teaching methods and modern teaching technologies (for details on the functions of each unit see AOQ 13, pages 4-5).

According to the University, all units and stakeholders participate in the quality assurance system of the institution. Academic instructors are required to prepare course reports at the end of each semester, which include the description of the course delivery, analyses of achieved results, resources and facilities used in the course, evaluation methods and other relevant aspects (see the form for a course reform in AOQ Annex 1, pages 1-8). These reports are submitted to the University

Secretary for Development. The Secretary for Development is in the first year of its establishment and is currently in the process of reviewing the reports and studying the procedure of how and to what departments/colleges the obtained results will be made available.

Students are also integrated into the internal quality assurance process of the University. At the end of each semester, they have meetings with the head of their department. Furthermore, they are required to give feedback on the courses they attended by filling in an evaluation survey (see the form of a course evaluation survey in AOQ Annex 1). Course coordinators compare students' evaluation results with the objectives of the course and then formulate their own suggestion on what and how should be improved. Instructors discuss and exchange their suggestions as well as experiences during departmental meetings (Self-Evaluation Report 1.6.3).

Practical relevance of the study program "Diagnostic Radiology" is maintained through the activity of an Advisory Committee, which consists of 8-12 people among them students and alumni representatives, current employers of program graduates, members of the program teaching staff, quality committee members and the program director or his/her representative. The function of the Advisory Committee is to monitor and prove the validity of implemented improvements, assist in adapting the program competences to the needs of the labor market, increase the effectiveness of the program curriculum, assist in work placement of graduates and provide feedback on the learning outcomes of the program (for details, see AOQ 58).

Academic feasibility of students' workload, as well as correlation between the learning objectives of each course and of the internship year with those of the program are assessed and assured through course and internship evaluations and alumni surveys completed by students at different stages of their studies at the University (see the forms of these surveys in AOQ Annex 1).

At the moment, the program "Diagnostic Radiology" has in total 68 female and 48 male students. According to the statistics provided in the AOQ 46, the number of admitted students in both female and male campuses reveals a tendency to increase and so does the number of program graduates.

In accordance with the Self-Evaluation Report, 1.6.7, the University Electronic Website contains information about faculties and colleges, as well as admission procedures implemented in the institution. The official website of the Diagnostic

Radiology Department⁶ provides information about the study plan, admission and graduation requirements, employment opportunities, contact information about the teaching staff and other aspects. The University issues also handouts and brochures about the news and activities carried out at the department.

As for general academic support and counselling mechanisms, the University established an Academic Advising Unit for this purpose. Students receive guidance from the academic advisor assigned to them at the beginning of each academic year. Besides, each teacher and tutor has specific office hours and they can also be contacted through the website of the University and per e-mail (Self-Evaluation Report, 1.6.8).

The University states that the Ministry of Higher Education provides equal participation of female and male students in all forms of education (Self-Evaluation Report, 1.6.9). The Department of Diagnostic Radiology assures that it provides equal enrollment opportunities and implements identical teaching and examination procedures for both female and male students.

2.4 Institutional context

The King Abdul-Aziz University was founded in 1967 to serve the needs of the western territories of Saudi Arabia. The College of Economics and Management was the first to be established, followed by the College of Arts and Humanities. Currently, the University encompasses 25 faculties and branch faculties offering education for over 52,000 students. More information is available on the website of the University⁷.

The University has one campus divided into two sections: one for male and one for female students. It assures that each campus is provided with equal and sufficient amount learning and teaching resources, recreation and sport facilities.

With regard to the information on important institutes and research facilities, the University names the King Fahd Medical Research Centre established in 1980. This research center provides laboratories as well as scientific and administrative support for researchers from different faculties of the University. Another important institution of the University is the King Abdul-Aziz University Hospital; its premises serve the purpose of education and training of students from medical study programs.

⁶ See: http://rad.kau.edu.sa/Default.aspx?Site_ID=142003&lng=EN (24.03.2015)

⁷ See: http://www.kau.edu.sa/home_english.aspx (24.03.2015)

The Faculty of Applied Medical Sciences was established in 2003. In the year 2005, the first batches of students were admitted to the programs “Clinical Nutrition”, “Diagnostic Radiology” and “Physical Therapy”. The total number of students in all four programs of the Faculty is 722 people. There are 92 students at the Department of Clinical Nutrition, 116 students at the Department of Diagnostic Radiology and 191 students at the Department of Physical Therapy.

As for the current developments carried out in the Faculty of Applied Medical Sciences, the Department of Physical Therapy will be re-established into the Faculty of Medical Rehabilitation in the coming academic year 2015/2016. Furthermore, master’s degree programs will be established in the departments of Medical Technology and Physical Therapy.

3 Expert report

3.1 Preliminary remarks

Study programs of King Abdul-Aziz University, Jeddah, Kingdom of Saudi Arabia, are required by the decision of the University to be accredited by an international accreditation agency. The accreditation criteria of the Accreditation Agency in Health and Social Science (AHPGS) are the basis for the accreditation decision. These criteria can be found on the website of the AHPGS⁸. The accreditation criteria are developed by the AHPGS in close accordance with the existing criteria and requirements valid in the Federal Republic of Germany and based on the “Standards and Guidelines for Quality Assurance in the European Higher Education Area” (ESG), established by the European Association for Quality Assurance in Higher Education (ENQA).

