

Accreditation Report

Programme Accreditation of

German University of Technology Oman

"Logistics" (B.Sc.), "International Business and Service Management"(B.Sc.),

"Cybersecurity" (B.Sc.), "Artificial Intelligence" (B.Sc.)

I Procedure

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II Introduction

The experts would like to thank the representatives of the HEI as well as students who have taken part in the discussions and willingly shared information and their views during the site visit. The discussions are valuable not only for the assessment of the institution, but also for a better understanding of the legal and sociocultural context of the local higher education system.

Evaluation basis for the peer-review experts is the self-assessment report of the HEI as well as intensive discussions during the site visit with the HEI management, deans and/or heads of the departments, head(s) of the study programmes, study programmes coordinators, teachers, lecturers, administrative staff, students, and graduates.

Main objective of the accreditation procedure is to assess the quality of the study programmes and compliance with the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ESG). The ESG standards are applied as main assessment criteria in the international accreditation procedure.

A group of experts was set up, which ensured that all areas relevant to the accreditation procedure (e.g. legal, structural, social etc. aspects) are considered. The peer-review experts include professors, representatives of the professional practice and the student representative. A certificate with the ACQUIN seal is awarded upon accreditation of the study programmes.

1 The Higher Education System in Oman

Today's Omani education system was established by the late His Majesty Sultan Qaboos and is hence a relatively young system. This can be seen when looking at the literacy rate: In 2018, the literacy among people aged 65 and older was 56.9%, while it was 95.7% among the total population aged 15 and older. English is taught as a foreign language in school.

Founded in 1986, Sultan Qaboos University (SQU) in Muscat is the nation's first public university and at second Oman's largest HEI, with 18,366 students enrolled as of Fall 2020. In addition, a second public university in Oman was established in January 2020 under the Royal Decree 76/2020. This Royal Decree brought together the former Colleges of Technology, the former Colleges of Applied Sciences and the former Rustaq College of Education to form the University of Technology and Applied Sciences (UTAS), motivated by the Oman Vision 2040. There are also 7 Oman College of Health Sciences and 4 Higher Institute of Health Specialisations throughout the country associated with the Ministry of Health, College of Sharia Sciences under the Ministry of Endowment and Religious Affairs, and a new Military Technological College in Muscat under the Ministry of Defence with a total of 8,037 students in 2019/20.

There are nine private universities and nineteen private colleges in Oman, established by the *Council of Higher Education*, with a total of 55,827 students in 2019/20. All private HEIs are supervised by MoHERI and must be affiliated to a university outside of Oman. The private colleges must offer study programmes that are (co-)developed and approved by their international partner universities to ensure the international benchmarking of the programmes. Sultan Qaboos University and the University of Technology and Applied Sciences serve different target groups than GUtech (e.g. they often offer two- year diploma programmes, and three-year higher diploma programmes).

2 Short profile of German University of Technology in Oman (GUtech)

The **German University of Technology in Oman (GUtech)** is a private university associated with RWTH Aachen University. The university was established in the Sultanate of Oman in 2007 with support of H.E. Abdullah bin Mohammed Al Salmi, the Omani former Minister of Endowments and Religious Affairs, and the German Academic Exchange Service (Deutscher Akademischer Austauschdienst, DAAD) to provide programmes of study and research that enable innovation and are aligned with the German university model created by von Humboldt, where teaching and learning are based on research and practical experience. The University aspires to achieve this by encouraging the exchange of people, knowledge and ideas between the Sultanate of Oman and Germany, thereby strengthening the intercultural understanding between both countries and beyond. The University aims at becoming the leading University in the region, achieving internationally recognised standards in Education, Research, and Innovation.

In September 2012, GUtech moved to its custom-built campus located in Halban at the western outskirts of Muscat. With a total area of 500,000 m², the campus is designed to accommodate the University's growth over the next decades. The facilities built in Phase I and Phase II, i.e., the main academic building, the new building (GU2 Algorismus) and four student/staff dormitories, can house 3,500 students. 2,798 students are enrolled in one of the following programmes as of Academic Year 2022/23.

The Royal Decree No. 41/99 on "Issuing Private Universities Ordinance" and Ministerial Decision No. 36/99 on "Issuing the Executive Regulations for the Private Universities Ordinance" provide the legal framework for the establishment of the University.

The University was established as a juristic person under the name Oman-German University of Technology pursuant to Ministerial Decision No. 9/2007 published by the Ministry of Higher Education, Research, and Innovation of the Sultanate of Oman on the 17th of March 2007. Ministerial Decision No. 57/2007 determined the start of studies at GUtech as winter semester

2007. Following a royal directive, the name of the University was changed to *German University of Technology in Oman* on the 19th of March 2008. Hereinafter, the term *GUtech* refers to *the German University of Technology in Oman*. The German University of Technology is hence determined to be a non-profit organisation.

The study programmes at GUtech do not have unlimited capacity. Most laboratories, e.g., in physics and chemistry, have a maximum capacity. If a class has more students, the lab sessions must be split into several small groups whose lab time cannot overlap. Consequently, the staff- student ratio is small in these courses. Due to the significant growth of GUtech's student population, a new building was constructed in 2017 and used starting winter 2018. It houses laboratories, classrooms, lecture halls and design studios. Lecture courses may in principle have larger class sizes, however the largest classrooms at the Halban Campus of GUtech have a capacity up to 250 students, while the majority of classrooms have a capacity of 25 to 40 students. At the moment, GUtech is aiming at a total student enrolment of around 2,800 students, including the Foundation Programme. Since most students must pass through the Foundation Programme, the departments get rough estimates of the next freshman class sizes one year in advance, which greatly assists with the capacity planning.

Affiliation to RWTH Aachen University

The Vision of GUtech is being achieved in affiliation with RWTH Aachen University, one of the leading universities of technology in Europe. GUtech promotes cooperation and exchange with other universities worldwide. The university has signed Memoranda of Understanding (MoUs) with the University of Brescia (Italy), Hochschule Neu-Ulm (Germany), Hochschule 21 Buxtehude (Germany), CBS International Business School (Germany), Brandenburg University of Technology Cottbus-Senftenberg (Germany), Indian Institute of Technology Bombay (India). GUtech also signed agreements with the Munich University of Applied Sciences (Germany), the University of Applied Sciences in Stralsund (Germany), Universiteit Hasselt (Belgium), Executive Academy of Vienna University for Economics and Business (WU) (Austria), University of Salzburg (Austria), University of Bologna (Italy), and Wilkes University (USA). An Academic Affiliation Agreement between Oman Educational Services LLC (OES) and RWTH Aachen University in Germany, was signed on the 27th December 2006, and was amended on 5th May 2010 and renewed on 29th June 2018. The Academic Affiliation Agreement between Oman Educational Services LLC (OES) and RWTH Aachen University in Germany was revised on 2nd February 2021 to establish a mutually beneficial framework for their relationship.

GUtech is designed to be an independently operating university, affiliated to RWTH Aachen University and controlled by the Board of Governors which is chaired by the Rector of RWTH Aachen University, hosting Aachen professors and representatives of public bodies of both

countries. With the agreement, Oman Education Services LLC appointed RWTH Aachen University to provide curricula for study programmes, quality assurance and expertise in setting up the operations of GUtech. The collaboration also has the support of the Ministry of Education of North-Rhine-Westphalia, the home state of RWTH Aachen University, and the German Academic Exchange Service (DAAD). RWTH Aachen University, a public technical university located in the German state of North-Rhine-Westphalia, was founded in 1870. As of winter semester 2021/2022, total of 47,269 enrolled students, of which 13,354 are from overseas. In the academic year 2023/24 winter semester, 2,027 of the 2848 students at GUtech were female (71%).

