

## Accreditation Report

### Programme Accreditation

University	<b>German University in Cairo</b>			
<b>Study Programme 01</b>	<b>Pharmacy</b>			
Degree	<b>Bachelor of Science</b>			
Form of Study	Full time mode	<input checked="" type="checkbox"/>		
Duration (Semesters)	<b>8</b>			
ECTS-Points	<b>240</b>			
Master only:	consecutive	<input type="checkbox"/>	continuing	<input type="checkbox"/>
Study Programme exits since (Date)	2003			
Capacity (Maximum Number of Students)	Per Semester	<input type="checkbox"/>	Per Year 2003-2018: 420 2019-2020: 315	<input checked="" type="checkbox"/>
Average Number* of new Students	Per Semester	<input type="checkbox"/>	Per Year 315	<input checked="" type="checkbox"/>
Average Number* of Graduates	Per Semester	<input type="checkbox"/>	Per Year 400-415	<input checked="" type="checkbox"/>
* reference periode	2003-2020			
Concept Accreditation	<input type="checkbox"/>			
Initial Accreditation	<input checked="" type="checkbox"/>			
Re-Accreditation No.	1			
<b>Study Programme 02</b>	<b>Pharmaceutical Science</b>			
Degree	<b>Master of Science</b>			
Form of Study	Full time mode	<input checked="" type="checkbox"/>		
Duration (Semesters)	<b>3</b>			
ECTS-Points	<b>90</b>			
Master only:	consecutive	<input checked="" type="checkbox"/>	continuing	<input type="checkbox"/>
Study Programme exits since (Date)	2006			
Capacity (Maximum Number of Students)	Per Semester	<input type="checkbox"/>	Per Year 50	<input checked="" type="checkbox"/>
Average Number* of new Students	Per Semester	<input type="checkbox"/>	Per Year 40	<input checked="" type="checkbox"/>
Average Number* of Graduates	Per Semester	<input type="checkbox"/>	Per Year 32	<input checked="" type="checkbox"/>
* reference periode	2006-2020			
Concept Accreditation	<input type="checkbox"/>			
Initial Accreditation	<input checked="" type="checkbox"/>			
Re-Accreditation No.	1			
Responsible Agency	ACQUIN			
Responsible Consultant	Lisa Stemmler			
Date of On-Site-Visit	9./10.02.2021			
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## **Short profile of the HEI and the study programmes**

The German University in Cairo (GUC) was inaugurated in October 2003 with a first admission intake of 956 students. In comparison, the total of currently enrolled students in the undergraduate programmes is 11,010. The increase in total enrolment reflects the well-established reputation of the GUC as well as the high demand for its study programmes. In addition, the overall average score of the newly admitted students is 95.27% over the last 10 years. Furthermore, the GUC offers scholarships to newly admitted students with high school scores to attract academically outstanding students. The increasing number of students offered scholarships (69 students in 2003/2004 to 727 in 2018/2019) reflects the high qualification level of the students joining GUC. Today, the GUC consists of eight faculties with two further faculties in the planning stage.

The teaching language is English, while German is taught to allow the exchange of GUC students with universities in Germany and to facilitate their training in German companies.

### **Bachelor**

The bachelor programme "Pharmacy" (B.Sc.) at the German University in Cairo consists of a practice-oriented and research-based curriculum, which equips the students with scientific knowledge, necessary skills, and advanced experimental training to graduate as competitive pharmacists to fit in all pharmacy-related fields, serve the profession and the community, compete with their counterparts nationally and internationally, and pursue a postgraduate degree in pharmaceutical sciences.

The main goal of the programme is to provide students with requisite knowledge, skills, and advanced experimental training to graduate as nationally and internationally competitive pharmacists with a broad background encompassing relevant disciplines related to Pharmacy.

The study programme aims at high school graduates striving for a career in the pharmaceutical field.

### **Master**

The master programme "Pharmaceutical Sciences" (M.Sc.) is committed to academic excellence by providing a solid foundation in different disciplines of pharmaceutical sciences, preparing graduates for careers in the pharmacy profession, further postgraduate studies, and related advanced studies in biomedical, pharmaceutical, and clinical sciences.

Graduates will receive high quality practical education of comprehensive breadth and depth to qualify for leading positions in different fields of the pharmacy profession, allowing them to compete successfully in their field on national and international level and to pursue a Ph.D. degree in their field of study.

The Master in Pharmacy at the GUC unifies biology, technology, chemistry, economics and management aspects, in order to cover a wide range of applications in the pharmacy profession and research disciplines. The programme aims at bachelor graduates of the respective bachelor programme of the GUC or similar programmes offered by other universities.



## **Summary of the review**

### **Bachelor**

The goals and objectives of the B.Sc. programme are well defined and reflect the predefined goals by an intensive and in-depth educational programme in pharmaceutical sciences. The study concept includes the teaching of specific technical, methodological and basic knowledge. The curriculum is well structured, has a balanced distribution of subjects across the individual semesters and corresponds to the classical curriculum for pharmaceutical sciences. The structure and content of the study programme are well suited to achieving the outlined objectives. Additionally, the expert group recommends the implementation of a bachelor thesis.

The students of the bachelor programme are overall very satisfied with their studies even though they rate the workload as quite demanding, especially in the first semesters. On the other hand, they praise the support mechanisms implemented by the GUC and feel the workload to be legitimate, especially regarding the great national and international reputation of the GUC and its graduates.

However, the expert group wishes to underscore that the bachelor's degree – without the master's degree – can offer only limited options for a professional career in pharmaceutics. Therefore, the bachelor and master programme shall be regarded as a coherent unit in order to enable the students for the aspired professional fields. In German universities (as in many other countries) the courses taught in pharmacy are subject to the regulations of the Federal Law in order to enable the students for the necessary professional licensing. Accordingly, the recommendations in this report cannot be used to prove equivalence of the GUC study programmes "Pharmacy" (B.Sc.) and "Pharmaceutical Science" (M.Sc.) with the German "Pharmazeutische Prüfung" according to the Approbationsordnung.

### **Master**

The goals and objectives of the study programme are well defined and reflected in the study programme by an intensive and in-depth educational programme which also includes the opportunity of national and international internships. The study concept includes the teaching of specific technical, methodological and basic knowledge.

The scientific quality of the Pharmaceutical Sciences master course was judged to be high by the expert group. The goal – drug discovery and development – is clearly set.

Nevertheless, the expert group strongly recommends to include one specific teaching course to accompany each master thesis topical area. This addresses master theses where the experimental work is performed on the GUC campus. They further recommend to the faculty to offer master thesis topics and supervisors for at least 50 per cent of all students that apply for a master thesis. The panel feels this will give continuity and indeed strengthen on-campus research.

## Overarching Aspects

The expert group praises the GUC for its broad network of cooperation partners. The outgoing mobility is particularly impressive, which applies to both pharmacy programmes as well as the GUC programmes in general. Even though more than 50 per cent of GUC students receive partial/full scholarships or financial aid, the expert group recommends the financial aid system to continuously improve in the future as well as further support in administrative issues for outgoing students.

The Faculty of Pharmacy and Biotechnology is very well staffed as for complementary expertise, hierarchical differentiation and quality of research and teaching. Since the number of German lecturers has dropped in the past years, the GUC should increase efforts to keep the number of German lecturers on a stable level.