The criteria are divided as follows:

- 1) Program Aims and Learning Outcomes,
- 2) Curriculum Design,
- 3) Staff,
- 4) Facilities and Learning Resources,
- 5) Study Process and Student Assessment,
- 6) Program Management.

The main focus of the accreditation procedure is the assessment of learning outcomes and objectives of the study programs, the structure of the study programs, the examination system and transparency, availability of adequate equipment and facilities, study conditions, implementation of the results of quality assurance in terms of the further development of the study programs and the implementation of equal opportunities for all University members involved.

The evaluation of the following study programs offered at King Abdul-Aziz University, with the subsequent decision on their accreditation by the AHPGS, was carried out according to an agreed structure.

As the first step, the documents submitted by the University were reviewed by all nominated experts based on the specified criteria as well as disciplinary and substantive aspects.

As the second step, a part of the nominated expert group carried out an on-site visit at King Abdul-Aziz University, Jeddah, Kingdom of Saudi Arabia with the

⁸http://ahpgs.de/wp-content/uploads/2014/11/accred_criteria.pdf

focus of clarification of open questions as well as verification of the statements described in the application documents of the University.

The third step had been the preparation of the expert report by the expert group. The report is structured in compliance with the accreditation criteria approved by the AHPGS. The documents of the university, the feedback from the experts to the documents and the results of the discussions with the representatives of the University during the on-site visit serve as the basis for the statements made in the expert report.

The last step of the procedure is the decision regarding the accreditation of the study program of King Abdul-Aziz University. The decision is carried out by the Accreditation Commission of AHPGS.

The following study programs were the subjects of the accreditation procedure:

Faculty of Applied Medical Sciences:

- a) "Clinical Nutrition" (Bachelor of Science in Clinical Nutrition);
- b) "Diagnostic Radiology" (Bachelor of Science in Diagnostic Radiology);
- c) "Physical Therapy" (Bachelor of Science in Physical Therapy).

The following experts were appointed by the accreditation commission of the AHPGS for the evaluation of the study program:

As representatives of academic and health care institutions:

Dr. Martin Alfrink⁹

General practitioner in Radiotherapy at the Hospital of Coburg, Germany; Medical practitioner responsible for oncological diseases; expert with broad experience in the fields of Radiotherapy and Radiological Medicine

Prof. Dr. Anja Bosy-Westphal

Professor of Applied Nutrition Sciences and Dietetics at the University of Hohenheim, Stuttgart, Germany; expert in the fields of body composition, obesity, regulation of energy balance and metabolic consequences of its dysregulation

Prof. Dr. Christian Grüneberg

Professor of Physiotherapy at the University of Applied Medical Sciences Bochum, Germany; Head of the study program "Physiotherapy"; expert in the fields of therapeutical sciences, evidence-based practice in physiotherapy, motion systems and movement control

Dr. Dirk Häger

Head physician at the Psychosomatic Preventive Clinic, Regenesa, Juist,

⁹ The experts shown in italics have participated in the on-site visit of the University.

Germany; Team physician at the German Red Cross Blood Donation Service, Niedersachsen, Germany; Bologna expert with broad experience in the area of quality assurance in higher education sector

Prof. Dr. Gregor Hohenberg

Professor in the fields of IT, Media and Knowledge Management at Hamm-Lippstadt University of Applied Sciences, Hamm, Germany; expert in medical imaging in Radiological Technology; patent holder in the sphere of multimedia technology

Prof. Dr. Johannes Keogh

Professor of Nursing at Fulda University of Applied Sciences, Fulda, Germany; member of the academic staff responsible for foreign contacts in the study program "Nursing"; expert with a broad experience in theories and methods of nursing, hospital and community nursing, and nursing education

Dr. Martina Plaumann

Research assistant at the Medical School of Hannover, Hannover, Germany; PhD in Public Health at the Medical School of Hannover; expert in the fields of epidemiology, prevention of diseases and care for specific target groups, and teaching of Public Health and Health Promotion

Prof. Dr. Britta Rademacher

Professor in Engineering and Bioprocess Technologies at Hannover University of Applied Sciences and Art, Hannover, Germany; expert in the spheres of food technology, product development and dairy technologies

Dr. Werner Reiche

Head practitioner in neuroradiology and vascular intervention at the Central Institute of Diagnostic and Interventional Radiology at Ludwigshafen Hospital Clinical Care Centre, Germany

Prof. Dr. Christian Trumpp

Professor of Speech Therapy and Neuro/Patho-Linguistics at the Faculty of Health Sciences, IB University of Applied Sciences Berlin, Germany; Rector of the IB University of Applied Sciences Berlin; Chairman of the Academic Senate of Study Program Directors in Speech Therapy

Prof. Dr. Mieke Wasner

Professor of Physiotherapy, Dean of Studies and a qualified member of the teaching staff responsible for the development of studies in Physiotherapy at the SRH University of Applied Sciences, Heidelberg, Germany; expert in the fields of gerontechnology, geriatrics and sport sciences

Prof. Dr. Gertrud Winkler

Professor in the fields of Nutrition and Food Sciences at Albstadt Sigmaringen University of Applied Sciences, Albstadt and Sigmaringen, Germany; expert in the fields of communal catering, behavioral-economical and nutritional-psychological approaches in the promotion of dining assortment ("choice architecture")

As student representatives:**Martha Hofmann**

Student of Medicine at Witten/Herdecke University, Witten, Germany

For the document-based written evaluation of the study program and the on-site visit of the University, the Accreditation Commission of the AHPGS nominated the group of experts. In March-April 2015, the relevant documents were forwarded to the experts to review the available information and determine the strengths, weaknesses and open questions regarding the study programs. The experts' statements from the written evaluations served as the basis in the process of preparation for the on-site visit of the University.

