

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



## **Assessment Report**

**for the Application of  
Majmaah University, Al-Majmaah, Saudi Arabia,  
College of Applied Medical Sciences,  
Department of Medical Laboratory Sciences,  
for the Accreditation of the Bachelor Study Program  
“Medical Laboratory Sciences”  
(Bachelor of Medical Laboratory Sciences)**

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Decision	18.02.2016

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## 1 Introduction

The Accreditation Agency in Health and Social Sciences (AHPGS) is an interdisciplinary, multi-professional organization. Its mission is to carry out quality assurance procedures regarding study programs, as well as Higher Education Institutions, in the fields of health and social sciences and in related domains.

Starting from 2009, the AHPGS is listed in the European Quality Assurance Register (EQAR). Since 2004, the AHPGS has been a member of the European Consortium for Accreditation (ECA). In 2006, the AHPGS joined also the European Association for Quality Assurance (ENQA), and it 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).

Majmaah University, Al-Majmaah, Saudi Arabia, has commissioned the AHPGS for the external assessment and accreditation of three bachelor study programs related to the field of applied medical sciences. The decision regarding the accreditation of each study program is carried out by the Accreditation Commission of the AHPGS.

The accreditation criteria of the AHPGS are the basis for the accreditation decision. These criteria can be found on the webpage of the agency<sup>1</sup>. 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 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 documents have to fulfil the assessment criteria as well as the AHPGS standards. As a result, the AHPGS produces a summary (see below), which is to be approved by the University and subsequently made available for the expert group, together with all other documentation.

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

## **II. Written review regarding the content of the programs**

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

## **III. On-site visit (Peer-review)**

The experts carry out an external on-site visit at the University. In the course of the visit, the experts group holds discussions with different representatives of the University including University and department administration, program management, teachers and students. These discussions enable the experts to obtain information beyond the written documents. The task of the expert group 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 an expert report for the study program. The expert report is based on the results of the visit, the written reviews of the study program, and the documents submitted by the University. The expert report is then made available to the University for a response opinion.

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

## **IV. The AHPGS decision regarding accreditation**

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

## 2 Overview

### 2.1 Procedure-related documents

The Self-Evaluation Report of the study program “Medical Laboratory Sciences” of Majmaah University, Al-Majmaah, Saudi Arabia (hereinafter “the University”) was submitted to the AHPGS in electronic format on 17 December 2014. The contract between the University and the AHPGS was signed on 15 December 2014.

On 20 March 2015, the AHPGS forwarded open questions (hereinafter OQ) pertaining to the Self-Evaluation Report of the study program to the University. On 24 June 2015, the University submitted explanatory notes and answers to the open questions (hereinafter AOQ) to the AHPGS in electronic format.

This document presents the summary and the assessment of the study program “Medical Laboratory Sciences”. The program is offered for both female and male students. The first batch of students was admitted to the program in the year 2009.

The Self-Evaluation Report submitted by the University follows the outline recommended by the AHPGS. Along with the Self-Evaluation Report, the University provided documents specific to the study program “Medical Laboratory Sciences”:

Annex	Description
01	Module description
02	Study plan of the program “Medical Laboratory Sciences”
03	Total program workload
04	Organizational structure of the program
05	CVs of the teaching staff
06	Students training manual in the program “Medical Laboratory Sciences”
07	Internship evaluation form
08	An example of a feedback report produced by a clinical supervisor after one of the internship rotations
09	An example of a student evaluation form filled in by a clinical supervisor
10	An example of a student academic record
11	Learning outcomes of the study program
12	An example of a published research paper by a program student
13	An example of a published research paper by a member of the teaching staff of the Medical Laboratory Department
14	An example of a published research paper by a member of the teaching staff of the College of Applied Medical Sciences
15	An example of a training course certificate

Table 1: Documents specific to the study program

Alongside the program-specific documents, the University forwarded also the following documents pertaining to all study programs submitted for the external evaluation:

Annex	Description
A	Regulations and procedures applied at Majmaah University
B	Appointment regulations of the University
C	Manual for instructors for the online learning system “Desire to Learn”
D	Manual for students for the online learning system “Desire to Learn”
E	Graduate evaluation survey for employers

Table2. Documents common for all three study programs

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

## 2.2 Study program

### 2.2.1 Structural data

University	Majmaah University, Al-Majmaah, Saudi Arabia
College/Department	College of Applied Medical Sciences Department of Medical Laboratory Sciences
Title of the study program	“Medical Laboratory Sciences”
Degree awarded	Bachelor of Medical Laboratory Sciences
Form of studies	Full-time; Sunday – Thursday
Language of instruction	English
Period of education	8 semester (4 years) + 1 year internship
Credits according to the Majmaah University system of credit hours <sup>2</sup>	134 credit hours
Hours/CP	<i>Credit hours</i> are calculated based on the number of theoretical and practical hours per week 1 theoretical contact hour = 1 credit hour 2 laboratory contact hours = 1 credit hour 3 clinical contact hours = 1 credit hour

<sup>2</sup> According to the University definition, a *credit hour* is “a weekly theoretical session of not less than 50 minutes, a clinical session of not less than 50 minutes, or a practical work not less than 100 minutes”. For details, see: <http://mu.edu.sa/en/deanships/deanship-admission-and-registration/definitions>

Workload	Total: 8,764 hours Contact hours: 1,584 hours Individual study: 4,020 hours Practical classes: 1,080 hours Clinical Internship: 2,080 hours
Beginning of the program	In 2006 in Zulfi male campus; In 2011 and 2012 in Majmaah female and male campuses, respectively
Time of admission	September each academic year
Number of available places on the program	An average of 20 seats is available every year
Number of enrolled students in 2014/2015	50 students in total: 3 in Majmaah male campus 31 in Majmaah female campus 16 in Zulfi male campus
Number of graduates in 2014/2015	16 graduates in total: 7 in Zulfi male campus and 9 in Majmaah female campus
Particular enrollment conditions	For the admission to the preparatory year: - A general secondary school certificate or an equivalent document - an Aptitude Test Certificate administered by the National Center for Assessment in Higher Education - a certificate of good conduct from the school - applicants must be physically fit  For the admission to the program itself: - the minimum Grade Point Average (GPA) of 2.00 after the preparatory year
Tuition fees	No fees

Table 3: Structural data of the study program

The study program “Medical Laboratory Sciences” is taught in male and female campuses of the University in Majmaah as well as in the branch campus located in the city of Zulfi. The University campus in Zulfi is located approximately 80 kilometers away from Majmaah campus and it offers study programs only for male students.

All program students have to complete the initial preparatory year before they can be admitted to College of Applied Medical Sciences and, thus, to the Department of Medical Laboratory Sciences. Courses offered in the preparatory year are man-

datory and they aim at developing students' knowledge and abilities in English language, computer skills as well as communication and learning methods. In addition to that, students attend introductory courses in Mathematics, Chemistry, Physics and Biology.

The rest of the curriculum (2-4 years) consists of three types of courses:

- University requirement courses, which focus on Islamic culture and studies as well as Arabic language
- College requirement courses, which serve to improve students' knowledge of medical terminology, Biostatistics and other spheres preparing them for advanced studies
- Program requirement courses, which are specific to the study content and qualification objectives of the program.

The College and University requirement courses are taken together with students from other study programs.

The program "Medical Laboratory Sciences" does not require the submission of a bachelor thesis at the end of studies. Upon completion of all courses, students must do a mandatory internship year at a hospital, which is not awarded any credits. There is an agreement between the Ministry of Education and the Ministry of Health, according to which state hospitals are made available for student training purposes (Self-Evaluation Report 1.1.2).

According to the regulations applied at the University<sup>3</sup>, students graduate from the program when they have completed all courses of the curriculum with a grade not less than "Pass", which is equal to 60 - 65% of performance or to the Cumulative Grade Point Average of 2.00 out of 5.00. Upon the decision of the University Council, students are considered as graduates and are awarded with the title 'Bachelor of Medical Laboratory Sciences'. The graduation certificate is issued in Arabic and English languages.

### **2.2.2 Qualification objectives and employment opportunities**

The objective of the study program "Medical Laboratory Sciences" is to create conditions for successful professional and personal development of students and to train them for working in medical laboratory environment. The program aims at preparing competent laboratory technologists competent in both clinical and academic spheres. Students are expected to obtain and improve their skills in anal-

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<sup>3</sup> See the website of Majmaah University: <http://www.mu.edu.sa/en/deanships/deanship-admission-and-registration/graduation>

yses, synthesis, scientific reasoning and reflection. According to the *Training Manual* of the program, students are taught to perform a wide range of laboratory tests, including simple premarital blood tests and more complex ones for the detection of different diseases, such as HIV/AIDS, diabetes, and cancer (Annex 06).

The Self-Evaluation Report, section 1.3.3, outlines the following learning outcome of the study program “Medical Laboratory Sciences”:

- In terms of acquired knowledge, students have to be able to read, interpret and apply the scientific material in clinical practice. They must know how to perform microscopic examinations and analytical tests of cells, tissues and various body fluids;
- In terms of cognitive skills, students learn to recognize, evaluate and interpret the results of laboratory tests and findings based on statistical approach. They must be able to collect, process and analyze various medical care-related specimens;
- In terms of interpersonal skills and the aspect of social responsibility, students are expected to know and apply ethical standards and professional communication skills when interacting with patients, colleagues and other health care personnel. Furthermore, they should be able to work in a team and demonstrate an aspiration towards continuous professional development;
- In terms of information technology skills, students are required to learn how to work with different computer programs used for data storage;
- In terms of psychomotor skills, students must be able to work with different laboratory equipment and thereby provide safety for themselves and other people; furthermore, they should learn and apply the rules of appropriate maintenance of laboratory and hospital equipment.

According to the University, governmental and private hospitals are the main employers of program graduates. Besides, graduates can work in primary health centers, private medical laboratories, private medical centers, forensic research centers, in Saudi Arabian administrative institutions responsible for food and drug control, food related factories, factories producing and dealing with medical drugs and different academic institutions located in Saudi Arabia (Self-Evaluation Report 1.4.1).

