

Akkreditierungsagentur für Studiengänge
im Bereich Gesundheit und Soziales
Accreditation Agency in Health and Social Sciences



Assessment Report

**for the Application of
the University of Ha'il, Kingdom of Saudi Arabia,
College of Applied Medical Sciences,
Department of Clinical Laboratory Sciences
for the Accreditation of the Study Program
"Clinical Laboratory Sciences" (Bachelor of Clinical Laboratory Sciences)**

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Table of Contents

1	Introduction	4
2	Overview	7
2.1	Procedure-related documents	7
2.2	Study program	9
2.2.1	Structural data	9
2.2.2	Modularization and exam system	13
2.2.3	Admission requirements	19
2.3	Study conditions and quality assurance	19
2.3.1	Human resources	19
2.3.2	Facilities	20
2.3.3	Quality assurance	21
2.4	Information about the University	23
3	Expert reports	25
3.1	Preliminary remarks	25
3.2	Basic information about the study program	28
3.3	Expert Report	29
3.3.1	Program aims and their implementation	30
3.3.2	Structure of the study program	31
3.3.3	Admission and Feasibility	33
3.3.4	Examination system and transparency	34
3.3.5	Teaching staff and material equipment	35
3.3.6	Quality assurance	37
3.3.7	Gender equality and equal opportunities	38
3.4	Summary	39
4	Decision of the accreditation commission	41

1 Introduction

The Accreditation Agency in Health and Social Sciences (AHPGS) is an interdisciplinary and multi-professional organization. Its mission is to evaluate Bachelor and Master's programs in the fields of health and social sciences, as well as in related domains, such as law or economics. By implementing accreditation and recommendation procedures, the AHPGS contributes to the improvement of the overall quality of teaching and learning. However, the higher education institutions remain responsible for fulfilling the quality assurance, too.

Since 2004 the AHPGS has been a member of the European Consortium for Accreditation (ECA). In 2006, the AHPGS also joined the ENQA and became a member of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) in 2009. Since 2012, the AHPGS has been a member of the Network of Central and Eastern European Quality Assurance Agencies in Higher Education (CEENQA). Starting from 2009, the AHPGS has been listed in the European Quality Assurance Register (EQAR).

In carrying out accreditation procedures, the AHPGS follows the requirements of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG). In the present case, the decision regarding the accreditation of the study program is carried out by the AHPGS Accreditation Commission based on the following accreditation criteria¹:

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
7. Gender equality and equal opportunities

¹ Approved by the AHPGS Accreditation Commission

The external assessment 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 AHPGS standards based on the European Standards and Guidelines (ESG). As a result, the AHPGS produces a summary (see Sections 2-5), which is to be approved by the University and subsequently made available for the expert group, together with all other documentation.

II. Written review

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 agreed upon accreditation criteria. Consequently, the experts comprise a short summary regarding the study programs.

III. On-site visit (peer-review)

The experts carry out an external on-site visit at the University. During this visit, discussions are held with members of the University, which include University and department administration, degree program management, teachers and students. This provides the expert group with details about the study program beyond the written documents. The task of the experts during 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 the expert report. This report is based on the results of the visit, the written review of the study programs, and the documents submitted by the University. Finally, the report is made available to the University so that it can issue a response opinion.

The expert report as well as the University's response opinion – together with the provided documents – is submitted to the accreditation commission of the AHPGS.

IV. The AHPGS accreditation decision

The accreditation commission of the AHPGS examines the documentation made available in the process of application, namely the University's self-evaluation report, its annexes, the summary comprised by the AHPGS, the expert report, as well as the University's response opinion. These documents represent the basis for the commission's decision regarding the recommendation for accreditation of the study program. Consequently, this decision – together with all other documentation – is forwarded to the AHPGS Accreditation Commission for it to reach a decision regarding the accreditation of the study program.

2 Overview

2.1 Procedure-related documents

The University of Ha'il (UOH), also referred to hereinafter as "the University," delegated the task of accrediting the following Bachelor study programs to AHPGS: "Clinical Nutrition", "Clinical Laboratory Sciences", "Diagnostic Radiology", "Dentistry" and "Doctor of Pharmacy".

The self-evaluation report for accreditation (without the awarding of the official seal of the Accreditation Council of the Foundation for the Accreditation of Study Programs in Germany) of the above-mentioned study programs (hereinafter the Self-Evaluation Report or SER) of the University were submitted to the Accreditation Agency in Health and Social Sciences (AHPGS) in electronic format on November 25, 2018. The contract between the University and the AHPGS was signed on September 12, 2018.

On February 8, 2019 the AHPGS forwarded the open questions and explanatory notes (hereinafter OQ) pertaining to the Application for accreditation for the study programs to the University. On February 26, 2019 the University submitted the answers to the open questions and explanatory notes (hereinafter AOQ) to the AHPGS in electronic format.

The present document presents the summary of the AHPGS for the Bachelor study program "Clinical Laboratory Sciences." The first cohort for this program was admitted in 2009.

The application documentation submitted by the University follows the outline recommended by the AHPGS. Along with the application request towards accreditation of the Bachelor study program "Clinical Laboratory Sciences", the following additional documents can be found in the application package (the documents submitted by the University are numbered in the following order for easier referencing):

Specific documents for the Bachelor study program "Clinical Laboratory Sciences":

Annex	Description
1	Study plan

2	Module overview
3	Module descriptions
4	Teaching matrix
5	Teachers' CVs
6	Internship Logbook (example)
7	List of student projects (2017/2018)
8	Overview about the national (2018-2027) status in the demand of man power in CLS

Alongside the study-program-specific documents, the following documents pertain to all study programs submitted to AHPGS for evaluation:

Annex	Description
A	Admission Rules
B	General University Mandatory (GUM) Course Descriptions
C	Short CVs Teaching Staff GUM
D	Study & Examination Regulations
E	Memorandum of Agreement between University of Ha'il and Ministry of Health
F	University Quality Organization
G	Quality Manual
H	Course Evaluation Faculty
I	Student Evaluation Surveys
J	ISO Certificate
K	Certificate of Accreditation granted by the Accreditation service for International Schools, Colleges and Universities (ASIC) to the University of Ha'il as a "Premier University".
L	Preparatory Year Modules and University Compulsory Modules
M	Inventory Form for Assessment Methods
N	Course Specification Auditing
O	Theoretical Paper Exam Auditing
P	Course Report Auditing
Q	Administrative Hierarchy of the Internship Management
R	University Regulations for Saudi Personnel
S	University Regulations for Non-Saudi Personnel
T	Vision, Mission, Strategic Objectives of UOH

The application, the open questions (OQ) and the answers to the open questions (AOQ), as well as these additional documents, together build the basis for the present summary. The layout bears no significance, as it solely reflects the agreed standard within the University.