After the University representatives had submitted their responses to the open questions by 11 March 2015, the AHPGS processed and inserted these answers into the program summary. The Self-Evaluation Report, its annexes and the summary of the study program were forwarded to the members of the expert group assigned for the on-site visit.

3.2 Basic information about the study program

The main objective of the bachelor study program "Diagnostic Radiology" offered at the Faculty of Applied Medical Sciences is to train specialists in medical imaging technologies and thus meet the growing demand for medical professions in Saudi Arabian labor market. The program is aimed at providing graduates with the abilities to assess, plan and implement proper diagnosis based on image techniques and procedures according to the needs and health conditions of patients. The study program requires the obtainment of 137 credit hours (defined in the program summaries as "study units") according to the national credit system applied at Saudi Arabian higher education institutions. One credit hour is calculated based on the number of theoretical and practical hours per week.

It is a full-time study program with a regular duration of four years/eight semesters followed by a one-year (12 months) internship. The program curriculum consists of 48 courses, of which 31 (65%) are program-specific courses, seven (14%) are faculty requirement courses taught to all students of the faculty, and ten (21%) are university requirement courses taught to all students at the University.

Students' performance is evaluated based on the results of a Grade Point Average (GPA) and the Cumulative Grade Point Average (CGPA). GPA is calculated by dividing the sum of the credits received in all courses registered during one se-

mester by the total credit hours of the same courses. CGPA is calculated by dividing the total credits received from all courses a student has completed since joining the program by the sum of the credit hours of these courses. According to the University regulations, the passing GPA grade for the program in general is 2.00 out of 5.00, while for an individual course it is 3.00 out of 5.00, in other words 60%.

Admission requirements of the program include a general school certificate or an equivalent document as well as the results of the General Aptitude Test (“Qudrat”) and the General Achievement Test (“Tahseely”). The total admission score of an applicant is calculated according to the following percentage distribution: 50% is defined by the school certificate grade, 25% by the score in the general aptitude test and 25% by the score in the achievement test. In order to be admitted to the faculty students have to complete the preparatory year with an average grade not lower than 3.00 out of 5.00 or 2.00 out of 4.00 if the student completed a similar preparatory year in another university.

There are 30 seats annually available in the study program. Admission takes place every winter semester. The department admits both female and male students. Upon completion of studies, students receive the academic title “Bachelor of Science in Diagnostic Radiology”. The first batch of students has been admitted to the program in 2005/2006. In the academic year 2012/2013 and 2013/2014, there have been 27 and 38 program graduates, respectively.

3.3 Expert report

The on-site visit took place on 9 and 10 November 2015 according to the previously agreed schedule. Representatives from the central office of the AHPGS accompanied the expert group during the on-site visit.

The expert group met on 8 November for the initial discussion and briefing by the APHGS prior to the on-site visit. They discussed the submitted application documents and the results of the written evaluations, as well as the accreditation-related questions and foreseeable problems. Furthermore, they prepared the plan of the on-site visit at King Abdul-Aziz University and the associated transportation logistics.

In the course of the on-site visit, the experts conducted open discussions with the representatives of the University management, members of the Faculty of Applied Medical Sciences, program directors and teachers, as well as with a group of students currently studying in the evaluated study program. Furthermore, the ex-

perts had a chance to examine the facilities and equipment of program laboratories, lecture and seminar halls as well as of the library study areas.

The expert report is structured in compliance with the accreditation criteria approved by the AHPGS. The study program will be discussed in a comprehensive manner below. The documents of the University, the written reviews of the application documents by the experts, the impressions from the on-site visit and the results of the discussions with the university representatives serve as basis for the statements made in the expert report.

3.3.0 Introduction and comprehensive remarks

King Abdul-Aziz University, Jeddah, Kingdom of Saudi Arabia, was established in 1967 to service the needs of the western territories of Saudi Arabia. Currently, there are more than 52,000 students studying at the University. The University encompasses 25 faculties and branch faculties and it has two separate campuses for female and male students. Each campus is provided with all cultural, recreation and sport facilities and a library.

One of the main research institutes of the University is the King Fahd Medical Research Centre, which was established in 1980. It offers its laboratories and also provides scientific and administrative support for researchers from different faculties of the University. The research center cooperates with other universities and health care institutions of the country. King Abdul-Aziz University has its own hospital and it serves the purpose of education and training of students of medical study programs.

King Abdul-Aziz University is considered to be among the first universities providing education to female students. Apart from regular study programs, the University offers online distance learning opportunities with the help of modern teaching technologies.

One of the long-term goals of the University is the development of standards for the evaluation of student performance, implementation of high-quality research programs as well as the optimal investment of the University resources and capacities. Taking these objectives into account, the University considers the accreditation of its study programs by external international experts as an important source of valuable feedback and an effective impetus for the improvement of teaching and study processes.