With regard to the current situation in the local labor market, the University informs that the population of Saudi Arabia is growing, and so does the demand for health care services. At the moment, the annual population growth rate constitutes 2.2%. Hence, more hospitals are expected to be established in the nearest future, which will create more working positions for graduates of medical programs, including

students of the program “Medical Laboratory Sciences”. The University emphasizes that the Saudi Ministry of Health and other governmental organizations, as well as private sector organizations, reveal the tendency to employ people preferably with Saudi citizenship (Self-Evaluation Report 1.4.2).

According to the employment status of the students who graduated the program in the academic year 2014-2015, 7 out of 25 are currently working, 17 are unemployed and 1 student is further pursuing his or her education. Thus, the employment percentage in this group constitutes 28% (AOQ II A, 3).

### 2.2.3 Modularization and exam system

Regular study period of the program “Medical Laboratory Sciences” is 8 semesters (4 years). The program curriculum comprises 48 mandatory courses, of which 9 are taught in the preparatory year, whereas 39 courses are taught over the main study period of the program (2-4 years). These 39 courses include 29 mandatory and 2 elective (out of 4) program requirement courses, 2 elective (out of 3) college requirement courses and 6 elective (out of 13) university requirement courses. Every course is completed with an exam.

One academic year at the University consists of 2 main semesters, each lasting for 15 weeks followed by 3 weeks of final examinations. The total number of credit hours for the whole program is 134. Students have to acquire from 14 to up to 18 credit hours per semester.

The preparatory year of the program consists of 9 courses that provide students with skills and background knowledge for further specialization in Medical Laboratory Sciences:

Sem.	Title	Credits
1	English 1	8
	Introduction into Mathematics 1	2
	Computer Skills	2
	Learning Skills and Communication	2
<b>Total:</b>		<b>14</b>
2	English 2	6
	English for Health Sciences	2
	Introduction into Chemistry	2
	Physics for Health Sciences	2
	Biology	3
<b>Total number of credit hours for the preparatory year:</b>		<b>15</b>

Table 4: the study plan for the preparatory year

The curriculum of the program from the 3<sup>rd</sup> to the 8<sup>th</sup> semester includes the following courses (Annex 02):

Sem.	Title	Credits
3	University requirement elective 1	2
	Principles of Anatomy	2
	Principles of Physiology	2
	Organic Chemistry	3
	General Microbiology	4
	Emergency Care	2
	College requirement elective 1	2
<b>Total:</b>		<b>17</b>
4	University requirement elective 2	2
	Hematology	3
	Histology	3
	Medical Microbiology	3
	Introduction to Immunology	2
	Analytical Chemistry	3
	College requirement elective 2	2
<b>Total:</b>		<b>18</b>
5	University requirement elective 3	2
	Principles of Biochemistry	3
	General Pathology	3
	Histotechnology	3
	Clinical Mycology	3
	Clinical Parasitology	3
<b>Total:</b>		<b>17</b>
6	University requirement elective 4	2
	Medical Biochemistry	3
	Electron Microscopy	3
	Clinical Bacteriology	3
	Pathophysiology	3
	Program requirement elective 1	3
<b>Total:</b>		<b>17</b>
7	University requirement elective 5	2
	Clinical Virology	3
	Epidemiology	2
	Clinical Immunology and Serology	3
	Clinical Biochemistry	3
	Research and Seminar	2
	Program requirement elective 2	3

<b>Total:</b>		<b>18</b>
<b>8</b>	University requirement elective 6	2
	Applied Clinical Microbiology	3
	Applied Clinical Biochemistry	4
	Analytical Laboratory Automation	3
	Applied Immunology and Hematology	3
	Cellular and Molecular Pathology	3
<b>Total:</b>		<b>18</b>
<b>Total number of credit hours for the whole program</b>		<b>134</b>

Table 5: Module overview

Annex 1 provides the description of each course offered in the program, which contains brief information about the semester when the course is offered, credit hours, language of instruction, learning objectives, content of studies and examination methods.

Among the university requirement elective courses, students can choose “Introduction to Islamic Culture”, “Economic system in Islam”, “Political System in Islam”, “Entrepreneurship”, “Contemporary societal issues”, “Legislations and human rights”, “Family and Childhood” and other courses (the full list in in the Self-Evaluation Report, section 1.2.2). College requirement elective courses include “Biostatistics”, “Medical Terminology” and “The Quality of Health Care”.

According to the Self-Evaluation Report 1.2.2, the curriculum of the program does not contain any courses or other activities offered in cooperation with other universities or institutions.

After the preparatory year, the program offers courses in basic medical laboratory sciences, such as *General Microbiology*, *Principals of Physiology*, *Histology*, *Hematology* and other. Later on students attend courses in clinical laboratory sciences, such as *Clinical Mycology*, *Clinical Bacteriology*, *Clinical Biochemistry*, *Clinical Immunology and Serology*, and other. As the final stage, the program focuses on the advanced level courses in applied clinical laboratory sciences, such as *Applied Clinical Microbiology*, *Applied Clinical Biochemistry*, *Cellular and Molecular Pathology*, and other (Self-Evaluation Report 1.3.4).

Methods of teaching applied in the program include traditional lectures, group discussions, laboratory practical sessions, PowerPoint presentations and electronic learning opportunities. Regarding electronic forms of teaching and learning, the University assures that the Department of Medical Laboratory Sciences has a sufficient number of computer laboratories, personal computers and laptops. Furthermore, department students are offered internet-based distance learning pro-

grams and services, such as the online Learning Management System (LMS)<sup>4</sup> and the EduGate<sup>5</sup> system designed for online admission and registration purposes and also to enable students to monitor their academic progress and obtained grades. In addition to this, every classroom and laboratory is equipped with interactive board, e-podium and internet connection.

The program complements theoretical knowledge of the courses with practical activities in laboratory sessions and the final internship year. The University informs that each main course of the program has laboratory session manuals containing a list of the envisaged experiments and practical activities. These experiments are prepared in accordance with the course objectives and learning outcomes. Laboratory manuals are regularly reviewed (AOQ II A, 4).

According to *Students Training Manual*, 80% of all practical activity in the program “Medical Laboratory Sciences” is covered by the internship year. All students of the University are offered an internship placement in one of the local or regional state hospitals supervised by the Ministry of Health. Before the beginning of the internship, students have to fill in an online form where they choose three hospitals of preference. Afterwards, the Clinical Training Unit of the College forwards a placement request and a list of students to these hospitals (AOQ II A, 5).

During the internship period, students are guided by an academic coordinator and a clinical supervisor, who should have extended experience in clinical laboratory. The function of both supervisors is to ensure that students obtain the competences of working in clinical environment.

Internship regulations and requirements are described in detail in the *Training Manual*, which contains hygiene rules, instructions of how to use the equipment for personal protection and safety and a list of precautions against infections of different kind. Furthermore, the manual delineates the following nine rotations within the internship program:

- Hospital and laboratory orientation (one week),
- Sample receiving and processing area (two weeks),
- Microbiology and Parasitology (15 weeks),
- Clinical Biochemistry (8 weeks),
- Immunology and Serology (6 weeks),
- Hematology (5 weeks),
- Blood Bank (5 weeks),

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<sup>4</sup> <http://mu.edu.sa/en/deanships/deanship-e-learning-and-distance-learning/e-learning-system>

<sup>5</sup> <http://edugate.mu.edu.sa/mu/ui/home.faces>

- Histopathology (4 weeks),
- Laboratory Management and Quality Control (2 weeks).

These rotations are described in terms of their main purpose, student learning objectives, brief explanation of the content of each specific practice and an attendance sheet. On the final page of the manual students are offered a list of reference material (Annex 06).

The University ensures the correlation between the objectives of the program and the practical content of the internship year by means of the internship manual, which provides students with a schedule and a set of performance requirements.

Quality of the internship year is assured by clinical supervisor, who hold the first qualification degree in medical laboratory sciences. At the end of each rotation, clinical supervisors produce a feedback report about the content of the completed rotation (see a sample in Annex 08) and also fill in an evaluation form for each student (see a sample in Annex 09). Both report and the evaluation form are then submitted to academic coordinators from the Department.

As can be seen from the *Internship Evaluation Form* (Annex 07), students' practical performance is evaluated based on a list of criteria (such as quality of work, initiative, learning abilities, problem solving and decision taking abilities, communication skills and other) and also based on an overall evaluation grade: "E" (exceptional), "S" (satisfactory), "I" (Improvement recommended) and "U" (unsatisfactory). An evaluation form is signed by two clinical supervisors and the respective student.

At the end of the internship year, students have to submit a report to the assigned academic coordinator and pass an oral exam. The Council of the Department of Medical Laboratory Sciences carries out the oral examination and then issues the final assessment decision about the performance of each student.

Concerning the aspect of internationality of the program curriculum, the Department strives to start applying international standards in teaching and research. The outcomes of the program "Medical Laboratory Sciences" (see Annex 11) are said to be consistent with national requirements and employment needs, although there are no specific international benchmarks applied (AOQ II A, 7).

English is the language of instruction in all courses, except for the University requirement elective courses that are taught in Arabic. According to the Self-Evaluation Report, section 1.2.9, the program "Medical Laboratory Sciences" prepares students to undergo postgraduate studies abroad. At the moment, the pro-

gram does not offer any international mobility opportunities, though mobility within the country is possible.

Research is integrated into the study process through the course *Research and Seminar* in the 7<sup>th</sup> semester of the program. According to the course description, it is offered in the form of one theoretical and one practical credit hour per week; students are provided with research topics, on which they work for one semester. By the end of this course, they are expected to be able to search and use library and electronic resources, to design a research proposal, to conduct practical part of a research, to collect and analyze data, to write and present a scientific paper (for details, see Annex 01). As an examination, students have to submit a report about their research activities in the course to their instructor. Some of the reports are then chosen for publication (see a sample of a published student research paper in Annex 12).

