



Thematic Analysis

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Accreditation Procedures in the Kingdom of Saudi Arabia – Analysis of the general recommendations

Table of Contents

1	Introduction	3
2	Methodology.....	5
3	Applied Criteria and Specialties in KSA.....	7
4	Findings and Discussion	11
5	Conclusion.....	15
6	References	16
	Appendix 1: General Recommendations.....	17
	Appendix 2: Recommendations made in relation to the criteria applied	27

1 Introduction

The AHPGS (Accreditation Agency in Health and Social Sciences) is an interdisciplinary and multiprofessional organization which concentrates on the accreditation of Bachelor and Master programs, as well as internal quality control and assurance systems, at universities and other institutions of higher education especially in Germany but also in foreign countries. The AHPGS works with special competence in the fields of health and social sciences, as well as in other adjacent and related disciplines. From the beginning, the agency has been located in Freiburg, Germany.

Within the framework of the quality assurance procedures, which have been nationally and internationally supported by ESG since 2015, the AHPGS gains a wide range of knowledge about the development of the study landscape and the evaluated study programs in the field of health and social sciences. The systematic analysis of these findings beyond the respective review process offers the opportunity to identify current developments in higher education and in the study landscape of health and social studies, which can be just as helpful for universities and the further development of their study programs as for the development of new study programs. These findings contribute to the reflection and improvement of quality assurance strategies and procedures. In this sense, in 2019 the AHPGS started systematic thematic analyses according to the new version of the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" adopted in 2015.

Since 2011, the AHPGS carries out accreditation procedures in the Kingdom of Saudi Arabia (KSA). Recommendations imposed by the experts are differentiated between general and study program-specific recommendations. The general recommendations mainly concern structural aspects and aspects that are relevant for all study programs. The present report presents the results of an analysis of the general recommendations made by the experts in the accreditation procedures conducted in Saudi Arabia to date, in order to give an overview of recommendations which apply to all universities the AHPGS has worked with. In KSA, the accreditation procedures by foreign accreditation agencies are executed on a voluntary basis and can be seen as an additional assessment to the national accreditation. The AHPGS helps universities to improve their study programs in terms of international recognition and increase of competitive power in academic accomplishments, research activities and teaching performance.

Furthermore, the AHPGS focuses on the social and medical relevance of the study programs' profile as well as the employability potential of their graduates.

Some of the universities in KSA accredited by the AHPGS are currently preparing for re-accreditation. In addition, the AHPGS regularly receives inquiries from interested universities in KSA which request basic information about the procedure and application. The basis for this is the regularly updated Handbook for Program Accreditation of the AHPGS. Furthermore, the recruitment of new experts, who never participated in accreditation processes is another important aspect. For the preparation of the experts involved in the accreditation procedures, the AHPGS uses country-specific documents/materials that represent the particularities and the respective educational system.

The aim of the following analysis is to provide answers to the following questions:

For which criterion were the most recommendations made?

Are there any recurring recommendations?

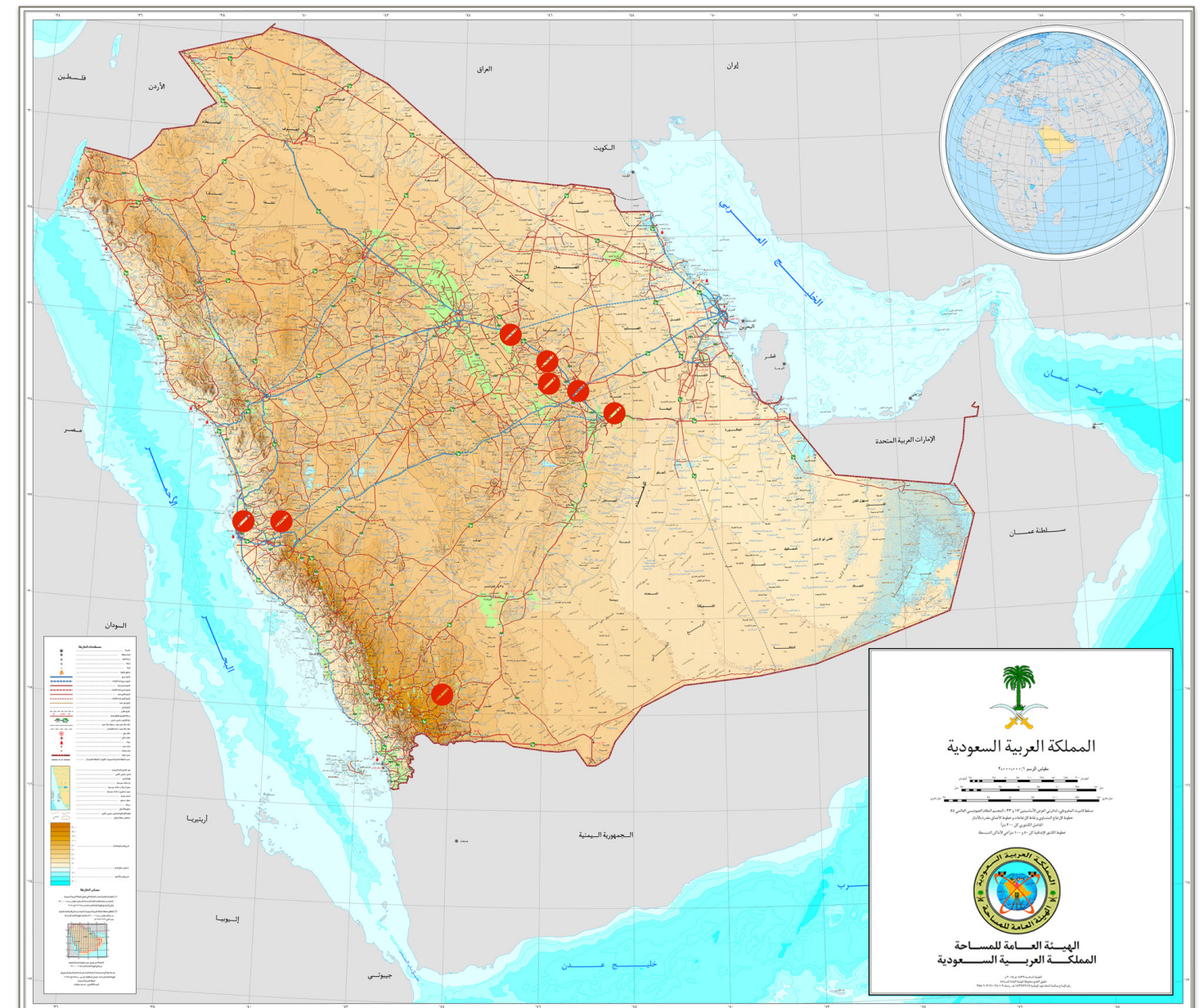
Are there any changes over the period from 2011 to 2019 with regard to the recommendations made?