3 General information on the study programmes

Location	German University of Technology in Oman (GUtech): Bachelor of Science in Logistics (B.Sc.)
Faculty/ department	School of Business and Economics
Standard period of study (semesters)	Four years (eight semesters) excluding Foundation programme
Number of ECTS credits	240
Number of students currently enrolled	-
Target group(s)	Omani and international students
Form of study	Full-time
Tuition fee	2,700 OMR for Omanis and 3,375 OMR for non-Omanis (per semester)

Location	German University of Technology in Oman (GUtech): Bachelor of Science in International Business & Service Management (B.Sc.)
Faculty/ department	School of Business and Economics
Standard period of study (semesters)	Four years (eight semesters) excluding Foundation programme
Number of ECTS credits	240
Number of study places	-
Admission requirements	Omani and international high school graduates
Form of study	Full-Time
Tuition fee	2,700 OMR for Omanis and 3,375 OMR for non-Omanis (per semester)

Location	German University of Technology in Oman (GUtech): Bachelor of Science in Cybersecurity (B.Sc.)
Faculty/ department	Faculty of Engineering and Computer Science

Standard period of study (semesters)	Four years (eight semesters) excluding Foundation programme
Number of ECTS credits	240
Number of study places	Between 40 and 80
Target group(s)	Omani and international high school graduates
Form of study	Full-Time
Tuition fee	2,940 OMR 2,940 OMR for Omanis and 3,900 OMR for non-Omanis (per semester)

Location	German University of Technology in Oman (GUtech): Bachelor of Science in Artificial Intelligence (B.Sc.)
Faculty/ department	Faculty of Engineering and Computer Science
Standard period of study (semesters)	Four years (eight semesters) excluding Foundation programme
Number of ECTS credits	240
Number of students currently enrolled	Between 10 and 50
Target group(s)	Omani and international students
Form of study	Full-time
Tuition fee	2,940 OMR 2,940 OMR for Omanis and 3,900 OMR for non-Omanis (per semester)

4 Results of the previous accreditation

The study programmes "Logistics" (B.Sc.) & "International Business and Service Management"(B.Sc.) were accredited for the first time in 2017. For further development of the study programmes, the following condition and recommendations were formulated:

The following overall condition was given for both study programmes:

- GUtech has to deliver a concept describing the skills to be achieved by students in the „Life Skills Courses“; the concept has to prove the sustainability of the offered courses.
- Statement: GUtech has submitted revised module descriptions, including module descriptions of the „Life Skills Courses“ and detailed descriptions of the assessment forms.

The following overall recommendations were given for both study programmes:

Recommendations for "Logistics" (B.Sc.) & "International Business and Service Management"(B.Sc.):

- The human resources, especially with an adequate expertise in the field of tourism and management studies, should be increased. The number of students being enrolled should be limited and should be adapted to the human resources.
- The administrative burden of teaching staff should be reduced in order to enable them to conduct scientific research to a greater extent. An additional position for managing the study programmes (e.g. a study programme coordinator) should be allocated.
- The number of electives should be increased. GUtech should figure out whether synergies of collaboration between faculties (e.g. sharing modules) could be created. The university should try to implement trajectories of elective courses.

III Implementation and assessment of the criteria

1 ESG Standard 1.1: Policy for quality assurance

Institutions should have a policy for quality assurance that is made public and forms part of their strategic management. Internal stakeholders should develop and implement this policy through appropriate structures and processes, while involving external stakeholders.

1.1 Implementation

Strategic development and Quality Policy

GUtech aims to introduce high quality higher education to the Sultanate Oman and the region according to German standards. Graduates shall have the qualification and knowledge to work in both Omani and international companies. Educating students is considered to be the basis of the further development and long-ranging success of the University. To do so, both teaching and research shall be at German and European standards.

A combination of teaching and applied research ensures the employability of its students, matching the needs of the region. This has proven to be a successful concept for RWTH Aachen University and is considered an important step towards the success of GUtech as there is a demand for this in the local region.

The Vision of GUtech is to become a leading university in the region, achieving internationally recognised standards in education, research, and innovation.

The Mission aims to provide a diverse student body with the education required to become highly qualified and socially responsible graduates, guided by German excellence in science and technology and with a firm grounding in Oman's culture and heritage. The University fosters creative and critical thinking to advance research and innovation and, through this, aims at serving society as a whole.

GUtech is committed to ethical principles in all its undertakings. In particular, the University welcomes students and staff from both genders, and all ethnic, geographical, cultural, and religious backgrounds. The University encourages association in peace and with tolerance, and welcomes further intercultural exchange between Oman, Germany, and the world.

The goal of GUtech is to produce highly qualified graduates with a strong sense of responsibility for business and industry, thereby addressing Oman's commitment to providing society with the human resources it requires to thrive.

Students studying at GUTech benefit from an international university education while remaining close to home. They may, during their studies, spend part of their time at RWTH Aachen University in Germany and other universities abroad, thereby gaining valuable exposure outside their home country. Students in Europe will also benefit from hosting visitors from the Arabian Peninsula by gaining an understanding and knowledge of customs and traditions that will bridge cultural gaps and cement international friendships.

Both students and employees shall become aware of the cultural differences that are commonly encountered in today's work environment, especially when working for multinational companies. They are encouraged to discover other cultures and learn from each other. Students shall learn how to work in international teams with people from different backgrounds and cultures.

The University aims at offering varied and flexible education and endowing its students with the ability to solve complex challenges, explore new territory, approach established and new knowledge in a critical manner, and be open to achievement and learning skills to communicate and cooperate effectively.

Both the Ministry of Higher Education, Research and Innovation and the Omani shareholders of GUTech are requesting more BSc and postgraduate programmes, with special emphasis on technical subjects. GUTech carefully considers opportunities for new programmes for Master's programmes and a Doctoral degree in accordance with its Strategic Plan.

When designing the study paths and regulations, a variety of legal restrictions, guidelines and recommendations from multiple countries had to be considered. Documents considered when designing and conducting the programmes include but are not limited to Oman. These are:

- Omani National Qualifications Framework (ONQF)
- Higher Education Admission Centre Student Guidebook
- Requirements for Oman's System of Quality Assurance in Higher Education

Quality Policy

The University has been implementing quality control measures at all levels from the beginning. The department of Quality Assurance and Planning reports directly to the Rectorate.

All study programmes need the approval of the Ministry of Higher Education, Research, and Innovation in Oman before they can be offered by the University. The introduction of new Bachelor and postgraduate programmes in technical disciplines as well as areas in line with the strategic plan of the Government of Oman is being considered. This was the reason why business-related programmes were introduced in 2014 and 2015 that focus on tourism and logistics, and more recently programmes in cyber security and artificial intelligence in 2021.

Structure of the University and its Decision-Making Processes

The overall structure of GUTech is defined in the University's Constitution, which also defines the role of Oman Educational Services LLC (OES), the company owning the University, in the academic operations of the University.

GUTech was established by a collaborative agreement between the Omani shareholders and RWTH Aachen University. GUTech is 100% owned by Omani shareholders and its management is supported by RWTH Aachen University. The shareholders and the Rector of RWTH Aachen University are represented on the Board of Shareholders.

The administration of GUTech is organised in a departmental structure. The governance structure of GUTech is determined by the following bodies: The Board of Shareholders of Oman Educational Services LLC (OES); the Board of Governors of the University, the Rectorate, the Academic Board; the Research, Consultancy and Innovation Board as well as Department Boards and Student Advisory Council.

The senior officers of the university include: The Rector, the Deputy Rectors, the Deans; the Heads of Academic and Administrative Departments and the Professors.

The Board of Shareholders (BoS, or the Board), formerly known as Board of Directors, represents the interests of the shareholders of Oman Educational Services LLC (OES). The BoS shall be responsible for according to their approval and its decisions shall be based on the then prevailing scenarios of the University or on recommendations from the Rectorate and/or from Board of Governors duly constituted in line with the Academic Affiliation Agreement between GUTech and RWTH Aachen University, Germany. The Board of Shareholders comprises all the shareholders of OES. They are called individually "members" or collectively as "members of the Board."