Examination regulations applied in the program are presented on the website of the University<sup>6</sup>. Students' performance is assessed in the program by means of:

- final formal examinations, which take place at the end of the semester;
- continuous evaluations, which take place during the semester.

Continuous exams include mid-term exams and such evaluation methods as quizzes, short exams, projects, presentations, homework, logbook tasks, diaries, and class-room discussions. Course coordinators are responsible for the preparation of the schedule and content of both continuous evaluations and final examinations in collaboration with the course instructors<sup>7</sup>. At the same time, the schedule and conduct of final examinations is approved and monitored on the college level, namely by the College Members Committee, the College Dean and the Assessment and Evaluation Unit of the College.

The Assessment and Evaluation Unit guarantees the quality of the final examinations as well as their consistency with the intended learning outcomes. Furthermore, this unit decides upon the appropriateness and feasibility of final examinations based on student surveys (AOQ I, 2).

According to the University regulations, students' final grade for each course is calculated based on the results of continuous exams (60%) and final exams

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<sup>6</sup> <http://www.mu.edu.sa/en/deanships/deanship-admission-and-registration/final-examinations>

<sup>7</sup> It is assumed that course coordinators are responsible for the preparation and organization of the content and structure of a specific study course. Meanwhile, course instructors are responsible for the teaching process; they are directly dealing with students. Hence, several course instructors can be working under the management of one course coordinator who 'coordinates' the implementation of the one course in different sections of the University.

(40%). Students are required to attend at least one continuous exam of a theoretical course, but it is the responsibility of the course instructor to decide how many continuous assessments are counted into students' internal grade. Students should have attended at least 75% of the contact hours in order to be admitted to the final examinations (AOQ I, 2).

At the Department of Medical Laboratory Sciences, continuous exams and formal final exams take place according to a timetable determined at the beginning of each semester:

1. Continuous examinations:	
1st midterm examinations	6th - 7th week
2nd midterm examinations	12th – 13th week
Practical examinations	15th week
Other assignments and activities	Throughout the semester
2. Final examinations	16th – 18th week

Table 6: examination sessions

As indicated in the University regulations, the college may allow students to complete a course in the following semester based on the recommendation of the course instructor. In that case, students receive a temporary grade "IC" (incomplete) which will later be changed into the obtained grade or into "F" in case of failure. Students who could not attend a midterm or a final exam due to legitimate reasons, can submit an application for re-examination to the head of the department (a list of circumstances considered as a legitimate excuse to miss an exam is presented in the Self-Evaluation Report, section 1.2.3).

Students, who have failed an examination after the first attempt, do not have the possibility of re-examination. They have to repeat the respective course in the next semester. Every failed examination directly affects students' GPA (Grade Point Average<sup>8</sup>).

According to the University regulations on dismissal from the University<sup>9</sup>, students with the CGPA (Cumulative Grade Point Average<sup>10</sup>) lower than 2.00 (out of 5.00) are given a probation period to improve their performance. If these students fail to improve their cumulative grade after the third probation period, they will be dismissed. Nevertheless, the University may allow them to take up to six attempts upon the recommendation of certain units of the University.

<sup>8</sup> GPA is calculated by dividing a student's total sum of points for one semester by the total amount of credit hours for all courses he or she attended in that semester.

<sup>9</sup> <http://www.mu.edu.sa/en/deanships/deanship-admission-and-registration/dismissal-university>

<sup>10</sup> CGPA is calculated by dividing a students' total sum of points since his or her enrollment by the total amount of credit hours for all courses he or she attended for the whole time in the program.

Students of the University have the right to appeal if they disagree with the conduct or results of an examination. For that, they should forward a request to the head of a respective department, who will then form an independent committee to decide upon the appeal. The decision of this committee is put into force after the approval by the department and the college councils (AOQ I, 2).

At Majmaah University, students' performance is evaluated in terms of a GPA and a CGPA. The University uses a grading scale with 5.00 as the maximum grade, whereas the scale with 4.00 as the maximum grade is only provided for transferring students to calculate the equivalence of their previous grades (AOQ I, 3):

%	Grade	Grade code	Grade weight (out of 5)	Grade weight (out of 4)
95 - 100	Upper Distinction	A+	5.00	4.00
90 - 95	Distinction	A	4.75	3.75
85 - 90	Upper very good	B+	4.50	3.50
80 - 85	Very good	B	4.00	3.00
75 - 80	Upper good	C+	3.50	2.50
70 - 75	Good	C	3.00	2.00
65 - 70	Upper pass	D+	2.50	1.50
60 - 65	Pass	D	2.00	1.00
≤ 60	Fail	F	1.00	.
	IP (in progress)			
	IC (incomplete)			
	DN (denial)			
	W (withdrawn)			

Table 6: Grading scale

Example for both GPA and CGPA calculations are provided on the website of the University<sup>11</sup>. Students who have obtained CGPA 4.75 (out of 5.00) are distinguished with the first class honors degree upon graduation.

With regard to compensation measures for students with disabilities and chronic illnesses, the Department of Medical Laboratory Sciences considers each case individually (Self-Evaluation Report 1.2.3). According to AOQ, the College of Applied Medical Sciences offers psychiatric and medical support for students who became disabled during their studies and who can continue their education at the University (AOQ I, 1).

#### 2.2.4 Admission requirements

Admission processes are carried out at the University electronically through an online system EduGate<sup>12</sup>, which serves students to register for courses, to monitor their academic progress and to view their grades. Admission takes place in Sep-

<sup>11</sup> See: <http://www.mu.edu.sa/en/deanships/deanship-admission-and-registration/appendices>

<sup>12</sup> See the webpage: <http://edugate.mu.edu.sa/mu/ui/home.faces>

tember at the beginning of each academic year. In order to be admitted to the preparatory year, applicants have to submit the following documents:

- a general school certificate or an equivalent document not later than 5 years after school graduation;
- an Aptitude Test Certificate (ATC) administered by the National Center for Assessment in Higher Education.

Furthermore, the University organizes an introductory language test, which determines applicants' levels of knowledge and skills in the English language.

The total admission score of an applicant is calculated based on his/her scores in science section of the Saudi secondary school certificate (30%), the cumulative score of the school certificate as a whole (40%) and the ATC results (30%).

Before admission, applicants are required to provide a medical fitness report from a public hospital. After that, they have to do a medical investigation in medical clinics of Majmaah University, who will finally decide about their fitness. According to the University, after the admission, students are provided with some vaccines. The College of Applied Medical Sciences offers psychiatric and medical support for students who became disabled during their studies and who can continue their education at the University (AOQ I, 1).

According to the University, there are no general by-laws regulating the compensation measures for students with disabilities and chronic illnesses. Therefore, decisions on these matters are taken by the departments independently and on an individual basis (Self-Evaluation Report 1.5.2).

If by the time of admission applicants have been working in a government or private organization, they should provide study permission of their current employer. Another important admission requirement is that an applicant should not have a record of dismissal from another university due to academic underachievement. According to the University regulations, students who have already obtained a bachelor's degree shall not be admitted to another bachelor program<sup>13</sup>.

Upon completion of the preparatory year, students are allocated to one of the colleges of the University based on two criteria: students' choice of specialization and the enrollment capacity of the specific study program. Students are required to have at least GPA 2.00 for the preparatory year in order to be admitted to the program of their choice. If there are more applicants than the number of available

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<sup>13</sup> See the general admission requirements on the webpage of the University: <http://www.mu.edu.sa/en/deanships/deanship-admission-and-registration/requirements-admission>

places, priority is given to students with a higher GPA result. The final list of students enrolled to the program is submitted to the Deanship of Admission and Registration.

According to the University regulations, for a horizontal transfer (transfer from lower to higher level is not possible) to the College of Applied Medical Sciences from other universities, applicants have to submit: a) a cumulative GPA of at least 2.75 (out of 5.00) from an equivalent medical sciences unit, and b) a secondary school grade with at least 75% of performance (Self-Evaluation Report 1.5.3). Thereby, 40% of the total program curriculum can be covered by transferring students' previously obtained credit hours, whereas they are required to accomplish at least 60% of the total curriculum in order to obtain a bachelor's degree at Majmaah University. Another important requirement is that transferring students should not have a record of dismissal from the previous university<sup>14</sup>.

For internal transfer from one college to another, students are required to complete at least one and not more than four semesters (the preparatory year is not counted) in the initial college. Transfer from other programs within the College of Applied Medical Sciences is possible when students have a CGPA more than 2.75 (out of 5.00). Recommendation for the internal transfer is given by the department committee, which is then submitted to the college council for the final approval. All previously attended courses and obtained credit hours are afterwards registered in the academic record of a student (Self-Evaluation Report 1.5.3).

Courses attended by students at other universities are recognized in terms of a 'pass' grade, whereas credit hours assigned for such courses are not calculated into students' GPA. It is the head of the department who consults the foreign university unit teaching the course in order to verify its correspondence to the one offered at the department itself. In case the courses have the same amount of credit hours and their syllabi is equivalent up to 80%, the course at the foreign university is recognized.

As for tuition fees, education at Majmaah University is free for national as well as international students as at any other state universities of Saudi Arabia. Besides, local students receive monthly grants from the Saudi Government (Self-Evaluation Report 1.1.10).

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<sup>14</sup> See the transfer regulations of the University on the official webpage:  
<http://www.mu.edu.sa/en/deanships/deanship-admission-and-registration/transfer>

## 2.3 Study conditions and quality assurance

### 2.3.1 Human resources

There is a male and a female teaching staff at the Department of Medical Laboratory Sciences working in the respective campuses of the University. Among 13 female teachers, there is 1 professor, 5 assistant professors and 7 lecturers. Among 15 male teachers at Majmaah campus, there is 1 associate professor, 11 assistant professors and 3 lecturers. Among 22 male teachers at Zulfi campus, there is 1 professor, 5 associate professors, 10 assistant professors and 6 lecturers (Self-Evaluation Report 2.1.1, Table 9). There are no adjunct professors in the Department.