Also, the expert group was impressed by the quality and variety of equipment provided in bachelor and master teaching as well as research labs. Notwithstanding this positive impression, the expert group solely recommends to not only strive to acquire new instrumentation, but also to increase efforts to provide more apparatus per student so that each and every student has the chance of hands-on experience with the instrumentation.

## **I Formal criteria**

### **1 Structure, duration, and profile of the study programmes**

Both study programmes (bachelor and master) are offered in full time mode. The bachelor programme consists of eight semesters and 240 ECTS credits while the consecutive master programme consists of three semesters and 90 ECTS credits. Graduates accordingly reach 330 ECTS credits in eleven semesters, resulting from the legal requirements in Egypt. The legal framework for Egyptian bachelor's degree demands five years of full-time studying, plus one additional year for the master's degree. However, since the Egyptian master's degree does not contain a comprehensive graduation project by default, the GUC decided to follow international standards by concluding its programme with a master thesis.

### **2 Admission and enrolment**

As an Egyptian private university, GUC complies with the admission regulations of the Supreme Council for Egyptian Universities and Private Universities Council of the Ministry of Higher Education. The Private Universities Council sets the general rules that regulate the admission to private universities including the minimum academic requirements for acceptance at private universities; the rules for admission to the bachelor programme include minimum High School Scores, qualifying subjects required by each secondary school certificate for each study group, complete documentation for registration, etc. During the GUC admission process, students complete the GUC Reasoning Test as well as the GUC Computerized English Language Test.

The rules for admission to the master programme are laid down in the document "Admission Requirements, Study Examination Regulations for the Master of Pharmaceutical Sciences Program". The admission requirements state that "Eligible Applicants to the Master of Pharmaceutical Sciences Program include:

- (1) GUC students who had fulfilled all requirements of the "Bachelor of Pharmacy Program" (240 ECTS CP)
- (2) Students with international Bachelor of Pharmacy or equivalent degree from an internationally accredited university, applying ECTS or a university applying ECTS which has an agreement with GUC.
- (3) International students who earned 240 ECTS credit points or equivalent may be required to study bridging courses to achieve the equivalence to the GUC "Bachelor of Pharmacy Program" learning outcomes. Alternatively, applicants may be entitled to an evaluation for equivalence of their degree according to the recommendations of the Faculty of Postgraduate Studies and Scientific Research at GUC.

- (4) Graduates from international programs with shorter duration; (180, or 210 ECTS credit points), may be required to study additional bridging courses to achieve equivalence to the GUC "Bachelor of Pharmacy Program" learning outcomes. Students with Bachelor of Pharmacy or equivalent of a longer duration (> 240 ECTS credit points) will be evaluated individually and may be recommended to take up to 30 ECTS credit points of pre-qualifying courses based on the recommendations of the Dean and the decision of the Faculty of Postgraduate Studies and Scientific Research.
- (6) Achieving the mandatory minimum GPA of 3.0 (based on the German Grading System) or equivalent in their cumulative grade.
- (7) Passing GUC admission test (GUC graduates are exempted from the test).
- (8) For non- GUC graduates, priority is given to eligible applicants who work as Teaching Assistants in governmental or private universities, or in research institutes.
- (9) Applicants employed elsewhere have to submit supporting documents from their employer approving that the applicant will be free for 5 full working days per week for full time enrollment or at least 2 full working days per week for part time enrollment.
- (10) Presentation of all required documents.
- (11) Students are required to pay predetermined tuition and fees approved by the University or show support by a research grant."

In order to facilitate the exchange of students and recognition of learning results with partner universities, the GUC study programmes are aligned with the German Higher Education system and designed in cooperation with German partner Universities.

### **3 Degree**

Upon successful completion of the study programmes the GUC awards the degree *Bachelor of Science* and *Master of Science*, respectively.

The bachelor programme does not include a bachelor thesis. The GUC appoints 30 ECTS credits for the master thesis which has to be completed within six months.



#### **4 Module structure and ECTS**

The organization of the GUC study programmes makes use of modular components and the European Credit Transfer & Accumulation System (ECTS) with generally 30 ECTS credits allocated to one semester. Minor deviations may occur.

In the bachelor programme each semester consist of five to eight modules on average, whereas the regular master semester consists of five modules. The last semester is occupied with the master thesis.

Most modules show a workload of 5 to 8 ECTS credits. Smaller workloads (1 to 4 ECTS credits) result from module contents aiming at interdisciplinary competences / soft skills with a lower workload.

According to the Study Examination Regulations for the Master of Pharmaceutical Sciences Programme one ECTS-Point equals the workload of 30 hours.

The Module Catalogues of both study programmes provide information on semester number, type of course, prerequisites, workload, ECTS credits, aims and learning outcomes, content, learning and teaching methods, required facilities, assessment, references, and course coordinator.

#### **Conclusion**

The standards concerning structure, duration, profile, admission, enrolment, degree, module structure and ECTS are fulfilled for both study programmes.

## **II Review of the study programmes**

### **1 Focus of the review**

In the course of the discussions, the expert group focused on several topics. For instance, the dean of the faculty laid out how practical elements are integrated in the programmes in order to prepare the students for a career in their chosen field of profession. Other topics concerned the implementation of a bachelor thesis as well as the students' possibilities to develop a specific profile by choosing electives.

Additionally, the GUC presented its support structures for students as well as the GUC's strategy regarding outgoing and incoming students and lecturers. In the discussion with the students, the expert group mainly inquired about the workload in the study programmes, their future career plans, as well as their overall satisfaction with their studies.

### **2 Content-specific criteria**

#### **2.1 Objectives of the programme**

##### **Bachelor**

##### **Documentation**

The programme is structured to prepare graduates for both high standards in contemporary pharmacy practice and the evolution of the profession. The concept of experiment-based learning enables the students to translate classroom learning into pharmacy careers to meet the demands of the profession.

The main goal of the programme is to provide students with requisite knowledge, skills, and advanced experimental training to graduate as nationally and internationally competitive pharmacists with a broad background encompassing relevant disciplines related to Pharmacy.

In the course of their studies, the students learn to:

1. Have a comprehensive background of the field of Pharmacy, respecting the laws and the ethics of the profession and encompassing many disciplines, that the graduates can be employed in widely varied fields.
2. Demonstrate the ability to think critically, solve problems, and take decisions to enhance their profession.
3. Pursue graduate studies in national and international institutes in the field of Pharmacy.
4. Work independently, or as member of a team, respecting team diversity.

5. Be capable of communicating with both medical professionals and the public, providing information and education services to the community and to patients.
6. Have the ability to apply their knowledge, understanding, and problem-solving abilities in new or unfamiliar environments within the broad, multidisciplinary context related to different Pharmacy disciplines.
7. Have the ability to integrate knowledge, handle complexity, and formulate judgments even with incomplete or limited information, and reflect on ethical responsibilities linked to the application of their knowledge and judgments.
8. Have developed learning skills that will stimulate life-long learning, to be self-directed or autonomous in their further studies, and to take responsibility for their own professional development.
9. Apply relevant concepts of basic and applied pharmaceutical sciences in their profession of pharmacy.