2.2 Study program

2.2.1 Structural data

University	University of Ha'il
College	College of Applied Medical Sciences
Department	Department of Clinical Laboratory Sciences
Title of the study program	"Clinical Laboratory Sciences"
Degree awarded	Bachelor of Clinical Laboratory Sciences
Language(s) of instruction	English, General University Mandatory (GUM) Courses are taught in Arabic
Form of studies	Full-time, on-campus
Course offering timetable	Sunday to Thursday, 08:00-16:00
Period of education	8 semesters (4 years), plus 1 year of rotatory internships at hospitals
Total number of modules	47
Credit Hours (CH) according to the Credit Hour system	137
Hours/CP	1 theory credit hour = 1 hour 1 lab/practical credit hour = 2 hours 1 clinical credit hours = 2 hours
Workload	Total: 7,871 hours Theoretical modules: 1,155 hours (15%) Practical modules: 1,333 hours (17%) Self-study: 3,543 hours (45%) Final Exam: 160 hours (2%) Internship training: 1,680 hours (21%)
Launch date of the study program	2009

First accreditation	Program has not yet been accredited
Number of available places in the program	60 per year, 42 female and 18 male students
Number of currently enrolled students	42 male + 222 female students Total: 264
Number of enrolled students to date	66 Male + 246 female students Total
Number of graduates to date	228 (176 female and 52 male graduates)
Particular enrollment conditions for regular students	<ul style="list-style-type: none"> - Saudi nationality - possession of a secondary education certificate or equivalent (not older than 5 years) - passing a general aptitude test and a scientific scholastic admission test - not currently studying at another university (unless resignation documents are provided) - passing the Preparatory Year with a GPA of at least 2.8 on a 4.0 scale
Tuition fees	Tertiary education is free in Saudi Arabia for Saudi nationals. Students also receive monthly governmental stipends until they graduate.

Table 1: Structural data of the study program

The College of Applied Medical Sciences was established in 2008. It encompasses four academic departments including the Department of Clinical Laboratory Sciences to which the Bachelor study program “Clinical Laboratory Sciences” is affiliated. The language of instruction is English – except “some university requirement modules are taught in Arabic” (SER 1.1.5). The study program is structured as follows:

Semester 1 + 2: preparatory year under the deanship’s supervision. Students study at the College of Education together with all other enrolled students (e.g. English language skills). This preparatory year is “common to all medical and allied health sciences programs at the university” (SER 1.2.2). Passing the first year is a prerequisite for being admitted to the study program. It is not possible to redo the preparatory year if the required GPA for the health track is not achieved. In this case, the student will be enrolled in other colleges for example for the science track (General AOO 2).

Semester 3-4: the students study at the College of Education but under the supervision of the Department of Clinical Laboratory Sciences.

Semester 5-8: Except for two courses, the students study solely under the supervision of the Department of Clinical Laboratory Sciences (see study plan Annex 01).

In addition to the eight semesters at the university, the students have to complete a rotary internship (one year without credits). It is primarily designed to “provide an opportunity for the student to integrate didactic concepts of a physical program and fine-tuning profession skills gained during their study in the “Clinical Laboratory Sciences” program into the clinical environment “(SER 1.2.6).

2.2.2. Qualification objectives and employment opportunities

The University strives to generate highly qualified students who meet, not only the national, but the international clinical laboratory skill standards as well. Thus, the curriculum is being continuously updated according to the international progress (SER 1.2.8).

The University provided a list of output-oriented descriptions of all skill fields in the program, including overarching skills, following the categories of the National Qualification Framework (NQF) of the Kingdom of Saudi Arabia. These are categorized into Knowledge Skills; Cognitive Skills; Interpersonal Skills and Responsibility; Communication, Information Technology and Numerical Skills; and Psychomotor Skills and described by the University as follows:

Knowledge Skills are chiefly concerned with the ability to understand and acquire knowledge, concepts and information from different disciplines and sciences, such as (SER 1.3.3):

- outline scientific knowledge in fundamental laboratory practice
- recognize the basic concepts of mathematics fundamental to CLS
- state the importance of safety and the various types of waste generated by the clinical laboratories
- label various types of commonly used medical lab equipment and the principles of these instruments whether manual or automated system
- define in simple terms the normal function of the living organism in terms of its tissues, organs and systems individually and collectively

- define the anatomical terms, and recognize its structure
- memorize theoretical and practical aspects in serological testing

Cognitive skills stem from the students' ability to analyze the result of the patients' samples, evaluate appropriate orientation to biomedical instruments, justify critical thinking skills through problems solving, etc.

Interpersonal Skills and Responsibility concern the skill of working effectively. As the University states, the students will "demonstrate protocols for laboratory diagnostics methods, demonstrate the clinical conditions associated with immuno-hematology", as well as "judge various issues related to urinalysis and body fluid testing" (SER 1.3.3). Concerning Communication; Information Technology and Numerical Skills, the students are expected to illustrate clear and accurate laboratory reports, using whatever medium the position entails (computer entry, written narrative, telephone messages), that give data about patient samples.)

Finally, the Psychomotor section concerns itself with the ability to appropriately and safely operate with laboratory equipment and perform preventive maintenance on instruments.

The University states that graduates are qualified to match the highly developed and sophisticated health systems in the Kingdom and to employ recent scientific and technical developments in health care delivery. Their acquired qualification enables the graduates to practice as professional clinical laboratory technologists in public and private hospitals and rehabilitation setups or to start their own practice after completing the licensing procedures with the professional bodies in the kingdom (SER 1). The graduated students are only allowed to join the job market in health institutions after getting a license from the Saudi Commission for Health Specialties (SCFHS). Otherwise, the health institutions are not allowed to employ those graduates (General AOQ1). Besides that, graduates of the CLS program are eligible and equipped to pursue post-graduate education in various international higher education institutions (SER 1.2.9).

According to the University, there is a growing demand for the Clinical Laboratory Science graduate (SER 1.4.1).

So far, 176 female students and 52 male students graduated to "Clinical Laboratory Sciences" program. Out of the 176 female graduates, 60 % are currently working and 15% continued their study. Out of the 52 male graduates, 70%

are currently working, mostly in a related field, and 8% continued their study (AOQ 2).

2.2.2 Modularization and exam system

The program comprises 47 compulsory modules, out of which 12 modules are to be taken in a preparatory year (first two semesters) and 35 are to be taken in the subsequent eight semesters/four years. The fifth year is a yearlong internship training in clinical settings. There are no elective modules in the program. Students of "Clinical Laboratory Sciences" earn between 13 and 21 CP per semester².

Modules according to the study plan:

Semester	Course Nr.	Course Title	Total Workload Hours	CP
1 (Preparatory)	PENG001	Preparatory English I	132	3
	PENG002	Preparatory English II	132	3
	PBIO121	Preparatory Biology	150	3
	PCOS001	Preparatory Computer Skills	104	2
	PHYS121	Medical Physics	150	3
	IC101	Introduction to Islamic Culture	94	2
Semester Total			762	16
2 (Preparatory)	PENG003	Preparatory English III	132	3
	PENG008	Preparatory English IV	132	3
	PCHM121	Preparatory Medical Chemistry	153	3
	PMDC101	Medical Foundations	96	2
	PCSK001	Communication Skills	131	3
	ARAB101	Arabic Language	85	2
Semester Total			729	16
3	CLS 294	Clinical Laboratory Skills	139	3

² the students' workload is assigned based on their cumulative GPA of the previous semesters. Students who obtain a GPA of 2.0 and below are allowed to register a maximum of 14 credits hours