All the shareholders of OES shall have voting rights on the discussion points and recommendations that come to the Board for discussion. Each shareholder shall have one vote for each share owned or represented by him/her. The Chairman of the Board shall have the right to invite any individual or body of persons to attend the meeting and to appoint someone as a secretary of the meeting to record the minutes. Specifically, the Chairman of the Board may invite the Rector of RWTH Aachen University, or a person nominated by him/her, to any Board meeting that includes on its agenda matters related to the German University of Technology in Oman (GUTech).

The Board of Governors is the managing board of GUTech. It is entrusted by the Board of Shareholders of OES with the responsibility of governing the University and formulating the internal regulations for operating and managing the affairs of the University. The Board of Governors' responsibilities are to e.g. ensure that the Vision, Mission, Values, and Objectives are

reflected in the detailed planning and institutional activities of the University or to Pass resolutions required to achieve the University's academic, administrative, and financial objectives.

The Rectorate of GUTech is comprised of the Rector (Chair), the Deputy Rector for Administration and Finances, the Deputy Rector for Academic Affairs and the Deputy Rector for Research and Innovation and is chaired by the Rector. Each member of the Rectorate has one equal vote. The Rectorate responsibilities are to e.g. develop a governance, planning and policy framework that enables the implementation of the University's Vision, Mission, Values, Objectives and Strategies or to meet regularly with the Student Advisory Council and establish effective channels of communication with the University's student body.

The Academic Board is comprised ex-officio of the Deputy Rector for Academic Affairs (Chair), the Rector (non-voting), the Deputy Rector for Finance and Administration (non-voting), the Associate Deputy Rector for Academic Affairs, the Director of Research, the Deans, the Heads of Academic Departments, the Head of Registry and Student Admissions Department, the Head of Quality Assurance and Planning Department, the Head of the Library, the Head of Campus & Facilities Management Department and the President of the Student Advisory Council. The Academic Board advises the Rectorate on all academic matters, including academic priorities and policies of the University, academic aspects of the University's strategic plan, policies concerning the conditions of appointment and employment of academic staff, the maintenance of academic standards and any academic matters it considers to be of strategic importance.

The Deputy Rector for Academic Affairs is the Chair of the Academic Heads of Department Committee, comprised of the Associate Deputy Rector for Academic Affairs, and all Academic Heads of Departments, including the Head of GUBridge. Where a Head of Department is unable to attend, he/she will nominate a representative from within the Department. The Head of the Department of Quality Assurance & Planning, the Head of the Department of Registry and Student Admissions, the Rector and the Deputy Rectors have a standing invitation to participate in all meetings of the Committee.

The Research, Consultancy and Innovation Board is comprised ex-officio of the Deputy Rector for Research and Innovation (Chair), the Director of Research Centres, one representative from each Academic department, a representative of the Technology Transfer Office (TTO), the Head of the Quality Assurance and Planning Department, a student representative, appointed by the Student Advisory Council and TRC Focal Point (Secretary of the Board). The members of the Rectorate have a standing invitation to participate in all meetings of the Research, Consultancy and Innovation Board and as non-voting participants. The Chair of the Board can nominate one of the other Rectorate members or another member of the Board as the Acting Chair.

The University currently consists of four faculties, Business and Economics, Engineering and Computer Science, Sciences, and Urban Planning and Architecture, and five departments, Applied Geosciences (AGEO), Computer Science (CS), Engineering (ENG), Logistics, Tourism and Service Management (LTSM), and Urban Planning and Architecture Design (UPAD). Each faculty is headed by a Dean who is elected by members of the faculty. Members of a faculty are all professors (full, associate, and assistant professors) and lecturers with regular employment contracts with a department belonging to a faculty.

In the beginning, the faculties were headed by professors from RWTH Aachen University, the so-called inaugural deans. Professors employed at GUTech later assumed the posts of Head of Department and Dean.

The Academic Department Board comprises of all members of staff in the academic department. The Board is chaired by the Department Head. Each member of the Department Board has one equal vote. In case of equality of vote, the vote of the Head of Department shall decide. The Academic Department Board is responsible for ensuring good academic within the department. It monitors the development and the performance of the teaching, research, and community activities within the Department with respect to the needs of the programmes offered by GUTech and with respect to the needs of Oman and the neighbouring countries. It shall advise the Rectorate in matters of long-term, strategic planning and preparation of the annual budget and personnel development with regards to the Department needs. This advisory process requires the mutual exchange of relevant information between the Department and Rectorate.

The Head of Department invites all staff members of the department to regular department meetings. Other than the formal Department and Faculty Board meetings, the Department Meeting shall facilitate simple communication among the staff and dissemination of information and give space to discuss current topics and further developments, making sure everyone is up to date. Interns and other non-permanent staff may participate in the meetings.

The Department Board appoints a Curriculum Committee which is given the task of monitoring and reviewing the teaching and learning occurring within existing study programmes. The task of the Curriculum Committee is to review the study programmes and suggest curricula changes to the Department Board. Each study programme must have a Board of Examiners.

An External Advisory Board is located in each academic department, with the purpose of providing information and advice to the professors of the department about the needs of stakeholders from both industry and government.

GUtech's Constitution emphasizes its values: in particular, the University welcomes students and staff from both genders, and from all ethnic, geographical, cultural, and religious backgrounds. In addition, discrimination against others is considered non-academic misconduct and is punishable up to the termination of enrolment. The same applies for employees.

GUtech has a Student Advisory Council to ensure the proper representation of student interests on campus. The students in each department elect representatives to the Students Advisory Council. The President of the Student Advisory Council is a member of the Academic Board. The Student Advisory Council is elected by the students at the University and is structured according to the "Manual for the Organisation of Student Advisory Councils at Higher Education Institutions" issued by the Ministry of Higher Education, Research, and Innovation (MoHERI). Each study programme is represented on the Council with up to three representatives who are elected by the students in the programme in free, equal, and secret elections. The student representatives shall meet with the Rectorate and the Rector on a regular basis and discuss matters of mutual interest. This includes curricula, assessment procedures, course rules, residential and social facilities, quality assurance and fee payment policies.

The Deputy Rector for Administration and Finance is the Chair of the Administrative Heads of Department Committee. The Administrative Heads of Department Committee is comprised of all Heads of Administrative Departments. Where a Head of Department is unable to attend, he/she will nominate a representative from within the Department. The Rector and other Deputy Rectors have a standing invitation to participate in all meetings of the Committee.

The heads of the administrative departments/units chair the Steering Committees for their respective departments. These Steering Committees comprise stakeholders from academic and other administrative departments and are aimed at ensuring better collaboration and lateral integration between departments.

1.2 Assessment

GUtech has a well-defined and comprehensive policy for quality assurance that outlines the university's commitment to maintaining high standards in education and provides a clear framework for ensuring quality in all aspects of its operations. It is accessible to all stakeholders, including students, faculty, staff, and external partners, promoting transparency and accountability in the institution's quality assurance processes.

GUtech's quality assurance policy covers an extensive range of relevant areas, ensuring a holistic approach to maintaining and improving educational standards. The policy addresses key aspects such as curriculum development, teaching and learning methods, student assess-

ment, programme evaluation, and resource management. It also includes provisions for benchmarking against international best practices and aligning with local and regional accreditation requirements. The policy ensures that all areas of the educational experience, from admission to graduation, are subject to rigorous quality assurance measures.

GUtech involves all relevant bodies and stakeholders in the development and implementation of its quality assurance policy. The policy is developed through a collaborative process that includes input from faculty, administrative staff, students, and external partners, such as industry representatives and international advisory boards. This ensures that the policy reflects the diverse perspectives and needs of the university community. During implementation, various committees and working groups are responsible for overseeing specific aspects of quality assurance, such as programme review, student feedback, and staff development. This collaborative approach fosters a strong quality culture within the institution and ensures that all stakeholders are actively engaged in maintaining and improving educational standards.