The study programs assigned for accreditation are offered by the Faculty of Applied Medical Sciences, which was established in 2003. The faculty contains four

departments, each offering one study program (Clinical Nutrition, Diagnostic Radiology, Physical Therapy and Medical Laboratory Technology). The first batch of students was admitted to all programs in the year 2005. The current total number of students is 92 in the Department of Clinical Nutrition, 116 in the Department of Diagnostic Radiology and 191 in the Department of Physical Therapy.

3.3.1 Program Aims and learning outcomes

The main objective of the program “Diagnostic Radiology” is to train specialists in medical imaging technologies, who are able to assess, plan and implement proper diagnosis based on image techniques and procedures according to the needs and health condition of patients. Graduates of the program are expected to apply their knowledge in Anatomy, Physiology, positioning, and Radiographic techniques when demonstrating anatomical structures on a radiograph or imaging receptor. They must be able to determine various factors of patients’ exposure to radiation in order to achieve optimum techniques for image-taking. Students are trained to take independent decisions and perform medical imaging procedures with discretion. Furthermore, the study program requires that students learn to recognize human emergency conditions and to initiate first aid actions and life support procedures.

With regard to cognitive skills, the program envisages students’ acquisition of critical thinking and problem-solving skills. Students are trained to demonstrate professional communication skills with patients, their colleagues and other personnel of health care institutions. Students of the program are required to maintain standards of hygiene and follow safety measures throughout the whole period of studies and training. With regard to the research-related skills, in the course “Student Project” students are supposed to develop a research topic in such areas as X-Ray and contrast media, computer tomography, magnetic resonance imaging, mammography, angiography, ultrasound, nuclear medicine or radiation therapy.

The description of the program’s qualification objectives and learning outcomes provided in the written documents is clear and consistent with the mission of the University as well as with the needs of the local community. Due to the continuous growth of the local population and the increase of input from the province budget into the healthcare sector, the University predicts good employment opportunities for the program graduates.

From the experts’ point of view, it is a very practice-oriented study program with a distinct focus on clinical context. The aspect of qualification for employment is well described and constitutes one of the main objectives of the program. This is very

important given the fact that the demand for the program graduates in Saudi Arabia is continuously growing. In general, the study program has a well-balanced and successfully accomplished concept of higher education in diagnostic radiology.

For the continuous improvement of the study program, the experts recommend the department administration and the teaching staff of the program to follow more attentively the dynamic developments in the field of radiological technologies. Moreover, they suggest the program representatives to embed into the curriculum new methods of working with, for instance, molecular imaging, photoacoustic imaging, as well as the application of nanotechnologies. At the same time, cooperation of different disciplines should be further promoted to the benefit of students and for the expansion of the interdisciplinary capacities of the study program.

The expert group concludes that the requirements of the criterion are fully met.

3.3.2 Curriculum design

The study programs of the College of Applied Medical Sciences are structured according to the following three main requirements:

- University requirement courses; they are obligatory for all students enrolled at the University and are taught mainly in the second and third years of study in the program.
- Faculty requirement courses; they are obligatory for students of a certain faculty and specialization and are usually offered in the first foundation year and also at the beginning of the second year of studies.
- Department requirement courses; they are specific for the program and are taught by the teaching staff of the department from the second to the fourth years of study.

The study program “Diagnostic Radiology” consists of 48 courses, of which 31 (65%) are program specific courses and 17 (35%) are courses studied together with students of other programs. Out of these 17 courses, seven are faculty requirement courses and ten are university requirement courses. The regular study period in the program is four years/eight semesters followed by one year of clinical practice.

Students start their education at the University with the preparatory year, which comprises basic courses in English, biology, physics, chemistry, computer and

communication skills. The following three years of the program focus on specialization courses combined with university and faculty requirement courses.

After the completion of all courses and study requirements, students can begin their clinical internship year (12 months) either at the University Hospital or at the hospital of Saudi Arabian Ministry of Health. The internship is divided into three parts. Students work for five days a week, eight hours a day. They are supervised and guided by a hospital supervisor and an internship coordinator from the Diagnostic Radiology Department. The Intern Logbook contains information about the structure, aimed competencies and skills, requirements, evaluation methods applied during the internship year. Students' performance in each rotation is assessed by the hospital supervisors in a formative evaluation form and a summative evaluation form.

The experts came to the conclusion that the program curriculum contains all necessary courses that provide solid knowledge in radiological technologies and, thus, allow the obtainment of a bachelor academic qualification. The experts have positively evaluated the fact that the program requires students to complete basic courses before they can attend subjects offering complex learning material and in-depth analyses of radiology-related issues. The experts emphasized that the study program successfully combines theoretical knowledge with practical experience.

As a medium-term plan, the experts encourage the Department of Diagnostic Radiology to establish its own Master study program in the same field of sciences. However, they admit that such a project is only then reasonable and implementable, when a sufficient number of qualified teaching staff is available. Therefore, the experts conclude that the establishment of a postgraduate program should be dependent on the possibilities of the University to recruit additional academic and administrative forces.

The experts are convinced that the study program and the faculty in general could considerably enrich the expertise of their teaching staff and intensify the engagement of students in the academic and social life of the University through the establishment of contacts with other Saudi Arabian universities. Such contacts should encompass mutual exchange opportunities for learning and teaching at other national higher education institution for a specific amount of time. Due to cultural aspects, it might be a positive option to start with short-term exchange periods, e.g. summer schools lasting for one or several weeks.