	PHY208	Physiology	139	3
	BCH204	Biochemistry	164	4
	CLS296	Medical Instrumentation	108	2
	ANA208	Anatomy	108	2
	IC102	Islamic Studies	107	2
Semester Total			765	16
4	CLS204	Hematology 1	139	3
	CLS203	Basis of Immunology	139	3
	CLS205	Histocytotechnology	108	2
	CLS202	Genetics and Molecular Biology	139	3
	ARAB102	Arabic Language	107	2
	BST211	Biostatistics	107	2
Semester Total			739	15
5	CLS307	Hematology 2	195	5
	CLS301	Diagnostic Clinical Chemistry 1	169	4
	CLS308	Diagnostic Immunology	108	2
	CLS303	Diagnostic Microbiology 1	195	5
	CLS305	Diagnostic Parasitology	139	3
	IC103	Islamic Studies	107	2
Semester Total			913	21
6	CLS309	Blood Bank	169	4
	CLS302	Diagnostic Clinical Chemistry 2	169	4
	CLS310	Urinalysis and body fluids	139	3
	CLS304	Diagnostic Microbiology 1	169	4
	CLS306	Diagnostic Parasitology 2	108	2
	IC 104	Islamic Studies	107	2
Semester Total			861	19
7	CLS401	Clinical Rotation-Hematology	167	5
	CLS409	Lab Administration and Quality Control	107	2
	CLS402	Clinical Rotation Chemistry	167	5
	CLS403	Clinical Rotation Immunology	122	3

	CLS404	Clinical Rotation Microbiology	182	6
Semester Total			745	21
∞	CLS410	Student's Project	92	2
	CLS412	Clinical Technology Seminar	92	1
	CLS405	Clinical Rotation Blood Bank	112	4
	CLS406	Clinical Rotation Parasitology and Urinalysis	97	3
	CLS407	Clinical Rotation Hematology	107	2
	CLS408	Clinical Rotation Molecular Diagnostics	107	1
Semester Total			607	13
Study Program Total			6191	137

Table 2: Study Plan

The Module Descriptions (Annex 3) contain information on course titles and codes, the semesters in which the courses are offered, the number of CP, languages of instruction, intended learning outcomes, course contents and assessment methods.

The University explains that the program consists of a Health Sciences' Preparatory Year, General University Mandatory Requirements, Basic Medical Sciences, Basic Clinical Laboratory Sciences Courses, Clinical Laboratory Sciences Practice and Professionalization and Research Issues.

According to the University's "Admission Rules" (Annex A), all newly admitted students are required to complete the preparatory year program with a GPA of at least 2.8 out of 4 before starting their undergraduate study.

The Health Sciences' Preparatory Year (semester 1 and 2, 28 credits) includes ten modules pertaining to English language skills and communication skills, as well as basic sciences courses in biology, chemistry, medical physics and medical foundation. These modules reinforce skills and knowledge to provide a strong basis upon which to build the study of Clinical Laboratory Sciences. In this year, a course in Arabic language skills and Islamic culture are also to be taken. The Health Sciences' Preparatory Year is studied together by all students from the different Colleges.

The third semester shall prepare the students generally with modules like “Anatomy”, “Biochemistry” and “Physiology” for the specific programs offered by the College of Applied Medical Science, where the department of Clinical Laboratory Sciences is included.

The intermediate semesters 4-6 comprise examine modules which equip the students with fundamental knowledge required to comprehend the Clinical Laboratory Sciences, such as “Biostatistics”, “Hematology”, “Blood Bank”, etc.

In the higher semesters 7-8 the modules cover the studying of advanced clinical laboratory science topics, such as “Clinical Rotation Parasitology and Urinalysis”, “Lab Administration and Quality Control” and “Clinical Technology Seminar”.

After completing the fourth year of the program, students fulfill the final requirement for the obtainment of the degree of “Bachelor of Clinical Laboratory Sciences” by carrying out a year-long rotatory practical internship at (a) Saudi Arabian hospital(s). The internship is a full 48 weeks in length, with five days per week and seven hours per day. While mandatory, students receive no credit points for their carrying out of the internship year. (SER 1.1.7)

As the University of Ha'il does not operate its own hospital, the collaboration between the College of Applied Medical Sciences and external hospitals is organized through a Memorandum of Agreement between the University and the Ministry of Health (Annex E) in order to give Clinical Laboratory Sciences' students the opportunity to receive practical training.

To ensure a successful training during the internship, the College of Applied Medical Sciences, where the “Clinical Laboratory Sciences” program is included, developed a clinical logbook that incorporates all mandatory clinical skills (annex x). Furthermore, the internship is supervised by a Clinical Instructor who is designated by the Department and who is responsible for observing students, giving them feedback and reporting on their performance. The Department of Clinical Laboratory Sciences also designates an Internship Coordinator to coordinate the setting of the internship training between the Clinical Instructor, the cooperative trainer and the students. All interns and supervisors are guided by the policies and procedures contained in the Internship Training Manual (Annex 06). The Internship Coordinator is either a PhD holder, or, in case

there is no PhD holder in a specific field, a MSc holder who has previous clinical experience (General AOQ 3).

The University states that the students utilize the information gained early in the curriculum as a foundation for the development of analytical skills. “Students are challenged throughout the professional curriculum by a wide variety of problem-solving activities to analyze realistic situations and develop strategies for examination, evaluation, diagnosis, prognosis, intervention and outcomes analysis. Clinical experiences interspersed throughout the professional curriculum serve to reinforce knowledge and skills acquired in the classroom and laboratory” (SER 1.2.6).

It is possible for students of the University to visit another university during a regular semester or the summer session. For the implementation rules please see Article 50 of Annex D. Furthermore, the University claims to ensure the international relevance of its program by designing the curriculum in harmony with international standards. According to the University, this study program confirmed the conformity of the program with other universities, thus students of this program have no problems to continue their master study at foreign universities (SER 1.2.9). Currently, there are no incoming or outgoing students at the “Clinical Laboratory Sciences” program.

The University also claims that research has a central role in all of its study programs. Students take three research courses in their eighth semester, and those who distinguish themselves through outstanding research have the opportunity to win prizes and special opportunities to participate in national conferences (SER 1.2.7).

The University lists the following methods of teaching: traditional teaching lectures, role play, group work, case studies etc. (SER 1.2.4). All classrooms are equipped with a smartboard for using multimedia formats.

According to the University, each course’s intended learning objectives are used as skill-based evaluation methods in that course exams (and secondary assessment methods) measure students’ ability to fulfill them. Each course has a quiz, one midterm exam and one final exam. The theoretical and practical quizzes are conducted in the third and fourth week of each semester. Practical and theoretical midterms are conducted in the eighth week of each semester, practical

finals in the 14th; and theoretical finals, in the 16th week of each semester (SER 1.2.3).

According to Article 5 of the University's "Examination and Study Regulations" (Annex D), a student who obtains a failing grade in a required course must repeat the course. Under exceptional circumstances (at the discretion of the College Council), students may be granted allowance to retake an exam which they were not able to attend.

The University uses a Grade-Point Average (GPA) system with a 4.00 scale. 4.00 is a perfect grade, 1.00 is the minimum passing grade and 0.00 is a failing grade. Students' grade in each course is multiplied by the number of CP of that course (weighted), these numbers are summed, and then divided by the total number of CP taken. This allows for students' performance to be quantitatively evaluated over longer periods of time (Annex D).