Are there changes over time in relation to the recommendations made at the same universities?

The knowledge gained in this analysis will be incorporated into the revision of the handbook and provide orientation for higher education institutions in Saudi Arabia that are seeking accreditation or re-accreditation, or help to identify potential problem areas as early as the preparation of applications and, if possible, to remedy them in advance. The results are also of interest and helpful for new reviewers in terms of good preparation for on-site visits.

Figure 1: Overview

University	Study programs
King Saud University, Riyadh (2011)	Biomedical Technology - Instruments Clinical Laboratory Sciences Clinical Nutrition Dental Hygiene Health Education Nursing (BA), Nursing (MA) Optometry Physical Therapy Radiological Sciences
Umm Al Qura University (2014, 2016)	Anesthesia Technologies Clinical Nutrition Emergency Medical Services Health Services Management Laboratory Medicine Nursing Physical Therapy Dentistry Bachelor of Pharmacy Medical Bachelor and Bachelor of Surgery Doctor of Pharmacy
Najran University (2015)	Clinical Laboratory Sciences Nursing Physiotherapy Radiological Sciences
King Abdul Aziz University (2015)	Clinical Nutrition Physical Therapy Diagnostic Radiology
Majma'ah University (2015)	Medical Laboratory Sciences Physical Therapy Nursing
University of Ha'il (2017,2019)	Nursing Physical Therapy Clinical Laboratory Sciences Clinical Nutrition Diagnostic Radiology Dental Surgery Doctor of Pharmacy
Sulaiman Al Rajhi Colleges (2018)	Medical Bachelor and Bachelor of Surgery
Prince Sattem Bin Abdelaziz University (2019)	Biomedical Technology Medical Laboratory Sciences Nursing Radiology and Medical Imaging Physical Therapy and Health Rehabilitation



2 Methodology

In the accreditation procedures, study programs are evaluated according to certain criteria. Therefore, the AHPGS developed a Handbook for Program Accreditation which inter alia contains the applied criteria during the accreditation procedures. The Criteria are "Aims and Implementation", "Structure of the Study Program", "Admission and Feasibility", "Examination System and Transparency", "Teaching Staff and Material Equipment", "Quality Assurance" and "Gender Equality and Equal Opportunities" (see also chapter 3). After the on-site visit, the expert group issues an expert report based on the results of the visit and the documents submitted by the universities. For the qualitative development of the study programs, the experts make recommendations to the universities.

Data and information from the AHPGS internal database were used for the analysis. This internal database provides facts about the executed accreditation procedures in KSA. Using this database, it is possible to get an overview of how many procedures have been executed, when and where they were carried out, which study programs have been accredited and which experts accompanied the agency during the procedures. From 2011 until now, the AHPGS conducted 10 accreditation procedures at 8 Universities with 42 study programs in the Kingdom of Saudi Arabia. The first accreditation procedure took place at the King Saud University in Riyadh. In this procedure, 10 study programs at the College of Applied Medical Sciences and the College of Nursing were reviewed. The Bachelor study programs were "Biomedical Technology – Instruments", "Clinical Laboratory Sciences", Clinical Nutrition", "Dental Hygiene", "Health Education", "Nursing" (BA and MA), "Optometry", "Physical Therapy" and "Radiological Sciences". At this University, the Nursing study program was, up to now, the only Master program accredited by the AHPGS in KSA. All other study programs were Bachelor programs, despite titles that suggest something else e.g. "Doctor of Pharmacy" which is also a Bachelor program qualifying for a specific field of action in the area of pharmacy.