GUtech's quality assurance policy is implemented through a well-defined set of procedures and guidelines that are consistently applied across the institution. The policy is monitored through regular internal audits, performance evaluations, and feedback mechanisms, such as student surveys and stakeholder consultations. The university has established key performance indicators (KPIs) to measure the effectiveness of its quality assurance processes and identify areas for improvement. Data collected from these monitoring activities is analysed and used to inform policy revisions and strategic planning. The policy is reviewed and updated periodically to ensure its relevance and alignment with changing educational standards, stakeholder needs, and institutional goals. This continuous improvement cycle ensures that the quality assurance policy remains effective and responsive to the evolving needs of the university community.

GUtech has a strong commitment to gender equality and the promotion of equal opportunities, which is reflected in its quality assurance policy and institutional practices. The university actively promotes a culture of inclusivity and non-discrimination, ensuring that all students and staff have equal access to educational and professional opportunities, regardless of gender or background. The policy includes specific provisions for ensuring fair and equitable treatment in areas such as admissions, scholarships, and career advancement.

GUtech's robust and comprehensive approach to quality assurance is underpinned by strong institutional policies, collaborative stakeholder engagement, and a commitment to continuous improvement and inclusivity.

1.3 Conclusion

The criterion is **fulfilled**.

2 ESG Standard 1.2: Design and approval of programmes

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

2.1 Implementation

Oman National Qualifications Framework (ONQF)

The Oman Academic Accreditation Authority (OAAA), now Oman Authority for Academic Accreditation and Quality Assurance of Education (OAAAQA), is responsible for quality management in higher education in Oman by Royal Decree 74/2001. In 2009, it published the Oman Standard Classification of Education Framework (OSCED) which provides a framework to classify all academic study programmes in Oman and which supersedes the older Requirements for Oman's System of Quality Assurance in Higher Education (ROSQA) framework, which was introduced in 2004, a mandatory national accreditation framework.

The Oman National Qualifications Framework (ONQF) which was approved in 2005 is part of OSCED and lists detailed requirements for study programmes at various types of HEIs, as for example general graduate skills. For example, a Bachelor degree at university level requires 480 ONQF credits (equivalent to 192 ECTS credits, since one ONQF credit represents ten hours of work versus 25 hours for one ECTS credit) and a four-year full-time study plan. In September 2018, the Oman National Qualification Framework (ONQF) was introduced. It is a comprehensive, integrated ONQF. It includes both qualifications from public and private sectors of education and training in Oman.

In August 2022, the updated version of the Oman Qualifications Framework (OQF) was published. This OQF Document provides a comprehensive description of the OQF, including its objectives, structure, Level Descriptors and processes for the placement and review of qualifications on the National Register of Qualifications (NRQ). In addition, the document includes the Qualification Arrangements for the range of Omani qualifications offered in general (school) education, academic, technological, professional and technical and vocational education to provide information on the OQF Level and minimum OQF Credit Value of each Qualification Type.

Objectives

Due to the quality of the local high school education system, most students cannot enter the Bachelor programmes immediately after high school but first complete a foundation year at GUtech. GUtech is the only private HEI in Oman asking for an IELTS score of at least 6.0 to start the Bachelor programmes. However, the achievement of this requirement may be delayed until the 4th year if students achieve IELTS 5.5 and seats are available in the respective programmes.

For more than three decades, Oman and Germany have enjoyed successful cooperation in political, economic, and cultural fields. Germany is one of Oman's key economic partners in the non-oil sector. The two countries hold regular bilateral consultations focusing on both politics and economics. In 2014, Germany and Oman signed a declaration of intent on cooperation on culture, education, science, and research. Guided by his Majesty Sultan Qaboos bin Said's strong commitment to provide excellence in education for the country's youth, the German University of Technology was established in collaboration with RWTH Aachen University to introduce to Oman and the region new, internationally recognised educational opportunities.

Through its affiliation with RWTH Aachen University, the German University of Technology aims at educating highly qualified and responsible students according to German standards and with a firm grounding in Omani heritage. The Degrees offered are recognised both in Oman and the European Union, thereby offering a wide range of options for the future careers of the students.

All degree programmes at GUtech are taught in English, including written and oral tests, seminar papers, and the Bachelor's and Master's theses. Students are also expected to develop communication skills in German as a preparation for possible courses abroad. To ensure that students can sufficiently follow the programme, they have to meet certain language standards upon enrolment. To ensure the necessary language skills among the University's staff as well, applicants must prove their English proficiency during the recruitment process.

Students at GUtech enjoy an education that is very demanding because the study programmes at GUtech are modelled on similar programmes at RWTH Aachen University. Some students have difficulties coping with the demands of a German University education, but in general one can in most students observe a drastic change of attitude and self-study skills over the four years they spend in a Bachelor programme at GUtech. In most programmes, students spend 25–30 hours per week in a classroom or lab. The Department of Student Affairs offers extra-curricular activities, like student clubs and sports activities.

Learning English

GUtech has an IELTS 6.0 entry requirement, which is the highest threshold in Oman (minimum 4.5 is required by the Ministry of Higher Education, Research, and Innovation). Fluency in English is essential for scientists and engineers in a global business environment such as the Gulf region, with a strong mix of local and expatriate workers at all levels of a company. All students take Life Skills Courses worth four ECTS credits for the first six semesters.

Learning German

Students at GUtech study German for at least three semesters. Studying a foreign language broadens their horizons; studying German prepares them for future educational or working visits to Germany or other German speaking countries. It raises their understanding of diverse cultural, communication and learning issues. They learn to reflect on their own and other perspectives and are challenged to communicate in a foreign language system in unaccustomed situations with a positive effect on their general problem- solving abilities.

Learning a language involves memorising rules and vocabulary which improves overall memory and learning techniques. The students learn to focus on what is relevant and edit out irrelevant information; they improve their analytic and interpretive capacities.

Foundation programme

To prepare students for the demands of the Bachelor programmes

students are required to first pass GUtech's Foundation Programme (FP)6 before being eligible to start their Bachelor studies. Since the different Bachelor programmes at GUtech have some subject-specific requirements for the preparatory courses in FP, students usually decide on their future Bachelor programme before entering the FP.

The Foundation Programme is committed to improving students' English language proficiency, developing their ability in the other core subjects, mathematics and information technology. The learning of study skills is integrated in all courses. The decision of the MoHERI to provide only one year of scholarship for Foundation students from 2018-2019 prompted a restructuring of the Foundation Programme for the start of 2018-2019.

Successful completion of GUtech's Foundation Programme requires a pass in English, Mathematics, and Information Technology courses.

Students are expected to achieve a level of proficiency that will allow them to gain entry to and succeed in the academic (i.e., Bachelor) degree programmes offered by GUtech.

English language

The FP programme comprises of two semesters over one academic year. The English Language Foundation Programme Curriculum consists of English Level Courses at eight levels. Students are streamed into one of the four levels in English based on their scores in the Oxford Online Placement Test (OOPT) in semester one at the start of the academic year. A minimum grade of 50% and IELTS is required to pass English Coursework at the end of the academic year.

Depending on their choice of degree programme in the FP (i.e., Computer Science, Engineering, Geoscience, Logistics, International Business and Service Management, or Urban Planning and Architectural Design), students also receive tuition in mathematics and IT to equip them with content specific knowledge and skills.

Information Technology

One of the core courses provides the basics of intermediate computer skills which students need to succeed in environments that require the use of computers and the Internet. The course is using Internet and Computing Core Certification (IC3) that covers Key Applications, Computing Fundamentals, and Living Online. Students who pass all three online examinations will be certified in IC3, a recognised global certification for digital literacy. To pass IT you must obtain a minimum score of 700 in each section (module).