The same ideas apply to the experts' advice to initiate international collaborations with foreign higher education institutions. The experts emphasize that the aspect

of internationality is one of the crucial constituents of modern societies and higher education. Therefore, they suggest the program administration and the Faculty of Applied Medical Sciences to launch student and teacher exchange projects with universities abroad. The experts believe, for instance, that inviting international scientists to teach for one or several semesters would allow students to receive a better insight into medical imaging techniques in other countries. At the same time, the program teachers could share their own experience in the application of visual representations of the human body for clinical diagnosis and medical interventions with international peers and students while working as guest professors, lecturers or researchers at universities abroad. The organization of student exchange opportunities for both local and visiting students from other universities will also positively enhance the faculty's role on the international academic stage.

Overall, the expert group concludes that the requirements of the criterion are fully met.

3.3.3 Staff

The teaching staff of the Bachelor's degree program "Diagnostic Radiology" comprises 15 members, of whom 12 are full-time University teachers and three are part-time adjunct teachers. Among the full-time teaching staff, there are two associate professor, seven assistant professors, and three lecturers. Among the part-time teaching staff, there are two assistant professors and one lecturer.

At the moment, there are in total 116 students studying in the Department of Diagnostic Radiology. Taking into consideration the amount of full-time teaching staff, the actual student-teacher ratio constitutes nine - ten students per one teacher.

Overall, the teaching and academic staff of the University shows a very high level of commitment and potential for the execution as well as further development of the study program they are responsible for. The expert group came to the conclusion that there is a strong corporate identity and positive group dynamics among the University and the faculty administration.

As the main selection criteria, the University names the academic degree, teaching experience in the relevant field, amount of publications and reference letters. Furthermore, applicants for the academic position have to pass an interview by the department committee and then by the faculty committee, after which the University Scientific Council takes the final decision. Promotion to a higher position is possible only for PhD holders who work at the department as assistant professors, having worked for at least four years at the University. Promotion criteria include the length of working in the initial position, scientific activity and number of publica-

tions. Thus, an assistant professor has to have four publications whereas an associate professor is required to complete six publications.

The academic staff of the Department of Diagnostic Radiology offers extensive support to its students.

Members of the program teaching staff participate in a number of national and international workshops and conferences, and are active in various academic research projects. This guarantees that they stay up to date with the global developments in the field of diagnostic radiology and integrate an international perspective into the teaching process.

From the experts' point of view, the personnel selection criteria of the University are described in a sufficient and transparent manner. The amount of full-time teaching staff is sufficient for the current number of students. Furthermore, the teaching staff is appropriately qualified and experienced for their particular teaching responsibilities. During the on-site visit discussions, students of the Faculty of Applied Sciences have explicitly pointed out that there are sufficient mentors at the University and that they are content with the support system of the institution.

Based on the application documentation and the observations from the on-site visit at the University, the experts have concluded that the academic staff of the program reveals a great potential and interest to participate in further qualification development activities. Taking this into account, the University has established a learning center offering additional education opportunities for both teachers and students. In the course of the on-site visit, the experts have ascertained that the University offers financial support not only to students but also to PhD students as well as to other members of the teaching staff for scientific projects.

Nevertheless, the experts emphasize that the introduction of more opportunities to visit other national as well as international universities to study or to work as guest lecturers could enhance the pedagogical and scientific expertise of the program teaching staff. Such projects will enable the teachers to establish contacts with local academic circles as well as with international peers and scientific organizations.

The expert group concludes that the requirements of the criterion are met in full.

3.3.4 Facilities and learning resources

The Department of Diagnostic Radiology has five lecture rooms in the male section and two rooms in the female section with the capacity from 30 to 94 seats.

There are two seminar rooms, one in the female and one in the male section. Besides, the program has four radiology laboratories.

Students of the department can use the resources of the central library, the library at King Fahd Center for Medical Research and the library of King Abdul-Aziz University Hospital. The Medical Library of the University has female and male sections. The branch libraries include: male medical center library in the male campus, female medical center library in the female campus and the library of the University Hospital. Access to the digital library resources is possible with a Student ID 24 hours a day.

With regard to computer and media equipment, the program applies the Picture Archiving and Communication System (PACS) used for short- and long-term storage, management, display and distribution of images. Students can connect to PACS through private computers. Internet is available for teachers and students through their university ID number.

To summarize, the facilities available for the “Diagnostic Radiology” program are described in detail. The technical equipment of the program is highly professional and leaves nothing to be desired. The use of facilities and equipment is monitored in the program as part of the quality assurance system.

The library facilities and the amount of the program-specific learning material are sufficient. Nevertheless, the experts encourage the program administration to update the reading material used in the program within the coming several years.

The expert group concludes that the requirements of the criterion are met in full.

3.3.5 Study process and student assessment

In order to be admitted to the preparatory year at the University, applicants have to submit a general secondary school certificate or an equivalent and their scores in two standard national tests. In order to be admitted to the Faculty of Applied Medical Sciences, in other words to the second year of the program, students have to complete the preparatory year with an average grade not lower than 2.00 out of 4.00. Furthermore, they have to pass the medical investigation, meaning that students must declare whether they suffer from contagious diseases, diabetes and whether they have any restrictions in physical abilities, which might prevent them from fulfilling the requirements of the study program.