Teaching workload for lecturers constitute 16 hours per week, for assistant professors it is 14 hours per week, for associate professors 12 hours per week and for professors 10 hours per week (Self-Evaluation Report 2.1.1).

Currently there are 73 students in Majmaah female campus, 48 students in Majmaah male campus, and 132 students in Zulfi male campus (Self-Evaluation Report 1.6.6, Table 8). Taking into account the number of the teaching staff in the respective campuses, the students/teacher ratio constitutes 5-6 students per one teacher in the female campus, approximately 3 students per one teacher in the male campus in Majmaah, and 6 students per one teacher in the male campus in Zulfi.

According to the Self-Evaluation Report, section 2.1.2, the Department of Applied Medical Sciences informs the University Deanship of Faculty and Staff Affairs about the needs in human resources at the end of each academic year. Vacant teaching positions are then publicly announced on the website of the University, local and international periodicals as well as various online job portals. The appointment and promotion of the Saudi and non-Saudi teaching staff is implemented in compliance with the education bylaws of the University (for details, see Annex B).

Concerning the aspect of development opportunities for human resources, teachers of the program are encouraged to attend professional trainings and workshops organized at the University as well as at other higher education institutions. Professional trainings are offered at the University by the E-Learning Deanship through the online system "Desire to Learn" (D2L). Furthermore, the University Deanship for Quality and Skills Development has also arranged a number of training courses and workshops for the program instructors (see a training course

certificate in Annex 15). The College members are said to have attended national level seminars and trainings.

College members who want to attend or participate in a national and international event can receive financial support from the University. For that they have to fill in an electronic application form on the University website, which then needs to be approved by the Department Head, College Dean, Vice Rector for Graduate Studies and Research, and finally by the Ministry of Higher Education. This process might take up to 2 weeks. None of the department members are said to have participated or attended any international seminars or workshops this year (AOQ II A, 8). College members have the right to take a sabbatical leave for one semester every three years, or for two semesters every five years, during which they are expected to produce at least one research publication (see samples of the teaching staff publications in Annexes 13 and 14).

Further human resources of the Department of Medical Laboratory Sciences include 3 campus coordinators whose function is to assist students in various study-related issues (Self-Evaluation Report 2.2.1).

### **2.3.2 Facilities**

The Department of Medical Laboratory Sciences is located in two campuses of the University, namely in Al-Majmaah and Zulfi. The department consists of three sections: the female and the male sections in Majmaah campus, and the male section in Zulfi campus. The Department claims to provide adequate and functional equipment, as well as study premises, in all three sections. All classes are said to contain educative electronic devices. Laboratories are equipped for practical training according to the requirements of a specific course.

The male campus in the city of Zulfi has 7 laboratories and 6 classrooms, whereas the male and the female campuses in Al-Majmaah have 4 laboratories and 3 classrooms each; the classrooms are designed for 15-45 seats. Furthermore, every campus has 1 seminar room with the capacity of 20 seats. Students of the program use study and computer rooms available at the central library of the University (Self-Evaluation Report, 2.3.1 and AOQ II A, 9).

The central library of the University is located on the second floor of the main campus building. The total number of printed material in the library is 51,254 items. Male students have a direct access to the central library, whereas female students can order the necessary material through their library branches. The central library is open from 8:00 till 20:00 daily. The male campus in Zulfi has its

own library, which is open from 8:00 till 20:00 daily. At the same time, each student of the Zulfi branch has a personal account in the central library and, thus, can order learning material from there. Electronic library is available for all students. The central library and its branches, as well as the electronic library, are managed by the University Deanship of Library Affairs<sup>15</sup>.

The College is provided with a system of wireless internet connection, available for the teaching staff and students through their university ID numbers and passwords. Students have access to Saudi digital library (SDL)<sup>16</sup> and the online learning management system “Desire to Learn” (D2L). College of Applied Sciences offers courses and issues manuals for students and instructors on how to use the D2L system (AOQ, Annexes C and D). Furthermore, the University uses the electronic system of academic services ‘EduGate’ for admission processes as well as for students to register for courses and follow their academic development online.

The University receives financial support from the Saudi Ministry of Finance. The College of Applied Medical Sciences prepares an annual strategic plan, based on which the University allocates a certain amount of money for the College to acquire necessary facilities and learning material. Meanwhile, salary of the teaching staff of each college is directly determined by the University Deanship of Personal Affairs.

### 2.3.3 Quality assurance

According to the University, Guidelines for Quality Assurance Procedures are in the process of preparation to be distributed and applied starting with the academic year 2015/2016 (Annex A, 6). At the moment, the University Deanship of Quality and Skills Development guides and monitors quality assurance activities on the institutional level. Its function is to support secondary committees of each college, to ensure that quality assurance procedures are carried out in all units of the University, to evaluate various forms of performance according to the defined criteria<sup>17</sup>. Furthermore, its aim is to promote the importance of quality support system among all employees of the University.

According to the administrative chart presented on the official website of the University<sup>18</sup>, the Deanship of Quality and Skills Development manages the work of the Vice Dean for Skills Development and the Vice Dean for Quality and Academic

<sup>15</sup> Website of the Deanship of Library Affairs: <http://maktabat.mu.edu.sa/>

<sup>16</sup> Website of SDL: <http://sdl.edu.sa/SDLPortal/EN/Publishers.aspx>

<sup>17</sup> For more details, see the webpage of the University Deanship of Quality and Skills Development: <http://mu.edu.sa/en/content/deanship-goals>

<sup>18</sup> See: <http://mu.edu.sa/en/content/administrative-chart-0>

Accreditation. The latter contains a number of departments, among them the Department of Academic Accreditation, the Department of Quality Assurance, the Department of Technical Support and Information, Measurement and Evaluation Department (for more details about the functions of each department, refer to the University website<sup>19</sup>).

The College of Applied Medical Sciences has a defined system for internal quality assurance processes and a Quality Assurance Committee, which includes the College Dean and 13 other members (see AOQ I, 7). The main function of the Quality Assurance Committee is to achieve academic accreditation standards, to lead the academic evaluation process in the departments and to assure the quality of administrative work within the College (AOQ I, 7). Besides, the College of Applied Medical Sciences has in total 6 Academic Advisory Committees: one functioning on the college level and one in each of five departments of the College (AOQ I, 7). The academic advisory committees are responsible for the provision of necessary recommendations and suggestions to the college/departments in meetings with the College/Department Council.

The Department of Medical Laboratory Sciences has a Secondary Quality Assurance Committee, which involves the activity of both female and male students. The Department Committee cooperates with the Vice Dean for Quality and Academic Accreditation in all matters concerning quality assurance in academic, clinical, and administrative affairs.

All members of the College are said to participate in quality assurance procedures. Quality assessment methods of the University include: course reports, students surveys, alumni surveys, employee surveys, college surveys, feedback from an Advisory Committee and from external reviewers, program statistics and feedback from the Vice Deanship (Self-Evaluation Report 1.6.2).

Evaluation of the study process starts with the course coordinator's review of the course objectives, study content, teaching strategies and examination methods applied in order to determine whether they comply with the overall objective of the program. Course coordinators submit their weekly feedback and improvement suggestions to the Head of the Department. For the establishment of examination questions in each course, first, course coordinators receive model questions and suggestions from female and male course instructors; then they issue the final version of examination tasks. Furthermore, instructors of female and male sections submit their course reports at the end of each semester, which are then combined into one course report by the course coordinator. Such a report serves to detect

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<sup>19</sup> See: <http://mu.edu.sa/en/news/deanship-quality-and-skills-development/deanship-services>

strengths and weaknesses in design and implementation of the course. Consequently, course coordinators analyze and submit the details of their analyses to the Academic Advisory Committee (AAC) of the College (Self-Evaluation Report 1.6.3).

The mentioned course report also contains evaluation of students' study workload in a specific course. The University claims that CGPA serves as an indicator demonstrating whether students can cope with the requirements of the program. Hereby, students with the GPA result 2.00 or lower are qualified to register for no more than 14 credit hours per semester, whereas students with the GPA result 4.50 and higher are allowed to attend more courses with the total amount of 20 credit hours per semester (Self-Evaluation Report 1.6.5).

Students of the University are required to participate in an online course evaluation survey through the 'EduGate' system. Results of this survey are applied as an indicator of the quality of study process and teaching performance, and they constitute an essential element of the course reports as well as of the quality improvement plans (AOQ I, 7). Besides, students are required to give their feedback on examination questions during the final examination period.

Assessment of practical relevance of the study program "Medical Laboratory Sciences" is conducted through feedback from graduate students working in various health care institutions and their employers. The University informs that the College of Applied Medical Sciences has recently established a Graduate Unit, whose main function is to maintain contacts with graduates, to expand the University database on their employment places and to encourage them and their employers to participate in online surveys (see a sample of a questionnaire for employers in Annex E).

According to the statistics of enrollment, there were 3 male, 31 female, and 16 male students admitted to the Majmaah male, Majmaah female and Zulfi male campuses, respectively, in the 1<sup>st</sup> semester of the academic year 2014/2015. In the same year, 16 students have graduated from the program: 7 in Zulfi male campus and 9 in Majmaah female campus.

With regard to the availability of information about the study program, the University states that students have access to the 'EduGate' online system providing details of the program courses. Furthermore, the Examination Committee of the College of Applied Medical Sciences follows the principles of transparency in scheduling and announcing exam periods. Examination regulations are communicated to students in advance.

The College organizes an orientation program for the preparatory year students in order to inform them about the study programs offered at the College. Furthermore, there is an academic advisor whose function is to explain students the policies and services of the University, to assist them in case of problems and also to monitor their progress throughout the program. Academic advisors have specific office hours allocated for meetings with students. Each semester, the Department of Medical Laboratory Sciences conducts meetings with students for the exchange of opinions on study related issues. Besides, students have the opportunity to attend the annual career day organized by the College, where they can communicate with the prospective employers (Self-Evaluation Report 1.6.8).

The University asserts that it provides equal opportunities for female and male students in admission and study processes. Both female and male students have equal right and responsibilities administered by the University.