Students wishing to transfer to the University from an external higher education institution are governed by the University's "Examination and Study Regulations", Article 42-45 (Annex D). All transfer applications are submitted to the Admission & Academic Standing Committee and the college council which reviews the courses taken by the student outside the University based on the recommendations of the departments which offer equivalent courses. The courses evaluated as equivalent will be transferred to the student's record but will not be included in the calculation of his or her cumulative GPA.

The academic record of a student transferred from one college to another within the University of Ha'il includes all the courses he/she has studied together with the grades and the semester and cumulative GPA's obtained throughout his/her period of study at the University (ibidem, Article 47).

The "Clinical Laboratory Science" program does not require a thesis for completion, instead, a 2 credit hours module (CLS410) is offered in the last year. In this module, students should perform a project and subsequently the student project is evaluated (SER 1.1.7).

Ha'il University states that it grants students with special needs monetary allowances, special classrooms and teaching aids, based on the specific condition and needs of the individual in question. The Department Council considers such individual cases and sends its recommendations to the College Council, taking

into account the degree of disability and the requirements of the “Clinical Laboratory Sciences” program. (SER 1.2.3)

2.2.3 Admission requirements

Admission policies and procedures along with the requirements are listed in the “Admission Rules” (Annex A) and Article 3 of the “Study & Examination Regulations” (Annex D) of the University of Ha’il. In order to be accepted to the study program, students must complete the admission process for UOH and the program’s requirements, the most central of which is the possession of a Saudi Secondary School Certificate – Science Section (SSSCSS), or its equivalent, which is not more than five years old. Also required is an Aptitude Test Certificate (ATC) obtained from the Saudi National Center for Assessment in Higher Education. Finally, students who have been dismissed from another university for disciplinary reasons are barred from admission. Grades are used to assign priority in the event that there are more applicants than available places.

2.3 Study conditions and quality assurance

2.3.1 Human resources

According to the University, the workload in the “Clinical Laboratory Sciences” program is managed by 2 professors, 12 assistant/adjunct professors, 2 Associate professors and 20 lecturers. This leads to a student to faculty ratio of 1:9 for the female section and 1:3 for the male section, however, many staff members of the male section are also responsible for teaching female students, either directly or via video conference (AOQ 4).

The full teaching load of all regular academic staff members is ten hours for professors, 12 hours for associate professors, 14 hours for assistant professors and 16 hours for lecturers and instructors.

Instructors and lecturers must hold a Master’s degree. Assistant/adjunct professors hold a Doctorate degree. To be appointed to the level of associate professor, a doctorate degree, four years’ experience in the faculty of a recognized university and a group of scientific research published in refereed journals is required. Being appointed to the level of a full professor requires a Doctorate degree and at least eight years’ experience in the faculty of a recognized university, including at least four years after promotion to the level of associate professor as well as scientific research published in refereed journals (Annex R

+ S). The faculty's qualifications in particular are documented in the CVs submitted by the University (Annex 5).

According to the University (SER 2.1.3), faculty members at the College of Applied Medical Sciences are regularly invited to lectures, trainings, seminars, and workshops on various levels (departmental, through the Vice Deanship, the Deanship of Quality and Development or other universities). Additionally, attending national and international workshops and scientific conferences is highly encouraged by the University.

2.3.2 Facilities

The Department of Clinical Laboratory Sciences is housed within the College of Applied Medical Sciences building and, thus, shares some common facilities with other departments. Eight classrooms (five in the male section, three in the female section) are exclusively available for the teaching of Clinical Laboratory Sciences courses. These rooms are said to vary in size from 75 to 300 square meters (seating at least 30 students each) and to be equipped with internet-connected e-podiums, whiteboards, data shows, projectors and document cameras. (SER 2.3.1)

The male and female campuses at the University each contain an equally equipped library, both of which contain books, journals, indices, videos, electronic media and software for professional use. The University states to also hold subscriptions to more than 300 databases and periodicals through the Saudi Digital Library. The library is open from 08:00 to 14:00 on Saudi weekdays.

The faculty members in the College of Applied Medical Sciences request new textbooks and reference materials on a department level. These requests are discussed in a Department Council, the decisions of which are then subject to approval by the College Council. The Deanship of Libraries then procures the materials.

The Deanship of Information Technology and E-Learning is responsible for ensuring that students have access to the technology they need (SER 2.3.2).

2.3.3 Quality assurance

The Ha'il University claims to follow the National Commission for Academic Accreditation and Assessment (NCAAA) standards, which has been established in the Kingdom of Saudi Arabia with responsibility for determining standards and criteria for academic accreditation and assessment and for accrediting post-secondary institutions and the programs they offer.

The University of Ha'il has established a quality assurance hierarchy (Annex F) which chains from the University Rector to the Vice Rector of Quality and Community Services and the Deanship of Quality and Development. Furthermore, a Permanent Committee for Quality has been established, which consists of the University rector as a chairman, the vice rector for quality and community services, the Deanship of Quality and Development and its vice dean. Below this on the same tier are the Strategic Planning Administration, the Skills Development Administration and the Quality and Accreditation Administration, the latter of which further contains a Quality Assistant Unit, an Academic Accreditation Unit, an Intended Learning Outcomes Assessment Unit and an ISO Unit. The University of Ha'il went through a certification process for ISO 9001:2015 at the German TÜV SÜD and obtained its certificate for three years (2017-2020) (Annex J). Furthermore, the University of Ha'il was accredited by the English Accreditation Service for International Schools, Colleges and Universities (ASIC) and was granted the status of a "Premier University" for a four-year accreditation period from March 2017 to March 2021 (Annex K).

The University has created a Vice Deanship of Quality and Development which is empowered and charged with the following tasks:

- Establishing units within the College of Applied Medical Sciences involving members from the male, female and satellite campuses
- Coordinating with these units to address all concerns related to quality assurance in clinical, academic, research and management contexts
- Periodically updating, evaluating and enhancing modules under the guidance of Heads of Departments and Quality Coordinators in each department, in order to ensure that the objectives of each module align with those of the "Clinical Laboratory Sciences" program and the University
- Implementing various quality assessment mechanisms, viz.
 - Course specifications
 - Course reports

- Internal and external auditing of course specifications, course reports and course files
- Surveys of students, alumni, faculty and non-teaching personnel
- External auditor feedback
- Program specification and report

The overall feedback from the Vice Deanship of Quality and Development guides the individual departments to formulate action plans and module enhancement. The Vice Deanship of Quality and Development has as its central aims the short-, medium- and long-term goals and plans of the University.

At the end of each academic year, the Course Coordinator integrates all information regarding potential improvement of the courses in the "Clinical Laboratory Sciences" program, gathered from course reports submitted by instructors and students (Annexes H and I). With a goal of enhancing course objectives, content, teaching strategies and assessment methods, the Course Coordinator leads meetings with all instructors and forwards the recommended course improvements to the Heads of Department.

The "Banner system", provided by the Deanship of Admission and Registration, is said to provide students with details about their studies, including academic requirements, number of credit points earned and left to earn, the complete academic plan, their attendance records, their grades and their cumulative GPA. Administrative tasks, such as adding or dropping courses and managing schedules, can also be performed by students through "Banner" (SER 1.6.7).