The Department of Diagnostic Radiology has both female and male students. The University asserts its commitment to the provision of equal opportunities for all students. The Special Needs Centre of the University has been established to help

students with disabilities and chronic illnesses. The center provides special accommodations and, for example, reading material in Braille for blind students.

Students' Admission to the faculty is determined by three factors: 1) competition based on students' average grade for the preparatory year, 2) enrollment capacity of the faculty, and 3) by the admission standards of the Faculty Board. After the enrollment to the faculty, students choose three programs from those offered in the faculty and determine the degree of priority of these programs. As the final step, applicants are interviewed by the admission committee of the relevant department. The average of 30 places is annually available for the admission of new students.

The expert group evaluates the programs' admission requirements and procedures as very well structured. The University' admission structure consists of two stages: first, admission to the preparatory year and then enrollment to a specific study program. It is efficient and adequate taking into account the large number of applicants each year. The University follows the national guidelines for the admission to higher education institutions established by the Saudi Arabian Ministry of Education.

With regard to the criterion of physical fitness as one of the admission requirements in the Faculty of Applied Sciences, the experts are confident that it would be more adequate if specific characteristics of each study program are taken into account. Thus, the enrollment of students with diabetes into the study program "Clinical Nutrition" is certainly reasonable, whereas physical disablement is very likely to produce considerable hindrances in the "Physical Therapy" or "Diagnostic Radiology" study programs. Therefore, the experts recommend the faculty to prepare a program-specific definition of the criterion of physical fitness according to the learning and training content of each study program.

Transfer and recognition of academic credits acquired at other higher education institutions is possible if these students transfer from an accredited and recognized university, do not have a record of dismissal, and can provide the cumulative average grade of 3.00 out of 5.00 or 2.00 out of 4.00. Besides, they have to complete at least 50% of the program in order to graduate from King Abdul-Aziz University.

Coherence and rationality of the study plan, module succession and students workload in different stages of studies are calculated and established on the basis of regulated class contacts, independent study time given for the completion of the set assignments, and the preparation phase for the final exams.

The study program does not maintain any direct cooperation or exchange projects with other national or international higher education institutions. The experts are confident that mobility of students and teachers, as well as the development and implementation of international exchange opportunities, constitute the indispensable part of modern education. Therefore, as it has already been mentioned, they strongly recommend the department and the Faculty to introduce possibilities for student and teacher exchange.

Students' performance is assessed in the study program by means of continuous evaluations carried out during the semester and final examinations carried out at the end of each semester. The percentage ratio of continuous and final assessments varies from 40 to 60%, depending on the course requirements. In addition, students have to pass clinical exams, taken primarily in the fourth year of studies. Re-examinations or reset examinations take place once a year before the first semester of the following academic year. Every student has four attempts to pass any course of the program. The University has regulations and procedures enabling students to issue an appeal with regard to examination results.

From the experts' point of view, the examination system of the University is competence-oriented; it adequately evaluates students' understanding of the learning material as well as their performance in practical classes. Nevertheless, the experts recommend the department representatives to reorganize the examination scope as well as the size of the program courses. In total, the program consists of 48 courses, each completed with a respective examination, which leads to a high level of examination load for students. Taking this into account, the experts suggest the program administration to elaborate upon the combination of courses into larger units like modules that are finished with a single module-related examination. Such larger units or modules could also help to make the program more interdisciplinary and integrative with regard to other branches of medical sciences. As a source of additional information about the design of modules, the experts refer to the document "ECTS User's Guide", which is applied within the European higher education area.

Feasibility of students' workload, examination requirements and training assignments is evaluated and guaranteed by means of course and internship questionnaires for current students and graduates. From the experts' point of view, the University should maintain an attentive overview of graduates' career paths in order to determine insufficiencies as well as development potentials of the study program "Diagnostic Radiology". Through continuous contact with former students, the University could also effectively detect what knowledge and skills they lack at

current employment positions and what additional job opportunities are in general available for the program graduates.

The University publishes the results of the questionnaires and surveys thus making them available to all stakeholders involved.

The Academic Advising Unit of the University is responsible for the general academic support and counselling of students. At the beginning of each academic year, students are assigned to a personal academic advisor. In addition, each teacher and tutor has specific office hours and can also be contacted through the website of the University and per e-mail.

The discussion with students has revealed that the teaching staff of the study program gives high priority to the support of students. There is a wide variety of possibilities for students to take part in the development of the study program, the faculty and the University as a whole. For instance, students can work on their own projects, and for that they receive extensive assistance and guidance from the University. On the whole, the experts were impressed by the academic performance of the program students, who have proven to be critical-thinking and achievement-oriented, and who very much identify themselves with their University and the faculty.

Concerning the integration of research into the program, radiology students are required to complete a mandatory course dedicated to a research project, which is then awarded with 2 credit hours. Upon completion of this course, students have to prepare a report about the work and results they have achieved, and then to present it in front of an examining committee.

From the experts' point of view, such a report is comparable with a final paper or a bachelor thesis required in European higher education institutions. The experts advise the University to award more credit hours for research projects and the reports. By doing so, the University would reinforce the importance of independent projects and of individual academic engagement in the program.