Mathematics

The Mathematics programme is designed to develop core competencies that students require to enrol in undergraduate studies. The objectives of the course are e.g. to consolidate the understanding of the fundamental concepts and principles of mathematics. A minimum mark overall grade of 50% is required to pass Maths.

Bachelor Programmes

Programme Structure

In accordance with the regulations of the Ministry of Higher Education, Research and Innovation of the Sultanate of Oman, all BSc and BEng programmes at GUtech are taught as full-time programmes with a standard duration of eight semesters (i.e., four years). A Bachelor of Science or Bachelor of Engineering in the respective study field is awarded upon successful completion. While developed to be aligned with the structures introduced in Europe after the Bologna Reform, the study programmes must fulfil Omani legislation and take into account the local education system.

The Oman National Qualifications Framework (ONQF) requires a minimum of 480 ONQF credits for all Bachelor programmes in Oman, where one ONQF credit corresponds to a student workload of ten hours. GUtech exceeds the minimum workload by requiring a total workload

of 600 Omani credits, equal to 240 ECTS credits, typically 30 ECTS credits per semester with a workload of 25 hours per credit.

One of GUtech's main goals is to make its programmes internationally compatible and align them with European and German standards. Among other approaches, this is achieved by following the guidelines associated with the European Bologna process, including the usage of ECTS credit points, final theses, and outcome-oriented teaching. In particular, GUtech requires all graduates to successfully complete an internship and a Bachelor's thesis to qualify for graduation.

Students usually take all courses in the Sultanate of Oman. The courses are taught by faculty based in Muscat and, occasionally, visiting professors from RWTH Aachen University and other renowned universities. For courses requiring highly specialised equipment, students may travel to Germany to complete the courses at RWTH Aachen University, for example.

All study programmes are regularly reviewed by the Curriculum Committees of the respective departments.

Academic Calendar

For the Bachelor programmes, each academic year consists of two semesters, the winter semester, and the spring semester. A semester consists of fourteen teaching weeks, followed by an exam preparation week and two weeks of exams.

Learning objectives and modularisation

Formal Structure of the Bachelor Programmes: ECTS

One of GUtech's main goals is to make its programmes internationally compatible and align them to German standards. Among others, this is achieved by following the guidelines associated with the European Bologna process, including the use of ECTS (European Credit Transfer System) credit points and outcome-oriented teaching.

At GUtech, one ECTS credit point corresponds to a student workload of 25 hours. Since one ONQF (Oman National Qualifications Framework) credit point corresponds to ten hours of work, this means that one ECTS credit point is equivalent to 2.5 ONQF credit points. Here, student workload refers to the total time spent on a course, i.e., class time, preparation time, time for homework and exam preparation, etc.

All Bachelor programmes encompass a workload equivalent to at least 240 ECTS credit points, or 600 ONQF credit points, distributed over eight semesters. Each semester requires approximately 30 ECTS credits, or 75 ONQF credits. In daily routine, the ECTS system is more commonly used at GUtech than the ONQF system.

In most cases, the estimated workload and therefore the number of credits awarded for a course is based on experience at RWTH Aachen University and has hence been refined over several years. Moreover, close contact between the students and academic staff as well as the guided form of teaching allow for a good impression of the actual student workload.

Students are only awarded credits if they successfully pass a course. The requirements for passing are stated in the respective course specifications of each study programme.

Modularisation

All programmes at GUTech are modularised programmes, meaning that they consist of individual, subject-grouped courses with lectures, exercises, exams, etc. Each course can be passed and transferred individually (if pre-requisites are met), allowing for individual study paths and international mobility. No course exceeds the duration of one semester.

Course Specifications are regularly reviewed by the respective departmental Curriculum Committees and archived in a repository.

According to the affiliation agreement, RWTH Aachen University, if required, shall provide assistance for developing Programme Specifications at Bachelor, Masters and PhD levels, as well as short courses and training programmes based on mutually agreed terms on a case-by-case basis. The teaching staff may initiate minor changes to the Course Specification. A Course Specification must at least contain the following information: Course Code, Course Title, Credit Points, Catalogue Description, Prerequisite(s), Co-requisite(s), Requirement, Learning Outcomes, Topics, Distribution of Student Workload, Forms of Learning, Forms of Assessment and Weighting, Requirements to pass the Course, Textbooks/Recommended Reading/Supporting Material, Faculty's Member/Instructor, Semester, Start Date and End Date.

Integrating the German Point of View

GUTech takes pride in bringing German education to Oman and the wider region. To do so, experts from RWTH Aachen University and other German universities are involved in the development of curricula and the continuous improvement of the University. However, it is deemed important to also integrate German teaching directly in the education of GUTech's students.

This can be done either by sending students to Germany or by bringing German teaching staff to Oman. The latter can be achieved by either permanently employing German experts at GUTech or by hiring them as fly-ins to conduct certain courses at GUTech.

Sending students to Germany is an immensely immersive learning experience. Some courses in GUTech's curricula make use of expensive equipment available at RWTH Aachen University.

Such study trips to Germany also include cultural aspects and give insights to the other university's teaching and research projects. GUTech is grateful that the DAAD has been supporting many of these excursions in recent years, allowing socially disadvantaged students to take part in these important parts of their education at GUTech.

In the current situation at GUTech, the fly-in model has proven to be the best way to integrate the German point of view, both financially and qualitatively. Teaching staff, e.g., from RWTH Aachen University, come to GUTech to teach block courses using English versions of the very same materials they use back home. Department heads are in charge of ensuring that the content of the courses matches the course descriptions and that GUTech's quality standards are met.

Lastly, graduates from European universities are recruited as interns to support GUTech's permanent teaching staff. Since many of these students have already been teaching assistants at their home universities, they are competent to do the same job at GUTech. Interns are involved in teaching work for the University for at least one semester. Before arrival, interns are provided with an extensive document describing GUTech, the country of Oman, the work environment, and other practical aspects. On arrival, they are given an introduction to GUTech regulations and procedures. Involving the interns in everyday teaching, especially holding tutorials, and supporting labs and project work, is a powerful way to expose GUTech's students to a German (or international) viewpoint and new ideas. The GUTech Aachen Office coordinates the appointments and thereby assures the quality of the interns recruited.

University Graduate Attributes and Skills

The following describes the University Graduate Attributes and Skills that all GUTech graduates should display at the time of their graduation:

- Ethics – The graduates have developed awareness and holistic understanding of their role as responsible citizens in an increasingly globalised context.
- Critical thinking and problem solving – The graduates are able to engage real-world problems in a theoretically informed, rigorous, and questioning manner. They are able to devise solutions, select the most appropriate one, implement it, and reflect on its performance.
- Creative thinking – The graduates are able to think laterally and develop creative ideas.
- Individual and team work – The graduates have the capability to work effectively alone or in a team, to be self-directed, and to show independent judgment.
- Communication – The graduates are effective communicators, using oral, written, and electronic communication skills. They can interact confidently in a variety of settings,

with a range of people from both genders, individually and in team situations, from peers to the wider community.

- Life-long-learning – The graduates appreciate that learning is continuous and have the ability to continue learning throughout life. They have developed a variety of approaches to learning, including self-directed, collaborative and self-reflective processes.
- Sustainability – The graduates have acquired knowledge and have been engaged in a range of practices that enables them to implement sustainability in line with the United Nations SDGs and Oman's Vision 2040.

“Logistics” (B.Sc.):

Reasons for establishment of the Programme

The Bachelor of Science in Logistics at GUtech is tailored to the requirements of the Sultanate of Oman and the region yet draws on state-of-art expertise accumulated at RWTH Aachen University. A strong emphasis of the programme is placed on the employability of GUtech's graduates. Many elements of the programme are accomplished in cooperation with local and international industry partners. Also, generic skills such as critical thinking, creative thinking, life-long learning, intercultural communication, and teamwork are seen as essential and are integrated throughout the curriculum.