## **2.4 Information about the university**

Majmaah University was founded in the year 2009. Its main campus is located in the city of Al-Majmaah, whereas 4 other branch campuses are situated in the neighboring cities of Zulfi, Huta Sudair, Al-ghat and Rumah. The University serves the objective of Saudi Ministry of Higher Education to spread university education across the country.

The University consists of 13 colleges and 45 departments all offering bachelor programs. New master programs are expected to be established in the coming years. Currently, there are over 21,000 students enrolled at the University.

There are 3 research centers at the University: Engineering and Applied Sciences Research Center, Humanities and Administrative Sciences Research Center, and Health and Basic Science Research Center. These units are managed by the Deanship for Graduate Studies and Scientific Research, whose function is to provide the necessary environment for the development of research skills and to support research activities within the University.

With regard to current developments, the infrastructure of the University is said to be increasing in order to accommodate the growing number of high school graduates in the region. Apart from construction of new campuses and administrative buildings in Al-Majmaah and other branch colleges, the University is also working on the establishment of the new University hospital with the capacity of 400 beds.

The College of Applied Medical Sciences was also established in the year 2009. The total number of students currently enrolled at the College is 1,163 people. The

College offers 5 study programs for the obtainment of a bachelor's degree in: Medical Laboratory Sciences, Nursing, Physiotherapy, Biomedical Equipment and Medical Radiology. Recently, the College has been extended for one more male campus built in Al-Majmaah city.

The Department of Medical Laboratory Sciences hosts at the moment 253 students. The Department is planning to organize additional research laboratories as a part of a research development project.

### 3 Expert report

#### 3.1 Preliminary remarks

Study programs of Majmaah University, Al-Majmaah, Kingdom of Saudi Arabia, are required by the decision of the University to be accredited by an international accreditation agency. The accreditation criteria of the Accreditation Agency in Health and Social Science (AHPGS) are the basis for the accreditation decision. These criteria can be found on the website of the AHPGS<sup>20</sup>. The accreditation criteria are developed by the AHPGS in close accordance with the existing criteria and requirements valid in the Federal Republic of Germany and based on the “Standards and Guidelines for Quality Assurance in the European Higher Education Area” (ESG), established by the European Association for Quality Assurance in Higher Education (ENQA).

The criteria are divided as follows:

- 1) Aims and Implementation,
- 2) Structure of the Study Program,
- 3) Admission and Feasibility,
- 4) Examination System and Transparency,
- 5) Teaching Staff and Material Equipment,
- 6) Quality Assurance,
- 7) Gender Equality and Equal Opportunities.

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

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

College of Applied Medical Sciences:

- a) “Medical Laboratory Sciences” (Bachelor of Medical Laboratory Sciences);
- b) “Nursing” (Bachelor of Nursing Sciences);
- c) “Physical therapy” (Bachelor of Physical Therapy).

The evaluation of the above-mentioned study programs with the subsequent decision on their accreditation by the AHPGS was carried out according to an agreed structure.

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<sup>20</sup>[http://ahpgs.de/wp-content/uploads/2014/11/accred\\_criteria.pdf](http://ahpgs.de/wp-content/uploads/2014/11/accred_criteria.pdf)

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

As the second step, a part of the nominated expert group carried out an on-site visit at Majmaah University, Al-Majmaah, Kingdom of Saudi-Arabia, with the focus of clarification of open questions as well as verification of the statements described in the application documents of the University.

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

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

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

**As representatives of academic and health care institutions:**

**Prof. Dr. Frederike Bäumer**

Professor of Physiotherapy at the Alice Salomon University of Applied Sciences Berlin, Germany; expert with broad experience in the development of a scientific, practice and evidence-based approach in Physiotherapy as well as interdisciplinary work in multi-professional teams

**Prof. Dr. Christian Grüneberg**

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

**Prof. Dr. Friedrich Hofmann**

Professor of Occupational Physiology (retired) at the University of Wuppertal, Germany; expert with broad experience in the fields of epidemiology, vaccination in professional sphere, psychological stress, occupational medicine in public health, analyses of the impact of indoor climate and conditions and other aspects related to professional life

**Prof. Dr. med. Achim Jockwig<sup>21</sup>**

*Professor in the field of Health and Social Sciences at the Fresenius University of Applied Sciences, Idstein, Germany; Vice-president and Dean of the Department of Health Care and Social Sciences; Head of the bachelor study program “Physician Assistance”; expert with broad experience in management of health care centers, clinics and education institutions*

**Dr. rer. nat. Sylvia Kaap-Fröhlich**

Member of the administrative staff at the University of Zurich, Switzerland; expert with broad experience in curriculum development for health care study programs

**Prof. Dr. Johannes Keogh**

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

**Prof. Dr. med. Gerd Mikus**

*Deputy Medical Director of the Department of Clinical Pharmacology and Pharmacoepidemiology at the University of Heidelberg, Germany; expert with broad experience in clinical and experimental Pharmacology, drugs-in-pain therapy and drug addiction therapy*

**Prof. Dr. Katharina Scheel**

*Professor of Physiotherapy at Kiel University of Applied Sciences, Germany; expert with broad experience in development of Physiotherapy, theory formation in Physiotherapy, ethics and anthropology, academization and professionalization in the field of Physiotherapy*

**Prof. Dr. Klaus Stegmüller**

Professor of Nursing and Health Sciences at Fulda University of Applied Sciences, Germany; expert with broad experience in institutional and organizational prerequisites of nursing care, policy research in nursing and health care, as well as primary prevention in different settings

**Prof. Dr. Ulrike Thielhorn**

*Professor of Nursing Sciences at Catholic University of Applied Sciences Freiburg, Germany; Head of the bachelor study program “Management in Health Care”; expert in applied nursing research, patient centered evaluation research and management of healthcare services*

**Prof. Dr. Birgit Vosseler**

*Professor of Nursing Sciences at Ravensburg-Weingarten University of Applied Sciences; Head of studies in Nursing Education; expert in development of study curriculum in Nursing Education and Health Economics, International research in nursing in the sphere of family health care and financing*

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<sup>21</sup> The experts shown in italics have participated in the on-site visit of the University.

**As student representatives:*****Isabelle Schatz, B.A.***

*Student member of the Accreditation Commission of the AHPGS; studies in Health Economics at the University of Applied Sciences Ravensburg-Weingarten, Germany*

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

Open questions regarding the application documents were forwarded to the University on 20 March 2015. After the University representatives submitted their responses to the open questions by 24 June 2015, the AHPGS processed and inserted these answers into the summary of each study program. On 16 November 2015, the AHPGS forwarded the Self-Evaluation Reports, their annexes and the summaries of the study programs to the members of the expert group assigned for the on-site visit.

**3.2 Basic information about the study program**

The main objective of the bachelor study program "Medical Laboratory Sciences" offered at the College of Applied Medical Sciences is to prepare laboratory technologists competent in both clinical and academic spheres. Students are taught to carry out a wide range of laboratory tests, including simple premarital blood tests and more complex ones for the detection of different diseases, such as HIV/AIDS, diabetes and cancer.

The study program requires the obtainment of 134 credit hours according to the national credit system applied at institutions of higher education in Saudi Arabia. One credit hour is calculated based on the number of theoretical and practical hours per week; to be more exact, one credit hour is equal to one theoretical hour, two laboratory hours and three clinical contact hours. The total workload of the program constitutes 8,764 hours, of which 1,584 are contact hours, 1,080 are practical class hours, 1,584 are self-study hours and 2,080 are clinical internship hours. It is a full-time study program with regular duration of four years/eight semesters followed by a one-year internship, thus five years in total. The program curriculum consists of 48 courses, of which 38 are obligatory and ten are elective.

Students' performance is evaluated based on the results of a Grade Point Average (GPA) and the Cumulative Grade Point Average (CGPA). GPA is calculated by dividing students' total sum of points for one semester by the total amount of credit hours for all courses they attended in that semester. CGPA is calculated by dividing students' total sum of points since their enrollment by the total amount of credit hours for all courses they have attended for the whole education period in the program.

According to the University regulations, students with a GPA score of at least 2.00 (out of 5.00) are considered to have completed the respective course. To successfully complete the whole program, students have to pass all obligatory examinations with the minimum grade of 2.00 CGPA score.

Admission requirements of the program include a general school certificate or an equivalent document, which has been obtained maximum five years prior to the application, and the results of an Aptitude Test Certificate (ATC) administered by the Saudi Arabian National Center for Assessment in Higher Education. The total admission score of applicants is calculated based on their scores in the science section of the Saudi secondary school certificate (30%), the cumulative score of the school certificate as a whole (40%) and the ATC results (30%). There are no tuition fees at Majmaah University.

There is an average of 20 seats annually available in the study program. Admission takes place every winter semester. Upon completion of the study program, students receive the academic title "Bachelor of Medical Laboratory Sciences". The first batch of students has been admitted to the male campus of the University branch in the city of Zulfi in 2006, to the male and female sections of the main Campus in Al-Majmaah in 2011. In the academic year 2014/2015, there have been 16 male graduates in the study program.

### **3.3 Expert report**

The on-site visit took place on 30 November and 1 December 2015 according to the previously agreed schedule. Representatives from the central office of the AHPGS accompanied the expert group during the on-site visit.

The expert group met on 29 November for the initial discussion and briefing by the APHGS prior to the on-site visit. They discussed the submitted application documents and the results of the written evaluations, as well as the accreditation-related questions and foreseeable problems. Furthermore, they prepared the plan of the on-site visit at Majmaah University.

In the course of the on-site visit, the experts conducted open discussions with the representatives of the University management, members of the College of Applied Medical Sciences, program directors and teachers, as well as with a group of female and male students currently studying in the evaluated study program. It is important to mention that these discussions were carried out by female and male experts separately in the female and male campuses of the University. Furthermore, the experts had a chance to examine the facilities and equipment of the laboratories, lecture and seminar halls as well as the library and study areas.