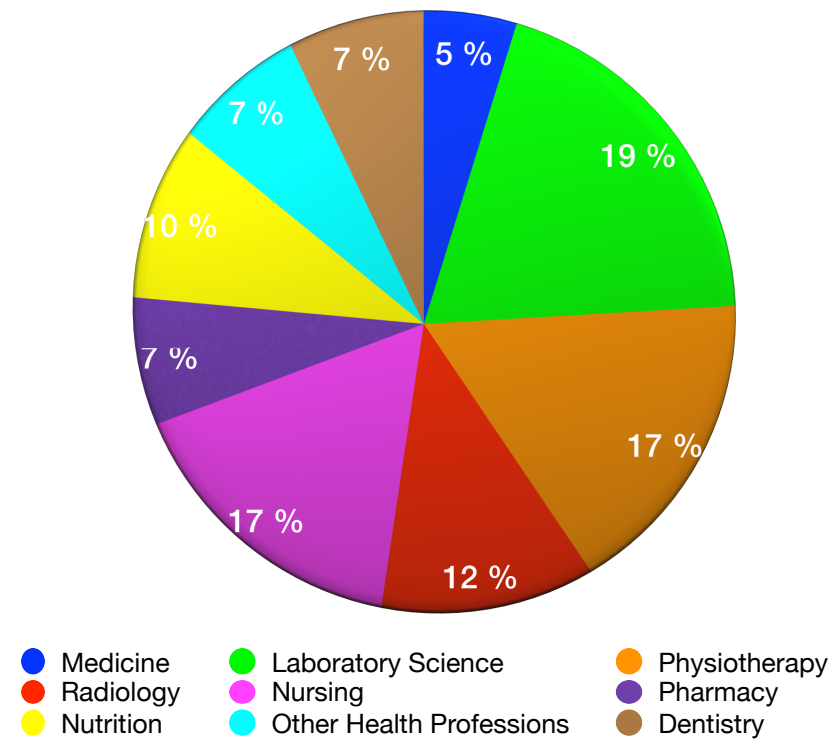
Most of the study programs are located in the field of health professions and medical services; the range is comparable with the situation in Germany (Figure 2). The expert reports for every study program are also stored in this database. In this analysis, all of the general recommendations of every single accreditation procedure since 2011 were considered. The first step is to compose a list of all

given general recommendations (see Appendix 1). By collecting the general recommendations and in the second step summarizing them under the applied criteria (see Appendix 2), it is possible to recognize which recommendations are repetitive and therefore, stand for a need for action for the AHPGS, whether by adapting the relevant documents or by sensitizing the universities as well as the experts for certain topics or criteria.

In order to get a feeling for the different study programs that have already been accredited by the AHPGS, these were summarized in terms of subject and illustrated in percentages.

Figure 2: Different Study Programs classified in Areas

AREA	NUMBERS	STUDY PROGRAMS
Medicine	2	Medical Bachelor and Bachelor of Surgery
Laboratory Science	8	Biomedical Technology, Biomedical Technology - Instruments, Medical Laboratory Sciences (2), Clinical Laboratory Sciences (3), Laboratory Medicine
Physiotherapy	7	Physical Therapy and Health Rehabilitation, Physician Therapy (5), Physiotherapy
Radiology	5	Radiology and Medical Imaging, Diagnostic Radiology (2), Radiological Sciences (2)
Nursing	7	Nursing
Pharmacy	3	Doctor of Pharmacy (2), Bachelor of Pharmacy
Nutrition	4	Clinical Nutrition
Other Health Professions	3	Anesthesia Technologies, Emergency Medical Services, Optometry
Dentistry	3	Dental Surgery, Dentistry, Dental Hygiene



3 Applied Criteria and Specialties in KSA

The following criteria of the AHPGS are implemented for the accreditation of study programs at foreign higher education institutions. The AHPGS developed the Handbook for program accreditation procedures based on its abundance of experience in national procedures. Furthermore, these criteria are in accordance with 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).

Aims and Implementation (in Accordance with ESG 1.2)

Standard: Institutions should have processes for the design and approval of their programs. The programs should be designed so that they meet the objectives set for them, including the intended learning outcomes. The qualification resulting from a program should be clearly specified and communicated and refer to the correct level of the national qualifications framework for higher education and, consequently, to the Framework for Qualifications of the European Higher Education Area.

Specialty: All study programs in KSA have to be accredited by the National Commission for Academic Accreditation and Assessment (NCAAA). NCAAA is an independent legal entity with administrative and financial governance that acts as the authority responsible for academic accreditation and quality assurance in higher education of public and private institutions and programs in Saudi Arabia. In general, Higher Education Institutions in Saudi Arabia are non-private, governmental founded Universities. The learning objectives of the study programs are based on the National Qualification Framework (NQF) of the Kingdom of Saudi Arabia and are categorized in ‘Knowledge skills’, ‘Cognitive Skills’, ‘Interpersonal Skills and Responsibility’, ‘Communication, Information Technology and Numerical Skills’ and ‘Psychomotor Skills’.

Structure of the Study program (in Accordance with ESG 1.3)

Standard: Institutions should ensure that the programs are delivered in a way that encourages students to take an active role in creating the learning process, and that the assessment of students reflects this approach.

Specialty: Usually, the standard study period is longer than in Europe due to general mandatory subjects such as Islamic culture in the first year of study (Preparatory Year). The Preparatory Year is common for all programs of one faculty. It also contains English language skills, Arabic language skills and communication skills, as well as basic science courses. Higher education in Saudi Arabia lasts four years in the field of humanities and social sciences, and five to six years in the field of medicine, engineering and pharmacy. Based on contact hours, the Saudi credit system suggests 15 credit hours per semester as a full-time undergraduate load, and 30 credit hours in an academic year. A maximum of 18 credit hours can be recognized for studies in any one semester. Credit hour calculations are based on a formula in which one 50-minute lecture, or two or three 50-minute laboratory or tutorial sessions over a 15-week teaching semester are regarded as one credit hour. Most classes are worth three credits. Higher education programs in professional fields often include periods of fieldwork or internship at the end of the study program. These may or may not be assigned credit hours.