Objectives and their Evaluation and Development

The Bachelor of Science in Logistics aims at providing students with a solid and in-depth knowledge of logistics, supply chain management, and transportation management. The programme combines a comprehensive education in the engineering subjects of logistics and in the business subjects of logistics and supply chain management. Graduates of the programme will be able to take over responsible administrative or management positions in logistics in the Sultanate of Oman and the region or to enrol in further postgraduate programmes.

Programme Objectives

Graduates from the Bachelor of Science in Logistics will also have developed the following attributes and skills: knowledge about business methods and theories, understanding of logistics, quantitative orientation, thinking in logistics contexts and management and entrepreneurial skills.

Structure – Time and Content

The Bachelor of Science in Logistics is taught as a full-time programme. The duration of the Bachelor programme at GUtech is eight semesters. The B.Sc. in Logistics encompasses a work-load equivalent to 241 credit points in the European Credit Transfer System (ECTS) or 600 credit points in the Oman Qualification Framework (OQF), distributed over eight semesters.

Programme-Specific Graduate Attributes and Skills

The main focus of the first four semesters in the Bachelor of Science in Logistics is to introduce students to the field of logistics and to convey the fundamentals of the study programme in mathematics, statistics, computer sciences and in core business subjects.

In the last four semesters, the study programme covers all other basic fields in business administration, economics, management, and the most relevant concepts, methods and applications of logistics.

Evaluation of Objectives

Most courses are assessed with a combination of continuous and final examinations (formative and summative assessments). Final examinations are scheduled and administered centrally. Moderation takes place if a course is taught by more than one lecturer.

Glossary for Forms of Assessment and Weighting

I. Quizzes. Individual assessment either written or oral – Sudden or announced in a controlled environment.

II. Mid-Semester Exam. Controlled written assessment counting between 20-30 % of the total grade. Duration between 60 to 90 mins.

III. Final Exam. Controlled written assessment counting for a minimum of 40 % of the total grade. Duration 120 mins or as recommended by the Professor.

IV. Course Work. Tasks specified by the tutor including but not limited to: class activities (e.g., case study analysis, research and presentation tasks done in class or outside), job shadowing reports, field trip reports, participation in field trips and tutorials.

V. Thesis written report. A written report of an average of 15,000 words representing student individual and independent work.

VI. Oral Examination (Viva). Includes presentation and oral exam of the thesis.

Internships

As a pre-requisite to the commencement of their Bachelor's thesis, students must submit their certificate of internship, a report as well as an internship presentation, and must have completed at least 180 credit points.

Employability

Graduates of the Bachelor of Science in Logistics receive an interdisciplinary education, focusing on the knowledge of theoretical fundamental concepts as well as the development of applied competencies required for the design and management of logistics networks, for supplier management, production and transportation logistics, intra-logistics, and several branch specific logistics areas. This will allow graduates to work as logistics engineer, planner, and manager or as a supply chain manager in a multitude of areas in industry or government.

"International Business and Service Management" (B.Sc.)

Reasons for establishment of the Programme

The Bachelor of Science in International Business & Service Management at GUTech is tailored to the requirements of the Sultanate of Oman and the region, hence it is focused on one of the two most strategic service sectors in Oman namely tourism and logistics (the latter being recently launched as a separate programme). The programme draws on state-of-art expertise accumulated at RWTH Aachen University in Business, Economics and Applied Geography and it also utilises existing expertise at GUTech and its Sustainable Tourism and Regional Development Department in the fields of tourism, culture, and development studies especially in the Arab World. The programme recognises the position of Germany as a world leader in the tourism industry (currently second only to China in generating international tourism and the first to the region) as well as the strategic direction of the Sultanate of Oman that highlights tourism as one of the leading sectors for its economic vision 2040.

Programme Objectives

The programme equips students with business knowledge and skills focusing on this vital service sector. The programme considers tourism via the prism of sustainability; providing the skills and the knowledge that can ensure that growth of this sector will not be at the expense of the society or the environment but rather enriching to them. A strong emphasis is placed on the employability of graduates of the programme; hence many elements of the programme will be accomplished in cooperation with local and international industry partners. Also, generic competencies, such as critical thinking, creative thinking, life-long learning, intercultural communication, and teamwork are seen as essential and are integrated throughout the curriculum.

Structure – Time and Content

The Bachelor of Science in International Business & Service Management is taught as a full-time programme. The duration of the Bachelor programme at GUTech is eight semesters. The B.Sc. in International Business & Service Management encompasses a work-load equivalent

to 240 credit points in the European Credit Transfer System (ECTS) or 600 credit points in the Oman Qualification Framework (OQF), distributed over eight semesters.

The main focus of the first four semesters in the B. Sc. in International Business & Service Management is to introduce students to the field and to convey the fundamentals of the study programme in mathematics, statistics, and languages (primarily English and German) in addition to core business and tourism subjects.

The last four semesters of the study programme cover more specialised courses in business, management and in tourism. Students can also choose from a set of elective courses. It is during that stage that students have to complete a 12 weeks internship module either nationally or internationally. Given the tourism focus of the programme students are also expected to participate in local and international excursions to main attractions and destinations.

Programme-Specific Graduate Attributes and Skills

The Bachelor of Science in International Business & Service Management aims at providing students with a solid and in-depth knowledge in the field of international business administration and service operations focusing on tourism. The programme combines a comprehensive academic and theoretical knowledge in business and management subjects with the specialised knowledge and operational skills of tourism and other service sector industries. This is a career-oriented programme and students will be equipped with necessary transferrable skills required such as information technology, languages, numerical skills, critical thinking and intercultural communication in addition to the specialised knowledge in both tourism and business management.

Graduates from the BSc. in International Business & Service Management will also have developed the following attributes and skills: interdisciplinary thinking, methodological diversity, theoretical knowledge, communication skills, innovation and entrepreneurial skills, analytical and reflective thinking.

Evaluation of Objectives

Most courses are assessed with a combination of continuous and final examinations (formative and summative assessments). Final examinations are scheduled and administered centrally. Moderation takes place if a course is taught by more than one lecturer. The most common forms of assessment are:

Quizzes. Individual assessment either written or oral – Sudden or announced in a controlled environment.

Mid-Semester Exam. Controlled written assessment counting between 20-30 % of the total grade. Duration between 60 to 90 mins.

Final Exam. Controlled written assessment counting for a minimum of 40 % of the total grade. Duration 120 mins or as recommended by the Professor.

Course Work. Tasks specified by the tutor including but not limited to: class activities (e.g., case study analysis, research and presentation tasks done in class or outside), job shadowing reports, field trip reports, participation in field trips and tutorials.

Thesis written report. A written report of an average of 15,000 words representing student individual and independent work.

Oral Examination (Viva). Includes presentation and oral exam of the thesis.

Internships

The programme includes a 12-week internship module. As a pre-requisite to the commencement of their Bachelor's thesis, students must submit their certificate of internship, a report as well as an internship presentation, and must have completed at least 180 credit points.

Employability

Graduates of the programme will be able to take over responsible administrative or management positions in business, tourism, culture and transportation operations. Graduates of similar programmes were also found to be attractive for cultural and environmental agencies and the banking sector.

"Cybersecurity" (B.Sc.)

Reasons for establishment of the Programme

The IT sector is the fastest growing sector among all science and engineering disciplines, and therefore any university of technology must offer IT or CS related study programmes. The Rectorate and Strategic Boards of the University therefore consider the programmes offered by the Department of Computer Science to be essential to GUtech and its contribution to the further development of the country and wider region.

The two study programmes – Artificial Intelligence and Cyber Security – complement the overall approach of GUtech to develop and deliver study programmes that meet the immediate need of the industry operating in the region and are fit for the Oman labour force nationalisation schemes. The study programme matches the fields that the Sultanate identified as being of current and future economic value. It is the clear aim of all GCC countries including Oman to replace the expatriate workforce with trained national personnel. The industry is thus in need of more qualified national staff trained at international standards.