To evaluate the practical relevance of the "Clinical Laboratory Sciences" program, the University claims to request periodic feedback from graduated students, professional and regulatory institutions, and various hospitals and healthcare centers. The Department Council discusses the results and, if necessary, makes changes to the annual improvement plans (SER 1.6.4). As the University states, regular surveys are designed to get graduate feedback and in order to develop the program.

In order to simplify all operations concerning quality for non-Arabic speaking staff of the university, a handbook was translated clearing the concepts and definitions in quality assurance at Ha'il University (Annex G).

"Clinical Laboratory Sciences" students are assigned an academic advisor, a faculty member responsible for helping students familiarize with the University's

services, policies and curriculum, as well as for solving any issues affecting the pedagogical experience. The department holds meetings each semester where students and faculty members are invited to exchange views and opinions about curricular, extracurricular and career issues.

Regarding the support of students with disabilities and chronic issues, the University states that as a part of the admission procedure, the students must undergo a pre-fitness screening program and a personal interview. The individual cases are forwarded to the concerned college council and the decisions are taken based on the degree of disability and the program requirements (SER 1.6.10).

2.4 Information about the University

The University of Ha'il was founded in 2005, having originally opened its doors in 1988 as the Ha'il Community College. It has two main campuses, one for male students and one for female students (Aja campus). The main campuses of the UOH are located in the north of Ha'il city and cover an area of more than 9 million square meters. The vision of the University is to achieve the leadership and excellency in education, research studies, and community service in order to building the society and the knowledge-based economy (Annex T).

UOH currently has an enrollment of roughly 40,000 students across 48 study programs (thereof 44 Bachelor programs) and the following 15 Colleges:

- College of Applied Medical Sciences,
- College of Arts and Sciences,
- College of Business Administration,
- College of Community,
- College of Computer Science and Engineering,
- College of Dentistry,
- College of Education,
- College of Engineering,
- College of Medicine,
- College of Nursing,
- College of Pharmacy,
- College of Preparatory Year,
- College of Public Health,
- College of Sciences,

- College of Shariah Law.

The College of Applied Medical Sciences was established in 2008 and offers the Bachelor programs "Physical Therapy", "Clinical Nutrition", "Diagnostic Radiology" and "Clinical Laboratory Sciences". In the future, it plans to also offer the Bachelor programs "Optometry and Vision Sciences" and "Hearing and Speech Sciences" (SER 3.2.1).

3 Expert reports

3.1 Preliminary remarks

The Accreditation Agency in Health and Social Sciences (hereupon, the AHPGS) was commissioned by the University of Ha'il (hereupon, the University) to accredit the study programs "Clinical Nutrition" (Bachelor of Clinical Nutrition), "Clinical Laboratory Sciences" (Bachelor of Clinical Laboratory Sciences), "Diagnostic Radiology (Bachelor of Radiological Sciences), "Dental Surgery" (Bachelor of Dental Surgery) and "Doctor of Pharmacy" (Bachelor of Pharmacy).

The on-site visit evaluation of the study programs "Clinical Laboratory Sciences", "Clinical Nutrition", "Diagnostic Radiology", "Dental Surgery" and "Doctor of Pharmacy" offered at the University of Ha'il, was carried out on April 8 and 9, 2019 at the University in Ha'il, Kingdom of Saudi Arabia.

The application 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 bases for the statements made in the expert report.

The following experts were appointed by the Accreditation Commission of AHPGS for the evaluation of the study programs.

As representatives of higher education institutions:

Prof. Dr. Gerd Mikus Heidelberg University Hospital, Germany

Clinical pharmacologist and senior physician at the Heidelberg University Hospital, Germany;

Member of the German Society of Clinical Pharmacology (DGKliPha), of the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists (ASCEPT), of the Association of Applied Human Pharmacology (AGAH); Deputy head of the Ethics Committee of the State Chamber of Physicians Baden-Wuerttemberg

Prof. Dr. Wolfgang Arnold University of Witten/ Herdecke, Germany

Professor for Biological and Material-scientific basis of Dentistry, Faculty of Dental Medicine;

Former Dean of the Faculty of Dentistry;

Former President of the Craniofacial Group of the International Association for Dental Research;

Former Head of the Department of Biological and Material Sciences in Dentistry

Prof. Dr. Dr. Anja Bosy-Westphal
Christian-Albrechts-University Kiel, Germany
Institute for Human Nutrition and Food Science
Head of the Department of Human Nutrition
Spheres of professional activity: Nutritional medicine, dietetics

Dr. Rolf Heusser
NICER, Zurich, Switzerland
Director
Member of the Swiss Medical Association
Former Director of the Swiss national accreditation agency (OAQ)
Former Chairman of the European Consortium of Accreditation in Higher Education (ECA)

Prof. Dr. Ulrike Holzgrabe
Julius-Maximilians-University of Würzburg, Germany
Chairperson of Pharmaceutical and Medicinal Chemistry and Vice-president of the University of Würzburg
Institute of Pharmacy & Food Chemistry, Würzburg
Associate Editor of the Journal of Medicinal Chemistry, Advisory Board Member Journal of Pharmaceutical and Biomedical Analysis

Dr. Werner Reiche³
Hospital of the city of Ludwigshafen
Central Institute for Diagnostic and Interventional Radiology
Specialist in Diagnostic Radiology, Specialist in Nuclear Medicine in Idar-Oberstein, Germany

Prof. Dr. Mozhgan Bizhang
University Witten/Herdecke
Senior physician of the department for tooth preservation and preventive dentistry;
Faculty of Health (Department of Dentistry, Oral and Maxillofacial Surgery)

Prof. Dr. Johannes Keogh
Fulda University of Applied Sciences, Germany
Professor of Nursing Sciences
Former Dean of the Faculty of Nursing and Health
Responsible for international affairs of the Nursing Degree Programs
Research and science in Nursing, Nursing Education, Public Health, Preventive Care and Health Promotion
Qualification as nurse, midwife, community nurse and in psychiatric patient care

³ The experts shown in italics did not participate in the on-site visit of the University. Instead, they took part in the written evaluation.

Prof. Dr. Geja Oostingh

Salzburg University of Applied Sciences, Austria

Head of the Degree Program Biomedical Sciences

Member of the Austrian expert team in biomedical sciences

Young Science Ambassador to raise the interest of youngsters for subjects in the natural science subjects

Prof. Dr. Gerhard Scriba

Friedrich-Schiller University Jena, Germany

Professor of pharmaceutical chemistry and former managing director at the

Institute of Pharmacy; Member of the German pharmaceutical

society, Member of the "Gesellschaft Deutscher Chemiker" (GDCh), Member of the American Association of Pharmaceutical Scientists

Prof. Dr. Luzia Valentini

Neubrandenburg University of Applied Sciences, Germany

Professor for Clinical Dietetics and Nutrition

Director of the Institute for Evidence-Based Dietetics (NIED)

As representatives of professional practice:

Tina Hartmann

Association for Technologists and Analysts in Medicine Germany, Hamburg, Germany

School for Health Professions at the Hospital Dortmund gGmbH,

Head of MTRA-Training

As a student representative:

Mathias Maximilian Dilger

Student at the Albert-Ludwigs University Freiburg, Germany

Licensed physician

According to the Rules for the Accreditation of Study Programs and for System Accreditation (determined by the decision of the Accreditation Commission, of December 8, 2009 in the version of February 20, 2013, Drs. AR 20/2013), the task of the experts in the accreditation procedures is to evaluate the education concept of a specific study program as well as to estimate the possibility of its successful implementation.