Another specificity of the curricula in Saudi Arabia is that the (Bachelor or Master) thesis is not a requirement. Instead, there are so-called “final projects” to prove the ability of scientific work.

Admission and Feasibility (in Accordance with ESG 1.4)

Standard: Institutions should consistently apply pre-defined and published regulations covering all phases of the student “life cycle”, e.g. student admission, progression, recognition and certification.

Specialty: The English proficiency is important at Saudi universities. In general, all science-based programs are taught entirely in English. Therefore, admission criteria include an English exam, so students seeking to join Saudi universities need to be prepared by having a high level of English language skills.

In addition to that, admission requirements in Saudi Arabia normally include a Saudi Secondary School Certificate or its equivalent. Moreover, passing a general aptitude test as well as a scientific scholastic admission test for medical programs is condition for admission. Furthermore, all newly admitted students are required to complete the so-called Preparatory Year program before starting their undergraduate studies. Passing this year, students get an orientation and

are approved to the study programs depending on their desire, available seats and their Grade Point Average (GPA).

Saudi nationals are not charged tuition fees. Instead, students receive monthly governmental stipends until they graduate. Where applicable, postgraduate programs in foreign countries are also financially supported by the KSA.

Students with disabilities and chronic illnesses, can only be admitted to most of the study programs in the medical and health care area if they are “physically and mentally fit”.

Examination System and Transparency (in Accordance with ESG 1.8)

Standard: Institutions should publish information about their activities, including programs, which is clear, accurate, objective, up-to-date and readily accessible.

Specialty: Based on their GPA (Grade Point Average), the workload is reduced individually. The GPA is a number representing the average value of the accumulated final grades earned in courses over time. A student’s grade point average is calculated by adding up all accumulated final grades and dividing that figure by the number of grades awarded. This calculation results in a mathematical average of all final grades.

Teaching Staff and Material Equipment (in Accordance with ESG 1.5 and in line with ESG 1.6)

Standard: Institutions should assure themselves of the competences of their teachers. They should apply fair and transparent processes for the recruitment and development of the staff. Institutions should have appropriate funding for learning and teaching activities and ensure that adequate and readily accessible learning resources and student support are provided.

Specialty: The teaching staff often consists of Saudi staff as well as people from neighboring countries as Egypt, Iraq etc.

Quality Assurance (in Accordance with ESG 1.1. and 1.10, in line with ESG 1.7 and taking into consideration ESG 1.9)

Institutions should have a policy for quality assurance that is made public and forms part of their strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes, while involving external stakeholders. Institutions should ensure that they collect, analyze and use relevant information for the effective management of their programs and other activities. Institutions should monitor and periodically review their programs to ensure that they achieve the objectives set for them and responds to the needs of students and society. These reviews should lead to continuous improvement of the program. Any action planned or taken as a result should be communicated to all those concerned. Institutions should undergo external quality assurance in line with the ESG on a cyclical basis.

Specialty: The National Commission for Academic Accreditation and Assessment developed a set of Standards for Quality Assurance in Higher Education in 2009. These standards are to be applied to all higher educational programs in Saudi Arabia. The NCAAA requires that every institution has to create its own quality assurance mode.

Gender Equality and Equal Opportunities

The University's actions on the provision of gender equality and promotion of equal opportunities for students with particular living circumstances are implemented in a transparent manner.

Specialty: No schooling educational institution in KSA allows men and women to attend the same classes. Segregation of men and women's education has been part of Saudi Arabia's culture for much of the twentieth century. Women and men study separately, at different colleges. The curricula are identical.

4 Findings and Discussion

From 2011 to 2019, in 10 procedures a total of 8 universities have been accredited. At least one and at most 11 study programs have been accredited per procedure. A total of 74 recommendations have been made. In every procedure, between two and 16 recommendations were stated.

Appendix 2 can now be used to answer the questions asked at the beginning.

For which criterion were the most recommendations made?

In terms of criteria, most recommendations were made on "Structure of the Study program" and "Gender Equality and Equal Opportunities". Eight different recommendations were made for the criterion Structure of the Study program, some of which were multiple answers (see next question). The recommendations range from earlier patient contact at the beginning of the study to an introduction to the thesis at the end. In addition, increased mobility of students is recommended 6 times, since e.g. no semesters abroad are currently planned or practiced. Furthermore, Appendix 2 shows that the number of courses is an often-discussed issue in the different procedures. Therefore, the experts suggested in 6 out of 10 procedures to combine the courses into larger units or modules that are completed with a single examination.

Are there any recurring recommendations?

As mentioned before, an extended national and international mobility for the students enrolled in the programs e.g. through exchanges are encouraged six times. The recommendation to combine the individual courses into modules was made just as often. Another often-discussed issue was the modernization of the female campus. Compared to the male campus, the equipment as well as the buildings are inferior. In connection with this, it was recommended that the communication possibilities between the female and male campuses should be fully exploited. Another important issue were the admission requirements. It was mentioned four times, that the universities need to specify requirements and selection criteria implied under the aspect of "physical fitness". Therefore, the universities should adopt official regulations for students with special needs on the institutional level in order to guarantee a consistent and transparent approach in matters of academic, health and social support. The universities claim to react individually regarding students with chronic illnesses or disabilities.