Both programmes are new. The first CYS graduates will be in Spring 2024 while the first graduates in AI will be in Spring 2026. The Ministry of Higher Education, Research and Innovation (MoHERI) does not allow programme changes before having first graduates.

Objectives and their Evaluation and Development

Cyber security industry in Middle East grew constantly. The growth was mainly driven by arising from an increasing number of cyber-attacks on critical infrastructure as well as cybercrimes that targeted many companies in the region. The current BSc in Computer Science does not give graduates enough technical background to deal with security challenges. In Oman, only colleges are offering Bachelor programmes in security while very few programmes are offered in the GCC. To overcome this lack of expertise, a Bachelor degree in Cyber Security will produce graduates who will be highly hireable in the local and regional market. This will also help in confirming GUtech's reputation as the foremost university of technology in the region. In particular, the programme aims to develop, in the Sultanate of Oman and the region, the knowledge and competencies required to meet the increasing demands of Cyber Security experts.

Programme Objectives

The educational objectives of the AI and Cyber Security programmes are to produce graduates who are able to:

1. Engage in professional practice where computer science skills are needed in general but mainly where AI/Cyber Security knowledge and skills are required.
2. Innovate in the design and implementation of secured systems and products.
3. Pursue post-graduate education in AI/Cyber Security, computer science, or related fields.
4. Assume positions of leadership and responsibility in their organisation.

Structure – Time and Content

In the Cyber Security programme, the first 4 semesters are exactly the same as the existing BSc in CS. Students will take the basic courses of CS including programming and data structures, database systems, Operating systems, Networking, algorithms, software engineering, and basic math courses. In the next 4 semesters, 9 new courses which are related to the specialisation of Cyber Security are introduced. According to both ABET and ACM, a cyber security curriculum should include 8 knowledge areas: data, software, component, connection, human, organisation, and societal. In addition to basic security concepts and following ACM and ABET recommendations for BSc programmes in Cyber Security, CYS students are ex-

posed to focused courses which cover the basics of each knowledge area. The CYS programme keeps some of the courses of the minor in Business that the CS programme already has.

Programme-Specific Graduate Attributes and Skills

The BSc programme in AI and the BSc programme in Cyber Security are aimed at high-school graduates who want to start a career in AI (or related fields) or Cyber security (or related fields), respectively.

Graduates from the Bachelor of Science in Cyber Security are expected to develop the following attributes that will allow them to participate effectively in the computer science professions: knowledge and understanding of computer science, computer science analysis and modelling, software design, investigations and assessment, computer science practice, knowledge and understanding of cyber security and cyber security practice.

Evaluation of Objectives

The types of assessments as well as their weightings and requirements to pass a course are stated in the respective course specifications. AI/CYS assessment types include on-course assignments, reading and presenting exercises, graded homework, project reports, lab reports, exercise-based exams and oral and written examinations.

Internships

The aim of the internship is to provide the students with insight into the daily activities of an IT professional and to apply classroom knowledge to real life situations. The students typically do their internships in the summer holidays after the 6th semester. The only requirement is that they have reached at least 120 credit points. Students are encouraged to look for internship opportunities both locally and internationally.

Employability

Both AI and CYS Bachelor programmes are designed to give students a broad foundation in the main areas of computer science before they specialise their knowledge in either AI or Cyber Security. The mandatory six-week internship gives students the opportunity to learn more about the workplace environment in various industries. It is anticipated that students join their internship company after graduation, as is the case with GUTech's other programmes. While both programmes have been designed to meet the requirements of the region, graduates will also be able to start working for international companies. Since 2014, the CS Department has joined leading university programmes (Cisco Net Academy, EC-Council Academia, and SAP University Alliances Programme to integrate the latest developments in database and networking technology into the AI and CYS curriculum).

"Artificial Intelligence" (B.Sc.)

Reasons for establishment of the Programme

The IT sector is the fastest growing sector among all science and engineering disciplines, and therefore any university of technology must offer IT or CS related study programmes. The Rectorate and Strategic Boards of the University therefore consider the programmes offered by the Department of Computer Science to be essential to GUtech and its contribution to the further development of the country and wider region.

The two study programmes – Artificial Intelligence and Cyber Security – complement the overall approach of GUtech to develop and deliver study programmes that meet the immediate need of the industry operating in the region and are fit for the Oman labour force nationalisation schemes. The study programme matches the fields that the Sultanate identified as being of current and future economic value. It is the clear aim of all GCC countries including Oman to replace the expatriate workforce with trained national personnel. The industry is thus in need of more qualified national staff trained at international standards.

Both programmes are new. The first CYS graduates will be in Spring 2024 while the first graduates in AI will be in Spring 2026. The Ministry of Higher Education, Research and Innovation (MoHERI) does not allow programme changes before having first graduates.

Objectives and their Evaluation and Development

In line with the global trend, Omani companies will also need AI technology to boost their business and be internationally and regionally competitive. Similarly, many governmental agencies are striving to apply AI tools in order to improve their services. However, currently in Oman, there is little workforce with skills in AI. The main aim of the Bachelor of Science in Artificial Intelligence programme is thus to fill this gap.

In particular, the programme aims to develop, in the Sultanate of Oman and the region, the knowledge and competencies required to meet the increasing demands of emerging professions such as knowledge engineer, intelligent systems or expert systems developer, systems analyst, data scientist, and AI engineer. Graduates may also work as systems programmer, systems designer, software developer, software consultant, or computer scientist. These jobs are very needed worldwide but also in the region.

Programme Objectives

The educational objectives of the AI and Cyber Security programmes are to produce graduates who are able to:

1. Engage in professional practice where computer science skills are needed in general but mainly where AI/Cyber Security knowledge and skills are required.
2. Innovate in the design and implementation of secured systems and products.
3. Pursue post-graduate education in AI/Cyber Security, computer science, or related fields.
4. Assume positions of leadership and responsibility in their organisation.

Structure – Time and Content

As per the AI programme, the courses of the first 4 semesters are almost the same as the CYS and the existing BSc in CS. Indeed, students will take the basic courses of CS including programming and data structures, database systems, Operating systems, Networking, algorithms, software engineering, and basic maths courses. However, as 3 basic AI courses are introduced in semesters 2-4, three CS core courses are postponed to year 3. In semesters 5-8, 7 other AI-related courses are introduced. In addition to basic AI concepts, students will be exposed to the main sub areas of AI such as Machine Learning, Cognition, and Autonomous Systems. The AI programme also keeps some of the courses of the minor in Business that the CS programme already has.

Unlike the existing CS programme, both AI and CYS offer a limited number of elective courses. Indeed, both AI and CYS programmes have to cover core CS courses, business courses, and specialty-related courses, which leaves little room for more elective courses.

Programme-Specific Graduate Attributes and Skills

The B.Sc. programme in AI and the B.Sc. programme in Cyber Security are aimed at high-school graduates who want to start a career in AI (or related fields) or Cyber security (or related fields), respectively.

Graduates from the Bachelor of Science in AI are expected to develop the following attributes that will allow them to participate effectively in the computer science professions: knowledge and understanding of computer science, computer science analysis and modelling, software design, investigations and assessment, computer science practice, knowledge and understanding of AI, and AI practice.

Evaluation of Objectives

The types of assessments as well as their weightings and requirements to pass a course are stated in the respective course specifications. AI/CYS assessment types include on-course assignments, reading and presenting exercises, graded homework, project reports, lab reports, exercise-based exams and oral and written examinations.

Internships

The aim of the internship is to provide the students with insight into the daily activities of an IT professional and to apply classroom knowledge to real life situations. The students typically do their internships in the summer holidays after the 6th semester. The only requirement is that they have reached at least 120 credit points. Students are encouraged to look for internship opportunities both locally and internationally.