This concerns, in particular, qualification objectives of the study program, its conceptual integration into the system of education, the concept of the study program, feasibility of the content and scope of studies, the examination system, study-relevant collaborations, personnel, material and space resources,

transparency and documentation, application of the results of quality assurance for further development of the study program (it is especially important to present the analyses and evaluation results of student workload, academic accomplishments and employment of graduates, which are to be documented and taken into account within the framework of continuous development of the study program), as well as the provision of gender equality and equal opportunities.

The on-site visit of the experts is carried out in line with the Accreditation Criteria for International Program Accreditation. They have been developed by the Agency in close accordance with the Standards and Guidelines for Quality Assurance in the European Higher Education Area established by the European Association for Quality Assurance in Higher Education (ENQA). After the announcement of the accreditation decision, the expert report will be published as a part of the final Assessment Report.

3.2 Basic information about the study program

The main objective of the Bachelor study program “Clinical Laboratory Sciences” offered at the College of Applied Medical Sciences of the University of Ha’il is to prepare students to become knowledgeable, service-oriented, collaborative and reflective practitioners, who are able to practice as professional clinical laboratory scientists in public and private hospitals and rehabilitation setups or to start their own practice. The study program requires 138 credit hours (CH) according to the international credit hour system. One credit hour is equal to one contact hour of lectures or two hours of laboratory or clinical training per week.

The total workload of the program constitutes 7,871 hours, out of which 2,488 hours are contact hours (1,155 hours theoretical modules and 1,333 hours practical modules), 3,543 hours are individual work, 160 hours for the final exam, and 1,680 hours have to be completed in a 48-week rotary internship at the end of the studies. The Bachelor program “Clinical Laboratory Science” is a full-time study program with a regular duration of four years / eight semesters. The curriculum consists of 47 obligatory courses, of which 12 are to be taken in a Preparatory Year.

Admission requirements include the possession of a Saudi Secondary School Certificate, or its equivalent, and passing the General Aptitude Test plus a scientific scholastic admission test. In addition, students must pass the preparatory year with a minimum GPA of 2.8 out of 4.0. Upon completion of the study program, students are awarded with the academic degree "Bachelor of Clinical Laboratory Sciences". The average number enrolled students in the "Clinical Laboratory Sciences" study program is 60 per year (42 female and 18 male students). Admission takes place every September (fall semester).

The first batch of students has been admitted to the program in 2009. Up to now, there are 176 female and 52 male graduates. The main language of instruction is English. Saudi nationals are not charged tuition fees. Saudi students also receive monthly governmental stipends until they graduate.

3.3 Expert Report

The on-site visit was carried out on April 8 and 9, 2019 according to the previously agreed schedule. Representatives from the head office of AHPGS accompanied the expert group.

The expert group met on April 7, 2019 for preliminary talks prior to the on-site visit. They discussed the submitted application documents and the results of the written evaluation as well as uprising questions. Furthermore, they prepared the plan of the on-site visit at the University.

In the course of the on-site visit, the experts conducted discussions with the University management (rector of the University, vice rector of the University, director of quality and accreditation) the dean of quality and accreditation, the quality coordinator in the female section, the vice dean of quality and development, the vice dean of the female section, the dean of the College of Dentistry, the dean of the College of Pharmacy, the dean of the College of Applied Medical Sciences, the departments chairmen and the teaching staff of the programs as well as with the male and female students currently studying in the programs and graduates. Furthermore, they inspected the learning premises, such as lecture halls, seminar rooms, library, and computer rooms. Moreover, the experts had the opportunity to see the equipment and the capacity of the laboratories at the male and female campus.

The expert report is structured according to the "Accreditation Criteria for International Program Accreditation" which are in compliance 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). The study program will be described and analyzed in a comprehensive manner below. The documents submitted by the University, the experts’ feedback to the documents, the observations made during the on-site visit, the results of discussions with the representatives of the University, the Colleges and the departments serve as the bases for the statements made in the expert report.

3.3.1 Program aims and their implementation

The University itself has set the goal to become a local and regional leading institution with regard to knowledge dissemination and research and to establish sustainable partnerships within the community. To ensure this mission, the University plans to develop around 20 postgraduate study programs in the next years in order to offer the undergraduate study program graduates the possibility to continue their studies at the University of Ha’il and to forward the achievements in research. The College of Applied Medical Sciences, where the “Clinical Laboratory Sciences” program is located, aims to play a leading role in community service and the promoting of medical research in particular. To expand the variety of the study programs within the College of Applied Medical Sciences, the Bachelor programs “Clinical Optometry” and “Speech Pathology and Audiology” as well as “Occupational Therapy” will be implemented next year, which has already been approved by the management. Furthermore, the experts appreciate that the University plans to implement a consecutive master study program for graduates of the “Clinical Laboratory Sciences” Bachelor study program.

In accordance with the mission of the University as well as the College of Applied Medical Sciences, the Bachelor study program “Clinical Laboratory Sciences” has been implemented in 2009 in order to meet the need for skilled health care professionals. The study program “Clinical Laboratory Sciences” pursues specific qualification objectives. The program aims at preparing individuals who fulfill their professional obligation to contribute to the health needs of the Saudi Arabian society through education, scholarly activities, service and professional practice. The students are provided with advanced educational and research competencies. In the expert’s opinion, graduates of the “Clinical Laboratory Sciences” program will be able to work as clinical laboratory technologists

in public and private hospitals, rehabilitation setups or to start their own practice after completing the licensing procedures with the professional bodies in the kingdom. From the experts' point of view, slightly more emphasis could be placed on the scientific field in biomedicine, allowing students to further their studies within this field in the future.

The learning objectives of the "Clinical Laboratory" program 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.

Out of the 176 female and 52 male graduates of the "Clinical Laboratory Sciences" program, the University could determine that 60 % of the female and 70 % of the male graduates are currently employed in a related field. 15 % of the female and 8 % of the male graduates decided to pursue their master's degree at another University.

From the experts' point of view, the requirements of this criterion are fulfilled.

3.3.2 Structure of the study program

The Bachelor study program "Clinical Laboratory Sciences" is a full-time study program with a regular duration of four years (eight semesters) plus internship (two semesters). The curriculum consists of 47 courses, of which 12 are to be taken in the Preparatory Year. This study period is followed by a non-credit-bearing but obligatory one-year internship. Hence, students require five calendar years to fully complete the program cycle.

The first year, also called the Preparatory Year, is common to all medical and allied health sciences programs at the University. Passing the first year is a prerequisite for being admitted to the study programs. In the third and fourth semester, students study at the College of Education but under the supervision of the Department of Clinical Laboratory Sciences. In semester 5-8 the students study solely under the supervision of the Department of Clinical Laboratory Sciences.

The Health Sciences' Preparatory Year contains English language skills, Arabic language skills and communication skills, as well as basic science courses in biology, chemistry, medical physics and medical foundation in order to reinforce

skills and knowledge to provide a strong basis upon which to build the study of “Clinical Laboratory Sciences”. Courses in computer skills and Islamic culture are also part of the Preparatory Year. The students must achieve grade C or better in the English courses in order to be able to register for the third level.