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

During the visit of the female campus of the University, female experts received folders with the information about the three study programs, including their research and internship portfolios, information about postgraduate education as well as examination examples and brochures about research achievements of the College of Applied Medical Sciences.

### **3.3.0 Introduction and comprehensive remarks**

Majmaah University, Al-Majmaah, Kingdom of Saudi-Arabia, was established in 2009 as a state-funded University. Its main campus is located in the city of Al-Majmaah, whereas four other branch campuses are situated in the neighboring cities of Zulfi, Huta Sudair, Al-ghat and Rumah. The University serves the objective of the Saudi Ministry of Education to promote higher education across the country. The University is financially supported by the state and students are paid during their studies.

The University consists of 13 colleges and 45 departments all offering bachelor programs. Currently, there are over 22,500 students enrolled at the University; 58% of them are female students. More than 1,000 people are employed as members of the teaching staff. The infrastructure of the University is being extended in order to accommodate the growing number of applicants. The University is also working on the establishment of the new University hospital with a capacity of 400 beds.

The College of Applied Medical Sciences was also established in the year 2009 among the first colleges of the University. The total number of students currently enrolled at the college is 1,163 people. The college offers five study programs for the obtainment of bachelor's degree in Medical Laboratory Sciences, Nursing, Physiotherapy, Biomedical Equipment and Medical Radiology. At the moment, there are 253 students enrolled at the Department of Medical Laboratory Sciences.

### **3.3.1 Aims and implementation**

The study program "Medical Laboratory Sciences" pursues a number of well-defined qualification objectives and learning outcomes that must be achieved by the end of the education period. The study program aims at the development of students' professional knowledge, cognitive skills, expertise in academic work, competences of interpersonal communication and exchange, information technology abilities, psychomotor skills, social responsibility (for instance, through the participation in the activities of health promotion among the local community) and disposition towards continuous personal improvement.

From the expert point of view, the bachelor program "Medical Laboratory Sciences" is structured in an expedient way and pursues qualification objectives fundamental for working in the field of medical diagnostic analyses. Moreover, these objectives cover professional and extraprofessional/interdisciplinary aspects as well as competences required for academic work and scientific research, competences necessary for qualified employment, skills of social commitment and personal development.

By the end of their studies, students have to be able to carry out microscopic examinations and analytical tests of cells, tissues and various body fluids. Furthermore, they are expected to be able to collect and analyze various medical care-related specimens. They learn to recognize, evaluate and interpret the results of laboratory tests and findings based on statistical approach. Graduates of the program must be able to implement ethical standards and professional communication skills when interacting with patients, colleagues and other health care personnel. It is of the utmost importance for them to be well trained in working with different laboratory equipment and thereby provide safety for patients, themselves and other people involved. Thus, there are laboratory safety manuals and course manuals in every female laboratory available also online via the online learning system ("Desire to Learn").

The learning outcomes of the program are well defined. The objectives of the study program have been developed in accordance with the overall strategy of the University. According to the representatives of the University, the national legal requirements regulating the establishment of the study program are observed.

Regarding the aspect of qualified employment, it has to be mentioned that the College of Applied Medical Sciences collaborates with local hospitals, where students can carry out their internship year and subsequently be offered an employment position. Given the fact that the number of citizens is continuously growing in Saudi Arabia and so does the demand for professionals in the sphere of medical care, the program graduates have high chances to find a job directly after the completion of their studies. Moreover, it is expected that a number of hospitals and healthcare centers will be established in Saudi Arabia, as well as within Majmaah University, in the coming years. Hence, the College of Applied Medical Sciences pursues the objective to educate health care specialists in compliance with the needs and future plans of the University and the local society in general.

In this regard, the experts 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. According to the representatives of the female campus, the employment rate among female graduates of the medical departments constitutes currently 100%, which means that there is a considerable demand for female health care specialists in the country. Hence, by extending its medical study programs in the female campus - which includes larger admission capacities as well as additional teaching forces, learning material and training premises - the University could prepare more female graduates with secure employment perspectives and, at the same time, further contribute to the expansion of the labor market for female employees.

With regard to research skills and competences, the experts positively evaluate the fact that students have to pursue a research project. At the same time, 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.

Concerning the aspect of internationality, the experts have observed that the program does not maintain direct contacts or cooperation projects with national or foreign higher education institutions. This is also reflected in the curriculum of the study program. The experts are confident that mobility of students and teachers,

as well as the development and implementation of international exchange, constitute an indispensable part of modern education.

Therefore, the experts strongly encourage the department and the college to initiate opportunities for students' and teachers' mobility with Saudi Arabian and international higher education institutions. Furthermore, they point out that the program curriculum should be reviewed and modified by taking into consideration the learning content and outcomes pursued in similar study programs abroad. This concerns particularly basic courses in Inorganic Chemistry, Pharmacology and Toxicology, which according to the experts should also be offered in the program.

The experts are convinced that each stakeholder of the University, including female and male members of the teaching staff as well as female and male students, will benefit from the opportunities of exchange with peers from other national higher education institutions as well as with international colleagues. The experts recommend the departments to start with short-term exchange programs for their students, for instance in summer schools, which usually last for only several weeks.

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

### **3.3.2 Structure of the study program**

All study programs of the College of Applied Medical Sciences, including the program "Medical Laboratory Sciences", start with the preparatory year and consist of the following types of courses:

- University requirement courses, which focus on Islamic culture and studies as well as Arabic language. They are obligatory for all students enrolled at the University and are taught throughout the whole period of academic studies at the program.
- College requirement courses, which serve to improve students' knowledge in medical terminology, Biostatistics and other areas of advanced medical sciences. These courses are obligatory for students of a certain college and specialization and are usually offered in the first foundation year and also at the beginning of the second year of studies.
- Program requirement courses, which are specific to the study content and qualification objectives of the program. They are taught by the teaching staff of the department from the second to the fourth year of studies.

The study program "Medical Laboratory Sciences" comprises 48 courses, of which nine are taught in the preparatory year, whereas 39 courses are taught over the

main period of studies between the second and the fourth year of the program. The regular study period is four years/eight semesters followed by one year of clinical internship.

The study program “Medical Laboratory Sciences” does not require the submission of a bachelor thesis for the award of the academic degree. Nevertheless, in the course “Research and Seminar” in the seventh semester students learn to use the library and electronic resources, to design a research proposal, to conduct the practical part of a research project, to collect and analyze data and to write and present a scientific paper. As an equivalent to a final paper, students have to submit a report about their research activities in the course to their instructor.

From the experts’ point of view, such a report is to some extent comparable with a bachelor thesis required in European higher education institutions. However, they underline that in order to be considered as a solid scientific paper, the college and department administration should upgrade their requirements to the content and form of students’ reports. Such reports should serve as a tool demonstrating students’ ability to define a scientific question/problem and independently work on it within a determined period of time using academic methods of research, reading and writing. Consequently, the experts advise the college academic 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 program.

During their visit to the female campus, the experts were informed about individual research activities by female students. Female students are obviously and successfully encouraged to pursue their own research, e.g. through college competitions in the so-called “scientific day”, where they can demonstrate their projects. Students, whose work is assessed as the best, can participate in an international conference. The experts are confident that such research engagement should be further promoted by means of objective and cooperative competition between students, departments or faculties. Such competition 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.

The experts have seen that the study program aims at providing students with specialized and interdisciplinary knowledge as well as professional, methodological and general competences. Nevertheless, they admit that there is room for improvement in the program curriculum, particularly in the structure and content of the basic courses. Hence, the program administration could consider the introduc-

tion of additional courses, such as Inorganic Chemistry being an indispensable part of knowledge in Chemistry as a whole, as well as Pharmacology and Toxicology that are necessary for working in clinical laboratories.

The combination and the succession of the courses of the study program are consistent with the specified qualification objectives. All courses are described in a comprehensive way. However, the curriculum of the program with 48 courses seems to the experts as too fragmented and overloaded with examinations. Therefore, they suggest the academic staff of the department 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, make the study program more competence-oriented and, at the same time, foster cooperation of teachers across disciplines. Integration of courses into larger coherent entities would enhance the interdisciplinary capacities of the study program and of the college in general.

Coherence and rationality of the study plan, module succession and students workload on different stages of studies are calculated and established on the basis of regulated contact hours in the classes. In this context, the experts underline that the department should take into account not only the contact hours but also the self-study hours of students. Self-study hours constitute the time students need for the completion of homework and independent assignments as well as for the preparation for examinations. Hence these hours belong to the total workload of the program.

The experts are convinced that consideration of self-study time together with contact hours would enable the department administration to organize the learning and teaching processes in a more practical and objective manner for both students and teachers. Moreover, the academic staff of the program could more expediently adjust the volume of specific learning material to the curriculum when knowing the actual amount of workload students and teachers need to accomplish their respective tasks.

The University assures that students receive sufficient academic as well as personal support and guidance they need for the organization and accomplishment of assignments and the learning process in general.

After the completion of all courses and study requirements, students can begin a one-year clinical internship in one of the state hospitals. The University offers students internship placements based on the online form, where students choose three hospitals of preference. According to the Training Manual of the program,

students have to complete nine rotations lasting from one up to 15 weeks. Regarding the internship, both students and teachers admit that it is becoming an actual problem to find sufficient number of real life cases in local health care institutions due to the constantly increasing number of students. The demand for a university hospital is respectively very high at the moment. Therefore, the experts clearly support the current plans of the University to build its own hospital, which will serve as a training facility for medical students and also as a health care centre for the local community.

The study program “Medical Laboratory Sciences” does not foresee the acquisition of credit hours for the internship year. Given the fact that the internship year constitutes 20% of the whole study period and up to 24% of the whole workload of the program, the experts strongly recommend the academic staff of the department 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.

Following the recommendation under the first criterion, the experts recommend that the program needs to be more familiar with study content and curriculum design of international study programs. The fact that students lack knowledge in certain subjects or spheres related to laboratory sciences might create obstacles for those graduates, who want to continue their academic career abroad, where these subjects constitute the core of their studies. Therefore, the experts recommend the program administration and the teaching staff to develop a strategy of integration of international teaching perspectives and methods into the study program.