Graduates from the programme will be able to:

1. Comprehend principles of pathophysiology of diseases and participate with other health care professionals in improving health care services using evidence-based data.
2. Be capable of formulation and preparation of pharmaceutical products from different sources and participating in systems for dispensing, storage and distribution of medications.
3. Use the techniques, skills, and modern laboratory tools necessary for the profession of pharmacy.
4. Design and conduct experiments, analyse and interpret data necessary for the profession of pharmacy.
5. Plan, design and conduct research using appropriate methodologies.
6. Be a life-long learner for continuous improvement of professional knowledge and skills.
7. Provide information and education services to the community and to patients about rational use of medications and medical devices.
8. Apply the basic knowledge of marketing, promotion, and business administration to pharmacy practice.
9. Apply the knowledge of information and communication technology in pharmacy practice.
10. Demonstrate communication skills in their profession of pharmacy.
11. Demonstrate their problem-solving and decision-making capabilities in pharmacy practice.
12. Demonstrate German language skills in communication of simple and routine tasks.
13. Work in teams of different cultures.

14. Comprehend the legal and ethical responsibilities applying to their profession.

Pharmacy is the branch of science that links health science with chemical science. It is mainly concerned with the discovery, development, production, and distribution of drugs, and with comprehensive understanding of drug activity, metabolism, and pharmacokinetics of human application.

The Pharmacy Programme at the GUC equips students with all needed skills to pursue their future careers in the following fields: community and hospital pharmacy, research and diagnostic centres, pharmaceutical companies (production, QA, QC, and R&D), drug representation and marketing, academic positions, nationally and internationally, governmental and international inspection agencies such as Ministry of Agriculture Organizations, microbiological and biomedical diagnostic laboratories, various medically oriented fields of biotechnology, food industry, forensic services, military pharmacy services, insurance companies, pharmacoepidemiology/data analysis, pharmacovigilance or medical training and consultancy companies.

### **Assessment**

The Faculty of Pharmacy and Biotechnology of the GUC is a prestigious and very well-known facility in Egypt for the education of pharmacists but also for the preparation of careers in pharmaceutical sciences in a broad variety of fields ranging from academic research to pharmaceutical industry and governmental services. Graduates from the Faculty of Pharmacy and Biotechnology are successfully placed in a wide range of pharmaceutical professions within Egypt but also abroad.

To further meet the growing demands within pharmaceutical sciences and also the adjacent life science fields and in order to further support and facilitate the transition of students in all domains of pharmaceutical sciences, the GUC offers the Pharmacy programme. This ambitious B.Sc. programme is meant to deliver a profound pharmaceutical education in all relevant fields to work as pharmacists (e.g. public and hospital) but also includes scientific research to qualify for jobs in different parts of academia and industry. It should also prepare students with international exchanges for international positions in the field of pharmacy, pharmaceutical sciences also including pharmaceutical industry.

The goals and objectives of the B.Sc. programme are well defined and reflect the predefined goals by an intensive and in-depth educational programme in pharmaceutical sciences. The study concept includes the teaching of the relevant specific technical, methodological and basic knowledge.

In particular, the B.Sc. programme

- will allow the graduates to be competitive with pharmacists, both nationally and internationally
- will further facilitate to start careers in other disciplines related to pharmacy and pharmaceutical sciences.

- o is also capable to teach soft-skills and social competencies, including communication skills and collaborative and team building behaviour.

These qualification goals are clearly defined in the study programme and reflected in the curriculum and courses of the B.Sc. programme.

The curriculum supports the personal development of the students, especially through the active exchange with international universities within the framework of stays at the GUC Berlin, internships and master's theses.

However, the expert group wishes to underscore that the bachelor's degree – without the master's degree – may offer only limited options for a professional career in pharmaceuticals. Therefore, the bachelor and master programme shall be regarded as a coherent unit in order to enable students for the aspired professional fields.

The expert group also wishes to emphasize that in German universities (as in many other countries) the courses taught in pharmacy are subject to the regulations of the Federal Law in order to enable the students for the necessary professional licensing. Accordingly, the recommendations in this report cannot be used to prove equivalence of the GUC study programmes "Pharmacy" (B.Sc.) and "Pharmaceutical Science" (M.Sc.) with the German "Pharmazeutische Prüfung" according to the "Approbationsordnung".<sup>1</sup>

## **Conclusion**

The standard is fulfilled.

## **Master**

### **Documentation**

The study programme unifies biology, technology, chemistry, economics, and management aspects to cover a wide range of applications in the pharmacy profession and research disciplines. It is offered for the purpose of conferring advanced academic qualifications, in particular with a view to developing research capabilities in the different disciplines of Pharmacy and pharmaceutical-related sciences.

In the course of their studies, the students learn to:

1. Have an in-depth expertise in practices related to the pharmacy profession.
2. Prove awareness of the role of the graduate in community development.
3. Demonstrate commitment for self-development and life-long learning.

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<sup>1</sup> One member of the expert group wishes to point out, that this chapter shall also apply for possible future changes in the German university pharmacy courses, e.g. towards a bachelor and master structured university pharmacy education.

4. Develop scientific research capabilities by analysing and solving problems and conducting independent research work.
5. Implement basic methodologies of scientific research in the field of drug discovery from natural sources.
6. Work in teams and communicate effectively both verbally and in writing, to achieve objectives in a multi-cultural international environment.
7. Be ready to pursue further studies, such as a Ph.D. degree, in national and international institutions.
8. Use state of the art technology and modern approaches to solve questions and reveal scientific ambiguities. Apply this knowledge practically in laboratories of various pharmaceutical sciences, as well as those related to chemical, biological, or technological sciences.
9. Make appropriate professional and scientific decisions in solving research problems based on self-directed and original research investigations, from the problem-recognition stage through to evaluation and appraisal of results and findings. This should include the ability to select appropriate techniques and procedures.

Graduates from the programme will be able to:

1. Demonstrate the ability to think critically, solve problems, and take decisions to enhance their research capability.
2. Work independently, or as a member of a team to operate/compose research projects, respecting the team diversity.
3. Communicate and illustrate research data in national and international conferences.
4. Apply knowledge and understanding, and acquired skills, in new or unfamiliar environments within their field of specialization of Pharmacy and other Fields.
5. Have the ability to integrate knowledge, handle complexity, and formulate judgments even upon incomplete or limited information, but always include reflection on ethical responsibilities linked to the application of their knowledge and judgments.
6. Develop learning skills that will allow them to continue in advanced studies in a manner that may be largely self-directed or autonomous, and to take responsibility for their own professional development.
7. Pursue a Ph.D. programme in Pharmacy at national and international institutions.
8. Conduct advanced laboratory techniques and use state of the art instruments in different fields of research.

9. Plan and carry out experiment independently and be self-critical in evaluation of the experimental procedures and outcomes.
10. Evaluate and present research results objectively.
11. Formulate research tasks and approaches in an oral presentation and/or in writing.

The M.Sc. Programme in Pharmaceutical Sciences at the GUC equips postgraduate students with all needed skills to pursue future careers and assume leadership positions in the following fields: pharmaceutical industry, dietary supplements, nutraceuticals and herbal products companies, reagents and biochemical analysis equipment companies, universities, academia and research institutes, community pharmacies, drug stores and distribution companies, marketing offices for pharmaceutical companies, entrepreneurship, governmental, military and private hospitals, poisons management centre and forensic labs, bioavailability and bioequivalence centres, clinical trials companies and organizations, private and governmental medical analysis labs, national and international drug control and legislations agencies and organizations, international health organizations.