Being admitted to the Department of Clinical Laboratory Sciences (*see Criterion 3*), students start accumulating more program-specific knowledge for the remaining three years. From the experts’ point of view, students acquire specialized and program-specific knowledge on the one hand, and interdisciplinary knowledge as well as professional, methodological and general competences on the other hand. The experts were convinced that the lectures in the “Clinical Laboratory Sciences” are regularly updated.

Furthermore, the experts acknowledge the very detailed course files with regards to contents and aims and, thus, allowing a high level of transparency. In the experts’ opinion, the structure of the curriculum seems to make the workload manageable. Nevertheless, the curriculum appears very detailed, consisting of a large number of more or less isolated courses and, therefore, a lot of examinations (*see Criterion 4*). Consequently, the experts recommend to revise the module manual and suggest to combine some modules in order to strengthen competence development and to reduce the number of examinations.

The experts remark upon the fact that students of the “Clinical Laboratory Sciences” program are not required to write a Bachelor thesis but have to conduct a research project instead. In addition to that, students take a course for evidence-based studying in the 4th semester and attend a seminar to improve their presentation skills in the 7th semester. On-site the experts were impressed by the involvement of the students in research at the University. The students are encouraged to write research papers, give presentations and are also invited to attend scientific conferences. Still, to guarantee international comparability, the experts recommend implementing a Bachelor thesis in the curriculum as a final proof of academic competencies.

To sum up, the study program has a course related examination system. Its implementation, including the grading system, course load regulations, repetition of courses and exams is regulated and transparent for the students in the Study and Examination regulations.

Professional skills are gained through practical hours in the College's laboratories (*see also Criterion 5*). However, the students are supposed to gain clinical practice in the internship year, which students complete in cooperating hospitals. The University has collaborations with governmental, military and private hospitals in which the graduates mostly work after their internships. During this year, students receive a comprehensive training in their potential work fields to continuously broaden their horizon and improve their qualifications. To assure the quality of the internship, the Clinical Laboratory Sciences Department designates an internship coordinator who is in regular contact with the clinical instructor responsible for the students at the hospital. The experts appreciate that students are supervised by members of the Clinical Laboratory Sciences Department in collaboration with the clinical trainers of the hospitals. After completion of the internship year, the Clinical Laboratory Sciences Department conducts a so-called exit exam which assesses the skills and knowledge of the students before graduating. Moreover, the clinical instructor has to fill in an evaluation form every month to evaluate the internship students. During the on-site visit, the students confirm that the University offers support both in finding hospitals and also during the internship.

From the expert's point of view, the requirements of the criterion are fulfilled.

3.3.3 Admission and Feasibility

The admission policies and procedures along with the requirements are properly documented and publicly available. Admission requirements include having a Saudi Secondary School Certificate or its equivalent which is not older than five years and passing a general aptitude test as well as a scientific scholastic admission test. All newly admitted students are required to complete the 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 GPA. To be placed to the "Clinical Laboratory Sciences" study program, students must pass the Preparatory Year with a Grade Point Average (GPA) of at least 2.8 on a 4.0 scale.

As the Preparatory Year comprises medical foundations as well as foundations in medical biology, chemistry and physics in order to compensate possible deficiencies from secondary school, the experts determine the admission procedure and requirements to be appropriate. They correspond to the standards of the study program.

The experts determine a relatively high number of exams to be passed during the “Clinical Laboratory Sciences” study program as each course require passing a midterm and a final exam, often comprising a practical and a theoretical part. To compensate, the University observes the students’ performance by collecting and generating the cumulative and semester Grade Point Average (GPA). Students with a GPA less than 2.0 out of 4.0 receive an academic warning. Students with a GPA less than 1.0 out of 4.0 are put under academic probation. To facilitate the amount of exams, the type as well as the time of the different examinations is defined and communicated to the students transparently at the beginning of the course. The experts confirm that the University takes measures to guarantee the feasibility of the study program. The amount of student workload is appropriate. As a whole, the organization of the education process ensures the successful implementation of the study program. A revision of the module manual is recommended, though (*Criterion 2*).

On site, it became obvious that the students’ satisfaction and students support is an important topic at the University of Ha’il and for its teaching staff. Therefore, the experts positively highlight that many activities related to the various study programs such as workshops, competitions and theaters are offered. Furthermore, students with a GPA below-average have the possibility to visit training courses in the evening. Moreover, all new students are allocated to an academic advisor who is responsible for explaining the future enrolment options, discussing problems in the academic progress and supporting the students in improving their results. During the talks, the students confirm the supportive and easy communication between staff and students and emphasize that the teaching staff adequately reacts to their questions.

The experts find the support services at the University to be exemplary and conducive to the health and success of the student body.

From the experts’ point of view, the requirements of the criterion are fulfilled.

3.3.4 Examination system and transparency

The University uses a continuous assessment process to ensure the quality of education for its students. This is achieved by evaluating the performance of the students through a series of exams and tests that are scheduled during the academic semester. Students’ workload is assessed and regulated through the Grade Point Average (GPA). A student who obtains a failing grade in a required

course must repeat the course and, therefore, the examination in the following semester. A course can be repeated twice.

Students of the "Clinical Laboratory Sciences" program are not required to write a Bachelor thesis but have to conduct a research project instead (*see Criterion 2*).

In the experts' opinion, the study program includes a high number of exams which causes a high workload not only for students but also for the teaching staff (*see also Criterion 3*). Discussing the issue on-site, staff as well as students are apparently satisfied with the exam procedures and see clear benefits in the current practice. The transparent information of examination methods and of the examination schedule at the beginning of each term makes the great number of assessments during and at the end of each semester manageable.

Thus, the experts conclude that the examinations, although numerous, serve to determine whether the envisaged qualification objectives have been achieved or not. The requirements with regard to students' performance in examinations are regulated and published.

Regarding students with disabilities and chronic illnesses, the experts were told that they are admitted to the program unless their illness will expose them or the patients assigned to their care to any kind of physical or psychological risk. The application of students with disabilities will be considered and evaluated by the Department Council. Based on the degree of disability and the program requirements, the Department Council will formulate their recommendation to the College Council who gives the final decision (*see also Criterion 7*).

From the experts' point of view, the requirements of this criterion are fulfilled.

3.3.5 Teaching staff and material equipment

In general, the "Clinical Laboratory Sciences" program is carried out by 2 professors, 12 assistant professors, 2 associate professors and 20 lecturers. In consideration of the distribution of female and male students there is a 1:3 ratio on the male campus and a 1:9 ratio on the female campus.

Regarding the employment process, the qualification and experience of the teaching staff is closely evaluated prior to the appointment decision. The experts are convinced that the instructors involved in study programs reveal a high level of competency in the relevant field.

New teaching staff is thoroughly briefed about the program and their teaching responsibilities before they can start working. Students evaluate the performance of all teaching and other staff periodically.

Overall, the teaching and academic staff of the College of Applied Medical Sciences at the University of Ha'il 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 comes to the conclusion that there is a strong corporate identity as well as a positive group dynamic among the University and the faculty administrations.

The experts deem the amount of human resources allocated to the program to be sufficient. The teaching staff within the Bachelor program "Clinical Laboratory Sciences" is in possession of academic and technical credentials and adequate professional experience. The University informs its employees about opportunities for personal and professional development in clear ways, and actively encourages their participation in workshops, training courses and conferences intended to improve their abilities which is confirmed during the talks with the staff on-site.