Two recommendations were also made with a view to the future. Firstly, in eight out of ten procedures, the universities were encouraged to introduce follow-up Master's programs. The second recommendation related to the expansion of research activities at the university - both in terms of teachers and students. This was addressed in four out of ten procedures.

Are there any changes over the period from 2011 to 2019 with regard to the recommendations made?

The most dominant criteria were discussed continuously from 2011 to 2019. No improvements could be observed over this period.

Are there changes over time in relation to the recommendations made at the same universities?

The AHPGS carried out two accreditation procedures with two on-site visits at two universities each. This was firstly Umm Al Quara University in 2014 and 2016 and secondly the University of Hail in 2017 and 2019.

In Umm Al Quara two general recommendations were made in 2014 and seven in 2016. The two recommendations in 2014 were

Further scientific engagement for the teaching staff should be encouraged and enabled. Regarding the development of the research activities, the experts recommend teachers to encourage research already among Bachelor students of the programs.

The University should offer continuing academic study opportunities for students by introducing master programs.

In 2016, seven recommendations were made. They addressed the offering of graduation diplomas, establishing career centers, initiation of national and international exchanges, determination of the self-study hours and the total workload, establishing official regulations for students with special needs, the equal access to existing learning resources for both female and male group of students and a concept of gender equality in an official document.

The recommendations of 2014 and 2016 show that different aspects were addressed by the experts during the two on-site visits. It is plausible that the recommendations of 2014 have been realized by the University and were therefore not addressed by the experts in 2016.

In Hail, 8 general recommendations were made in 2018 and 3 in 2019.

The recommendations in 2018 addressed the introduction of research skills earlier in the curriculum, the development of Master programs, student-centered study programs, a greater variety and flexibility in examination methods, more qualitative evaluations, the elimination of differences between male and female campuses and the communication possibilities between the male and the female campuses.

In 2019, the recommendations were the revision of the module manual, the reduction of the number of examinations, the implementations of a thesis and of compensation measures regarding students with disabilities and chronic illnesses.

In Hail, the self-evaluation report including the relevant annexes 2019 showed a significant improvement over the previous year. The recommendations of 2018 were partially addressed and realized, e.g. the elimination of differences between male and female campus. Furthermore, the documents were well prepared, so that few open questions had to be asked in advance.

Regarding the recommendations given for the individual criteria, the following statements can be made (see Appendix 2):

In all procedures, there were no general recommendations made regarding the criteria Aims and Implementations. They are clearly specified and communicated and refer to the correct level of the national qualifications' framework for higher education and also to the Framework for Qualifications of the European Higher Education Area.

The Structures of the Study Programs appear very detailed and therefore, not fully modularized, which also leads to a high number of examinations. To improve the comparability of study programs within KSA to study programs in Europe, it should be clearly emphasized that it is recommended to combine courses to larger modules.

Regarding the Admission and Feasibility there is still a need for improvement with regards to students with disabilities and chronic illnesses. Normally, the accredited universities have individual regulations and therefore, no official regulations for students with special needs on the institutional level in order to

guarantee a consistent and transparent approach in matters of academic, health and social support.

The main topic within the criteria Examination System and Transparency is the high amount of examinations based on the different understanding of the modularization of curricula. Besides that, the universities accredited by the AHPGS document and publish information regarding the study program (study plan, process of education, admission requirements, examination regulations) and its various activities in a clear, accurate, objective, up-to-date and readily accessible way.

The Teaching Staff and Material Equipment at the accredited universities assure the successful implementation of the study program. The skills labs comply with high standards (even higher than in German skills labs) which are positively noted by the experts.

The non-Saudi personnel normally gets one-year contracts which are extended every year. During the talks with the non-Saudi personnel on site, the contracts are regularly discussed.

Regarding the Quality Assurance at the universities accredited by the AHPGS, it has to be noted that they carry out internal and external quality assurance procedures on a cyclical basis. The Quality systems are well implemented and include an effective management, perpetual monitoring and review of the study programs, to guarantee the continuous development of both the study programs and the University in general.

Regarding Gender Equality and Equal Opportunities and with respect to the female campus, following the European understanding and the understanding of the AHPGS, is an important issue to guarantee gender equality within the cultural boundaries. Therefore, the AHPGS makes sure that a sufficient number of female and male experts are evaluating the conditions for female and male students on-site. Compensation measures for students with disabilities or chronic illnesses are generally implemented at the university. Due to the specific field of health science programs of the agency, it is usually required to be mentally and physically healthy (see also admission requirements).

5 Conclusion

In summary, the following findings were obtained: The most discussed issues on-site were in relation to the criteria "Structure of the Study program" and "Gender Equality and Equal Opportunities". With regard to the "Structure of the Study program", the most important aspect is the small curriculum and the resulting high examination density. Furthermore, the initiation of opportunities for students' and teachers' mobility with Saudi Arabian and international higher education institutions are a further point of criticism. The experts recommend the college to start with short-term exchange programs for its students. Under the criterion of Gender Equality and Equal Opportunities, the unequal equipment of the women's campus and the men's campus was usually addressed.

In the course of time, no changes in the recommendations given at the various universities could be observed. In one case, however, the second accreditation showed a progression in the preparation of the documents and on site.