### **Assessment**

The Faculty of Pharmacy and Biotechnology of the German University of Cairo (GUC) offers a Master of Science (M.Sc.) education in "Pharmaceutical Sciences". Graduates from the B.Sc. Programmes of the Faculty, but also B.Sc. of Pharmacy from other universities are qualified to join the Master programme at GUC.

The major aim of the master programme is to extend the in-depth knowledge in all pharmaceutical sciences to prepare graduates for job opportunities outside the classical pharmacy positions. The programme should enable graduates to continue with Ph.D. and/or Pharm.D. but also to obtain positions in academia and in the pharmaceutical industry. The continuation of international internships should help to get higher and leading positions within pharmaceutical sciences in international universities as in global pharmaceutical companies. In addition, the education should also facilitate the extension of the pharmaceutical expertise in the related fields of biomedical and clinical sciences.

The goals and objectives of the M.Sc. programme are well defined and reflected in the study programme by an intensive and in-depth educational programme which also includes the opportunity of national and international internships. The study concept includes the teaching of relevant knowledge and of specific technical, methodological and basic knowledge.

In particular, the M.Sc. programme

- will allow the graduates to pursue career opportunities in pharmaceutical sciences in academia and industry.

- will teach how to conduct experiments, analyse and critically discuss the results but also present scientific results and summarize them in writing, including a M.Sc. thesis.
- will give the students the opportunity to collaborate with the industry from an early stage.
- will provide internship opportunities within GUC and with Egypt but also on an international level with e.g. a long-lasting track-record in German universities and institutions.

These qualification goals are clearly defined in the study programme and reflected in the curriculum and course programme.

In summary, the standard criteria of the M.Sc. "Pharmaceutical Sciences" at the GUC consisting of 3 semesters, internships and an M.Sc. thesis are fully met by the defined programme.

## **Conclusion**

The standard is fulfilled.

## **2.2 Concept of the programme and its implementation**

### **2.2.1 Curriculum**

#### **Bachelor**

#### **Documentation**

The study programme consists of eight semesters in which the students complete 51 modules of different workload, complexity and aims.

Semester 1: General & Inorganic Chemistry (8 ECTS credits), Pharmaceutical Biology (5 ECTS credits), Physics for Pharmacy (6 ECTS credits), Mathematics & Statistics (4 ECTS credits), Introduction to computer Science (3 ECTS credits), English for academic purposes (2 ECTS credits), and German Language I (3 ECTS credits).

Semester 2: Pharmaceutical Analytical Chemistry (8 ECTS credits), Physical Chemistry (7 ECTS credits), Pharmaceutical Biology II (7 ECTS credits), History of Pharmacy & Biotechnology (1 ECTS credits), Pharmaceutical & Medical Terminology (1 ECTS credits), German language II (3 ECTS credits), and Introduction to Scientific Methods (2 ECTS credits).

Semester 3: Organic Chemistry I (7 ECTS credits), Biotechnology I (1 ECTS credits), Pharmacognosy I (4 ECTS credits), Pharmaceutics I (6 ECTS credits), Physiology & Anatomy I (6 ECTS credits), German Language III (3 ECTS credits), and Communication & Presentation Skills (2 ECTS credits).



Semester 4: Organic Chemistry II (7 ECTS credits), Pharmaceutical and Medical Microbiology (7 ECTS credits), Pharmaceutics II (6 ECTS credits), Physiology & Anatomy II (6 ECTS credits), German Language IV (3 ECTS credits), and Research Paper Writing (2 ECTS credits).

Semester 5: Pharmaceutical Chemistry I (7 ECTS credits), Instrumental analysis I (7 ECTS credits), Biochemistry I (7 ECTS credits), Pharmacognosy II (5 ECTS credits), Biopharmacy & Pharmacokinetics (3 ECTS credits), and Legislation and Pharmacy Law (1 ECTS credits).

Semester 6: Pharmaceutical Chemistry II (7 ECTS credits), Instrumental analysis II (7 ECTS credits), Biochemistry II (6 ECTS credits), Pharmacology I (7 ECTS credits), and Pathology & Histology (3 ECTS credits).

Semester 7: Pharmaceutical Chemistry III (6 ECTS credits), Phytochemistry I (5 ECTS credits), Pharmacology II (4 ECTS credits), Pharmaceutical Technology I (6 ECTS credits), Biochemistry III (Pathobiochemistry/Patho physiology) (5 ECTS credits), and First Aid (1 ECTS credits).

Semester 8: Pharmaceutical Chemistry IV (6 ECTS credits), Medicinal Plants & Marine Excursions (2 ECTS credits), Pharmaceutical Technology II (6 ECTS credits), Toxicology I (4 ECTS credits), Phytochemistry II (5 ECTS credits), Pharmacy Management (1 ECTS credits), and Quality Assurance (1 ECTS credits).

Alongside these modules, the internship is an essential part of the GUC study programmes. The students of "Pharmacy" (B.Sc.) must complete a total of 6 weeks of internships before their graduation. The internship must be practical and related to the student's majors; the students have the option to apply for industrial, research or corporate internships, the aim of the internship is to link between the academic programmes studied and their actual implementation in the field. Additionally, it will help the students expand their areas of knowledge and have a clear vision about possible career options.

The internship must fulfil the following criteria:

- Offer practical hands-on experience,
- Give the intern an insight about the latest technology/research updates,
- Offer a clear overview about the profession and different stakeholders involved in the operations,
- Develop the intern's interpersonal skills such as team-work, time management, and project management,
- Be related to the field of study,
- Cover a duration of 6 weeks before graduation; the internship can be consecutive or non-consecutive. If not consecutive, the duration of the internship should be at least 4 weeks consecutive,
- Be conducted after the 4th semester,

- A detailed evaluation & report must be submitted to the Student Career & Alumni Development – SCAD – office after completion of the internship.

### **Assessment**

The curriculum is well structured, has a balanced distribution of subjects across the individual semesters and corresponds to the classical curriculum for pharmaceutical sciences. The structure and content of the study programme are well suited to achieve the outlined objectives. In the sense of a research-driven education, the study programme should include a Bachelor thesis, according to plans presented in the discussions.

Regarding the defined entry qualifications and entry requirements, the content of the study programme is generally rated as very good. In some cases, it would be possible to include more current topics of pharmaceutical sciences in the modules (such as cell therapy, pharmacogenomics, personalised pharmacy, immunotherapy, big data science in pharmacy, system pharmacology). The expert group also suggests that pharmacological/clinical-translational subjects could be integrated more broadly in the future. Elective options are rather limited in the bachelor's degree, but are offered to an appropriate extent in the curriculum of the master's degree. The teaching and learning forms are suitable and well adapted to the respective module requirements.

Practical units and experiences are successfully integrated and supervised regarding the preparation, conduction, and allocation of ECTS credits.

Overall, the expert group confirms a well-structured and balanced curriculum with high performance density.

### **Conclusion**

The standard is fulfilled.

The expert group recommends:

- The GUC should introduce a Bachelor Thesis.