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

### **3.3.3 Admission and feasibility**

The admission procedure of the Department of Medical Laboratory Sciences complies with the regulations of the University and is in line with the two-step admission system implemented in other Saudi Arabian higher education institutions. Thus, applicants are first admitted to the preparatory year and upon completion, they are allocated to one of the colleges of the University based on two criteria: their choice of specialization and the enrollment capacity of the specific study program. Students are required to have at least GPA 2.00 for the preparatory year in order to be admitted to the program of their choice. If there are more applicants than the number of available places, priority is given to students with a higher GPA result.

According to the University, the programs' admission requirements and procedures, as well its structure, are consistent with the state-wide practice. The preparatory year serves as an introduction into the context of higher education, which enables students to adapt to the increasing complexity, scope and volume of learning material. The preparatory year and mandatory internship is a meaningful supplement from the point of view of the female students. The experts deem it positive that the lecturers stay in contact with their students during the internship also in order to ensure that the students reflect upon their own profession.

As one of the overall university admission requirements concerning all study programs, the College of Applied Medical Sciences requires the program applicants to be physically fit. With regard to this criterion, the experts believe that it 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. It has to be pointed out in this respect, that the program would give disabled people a possibility to work in laboratories.

Regarding the feasibility of the study program, the experts refer to the recommendation made under the second criterion: the department should identify not only the contact hours but the self-study hours as well, because they also belong to the total workload of the program. By taking into account the whole amount of time students spend during their education, the academic staff of the program could more adequately and objectively organize the teaching process and, also better integrate learning material into the program curriculum.

Student support services, as well as specialized and general consultations, are provided by the University in a sufficient and appropriate manner. Every college of the University has a committee for student advising and support, where each study program is represented by a faculty member. Moreover, each student of the program is assigned to an academic advisor, whose function is to assist students in getting acquainted with the services of the University, with institutional and program regulations and other study-related aspects. The Department of Medical Laboratory Sciences organizes meetings of students with the department and college academic staff every semester, where both sides can exchange opinions and recommendations. Lecturers are reachable for students even at weekends. The female students have pointed out how supportive their teachers are.

It has to be mentioned here that the female section of the program "Medical Laboratory Sciences" has been established based on the suggestion of a group of

nine female nursery students who asked to start this program in order to pursue their professional career in this area. They are currently in their internship year. The experts conclude that this is a good example for the University's involvement and willingness to hear out the wishes of its students.

As a whole, the organization of the education process ensures the successful implementation of the study program.

For a transfer to the College of Applied Medical Sciences from other higher education institutions, students must submit a) a cumulative GPA of at least 2.75 (out of 5.00) from an equivalent medical sciences unit, and b) a secondary school grade with at least 75% of performance. Thereby, 40% of the total program curriculum can be covered by transferring students' previously obtained credit hours. In addition, transferring students should not have a record of dismissal from the previous university. For internal transfer from one college to another, students are required to complete at least one and not more than four semesters (the preparatory year is not counted) in the initial college.

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

#### **3.3.4 Examination system and transparency**

Students' performance is assessed in the study program by means of continuous evaluations carried out during the semester and final formal examinations carried out at the end of each semester. Course coordinators are responsible for the preparation of the schedule and content of both continuous evaluations and final examinations in collaboration with the course instructors. According to the University regulations, students' final grade for each course is calculated based on the results of continuous exams (60%) and final exams (40%). Students should have attended at least 75% of the contact hours in order to be admitted to the final examinations.

Students, who have failed an examination after the first attempt, do not have the possibility of re-examination. They have to repeat the respective course in the next semester. Every failed examination directly affects students' GPA. Those students, who could not attend a midterm or a final exam due to legitimate reasons, can submit an application for re-examination to the head of the department. The University has regulations and procedures enabling students to issue an appeal with regard to examination results.

The experts concluded that the examinations, although numerous, serve to determine whether the envisaged qualification objectives have been achieved or not.

These examinations are focused mainly on students' knowledge instead of being more skill-oriented to stimulate the development of competences. As already mentioned under the second criterion, the large number of courses leads to a high examination load for students because they have to pass a final exam after each course. Such a fragmentation prevents also the continuous and coherent teaching of professional competences. Therefore, the experts strongly encourage the academic staff of the department to combine the program courses into larger units or modules, which are completed with a single examination. This will enable the University to reduce the examination load in the program. Furthermore, through the incorporation of individual courses into modules based on common learning objectives and outcomes, the study process will be made more systematic and competence-oriented. The experts believe that this will lead to the development of a more student-centered examination system. Having said that, they are however aware of the existing national regulations that could to some extent hinder such modifications.

Information about the University's institutional structure, vision and objectives, employment rules, financial regulations, admission requirements, graduate studies, e-learning and distance learning opportunities, community services, library services, preparatory year requirements, information technology resources, scientific research requirements, student support and quality control procedures is provided on the website of Majmaah University and is available for all visitors. The website of the University contains also information about the structure, departments, training and students forms, mission and vision of the College of Applied Medical Sciences. Finally, students can find the department manual and student guidelines, as well as information about the program objectives and outcomes, curriculum description and contact details on the webpage of the Department of Medical Laboratory Sciences.

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

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

### **3.3.5 Teaching staff and material equipment**

The bachelor study program "Medical Laboratory Sciences" comprises the following teaching staff: among 13 female teachers of Majmaah campus, there is one professor, five assistant professors and seven lecturers; among 15 male teachers of Majmaah campus, there is one associate professor, 11 assistant professors and

three lecturers; among 22 male teachers at Zulfi campus, there is one professor, five associate professors, ten assistant professors and six lecturers. Further human resources of the Department of Medical Laboratory Sciences include three campus coordinators whose function is to assist students in various study-related issues.

Currently there are 73 students in Majmaah female campus, 48 students in Majmaah male campus, and 132 students in Zulfi male campus. Taking into account the number of the teaching staff in the respective campuses, the students/teacher ratio constitutes five to six students per one teacher in the female campus, approximately three students per one teacher in the male campus in Al-Majmaah, and six students per one teacher in the male campus in Zulfi.

With regard to the teaching staff selection procedure, vacant teaching positions are publicly announced on the website of the University, local and international periodicals as well as various online job portals. The University applies officially established regulations of appointment and promotion of Saudi Arabian and non-Saudi Arabian members of the teaching staff. However it has to be pointed out, that only Saudi Arabian citizens are granted financial support in case of exchange programs or conferences abroad. The experts encourage the University to apply the concept of equal treatment for all members of the institution, irrespective of their national background or gender.

The experts underline the fact that many members of the teaching staff have obtained their academic degrees and experience of working abroad, for instance in countries such as Australia, India, Jordan, the UK and USA. The academic staff of the department and the college shows strong commitment and extensive professional input not only into the organization of learning content and study process but also into communication with students as well as with other peers and members of the University.

Having read the application documents and after the discussions with the representatives of the department, the experts are convinced that teachers of the study program are provided with opportunities for professional development. They actively participate in institutional and national level conferences and workshops. Nevertheless, the College of Applied Medical Sciences seems to lack involvement in international academic exchange events for male as well as female teaching staff, which is nowadays a crucial part of academic life, particularly in the medical sphere. As written above, the experts recommend enhancing the possibilities for international exchange.

To conclude, from the experts' point of view the teaching staff of the program is appropriately qualified and experienced for providing students with theoretical knowledge and practical skills of working in clinical laboratories. With regard to the opportunities for further professional growth and education, the experts emphasized that the teaching staff should be provided with free time allocated specifically for the purposes of continuous education. On the female campus, the experts noticed that the lecturers are willing to go to workshops but they should be in English language since many lecturers are not from Arabic-speaking countries. Hence, the experts encourage the University and the college to offer workshops and conferences in the English language as well, in order to enable the participation of all teachers and lecturers in the academic life of the institution.

The Department of Medical Laboratory Sciences in Zulfi campus of the University has seven laboratories and six classrooms, the male and the female campuses in Al-Majmaah have four laboratories and three classrooms each. The classrooms are designed for 15-45 seats. Besides, every campus has one seminar room with the capacity of 20 seats.

The central library of the University is located on the second floor of the main campus building. Male students have a direct access to the central library, whereas female students can order the necessary material through their library branches. The central library is open from 8:00 till 20:00 daily. The male campus in Zulfi has its own library, which is open from 8:00 till 20:00 daily. Each student of the Zulfi branch has a personal account in the central library and can order learning material from there. The College of Applied Medical Sciences is provided with a system of wireless internet connection available for the teaching staff and students through their university ID numbers and passwords. Students have access to Saudi digital library (SDL) 16 and the online learning management system "Desire to Learn" (D2L). Computer rooms are situated in the central library of the University. On the female campus there is one person responsible for the e-learning area. She also offers workshops about computer-based learning on YouTube. In addition to that, there are virtual classrooms in the campus. Finally, the students confirmed that the D2L system facilitates their learning process.

The library on the female campus is equipped with working places and two computer work places. The facilities are good and databases are available. Nevertheless, it would be useful to have more periodicals and journals in the library and also to publish information about students' research activities and achievements in these journals.

During the on-site visit, the experts witnessed that the laboratories of the program are adequately equipped. Moreover, the experts positively assess the fact that the College of Applied Medical Sciences is going to have a new building soon, which will enhance and also improve the space conditions in the study program. With regard to the new facilities and equipment, the experts point out that the same laboratories can be used by both female and male students of the college at different time intervals. Such approach would enable the University to save a considerable amount of resources because there will be no need to acquire the double quantity of every detail necessary in the study program. At the same time, this way the University could guarantee equal learning opportunities as well as equal access to training equipment for all students, female and male.

To conclude, the program has adequate facilities and equipment at its disposal for the teaching and learning requirements. The provision and use of facilities and equipment is monitored as part of the quality assurance system of the program.

However based on their impressions of the on-site visit, the experts draw the attention of the college administration to the fact that the material equipment and other facilities of its departments (e.g. wheelchairs, electric cables) should be repaired on time and should be appropriately maintained in a state that allows their full utilization.