Above all, this analysis was able to identify the main points of discussion with accreditations at universities in Saudi Arabia in order especially focus on these aspects during re-accreditations. Nevertheless, it became clear that mid-term follow-ups will be necessary and appropriate in the future in order to better understand the development of the universities after accreditation. The knowledge gained can also be useful for universities seeking initial accreditation.

The AHPGS is planning to prepare a paper for new customers, so that they can counteract possible shortcomings even before the application is submitted. The AHPGS hopes that this will lead to an improvement in the preparation of the documents, as has already happened once before, and thus reduce the workload of the quality assurance consultants by the AHPGS and the experts. Finally, the effort for the university is also reduced, since fewer open questions have to be asked after reviewing the documents. In addition, newly acquired experts can be sensitized to the recurring aspects. The already existing country-specific documents for the experts are to be adapted accordingly.

Feedback on optimization proposals from experts and universities are taken into account in the ongoing process and incorporated into the existing documents.

For further analyses, it would be conceivable to look at the course-specific recommendations instead of the general recommendations in order to be able to draw conclusions about course-specific differences.

6 References

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Appendix 1: General Recommendations

University	Study Program	Recommendations
King Saud University (2011)	Biomedical Technology – Instruments Clinical Laboratory Sciences Clinical Nutrition Dental Hygiene Health Education Nursing (BA, MA) Optometry Physical Therapy Radiological Sciences	<ol style="list-style-type: none"> 1. On the medium term, the introduction of Master and PhD programs should be considered. They should be built upon the existing Bachelor programs and should offer learning at higher academic levels. 2. Research should be extended at the College, maximizing the benefit of students on all levels of education. A clear internationalization strategy might help to build up strong research networks with partners within and outside Saudi Arabia. 3. The opportunities emerging from an interdisciplinary approach should be further exploited. For that purpose, a strong, target-oriented collaboration between the various departments of the College is encouraged. This holds also true for collaboration with other departments of the King Saud University. 4. It is proposed to initiate student-patient contacts as early as possible in the curriculum. Patient attendance strategies and supervision may be adapted to meet this precondition. 5. An extension of the optional courses available during the study period is suggested. This concerns especially study-program specific parts, as it represents a way for students to further develop their strengths in a more specialized area of the field. 6. A clear competence-oriented strategy for all study programs is suggested. In this sense, the course may be compiled in overarching modules, which articulate the competencies to be developed by the students during the modules. The adjoining exams may also follow this goal and evaluate its achievement. 7. The co-optation of internationally reputed and associated personnel is suggested as a future approach. This suggestion pertains to all study programs and shall aid in strengthening the University’s position and recognition in the international context. 8. With regards to the teaching personnel, the selection criteria should be adapted to meet with internationally established standards and practices. 9. The future strategy for the continuous professional development of the faculty might be oriented toward an enhancement of mobility of teachers. As a result,

		<p>the internationality of the study programs will be enhanced, as will the teacher interaction at international level.</p> <ol style="list-style-type: none"> 10. The expert group welcomes the upcoming relocation of the female campus and, along with this, the ongoing modernization of the corresponding material and technical resources and the exchange/sharing of equipment with the male campus. 11. An extended mobility and international connecting for the students enrolled in the programs is encouraged. Summer Schools offered at King Saud University or elsewhere may offer a viable solution to foster international experiences of students and staff. 12. An external assessment (validation process) of the examination system may enhance its efficiency and effectiveness. 13. The data collected in the frame of the internal quality management system should be more widely used. In this sense, this data may assist not only the further development of the study programs, but also for the steering of the College and of the University.
Umm Al Quara University (2014)	<p>Clinical Nutrition Health Services Management Laboratory Medicine Physical Therapy Nursing Anesthesia Technology Emergency Medical Services</p>	<ol style="list-style-type: none"> 1. Further scientific engagement for the teaching staff should be encouraged and enabled. Regarding the development of the research activities, the experts recommend teachers to encourage research already among Bachelor students of the programs. 2. The University should offer continuing academic study opportunities for students by introducing master programs.
	<p>Medical Bachelor and Bachelor of Surgery</p>	<ol style="list-style-type: none"> 1. The University should consider to provide an additional and official document to all successful graduates, which detail the specific program courses and the medical competences obtained throughout the medical studies to accompany the graduation diplomas 2. The University should increase its preparatory support to students during the critical transition period from the academic to professional health care sphere by establishing a Career Center and encouraging individual Colleges and departments to organize regular events and consultation opportunities, where students can meet representatives from various health care sectors and professions to learn about the specific needs and expectations of prospective employers.

<p>Umm Al Quara University (2016)</p>	<p>Dentistry Bachelor of Pharmacy Doctor of Pharmacy</p>	<ol style="list-style-type: none"> 3. The University should initiate national and international short-term exchange opportunities for their academic staff and senior students of the program within the framework of “summer schools”. 4. The University should explicitly determine the amount of self-study hours and of the total workload of the study programs in a transparent manner. By means of questionnaires, it should assess and plan the number of hours students need to accomplish various tasks. Based on the obtained results, the University should compare and accordingly adjust the expected workload to the experience and learning capacities of students. 5. The University should adopt official regulations for students with special needs on the institutional level in order to guarantee a consistent and transparent approach in matters of academic, health and social support. These institution-wide equal opportunity regulations should determine specific units and persons responsible for the organization of support measures for students with disabilities. Furthermore, these regulations should include program-specific exemptions concerning the general physical fitness of students. 6. The University should offer equal access to the existing learning resources for both female and male group of students. Female and male students must always have the same timeframe and opportunities for example to study and work at a particular library important for the study program. 7. The University should develop and publish a concept of gender equality in the form of an official document. This document should serve as a clear and transparent statement that both female and male students and members of the teaching staff, as well as other stakeholders of the University, are provided with equal opportunities and conditions to study and work at the university.
		<ol style="list-style-type: none"> 1. Further scientific engagement for the teaching staff should be encouraged and enabled. Regarding the development of the research activities, the experts recommend teachers to encourage research already among Bachelor students of the programs.