At the same time, they recommend the academic staff of the program to design and include into the program curriculum an introductory course dedicated to basic methods and tools necessary for the implementation and documentation of a scientific work and research project. This course should be offered relatively early, for instance in the second or the third years of studies, in order to encourage the formation of students' competences of scholarly work and writing already in the early stages of the higher education process.

The expert group concludes that the requirements of the criterion are fully met.

3.3.6 Program management

The quality assurance system of the University is based on the concept of “Total Quality Management”. It encompasses a number of units and special departments, whose main function is to guarantee the design and review of written and electronic questionnaires, supervision of evaluation procedures, review of accreditation mechanisms, promotion of national and international standards of quality management, provision of opportunities for professional growth of academic instructors and the improvement of teaching technologies.

At the same time, each academic department of the University implements and participates in various quality assurance procedures. The Department of Diagnostic Radiology guarantees the quality of the study program “Diagnostic Radiology” through the fact that all stakeholders are involved in the internal quality assurance procedures within the department. Hence, students are required to submit evaluation surveys at the end of each course, where they give feedback about the course content, instructors and assessment methods. Course coordinators then compare students’ evaluation results with the objectives of the course and then formulate their own suggestion on what and how should be improved. Academic instructors prepare course reports at the end of each semester, which include the description of the course teaching process, analyses of achieved results, resources and facilities used in the course, evaluation methods and other relevant aspects. These reports are submitted to the University Secretary for Development for further review and analyses.

External independent advisers and prospective employers are involved in the evaluation of the program’s relevance to the professional practice. They review course portfolios, fill in questionnaires, visit program laboratories and clinical training premises, interview students as well as speak to the academic and hospital training staff supervising students. Through these surveys, the University intends to obtain information about professional skills and knowledge required of program graduates upon employment in a health care institution. Thus, the program management continuously controls and ensures the compatibility of the program learning outcomes with the demands of the national labor market.

The experts underline that King Abdul-Aziz University has a very well-structured and comprehensive quality management system, effectively put into use in all teaching and administrative units of the institution.

Regular evaluations of quality are undertaken within each course of the program based on valid evidence, relevant performance indicators, and appropriate benchmarks. The efficiency of stakeholders' participation in this process is demonstrated through the fact that their feedback forms the main component of improvement plans subsequently carried out in the department.

The experts recommend the University and the department to provide more concrete and detailed recording of the positions, where graduates of the program have found an employment. As it has already been explained above, this information can serve as an empirically proven basis for the continuous development of the study program. Apart from the existing needs of the program, it will also be possible to distinguish the upcoming ones and, thus, to react to various challenges in the appropriate manner and in due time.

Moreover, the experts recommend the department to evaluate the current workload of students and of the teaching staff, and consequently compare the obtained results with the initially intended amount of working hours. By doing so, the department could calculate the actual load of work in the program and also assume the necessary measures if there are substantial disparities between expectation and reality. In this regard, the experts underline that although the University refers to the average self-study hours, these hours are not considered when calculating the credit hours. This means that students' self-study time is not reflected in the credit system of the University, although it is an important part of education process and it shows, together with the contact hours, the whole scope of students' input in the study program (please find more information in this regard in the document "ECTS User's Guide"). Therefore, the experts recommend the University to consider not only the contact hours but also the self-study hours when awarding the credit hours and when comparing the actual workload with the intended one.

During the on-site visit of the University, the experts had an opportunity to directly discuss various aspects of education with the management of the study program "Diagnostic Radiology". As a result of this direct communication and experience exchange, they came to the conclusion that the quality assurance concept of the program management relies on continuous performance monitoring and comparative evaluations of performance.

Information about the University's institutional structure, vision and objectives, general admission requirements, academic support services, questionnaire fulfillment requirements, alumni inquiry procedures and research paper database is available on the official website of the University. The website contains also information about the mission and vision of the Faculty of Applied Medical Sciences,

including its admission requirements and procedures, study process specifications, graduation requirements, departments, academic and administrative units and committees, the list of academic personnel and their contact information, annual student meetings, latest news and the descriptions of the administrative positions offered at the faculty. The University website provides a thorough description of the Department of Diagnostic Radiology, including its administrative structure, goals and objectives, list of academic staff members, employment opportunities for the program graduates, study plan, admission and graduation requirements and the internship-related information.

During the on-site visit of the University, students and the members of the teaching staff expressed their general contentment with the system of information publication and distribution on all stages of the education and teaching process.

The expert group concludes that the requirements of the criterion are met in full.

3.4 Summary

First of all it should be emphasized that the on-site visit of King Abdul-Aziz University took place in an exceptionally open atmosphere and in the form of mutual respect and appreciation. The experts received extensive and highly competent answers from the representatives of the University to all of their questions and inquiries. As a result, it became obvious that all members of the University – starting with the University and the faculty administration and including the personnel responsible for the study program “Diagnostic Radiology” and students – show tremendous engagement and commitment to the success of the University and of the individual study programs. In this respects, the discussion round with the group of students must be highlighted in particular. Students have displayed such motivation and open-mindedness, which is quite rare to come across.

In addition to the overarching aspects that were presented in the introduction to the assessment, the qualification objectives, the design and the structure of the study program in particular had been the focus of the accreditation procedure. Aspects related to quality management, as well as the learning resources, facilities and staff have been discussed.