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

### **3.3.6 Quality assurance**

Majmaah University has a well-structured system of quality assurance spread on all of its units. The Deanship of Quality and Skills Development manages the work of the Vice Dean for Skills Development and the Vice Dean for Quality and Academic Accreditation, and it also guides and monitors quality assurance activities on the institutional level. The Vice Dean for Quality and Academic Accreditation encompasses a number of departments, among them the Department of Academic Accreditation, the Department of Quality Assurance, the Department of Technical Support and Information, Measurement and Evaluation Department, each having distinct function and responsibilities.

As a part of the College of Applied Medical Sciences, the study program “Medical Laboratory Sciences” is under the supervision of the Quality Assurance Committee leading lead the academic evaluation process in the departments. Each department of the college has its own Academic Advisory Committee, who is responsible for the communication of improvement recommendations in the department coun-

cil meetings. This departmental committee is the smallest part in the chain of quality system.

All stakeholders of the College of Applied Medical Sciences are involved in the maintenance of quality control. Thus, students participate on on-line course evaluation and exam evaluation surveys. Graduates are involved in the assessment of practical relevance of the study content. Course instructors are required to prepare course reports at the end of each semester, which helps to determine strengths and weaknesses in design and implementation of each course. Besides, the University integrates external reviewers for the assessment of learning content and conditions. Data obtained as a result of these surveys is then submitted to the Academic Advisory Committee of the college, who further forwards it to the Vice Dean for Quality and Academic Accreditation.

From the experts' point of view, the study program constitutes a part of an effective and functioning mutual assessment and feedback system. Feasibility of students' workload, examination requirements and training assignments is evaluated and guaranteed by means of student surveys organized by the Assessment and Evaluation Unit of the University. In addition to that, course coordinators prepare a course report at the end of each semester, where they determine students' progress and difficulties, and their average cumulative GPA results. Interestingly, students whose GPA is 2.0 or lower are not allowed to register for more than 14 credit hours per semester, whereas those with 4.5 and more GPA can register for up to 20 credit hours per semester. All obtained data is then forwarded to the Department Council to prepare the analyses and action plan regarding the observations, recommendations and critique.

The University explains that it is obligatory for students to fill in electronic evaluations at the end of the courses. To do so, they have to register on the online platform of the University. The experts are concerned that the registration is not carried out anonymously and reveals the names of students, who submit their evaluation feedback. The experts emphasize that such lack of anonymity does not comply with the fundamental standards of quality assurance. Therefore, they underline that the University must change its procedure for quality evaluation by students as well as by other members of the University in accordance with the rules of data and privacy protection.

The University has developed a set of standards and benchmarks, which must be achieved, and it strives to involve every participant of the academic life of the institution into the quality assessment procedures. Stakeholders' participation in these processes is demonstrated through the fact that their feedback produces the core

of improvement plans subsequently carried out in the department. Nevertheless, the experts recommend the University to illustrate the contribution of different stakeholders to quality assurance in a more distinct and transparent manner, for instance through actual feedback examples and the consecutive improvement plans.

Members of the management of the study program and the college have revealed great enthusiasm and commitment during the whole process of external assessment and the on-site visit of the University. As a result of this direct communication and experience exchange, they came to the conclusion that the quality assurance concept of the program management relies on continuous performance monitoring, mutual feedback and critical reflection on the obtained results.

The expert group concludes that the requirements of the criterion are partially met. Quality evaluation procedures of the University must be changed and applied according to the rules of anonymity as well as data and privacy protection.

### **3.3.7 Gender equality and equal opportunities**

The Department of Medical Laboratory Sciences has both female and male students and assures that it provides equal admission, education, examination and participation opportunities for both groups of students. The College of Applied Medical Sciences demonstrates its commitment to the provision of equal opportunities for all students, within the cultural boundaries of the local society.

During the on-site visit, the experts have gained the impression that the communication and exchange of information between the male and the female campus could be significantly improved. Notably, the final statement given by the experts at the end of the on-site visit was attended exclusively by male members of the campus, although it was addressed to both male and female academic staff involved in the accreditation procedure. The experts would have wished to forward their feedback also to the female teaching staff of the college and the departments. Thus, it remains unclear how the results of the accreditation procedure will be communicated to the female campus. The expert group urges the University to use the full potential of communication possibilities between the male and the female campuses of the University in a transparent and effective manner, also for external visitors.

At the same time, the experts encourage the College of Applied Sciences to consider the possibility of using the same laboratories by both female and male students at different time intervals. As mentioned earlier, by sharing the same premises, the University could guarantee equal learning opportunities as well as equal

access to training equipment for both groups of students. At the same time, this way the University could save a considerable amount of resources because there will be no need to acquire the double quantity of every detail necessary in the study program.

It is important to mention that the College of Applied Medical Sciences offers psychiatric and medical support for students. As for the admission requirement of physical fitness for the applicants, the experts consider it to be appropriate given the recommendation to prepare program-specific definitions of the criterion of physical fitness according to the learning and training content of each study program.

The decision about the compensation measures for students with disabilities and chronic illnesses are taken individually in each department. The experts believe that the introduction of regulation in this regard on the institutional level may contribute to the fairness and transparency in dealing with such delicate and complicated issues.

Taking into account the societal norms and cultural context of the country of Saudi Arabia, the experts group concludes that the requirements of the criterion are met. Nevertheless, they underline that better and equal involvement of the female teaching staff and female students in the academic life and the administrative activities of the University are strongly desirable.

### **3.4 Summary**

The Bachelor program “Medical Laboratory Sciences” has an adequate program design that assures the acquisition of knowledge by students over the whole period of education. The objectives of the study program meet the requirements of the current job market of the Kingdom of Saudi Arabia. The structure and the processes of quality assurance by the program management is described and explained in detail. The study program has a well-functioning teaching and examination system. Learning material, training equipment, digital technologies and other necessary facilities are provided in a sufficient and accessible manner.

Currently, the University has to deal with the continuously growing number of applicants and enrolled students, which creates additional challenges for the institution in terms of spatial and material resources as well as additional teaching forces. In this regard, the experts positively emphasize the facts that a new building of the College of Applied Sciences is currently under construction and that the University is planning to build its own hospital in Al-Majmaah in the near future. The experts believe that these additional premises will help the University to appropri-

ately adapt to the growing number of students, and therefore they encourage the University to finish their construction as soon as possible.

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

Based on the application documentation and the conclusions of the on-site visit, the experts have determined that the study program “Medical Laboratory Sciences” fulfils the above described and evaluated criteria.

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

The experts recommend the accreditation of the study program on the following condition:

- The University has to demonstrate that the quality evaluation procedures carried out by students and members of the academic staff comply with the rules of anonymity as well as data and privacy protection.

Apart from the above described condition for accreditation, the experts have outlined the following list of recommendations for the continuous development of the study program:

Recommendations for the “Medical Laboratory Sciences” program:

- The experts recommend the Department of Medical Laboratory Sciences to introduce additional courses in the study program, such as Inorganic Chemistry being an indispensable part of knowledge in Chemistry as a whole, as well as Pharmacology and Toxicology that are necessary for working in clinical laboratories.
- The program curriculum should be reviewed and modified by taking into consideration the learning content and outcomes pursued in similar study programs abroad.

### Recommendations for all study programs:

- 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.
- 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.
- 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.
- 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.
- 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 needs of the society for female health care specialists and, at the same time, expand the labor market for female employees.
- 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.

- 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.
- 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.
- 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.
- 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.
- The experts believe that female students of the college should be provided with more periodicals and journals related to their study programs.
- With regard to the facilities and equipment, the experts point out that the same laboratories can be used by both female and male students of the College of Applied Medical Sciences at different time intervals. Such approach would enable the University to save a considerable amount of resources because there will be no need to acquire the double quantity of every detail necessary in the study program. At the same time, this way the University could guarantee equal learning opportunities as well as equal access to training equipment for all students, female and male.
- The experts recommend the University to illustrate the contribution of different stakeholders to quality assurance in a more distinct and transparent manner, for instance through actual feedback examples and the consecutive improvement plans.
- The expert group urges the University to use the full potential of communications possibilities between the male and the female campuses of the University in a transparent and effective manner, also for external visitors.
- The experts believe that the introduction of common regulation regarding the compensation measures for students with disabilities and chronic illnesses

may contribute to fairness and transparency in dealing with such delicate and complicated issues on the institutional level.

- The material equipment and other facilities of the College of Applied Medical Sciences (e.g. wheelchairs, electric cables) should be repaired on time and should be appropriately maintained in a state that allows their full utilization.

## 4 Decision of the accreditation commission

### The decision of the Accreditation Commission of 18 February 2016

The resolution of the Accreditation Commission of the AHPGS of 18 February 2016 is based on the University's application documents, the experts' review and the results of the on-site visit described in the expert report. Moreover, the Accreditation Commission took into account the response opinion of the University regarding the study program and also the following document, submitted on 1 February 2016.

- Course Evaluation Survey Report.

In it, the University declares that the course evaluation and other surveys are conducted online through the Learning Management System (EduGate), and the report generated by the system does not reveal any information about students or other stakeholders who have taken part in the assessment.

The Accreditation Commission follows the statement in the response opinion of the University regarding Criterion 6 (Quality Assurance) about the preservation of anonymity of students and other stakeholders, who provide feedback and take part in surveys. The procedure complies with the international norms of confidentiality and privacy protection.

The on-site visit of the University took place on 30 November and 1 December 2015 according to the previously agreed schedule.

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

The Accreditation Commission of the AHPGS adopts the following decision:

The bachelor study program "Medical Laboratory Sciences" completed with the academic degree "Bachelor of Medical Laboratory Sciences" is accredited. The regulated study period in the program is four years/eight semesters followed by a one-year internship, thus five years in total. The study program comprises 48 courses, of which 38 are obligatory and ten are elective.

The study program "Medical Laboratory Sciences" is accredited for the duration of five years until 30 September 2021.

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