<p>Najran University (2015)</p>	<p>Clinical Laboratory Sciences</p> <p>Nursing</p> <p>Physiotherapy</p> <p>Radiological Sciences</p>	<ol style="list-style-type: none"> 2. The University should offer continuing academic study opportunities for students by introducing master programs. 3. Closer and more interactive contacts with other higher education institutions within and outside of Saudi Arabia should be established. This includes student exchange opportunities, exchange of teaching experience through visiting professors, organization of conferences, workshops and discussions among students and teachers from partner universities. 4. The curriculums should offer more optional courses. 5. The currently applied credit system should be reviewed in terms of the self-study time dedicated to program-specific and general study content and the arrangement of the program courses within larger modules with a set amount of credit value and workload hours, which enables students to correlate the exchange studies accomplished in different universities and also to obtain credits for specialization-related courses offered by other departments within the same universities. 6. The University should consider the employment of the teaching staff based on long-term contracts. The length of a contract might be, for instance, determined by the criterion of belongingness to the University. The advantage of such a system is that it could enable the realization of continuous and long-lasting projects and scientific experiences, which require a certain period of time for preparation, implementation and subsequent analyses. 7. With regard to the admission procedure, the University should specify its requirements and selection criteria implied under the aspect of "physical fitness". The relevant information should be publicly available, for instance through the official website of the University. 8. As a recommendation for further enhancement of research activities, the experts emphasize that primarily teachers themselves should actively encourage and trigger bachelor students' interest in scholarly work. Course teachers can do so, for instance involving students in their own projects, practical experiments or social initiatives.
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		<p>9. The University should ensure that the results of evaluation questionnaires completed by students are properly communicated to all stakeholders, including students themselves. By doing so, the University should guarantee transparency and effectiveness of quality assurance procedures implemented in the program as well as within the University in general.</p>
<p>King Abdul Aziz University (2015)</p>	<p>Clinical Nutrition Physical Therapy Diagnostic Radiology</p>	<ol style="list-style-type: none"> 1. The University 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. 2. The experts recommend the departments' administration to rethink the examination scope and the size of the programs' 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. 3. 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. 4. 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. 5. The respective department should continuously evaluate the current workload of students and of the teaching staff and consequently compare obtained results with the initially intended amount of working hours. 6. With regard to the admission requirement of "physical fitness", the experts strongly recommend to prepare a program-specific definition of the criterion of

		<p>physical fitness according to the learning and training content of each study program.</p>
<p>Majma'ah University</p>	<p>Medical Laboratory Sciences Physical Therapy Diagnostic Radiology</p>	<ol style="list-style-type: none"> 1. The experts encourage the program administration to introduce research competences as early as possible in the program, in order to initiate students' involvement in academic writing and science-oriented activities starting with the early stage of their education. 2. The experts advise the college and the departments to upgrade their requirements to students' research reports, in order to make them more scientific both in terms of content and form. Consequently, this will enable the teaching staff to award more credit hours for students' research projects and reports. By doing so, the University would reinforce the importance of independent scientific work and of individual academic engagement in the study programs. 3. The experts encourage the University to promote students' engagement in research through competition. They believe that competitions will motivate students to more actively participate in scientific and research-oriented events of the college and the University in general. This will consequently contribute to the academic image of the University. 4. The experts strongly encourage the College of Applied Medical Sciences to initiate opportunities for students' and teachers' mobility with Saudi Arabian and international higher education institutions. The experts recommend the college to start with short-term exchange programs for its students, for instance in summer schools, which usually last for only several weeks. At the same time, the experts encourage the University to provide equal promotion opportunities and equal treatment for all members of the institution, irrespective of their national background and gender. 5. The experts strongly support the wishes of the administration of the female campus to extend bachelor study programs for female students in areas such as nutrition, health education, occupational therapy, epidemiology and other. By doing so, the University can prepare more female medical graduates with very good employment opportunities, thus meet the

		<p>needs of the society for female health care specialists and, at the same time, expand the labor market for female employees.</p> <ol style="list-style-type: none"> 6. The experts suggest the academic staff of the college to combine the courses into larger units or modules that are completed with a single examination and that pursue compatible and coherent learning objectives. By doing so, the University could reduce the workload pressure on students, foster cooperation of teachers across disciplines, and make learning outcomes as well as the examinations more competence-oriented. Furthermore, integration of courses into larger coherent entities would enhance the interdisciplinary capacities of the study program and of the college in general. 7. The experts underline that the college administration should take into account not only the contact hours but also the self-study hours of students, which also belong to the total workload of the program. This would enable the academic staff to organize the learning and teaching processes in a more practical and objective way, when knowing the actual amount of workload students and teachers need to accomplish their respective tasks. 8. The experts strongly recommend the academic staff of the college to consider the assignment of credit hours for the internship. This will encourage students to perform better in their clinical training and thereby to improve their cumulative GPA at the end of studies. 9. The experts believe that the admission requirement of physical fitness could be applied in a more adequate and objective manner in medical programs, if the specific characteristics of each specialization are taken into account. Hence, they recommend the college to prepare a program-specific definition of the criterion of physical fitness according to the learning and training content of each study program. 10. The experts encourage the University and the college to offer more time as well as workshops and conferences in the English language in order to enable the participation of all teachers and lecturers in the academic life and professional development opportunities offered by institution.
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	Nursing	<ol style="list-style-type: none"> 1. Research skills should be introduced earlier in the course of studies and a bachelor thesis as a final prove of academic competences should be implemented. 2. Further academic qualification options, such as Master programs should be developed. 3. The idea of a student-centered study program, encouraging students to take an even more active role