### **Master**

#### **Documentation**

The master programme is offered for the purpose of conferring advanced academic qualifications, in particular with a view to developing research capabilities in the different disciplines of pharmaceutical and pharmaceutical-related sciences. Research activity and professional experience achieved within this programme will pertain to any academic discipline related to pharmacy and to the application of scientific findings in the fields of study related to its disciplines. Ethical considerations as laid down in the

GUC Ethics regulations and international standards will be followed in all research activities. For the purpose of coordinating research projects and research priorities as well as of planning and executing joint research projects, the faculties at GUC will cooperate with each other and with other research institutes in Egypt and abroad especially with partner German Universities. Research conducted at GUC will consider national and community needs.

The master programme consists of three semesters.

Semester 1: Microbiology & Immunology (5 ECTS credits), Phytotherapy & Biogenic Drugs (5 ECTS credits), Pharmaceutical Technology III (7 ECTS credits), Clinical Pharmacy Practice I (5 ECTS credits), and Toxicology II (8 ECTS credits).

Semester 2: Drug Design (8 ECTS credits), Clinical Pharmacy Practice II (5 ECTS credits), Pharmacoepidemiology & Economy (6 ECTS credits), Pharmacotherapy (5 ECTS credits), and Biotechnology II (6 ECTS credits).

Semester 3: In this final semester of studies the students solely work on their Master Thesis for a maximum duration of 6 months and 30 ECTS credits, consisting of 20 per cent progress report, 50 per cent thesis evaluation and 30 per cent thesis defence.

## **Assessment**

The scientific quality of the "Pharmaceutical Sciences" master course was generally judged to be high. The goal – drug discovery and development – is clearly set. This impression is based on the self-evaluation document provided by the GUC, the interviews with GUC alumni, the video presentation of the GUC teaching and research labs and the scientific output and standing of the professors and lecturers as again documented in the GUC self-evaluation. The reviewers were particularly impressed by the wide range of drug discovery and development-related highly qualified teachers and by the extent and variety of modern instrumental equipment provided in GUC master teaching labs.

Students that have successfully completed this course will be qualified for advanced work in pharmaceutical companies and academia, e.g. to continue for a PhD. They will have an understanding of ethical aspects and impact of society of drugs. Additionally, they will be prepared for working responsibly in a team.

The expert group strongly recommends including one specific, mandatory teaching course to accompany each master thesis topical area. This addresses master theses where the experimental work is performed on the GUC campus. They further recommend to the faculty to offer master thesis topics and supervisors for at least 50 per cent of all students that apply for a master thesis. The panel feels this will give continuity and indeed strengthen the on-campus research.

## Conclusion

The standard is fulfilled.

The expert group recommends:

- The GUC should offer one specific teaching course to accompany each master thesis topical area. This addresses master theses where the experimental work is performed on the GUC campus.
- Regarding the large numbers of master students, the GUC should disclose how to provide all students with master thesis topics and supervisors in order to continue and strengthen the on-campus research.

### 2.2.2 Mobility

#### Bachelor and Master

##### Documentation

Since the GUC always aims for their graduates to be open to foreign expertise and cultures in order to enrich technical and human cultural knowledge, it strongly encourages students' exchange and supports the possibility of completing the bachelor and/or master thesis at a German partner university.

Furthermore, GUC arranges summer courses, internships, and trips in Germany to allow its students to learn more about and get familiar with the German culture. More than 42 per cent of all students travelled to Germany over the past 5 years to write their bachelor thesis, participate in study courses or internships, and improve their German language skills. The students can choose from more than 66 cooperating German Universities and institutions.

On the other hand, GUC regularly receives German students, mainly from universities in Baden-Württemberg. In addition, in 2007 the GUC inaugurated its own Guest House in Ulm and in 2012 a GUC Berlin Branch, which facilitates the exchange between Cairo and Germany for both students and academic staff. Another purpose of the GUC branch in Berlin is the promotion of international activities on a professional level by offering study semesters for GUC students, hosting research events, tapping into new fields of applied and theoretical research, and other activities that would foster the next generation of research and researchers.

Transfer students from other higher education institutions are accepted at GUC, provided that they meet the following criteria:

1. They fulfil GUC regular admission requirements including the attainment of high school certificate (Al-Thana-weya Al-Amma or its equivalent) with a score complying with the Supreme Council of the Egyptian Universities regulations for the year during which this certificate was obtained.
2. Submit Official records (Official Transcript) of the courses taken with detailed course descriptions stamped from an accredited university – including the credit hours and grades achieved.
3. Comply with GUC admission requirements including passing the admission tests (the reasoning and the English Language tests) and obtaining the qualifying subjects for the required field of study.
4. Submit the brochure / Catalogue of the institution.

In line with the GUC programme objectives to have graduates become open to foreign expertise and cultures in order to enrich the technical and human cultural knowledge, GUC encourages students' exchange and gives them a chance to complete their bachelor and/or master thesis at German partner universities. 27 per cent of the Engineering students wrote their B.Sc. theses in Germany.

Furthermore, the GUC arranges summer courses, internships and trips in Germany for its students in order to allow them to learn more about and get familiar with the German culture. Over 42 per cent of the students travelled to Germany over the last 5 years. The GUC cooperates with over 66 German Universities and institutions in the framework of study exchange (e.g. Bachelor-thesis, study courses, internships and German language).

On the other hand, the GUC receives German students from Hochschule Ulm for a practical study programme and the use of the GUC advanced "Festo" lab, as well as one-semester exchange programmes for students from universities in Baden-Württemberg.

In addition, and as a development to encourage such activities to achieve this goal, the GUC had inaugurated the GUC Berlin Branch in 2012 to facilitate future students' and academics' exchange between Cairo and Germany.

### **Assessment**

The expert group praises the GUC for its broad network of cooperation partners. Due to its founding history, the spectrum includes many German universities and institutions, especially in Baden-Württemberg.

Although highly recommended, students of both programmes are not required to participate in student exchange. Nevertheless, the outgoing mobility is particularly impressive, which applies to both pharmacy programmes as well as the GUC's programmes in general. The pharmaceutical internship is often used by students to gain international experience. In terms of preparation, organization, and funding, it is

recommended that the GUC should provide additional support in administrative issues for outgoing students.

There still seems to be room for optimization in incoming mobility. Therefore, a systematic strategy to promote the number of incoming German and international students, academics and professors would be appreciated.

## **Conclusion**

The standard is fulfilled with regard to both programmes.

The expert group recommends:

- The GUC should provide further support in administrative issues for outgoing students.

### **2.2.3 Staff**

#### **Bachelor and Master**

##### **Documentation**

The overall vision of the GUC is to build a distinguished centre of excellence in teaching and research that extends beyond the regional borders. The university is planning to achieve this by selectively appointing staff members with an established national and international reputation from both (German and Egyptian) sides, who additionally pursue advanced study and research in their particular academic field in accordance with the research plans of the departments.

The GUC Selection Committee criteria therefore include the following aspects:

- Teaching, with special regard to the development of the discipline through innovation and academic leadership.
- Research, as evidenced by scholarly publication, research supervision, and successful winning and completion of research grants and contracts; with recognition of innovation, versatility, leadership and management.
- External contribution, with special regard to involvement in professional bodies, consultancy activity, acting for professional journals, service with Research Councils and other bodies connected with higher education, membership of governing bodies or community bodies relating to education, seminars and invited lectures, and liaison with other institutions.
- Multicultural experience and
- The reputation at national or at international level.