During the on-site visit, the experts gained the impression that research is a very important issue at the University of Ha'il. The University has set agreements with regional businesses that provide additional research funds as the research fund of the University relies heavily on the government and is not sufficient to execute the defined research strategy of the University. Currently, various research projects of students and staff are implemented and especially on national level many articles were published. On site, the experts were told that 50 % of the envisaged postgraduate programs will be research-orientated. Overall, the College of Applied Medical Sciences encourages their staff to do research. The staff on site confirms that. Furthermore, the experts were shown various impressive research projects at the "Clinical Laboratory Sciences" program in which students are involved.

The experts visited the premises of the College of Applied Medical Sciences' on the female and the male campus. The experts were impressed with the quality of the laboratories and clinical areas used to train students in the Bachelor program "Clinical Laboratory Sciences". The skills labs are equipped with all relevant high technology devices. From the experts' point of view, the staff maintaining the equipment and supervising the practical hours is sufficient in number

and well qualified. Furthermore, the newly developed College of Applied Medical Sciences which is under construction and supposed to be finished during the year 2019 was presented. The new building will include 56 skills labs and 60 classrooms. The experts positively acknowledge that both male and female students will be housed in this building in order to guarantee the same standards in quality and quantity of the equipment for all students. From the experts' point of view, the new building will help the University of Ha'il to become a leading institute for education and training in applied medical professions in its region.

The University hosts a library on the male and female campus. The libraries offer ample print and online resources for academic research. Besides, every department hosts another small program-specific library with the most central reference books. In the experts' opinion, the learning materials and associated services are consistent with the requirements of the program and the courses offered.

As a whole, it was ascertained by the experts that the Bachelor study program "Clinical Laboratory Sciences" has ample teaching facilities at its disposal. The laboratory infrastructure and the equipment are suitable to guarantee a high level of teaching and research.

From the experts' point of view the requirements of this criterion are fulfilled.

3.3.6 Quality assurance

From the experts' point of view, the University of Ha'il has a very well-structured system of quality assurance spread across all of its units. The University has established a quality assurance hierarchy which ranges from the University Rector to the Vice Rector of Quality and Community Services to the Deanship of Quality and Development. At each department of the University, a Quality Assurance Unit has been established. Quality assurance rooms are prepared in each department, in which all relevant documents are kept readily accessible for the responsible staff members. Moreover, every college has a student council in order to involve students in the quality development processes. The Deanship of Quality and Development visits each college twice per year and carries out internal and external quality assurance procedures on a cyclical basis, among them course evaluations and student and teaching staff surveys. At the end of each semester, a course report is written and course specifications may be amended according to the evaluation results.

The experts conclude that the University has a well-established, documented and published concept of quality assurance regarding the education process, teaching and research, which serves as the basis for the quality-oriented development and implementation of the study program.

The experts could be convinced that results of the internal quality assurance management are applied for the continuous development of the study program. The University takes into close consideration the quality evaluation results as well as the analyses of students' workload, their academic accomplishments and feedback from graduates. The experts acknowledge that the University implemented arrangements for student participation, such as student committees and councils. The students on-site confirm that, also because of the good student-to-faculty ration, the communication with the staff is excellent and problems are dealt with, even outside of the intended round of talks. The students appreciate that their evaluations have an impact, e.g. their feedback results in changes in the curriculum.

From the experts' point of view, the requirements of the criterion are fulfilled.

3.3.7 Gender equality and equal opportunities

The Department of Clinical Laboratory Sciences has both female and male students and assures that it provides equal admission, education, examination and participation opportunities for all students. The University of Ha'il demonstrates its commitment to the provision of equal opportunities for all students, within the cultural boundaries of the local society, and shows impressive openness for diversity and social developments.

The experts acknowledge that female staff and students have been and are participating in national and international conferences.

To enable every young Saudi with a secondary school certificate to attend higher education, the Kingdom of Saudi Arabia grants full scholarships to all male and female students. Additionally, the female campus has a nursery for the female students' and staff's children.

Although this has not been an issue before and the experts are convinced that the University tailors a solution to every need, the panel urges the University to reflect on the implementation of compensation measures regarding students with disabilities and chronic illnesses.

Taking into account the societal norms and cultural context of the Kingdom of Saudi Arabia, the experts group conclude that the requirements of the criterion are fulfilled.

3.4 Summary

The overall impression of the University of Ha'il is very positive. The University presents itself convincingly as an open-minded and dynamic institution with willingness to develop new ideas and accept recommendations for further enhancement. Especially the high commitment of all Colleges and departments as well as the highly motivated management, staff and students made an impression on the experts. The experts strongly support to forward the vision of the College of Applied Medical Sciences of implementing postgraduate studies.

Moreover, the experts positively emphasize the construction of a new building for the College of Applied Medical Sciences and its impressive equipment Which will help the University of Ha'il to become a leading institute for education and training in applied medical professions in its region.

A number of additional favorable characteristics and achievements of the study program "Clinical Laboratory Sciences" were demonstrated by the management of the University, the representatives of the college, those of the department as well as of the student body, such as a curriculum which is well balanced between theoretical and practical contents, an excellent infrastructure, a multi-national and well qualified teaching team and a strong commitment to quality assurance. Noteworthy is also the community-based work of all persons involved in the study program.

Based on the information from written documents and the results of the on-site visit, the experts come to the conclusion that the study program "Clinical Laboratory Sciences" offered at the University of Ha'il fulfills the above described criteria. Hence, the experts decided to submit a recommendation to the Accreditation Commission of AHPGS for a positive decision regarding the accreditation of the study program.

For the continuous development of the study program, the experts have outlined the following recommendations:

- The module manual should be revised and the number of examinations should be reduced, e.g. through combination of modules.

- A Bachelor thesis as a final proof of academic competencies should be implemented.
- Compensation measures regarding students with disabilities and chronic illnesses should be implemented.
- Slightly more emphasis could be placed on the scientific area in biomedicine, allowing students to further support their studies within this area in the future.

4 Decision of the accreditation commission

University of Ha'il, Saudi Arabia, Bachelor Study Program "Clinical Laboratory Sciences"

This resolution of the Accreditation Commission of the AHPGS is based on the University's application, as well as the expert review and the on-site visit covered in the expert report.

The on-site visit of the University took place on April 08-09, 2019, according to the previously agreed-upon schedule.

The accreditation decision is based on the Expert Report which is structured according to the Accreditation Criteria developed by the AHPGS. 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 Accreditation Commission of the AHPGS discussed the procedural documents and the vote of the expert group of the University regarding the expert report.

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

The study program requires the obtainment of 138 credit hours (CH) according to the University's credit hour system. The regulated study period in the program "Clinical Laboratory Sciences" are 4 years (8 semesters), including a Preparatory Year, followed by a non-credit bearing one-year clinical internship after completing the studies. The study program comprises 47 mandatory courses, of which 12 belong to the Preparatory Year, and 35 are compulsory. The main language of instruction is English. The Bachelor study program "Clinical Laboratory Sciences" is completed with the conferral of the academic degree "Bachelor of Clinical Laboratory Sciences".

The study program "Clinical Laboratory Sciences" is accredited for the duration of five years, until September 30, 2024.

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 articulated in the expert report.