University of Ha'il (2018)	Physical Therapy	<p>in creating their own education process and developing a scholarly attitude, should be developed and implemented.</p> <ol style="list-style-type: none"> 4. A greater variety and flexibility in examination methods as well as a competence-oriented examination design should be implemented. 5. More qualitative dimensions and evaluations should be applied 6. Student participation at the University should be expanded. 7. Differences between the male and the female campus should be eliminated and same standards and quality in equipment and facilities for male and female students should be assured along with the further development of the University's implementation 8. The full potential of communication possibilities between the male and the female campuses of the University and the possibilities of exchange of experiences and ideas for the further development of the study program should be used.
University of Ha'il (2019)	Clinical Laboratory Sciences Clinical Nutrition Diagnostic Radiology Dental Surgery Doctor of Pharmacy	<ol style="list-style-type: none"> 1. The module manual should be revised and the number of examinations should be reduced, e.g. through combination of modules. 2. A bachelor thesis as a final proof of academic competencies should be implemented. 3. Compensation measures regarding students with disabilities and chronic illnesses should be implemented.
Sulaiman Al Rajhi Colleges	Medical Bachelor and Bachelor of Surgery	<ol style="list-style-type: none"> 1. The quality of learning material in the anatomy lab should be improved by modern preserved anatomical and histological specimen. Including new technologies, such as "virtual anatomy", should be considered in order to guarantee high quality teaching in the anatomy lab. 2. The University should provide more information and support for applying and recognition procedures abroad.
Princes Sattam Bin Abdulaziz University	Biomedical Technology	<ol style="list-style-type: none"> 1. Research skills should be introduced earlier in the course of studies and a Bachelor thesis as a final proof of academic competences should be implemented. 2. Differences between the male and female campus should be eliminated and same standards and quality

	<p>Medical Laboratory Sciences</p> <p>Nursing</p> <p>Radiology and Medical Imaging</p> <p>Physical Therapy and Health Rehabilitation</p>	<p>in equipment and facilities for male and female students should be assured along with the further development of the University's implementation.</p> <ol style="list-style-type: none"> 3. The module manual should be revised and the number of examinations should be reduced, e.g. through combination of modules. 4. A greater variety and flexibility in examination methods should be implemented, thus, focusing more on the development of competencies. 5. Compensation measures regarding students with disabilities and chronic illnesses should be implemented. 6. Didactic abilities of the teaching staff should be ensured through mandatory participation in the offered workshops and trainings (e.g. didactic methods). 7. A position which is responsible for the maintenance, operation and safety of the equipment in the laboratories to guarantee a smooth execution of the practical modules should be established. 8. The University should exploit the full potential of communication possibilities between the male and the female campuses in order to promote the exchange of experiences and ideas for the further development of the study program.
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Appendix 2: Recommendations made in relation to the criteria applied

Criterion	Recommendation
Aims and Implementation	
Structure of the Study Program	<ul style="list-style-type: none"> - Interdisciplinary approach - Earlier student patient contacts - Extend optional courses (2)* - combining the courses into larger units like modules (6) - expanding mobility / exchanges (6) - consider the assignment of credit hours for the internship - student-centered study program - bachelor thesis should be implemented (2)
Admission and Feasibility	<ul style="list-style-type: none"> - Establishment of a Career Center - specify its requirements and selection criteria implied under the aspect of "physical fitness" (4)
Examination System and Transparency	<ul style="list-style-type: none"> - external assessment of the examination system - determine the amount of self- study hours and the total workload in a transparent manner (2) - greater variety and flexibility in examination methods (2)
Teaching Staff and Material Equipment	<ul style="list-style-type: none"> - Co-optation of internationally reputed and associated personnel - Selection criteria should be adapted - Mobility (3) - Long-term contracts - Didactic abilities of the teaching staff should be ensured through mandatory participation in the offered workshops and trainings (e.g. didactic methods) - A position which is responsible for the maintenance, operation and safety of the equipment in the laboratories to guarantee a smooth execution of the practical modules should be established.
Quality Assurance	<ul style="list-style-type: none"> - ensure that the results of evaluation questionnaires completed by students are properly communicated - guarantee transparency and effectiveness of quality assurance procedures (2) - follow up with graduates - continuously evaluate workload of students and teaching staff - More qualitative dimensions and evaluations should be applied
Gender Equality and Equal Opportunities	<ul style="list-style-type: none"> - modernization of female campus (5) - official regulations for students with special needs (2)

	<ul style="list-style-type: none">- equal access to existing learning resources (2)- official concept of gender equality- use the full potential of communications possibilities between the male and the female campuses (3)- compensation measures regarding students with disabilities and chronic illnesses should be implemented (2)
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*number of mentions