Furthermore, the GUC is committed to staff development as an integral part of its commitment to delivering high quality teaching and research activities and strongly encourages its academic staff to take part in periodical training and development programmes to meet teaching and research needs. Newly appointed full-time members as well as continuing Egyptian and German academic staff receive training by the standard and assessment centre.

At the Faculty of Pharmacy and Biotechnology the GUC employs 11 professors and 9 associate professors, 42 persons holding a PhD and providing additional teaching capacity as lecturers, as well as 3 adjunct faculty members. Further 111 pharmacy teaching assistants, 10 maths teaching assistants and 2 computer science teaching assistants provide support in the teaching process. Furthermore, in order to provide appropriate language classes, the GUC employs 7 English language instructors and 3 German language instructors. The current teaching staff male/female ratio is 1 : 3.

In line with its vision and mission, the GUC considers its staff as valuable key to success. Hence, the human resources department is aiming at assembling a workforce consisting of highly qualified non-academic staff by continuous training and development. Staff members undertake general and specialized individual training upon identification of his/her needs for improvement through regular evaluation and assessment. The GUC also offers regular staff trainings on standard software programmes, presentation techniques, behavioural techniques etc.

### **Assessment**

The Faculty of Pharmacy and Biotechnology is very well staffed as for complementary expertise, hierarchical differentiation and quality of research and teaching. This evaluation is based on the self-evaluation document provided by the GUC, the presentation of the Faculty by its Dean and the interview with GUC undergraduates. The regular teaching evaluations and the active role in research of most if not all academic staff members ensures that staff will constantly improve their didactic versatility and update scientific knowledge.

The ratio of teachers to students could however be improved.

During the online evaluation, the expert group did not gather enough information to pronounce on staff recruitment and employment (e.g. length of contracts) except for the following aspect: The number of German lecturers has dropped in the past years. The reasons were discussed with the GUC leadership and are identified to partly result from the political situation in Egypt since the revolution.

However, the expert group strongly recommends increasing efforts to keep the number of German lecturers from further dropping. They understand that this is difficult for reasons that GUC cannot influence. Nevertheless, they recommend inviting lecturers and professors from Germany for shorter periods of time, thus letting a higher number of German university staff get a first-hand experience at the GUC, with the prospect that some will choose to stay longer.

## Conclusion

The standard is fulfilled.

The expert group recommends:

- The GUC should increase efforts to keep the number of German lecturers on a stable level.

### 2.2.4 Resources

#### Bachelor and Master

##### Documentation

The GUC library offers a variety of collections including textbooks, periodicals, references, online databases, also CDs that cover different disciplines and books in different fields. Available collections are in German, English and Arabic language as well as a small collection in French. The library is a member of the South-West Library Association in the State of Baden-Württemberg in Germany, the Egyptian Libraries Association, and the International Committee of Libraries in Egypt. It connects with the KIZ online library Ulm, where GUC staff and students are recognized members of the network and able to use services available in Ulm (especially e-journals). The library also connects to the Egyptian Universities Online Network and has access to most major online databases. The library provides 200 seats and accessibility to more than 2.000 PCs directly connected to the Library.

The GUC IT Centre maintains a wireless and wired network for fixed computers as well as students' devices with 100 per cent coverage in lecture halls and classrooms. Furthermore, GUC offers computer labs on campus as well as design-specific laboratories, studios and workshops.

The following Pharmacy and Biotechnology labs with indication of capacity are available for both study programmes: Analytical Chemistry lab (50), Pharmaceutical chemistry lab (25), Quantitative drug analysis lab (50), Pharmaceutics lab (25), Pharmaceutical technology lab (50), Pharmacology/Toxicology lab (50), Physiology lab (25), Fermentation Technology lab (25), Phytochemistry lab (25), Organic Chemistry lab (50), Biology lab (25), Microbiology lab (25), Instrumental Analysis lab (50), Biochemistry lab (50), and Physical Chemistry lab (25).

##### Assessment

The expert group was impressed by the quality and variety of equipment provided in bachelor and master teaching as well as research labs. This assessment is based on the self-evaluation document provided by the GUC, the video tour of the labs and the equipment documented through scientific publications with GUC scientists where pertinent experiments from different fields of drug discovery and development were done in GUC labs.



Notwithstanding this positive impression, the expert group solely recommends to not only strive to acquire new instrumentation, but also to increase efforts to provide more apparatus per student so that each and every student has the chance of hands-on experience with the instrumentation rather than observe in a large group how to use it.

## **Conclusion**

The standard is fulfilled.

The expert group recommends:

- With regard to its resources, the GUC should continue to strive for an even higher number of instrumentation in order to enable hands-on experience in the courses.

### **2.2.5 Examinations**

#### **Bachelor and Master**

##### **Documentation**

In both study programmes, each course is assessed individually upon its completion. Methods of assessment include written, oral, and practical examinations, research papers, course assignments and practical work. The module catalogue defines possible forms of assessment as class work and activities, projects, quizzes, assignments, written exams, oral exams, laboratory performance, lab reports and practical exams.

##### **Assessment**

The forms of examination used in the modules are varied and are designed to precisely suit the respective objectives and competences. The expert group finds the examination system very innovative and interactive.

According to the convincing presentation of the lecturers, there is a constant review and further development of the forms of examination.

However, the recommended introduction of a Bachelor thesis would promote competences for independent scientific work and writing.

## **Conclusion**

The standard is fulfilled.

The expert group recommends:

- The GUC should introduce a Bachelor Thesis according to the plans presented in the discussion (cf. Chapter 2.2.1).

## 2.2.6 Student-centred learning

### **Bachelor and Master**

#### **Documentation**

Both reviewed study programmes are under the supervision of the Faculty of Pharmacy and Biotechnology. The Faculty Council comprises the dean, the vice dean for academic affairs, who supervises the study programme directors, and the vice dean for student affairs. The academic coordinators for each study programme report to the dean and the respective study programme directors. Several faculty committees support the Faculty Council in performing its obligations.

In all GUC study programmes, student curriculum committees are implemented as an internal advising system. The major aim of this advising process is to support students struggling to follow the regular track. At the beginning of each semester, these students are encouraged to meet with their advisors in order to discuss their academic situation and advise them on an efficient plan to graduation. The committee usually meets twice per month to gather students' feedback regarding course content, teaching methods, assessment methods, student workload per course, courses prerequisites, repetition and redundancy of courses or topics, etc. The students' feedback is continuously taken into account.

The GUC provides the following counselling services:

- Counselling services for high school students regarding admission procedures and choice of areas of study,
- Assisting new entrants to make first steps at the GUC including orientation programmes,
- Information on courses at all faculties.

In 2011, the Review Committee arose from the requirement to enhance the handling of students' complaints and to speed up the handling process. The head of the committee is the GUC vice president for students' affairs. The members are representatives of different departments: complaint centre, examination office, students' affairs, finance, coordinators and Quality Management and Accreditation Committee (QMAC). The Review Committee's main task is to revise existing policies, propose amendments to running policies and recommend new policies based on students' complaints (if needed). QMAC representatives participate in committee meetings in order to solve problems related to ECTS credits, students' workload, etc. The QMAC executive committee played a major role in initiating and sustaining the mentoring system. The mentoring system started in 2011 as a pilot project to provide help and support for students facing difficulties regarding their progress in the study programme, effecting their

graduation as well as their GPA. The QMAC team together with volunteering academic members and teaching assistants offered academic and administrative support to these students.