From the experts' viewpoint, the study program “Diagnostic Radiology” completely fulfils the evaluation criteria described above.

The Bachelor program “Diagnostic Radiology” has an adequate program design that assures the acquisition of knowledge by students over the period of education. The objectives of the study program meet the requirements of the current job

market of the Kingdom of Saudi Arabia. The description of the study program, which consists of four years of full-time study followed by one year of clinical training, is distinct and consistent. The structure and the processes of quality assurance of the program management are described and explained in detail. The study program has a well-functioning teaching and examination system. Learning material, training equipment, digital technologies and other necessary facilities are provided in a sufficient and available manner.

The high quality of the offered courses, the relevance of the study programs to the current needs of the local society, qualified teaching staff and the open-minded attitude of the University towards innovative medical education and equal participation of all students in higher education process make it very attractive for students from all over the country. The location of the University in the city of Jeddah further contributes to its high popularity.

Similar to other higher education institutions in Saudi Arabia, King Abdul-Aziz University currently has to deal with the continuously growing number of applicants and admission rates. This situation creates challenges for the institution in terms of space and material resources as well as the need for additional teaching forces. Accordingly, the experts support the conclusion, that the decision to establish a master study program in “Diagnostic Radiology” must be based on the possibility of the University to recruit the necessary number of qualified teaching staff.

The experts came to the conclusion that they will submit a recommendation to the accreditation commission of the AHPGS for a positive decision regarding the accreditation of the study program.

Recommendations for all study programs:

- As an overall recommendation for the development of all three study programs, the Faculty of Applied Medical Sciences should consider the organization of possibilities for students and the faculty members to study or work at partner higher education institutions within Saudi Arabia. Given the cultural aspects, it could be an option to start with short-term exchange periods, e.g. summer schools. For the initiation of internationality, the faculty administration should also contemplate upon the arrangement of visit and specialty-related studies and teaching possibilities for students and members of the teaching staff at foreign higher education institutions.
- The experts recommend the departments' administrations to rethink the examination scope and the size of the programs' courses. They have determined that the programs consist of many courses, each completed with a respective

examination, which leads to a high level of examination load for students. In this regard, the experts suggest combining the courses into larger units like modules that are completed with a single examination. As a source of additional information about the design of modules, the University could refer to the document “ECTS User’s Guide” applied within the European higher education area.

- The experts advise the faculty to award more credit hours for research projects and reports required in the study programs. By doing so, the faculty would reinforce the importance of scholarly work and of individual academic engagement in the education process.
- The faculty should maintain communication with its graduates, and it should also attentively follow their career paths in order to determine insufficiencies and development potentials of each study program.
- From the experts’ point of view, the respective department should continuously evaluate the current workload of students and of the teaching staff, and consequently compare the obtained results with the initially intended amount of working hours. Thereby, it is important to take into account not only the contact hours but also students’ self-study hours when calculating the credit hours and when comparing the actual workload with the intended one.
- With regard to the admission requirement of “physical fitness”, the experts strongly recommend the faculty to prepare a program-specific definition of the criterion of physical fitness according to the learning and training content of each study program.

Recommendations for the “Diagnostic Radiology” program

- The experts recommend the administration and the teaching staff of the Department of Diagnostic Radiology to follow more attentively the dynamic developments in the field of radiological technologies. Moreover, they suggest the program representatives to embed into the curriculum new methods of working with, for instance, molecular imaging, photoacoustic imaging, as well as the application of nanotechnologies. At the same time, cooperation of different disciplines should be further promoted to the benefit of students and for the expansion of the interdisciplinary capacities of the study program.
- The experts encourage the program administration to update the reading material used in the program within the coming several years.
- Finally, the experts recommend the academic staff of the program to design and include into the program curriculum an introductory course dedicated to basic methods and tools necessary for the implementation and documentation of a scientific work and research project. This course should be offered rela-

tively early in order to encourage the formation of students' competences of scholarly work and writing already in the initial years of the higher education process.

4 Decision of the accreditation commission

The decision of the Accreditation Commission of 18 February 2016

The resolution of the Accreditation Commission of the AHPGS of 18 February 2016 is based on the University's application documents, the experts' review and the results of the on-site visit described in the expert report. Moreover, the Accreditation Commission took into account the response opinion of the University regarding the study program.

The on-site visit of the University took place on 9 and 10 November 2015 according to the previously agreed schedule.

The accreditation decision is based on the accreditation criteria of the AHPGS. They have been developed in close accordance with the existing standards and requirements valid in the Federal Republic of Germany and based on the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ESG), established by the European Association for Quality Assurance in Higher Education (ENQA).

The Accreditation Commission of the AHPGS considers that all accreditation criteria are fulfilled and adopts the following decision:

The bachelor study program "Diagnostic Radiology" completed with the academic degree "Bachelor of Science in Diagnostic Radiology" is accredited. The regulated study period in the program is four years/eight semesters followed by a one-year internship. The study program comprises 48 courses, of which 31 are program-specific courses, seven are faculty requirement courses taught to all students of the faculty and ten are university requirement courses taught to all students of the University.

The study program "Diagnostic Radiology" is accredited for the duration of five years until 30 September 2021.

For further development and enhancement of the study program, as well as of the University as a whole, the Accreditation Commission of the AHPGS supports the recommendations outlined in the expert report.