The Students Careers and Alumni Development Office (SCAD) office aims to help GUC students to determine career goals, identify and find appropriate employment in the fields of their specializations whereby they can progress in their development as individuals and as constructive members of society. To achieve this aim, the SCAD office organizes activities towards cooperation and partnership with the industry in order to offer internships, fieldwork, development and employment opportunities.

### **Assessment**

The expert group was able to convince itself that the university takes care of the studyability of its Pharmacy programmes. The clear processes for planning courses and examinations ensure that studies can be planned and are reliable.

The experts praise the various options for students to participate in the governance of their study programme, e. g. through the student curriculum committee. During the online conversations with the students, they outlined examples where student feedback was considered and improvements were implemented. This is complemented by an outstanding level of identification with GUC by the students and alumni.

During the discussions, it became evident that the student workload is high in both programmes, however, students seem to value this as an important preparatory skill for their future careers. The university has also integrated the regular calculation and review of the workload per module into its processes.

### **Conclusion**

The standard is fulfilled.

#### **2.2.7 Particular Profile**

Not relevant

### **2.3 Further Development**

#### **Bachelor and Master**

##### **Documentation**

As part of the GUC mission of enhancing the research and creative activities and keeping up with innovations in science and research, the GUC encourages full-time academic staff to attend conferences on national but also international level.

The Quality Assurance and Accreditation Center (QAAC) is playing a major role in enhancing the process of revising, external reviewing and updating curricula. It encourages all academics to prepare a course file for each course and review the courses' specifications each semester as do external evaluators. The GUC also established course reports at the end of each semester. These course reports include enhancements based on the feedback of all stakeholders, such as students, external evaluators, and industry feedback, etc. The entire academic staff (including heads, academics, and TAs) participates in the quality management process as part of their ongoing academic activities, for example by reviewing all course files and preparing a self-evaluation report according to the parameters of accreditation. External peers of the same expertise from Germany review the GUC courses.

Since its implementation in 2003, the Pharmacy programme at the GUC has been developed, revised, and updated based on the feedback from stakeholders including students, alumni, teaching staff, the German founding Deans, Professors from affiliated German Universities, Professors from Egyptian governmental Universities, as well as external stakeholders from the industry.

The faculty is structured in six departments, each of which have defined their departmental research profiles including current and future research areas in the specific field, ongoing postgraduate research, and topics or objectives for possible research cooperation. A summary of the research output and the research profile of the faculty was presented to the expert group.

### **Assessment**

Both study programmes provide a very broad and very solid education covering the whole spectrum of pharmaceutical activities. These programmes enable graduates to follow a broad variety of job opportunities in the whole spectrum of pharmaceutical business also including the more traditional fields like public or hospital pharmacy. In addition, GUC allows early on for students to get involved in research projects and promotes international internships but also tries to acquire international teaching staff. This is clearly helpful to provide graduates with the skills also for further Ph.D. and research careers which are in the major scope of the faculty and reflected especially in the master education.

Since this "research focus" is also one of the major future development areas, it is important to constantly include research topics in the curricula in the future. It could be helpful to even extend the opportunities for students to conduct their own research and therefore be aware of all relevant skills early on.

In this context it is important that students and staff are constantly encouraged to join international research conferences, to publish the results and to stay connected to the international research community. In addition, it could also be helpful to organize international workshops at the GUC in order to give students – who might not be able to travel – the opportunity to join such kind of scientific meetings.

In the future two topics might be enforced:

- having regular lectures of industry employees included in the curricula, e. g. reflecting the broad range of working areas in the pharmaceutical companies, e.g. regulatory affairs, pre-clinical research, clinical development, pharmacovigilance, analytics and pharmacokinetics, screening technologies, clinical pharmacology, medical information, and medical affairs, as marketing and commercial and health-economic aspects.
- To include topics and lectures on next-generation pharmaceutical innovations like, for instance, digitalization or new treatment modalities.

## **Conclusion**

The standard is fulfilled.

## **2.4 Quality Assurance**

### **Bachelor and Master**

#### **Documentation**

The GUC is committed to the quality and standards of the education offered. The university adopts a system of continuous monitoring, review, and evaluation of all programmes to ensure the quality and standards of teaching and learning at GUC. The aims of the system are:

- To ensure that each programme is planned, operated, and developed adequately to achieve the educational objectives as well as to ensure consistency of the educational objects with the university's overall goals,
- To convey qualifications in line with the needs and requirements of the market place,
- To monitor and ensure the progress of the study programme towards the desired objectives,
- To review and evaluate the progress and future development of the programmes,
- To make use of peer reviewing in developing and continuously improving the quality of the study programmes by utilizing a wide range of expertise, both internal and external as well as German and Egyptian.

In March 2019, a new quality position, i.e. the Vice Presidency for Quality, has been initiated under the structure of the QMAC.

The mission of the Vice Presidency for Quality is to:

1. Monitor, follow up and impose all quality needed tasks in every faculty, programme, department and unit,

2. Ensure the continuous development of the internal quality system at all levels of the GUC,
3. Enhance the quality performance levels in academic disciplines,
4. Assure sustainable diffusion of quality culture at all levels of the university.

In addition to other tools, the QMAC uses three surveys for programme evaluation: the "Fresh Graduate Survey", the "Alumni Survey", and the "Employer Survey".

The "Fresh Graduate Survey" is distributed to fresh graduates after the graduation ceremony where they evaluate their undergraduate experience, programme outcomes, quality of instructions and faculty, and overall satisfaction. Graduates can also give information about their career plans. The "Alumni Survey" focuses on different aspects to provide insights with regard to university quality improvement areas as well as measuring alumni experiences and satisfaction whereas the "Employer Survey" focuses employers' feedback and possible improvements. Additionally, the "External Evaluation Report" of a study programme asks external evaluators on the course files' content, including: course specifications, course report, course statistics, student feedback, lectures, tutorials, assignments, quizzes, mid-term and final exams with model answers and tables of exam specifications.

The GUC is continuously monitoring its students' progress throughout their studies via the Students Electronic Administration System as a measure of success. If a student achieves satisfactory results, the GUC regards this as an indicator that a student has reached the associated programme objective. The data collected by the Students Electronic Administration System enables continuous self-evaluation and measure their academic progress. This way the course instructors can evaluate their students' performance during the semester and detect deficiencies at an early stage to take counter measures like additional lectures, tutorials, or office hours if necessary.

The evaluation of a study programme also takes graduation rates, average scores as well as the evaluation of the B.Sc. thesis into account. The GUC compares evaluated data of different times and calculates programme performance indicators to give information on trends to determine whether the programme is fulfilling its outcomes and the needs of its constituents. This also reveals strengths and weaknesses of the programme, as well as the effect of changes.

Furthermore, the QAAC established new units within the GUC faculties. These units ("quality management coordinators") shall act as a link between the centre and the faculties by monitoring the quality activities and reporting. Further duties are to ensure publishing of lecture slides and related notes, regular visits of tutorials and labs to monitor the teaching activities of teaching assistants, conducting quizzes and assignments according to the course time plan, preparing table of specifications for midterm and final exams and design the exams accordingly.

During the period of 2008-2019, an average of 87.3 per cent of the students have graduated in time with an average graduation GPA of 2.01, indicating that the programme can be mastered but is still

challenging. The GUC alumni community of the Pharmacy programme has been growing with graduates spreading across the globe and proving their competence. The programme has succeeded in introducing graduates to the international scientific community where a large number of alumni pursued their postgraduate studies in research institutions and universities abroad. The study programme has also qualified the graduates to join industry not only in Egypt but worldwide.

### **Assessment**

Various mechanisms have been implemented to ensure the quality of teaching. The Vice Presidency for Quality is keeping track of overall objectives and identifies potential for improvements, e.g. by monitoring the clear description of all courses before each semester as well as the course reports at the end of the semester and by planning improvements in the next delivery of the course. Furthermore, the GUC ensures that all necessary documents are prepared in time. These mechanisms for quality assurance seem thorough and effective.

The evaluation reports include the feedback of all students and graduates. According to the information of the GUC, student feedback is collected anonymously and with no influence by the lecturers. The expert group has no reason to believe otherwise.

The course evaluation provided by the GUC is consistently very good (1) to good (2) across all courses. Solely the students' feedback on the workload shows lower results. In this category the expert group does suspect room for improvement as the densely structured work schedule could provide more room for further interdisciplinary research fields. Such discrepancies are detected by the quality assurance department and are considered in the further development of the study programmes.

Overall, the expert group judges the implemented tools of quality assurance and quality control to be very good and trusts that evaluation results are considered in appropriate manner.

### **Conclusion**

The standard is fulfilled.

## **2.5 Gender Equality and Diversity**

### **Bachelor and Master**

#### **Documentation**

The GUC is open to all and women without regard to race, ethnicity, or disability. It offers a balanced range of scholarships to outstanding students during the years of academic study with the purpose of attracting and retaining highly qualified students as well as giving incentives to students for maintaining

a high standard of academic achievements. In cases of serious financial difficulties, GUC can offer financial aid following a thorough inquiry on the social status conducted by the special committee in charge.

Furthermore, the GUC welcomes students with special needs and long-term medical conditions and provides additional services and facilities, including special examination arrangements in individual cases and ramp access to buildings, wide door elevators and sanitary facilities on campus. Students with special needs are also encouraged to visit the GUC before applying in order to inspect the facilities provided by the university.

In addition, the department aims at providing high quality guidance, information, and support by offering the following services:

- Student Counselling Services
- Students Career and Alumni Development services
- Internships and Student Exchange Programmes
- International Students Services
- Accommodation Services
- Clinic
- Transportation Services
- Students with Special Needs
- Extracurricular Activities
- Sports Facilities and Services

### **Assessment**

As the GUC is a private university coupled with relatively high tuition fees, the expert panel asked about the accessibility of the university for low- and middle-income students, public/government university students, etc. In the discussions with the university's leadership and senior pharmacy faculty, it was clarified that more than 50 per cent of GUC students receive partial/full scholarships or financial aid. Furthermore, there are plans to allow transfer students from public universities. The expert group values the aid and recommends that the financial aid system provided for students with a lower socio-economic background will also in future be continuously improved.

The expert group is convinced that gender equality aspects are considered at the GUC within the student, staff, and faculty bodies.

Special arrangements are made for students with special needs in collaboration with the GUC Clinic, Student Affairs Centre as well as the Faculty. In the video presentation of the GUC, the experts were exposed to a variety of facilities for students with special needs.



## Conclusion

The standard is fulfilled.

The expert group recommends:

- The financial aid system provided for students with a lower socio-economic background should also in future be continuously improved.



### III Review Procedure

#### 1 General Remarks

- This report has been created in reference to the MRVO (Musterrechtsverordnung gemäß Artikel 1 – 4 Studienakkreditierungsstaatsvertrag).

#### 2 Legal Framework

- Standards and Guidelines for Quality Assurance in the Higher Education Area (ESG 2015)
- ECTS Users' Guide (2015)

#### 3 Expert Group

- **Prof. Stefan Günther**, Albert-Ludwigs-Universität Freiburg, Pharmazeutische Bioinformatik
- **Prof. Dr. Peter Imming**, Martin-Luther-Universität Halle-Wittenberg, Pharmazeutische/Medizinische Chemie und Klinische Pharmazie
- **Prof. Dr. Angelika Vollmar**, Ludwig-Maximilians-Universität München, Pharmazeutische Biologie
- **Prof. Dr. Peter Sandner**, Head of Heart and Vascular Diseases V – sGC Pharmacology, Bayer AG
- **Damon Mohebbi**, Study programme "Medizin", Heinrich-Heine-Universität Düsseldorf

#### **IV Decision of the ACQUIN Accreditation Commission**

Based on the evaluation report of the expert group and the statement of the Higher Education Institution, the Accreditation Commission of ACQUIN decided on its meeting on the 22<sup>nd</sup> of March 2021:

##### **Pharmacy (B.Sc.)**

**The study programme „Pharmacy“ (B.Sc.) is accredited for the first time without any conditions.**

**The accreditation is valid until 30<sup>th</sup> of September 2027.**

The following recommendation is given for the further development of the study programme:

- The GUC should introduce a Bachelor Thesis.

##### **Pharmaceutical Science (M.Sc.)**

**The study programme „Pharmaceutical Science“ (M.Sc.) is accredited for the first time without any conditions.**

**The accreditation is valid until 30<sup>th</sup> of September 2027.**

The following recommendation is given for the further development of the study programme:

- For Master's theses in which the experimental work is carried out on the GUC campus, students should be required to attend an accompanying course on the subject area.

Furthermore, the following recommendations are given for the further development of both study programmes:

- The GUC should continue to strive for a higher number of German lecturers, including the possibility of online teaching.
- With regard to its resources, the GUC should continue to strive for an even higher number of instrumentation in order to enable hands-on experience in the courses.

The decision of the Accreditation Commission does not comply with the assessment by the expert group in the following points:

Withdrawal of recommendations:

- The GUC should provide further support in administrative issues for outgoing students.

Statement: According to the GUC self-report as well as the statement on the accreditation report, the GUC International Office provides comprehensive support in administrative issues (e. g. visa application).

- The financial aid system provided for students with a lower socio-economic background should also in future be continuously improved.

Statement: According to the information provided by the GUC, more than 50 % of students currently receive financial aid for their studies due to their outstanding performance. A significant proportion of these students have a lower socio-economic background. Therefore, the financial aid system at the GUC is setting a good national standard.

- Regarding the large number of master students, the GUC should disclose how to provide all students with master thesis topics and supervisors in order to continue and strengthen the on-campus research.

Statement: Considering the number of academic staff, the number of Master Students is suitable for appropriate supervision.

Furthermore, minor stylistic changes were made by the Accreditation Commission in the following recommendations:

- The GUC should increase efforts to keep the number of German lecturers on a stable level.
- The GUC should offer one specific teaching course to accompany each master thesis topical area. This addresses master theses where the experimental work is performed on the GUC campus.