Employability

Both AI and CYS Bachelor programmes are designed to give students a broad foundation in the main areas of computer science before they specialise their knowledge in either AI or Cyber Security. The mandatory six-week internship gives students the opportunity to learn more about the workplace environment in various industries. It is anticipated that students join their internship company after graduation, as is the case with GUtech's other programmes. While both programmes have been designed to meet the requirements of the region, graduates will also be able to start working for international companies. Since 2014, the CS Department has joined leading university programmes (Cisco Net Academy, EC-Council Academia, and SAP University Alliances Programme to integrate the latest developments in database and networking technology into the AI and CYS curriculum).

2.2 Assessment

“Logistics” (B.Sc.)

The Bachelor of Science in Logistics at GUtech is a well-designed programme for Logistics in Oman. The curriculum of the Bachelor programme is a good combination with modules which provides important general competencies and modules which cover more specific topics. Due to a wide range of electives within the programme, the students have the opportunity to set their own priorities and choose their preferred specialisation. However, more topics related to IT (e.g. data analytics) could be offered at least as electives for logistics students.

The mandatory internship provides a good insight for Logistics students in structures and processes of companies and other institutions. To enhance the scientific approach of an internship a scientific report and the end of an internship is recommended (instead of an experience report).

The study programme is designed in a way that the four objectives of higher education are met. The graduates gain a broad knowledge in Logistics and therefore are well-qualified for different Logistics jobs in companies and other institutions.

The expert group suggests the following recommendations:

1. The B.Sc. “Logistics” should include more topics related to IT (e.g. data analytics) to be offered at least as electives for the students.
2. The B.Sc. “Logistics” should include at the end of the internship a scientific report, instead of an experience report, to enhance the scientific approach of the internship.

"International Business and Service Management" (B.Sc.)

The programme “International Business and Service Management” (IBSM) fits generally to the overall strategy of GUtech to support the Sultanate of Oman in its aim to prepare the country for a sustainable economic development which is not solely based on the oil industry. Thus, the chosen focus on tourism as one of the growing sectors of Oman’s economy is highly reasonable. So far and since logistics has been offered as a separate programme – tourism has been the only service sector that is addressed by the programme, a circumstance which is not visible in the programme’s title. Furthermore, it was mentioned in the report of the first accreditation that the inner structure of lectures, particularly regarding tourism, doesn’t always follow a logical structure, starting with more general subjects and ending with rather specific ones. The programme management already took all these aspects into consideration and came up with a new proposal of the curriculum.

This new curriculum does not only offer a specialisation in tourism, but also in the financial sector, including economics as a prerequisite for understanding financial markets. The new curriculum has already been approved by the ministry of higher education and will be introduced for the upcoming academic year 2024/25. The modular concept, where the specialisation is based on a selection of electives in the 5th, 6th and 7th semester, gives room for launching other areas of specialisation from the international service industry in a flexible manner. This new policy underlines the rather general name “service management” which should be kept. Furthermore, the criticism concerning the inner structure of the courses regarding tourism doesn’t longer exist, as all students have to take basic courses in tourism and finance first, before they make their decision how to further specialise. The overall structure of the programme is now very clear and fosters the students’ development in all dimensions - knowledge via specialisations and personality via the life skill courses - in a logical order, starting with more basic subjects and bringing them closer to work life in later semesters. Thus, the internship and the thesis in the last semester give students the possibility to show their maturity in an academic and also practice oriented sense.

Although, the programme’s part “service management” is now highly justified, room for further improvements regarding the term “international” exists. A course, teaching state of the art approaches of intercultural theories (e.g. Hofstede, Hall, Globe study) is missing. This should be

integrated in the curriculum as a deeper understanding of these approaches enables students to better understand intercultural differences and being prepared for situations that require inter-cultural communication and other activities. This goes along with impressions of the involved practitioners that generally appreciate the qualifications of GUtech's applicants but see some gaps in this regard. Taking into consideration that the term "international" is an integral part of the programme's title, such a basic course would rather fit into the first academic year.

Another aspect connected to internationalisation is the quota of students going abroad. The university and the curriculum in IBSM offer the possibility of a semester abroad, e.g. in co-operation with partner universities in Germany. Nevertheless, the option hasn't been taken so often in the past. The meeting with the students revealed that not all students seem to be well informed about the existing possibilities. Thus, room for further improvements in the information policy regarding these possibilities seems to exist. On the other hand, institutional, cultural and financial hurdles shrink the demand. In terms of culture the high quota of female students seems to lead to resistances from their families to go abroad for a longer period. Furthermore, the process of getting a visa for studying in the EU is sometimes complicated and leads to delays. Finally, not everyone is able to afford to study abroad. DAAD finances only a limited number of outgoing students per year. Thus, especially for IBSM students the university should try to further foster international experiences for their students by e.g. looking for private sponsors from tourism and financial industry, finding co-operation partners for internships abroad or establishing something similar to Erasmus-exchange between Arabic states, where visas are not required.

The programme itself meets international standards in the sense of content and academic level. The workload over the 8 semesters seems to be well balanced. Requirements regarding examinations are shown in a transparent way for each course via the module descriptions and typically address a multitude of competencies.

The expert group suggests the following recommendations:

1. The B.Sc. in "International Business and Service Management" should offer a course on "Intercultural Work and Communication" preferably during the first academic year.
2. The B.Sc. in "International Business and Service Management" should try to further foster international experiences for their students by e.g. looking for private sponsors from tourism and financial industry and finding co-operation partners for internships abroad.

"Cybersecurity" (B.Sc.)

The B.Sc. „Cybersecurity“ has its curriculum published online as a generic document in the sense of covering all aspects of studying, not necessarily tailored to the particular Bachelor degree, but in parts detailed about the Cybersecurity specialisation. It was verified that this document is published identically for all studying degrees, showing that the policies applied are public and the same for all study programmes. The areas therein cover in particular the general outlines of study programmes (contents, teaching modes, credit points, etc.), admission procedures and rules, part- and full-time study possibilities, details of assessment and grading, regulations about absence and progression, as well as rights and responsibilities of students. The procedures are, upon inspection, all adequate and aligned with international standards, if not positively exceptional in the level of detail that they are presented to prospective students. As such, the quality criteria meet international standards, and cover all necessary aspects of academic quality and integrity assurance.

The Bachelor Degree in Cybersecurity was designed based on two initial information items: 1) official recommendations of relevant bodies like IEEE and ACM about cybersecurity curricula, and 2) a „benchmark“ of how study programmes of likewise nature at other institutions are designed. These prior research results were supplied as supplementary material for the accreditation, and confirm that the spectrum of contents is aligned with state-of-the-art educational offerings in the cybersecurity field. Additional information is repeatedly and continuously collected from industry stakeholders (in parts using the “internships” as a channel to this end), to adapt the contents of the programme accordingly to regional needs and the local job market. In interviews with the teachers, they confirmed that emerging topics in the field can be included efficiently and without structural or other changes to the curriculum by offering a “Special Topic in Cyber Security” course and in seminars. In cases that the teaching load of the permanent staff members is exhausted, external lecturers can be hired to present topics of contemporary interest. This practice is supported by the rectorate.

A particularity of the Bachelor degree (not only in Cybersecurity) is its weight of 240 ECTS points over 8 semesters. Comparing this to the amount of 180 ECTS points at 6 semester durations in other institutions shows that the workload of the undergraduate programme is the international standard. Similarly, the per-semester ECTS workload as documented in the details to the Cyber-security program ranges approximately at 30 ECTS per semester and is hence also matching standards elsewhere. Particularly positive to mention is the planned “internship” that precedes the phase of writing the master thesis. This part of the curriculum is not usually found in other institutions but adds invaluable experience to students. It was confirmed by the teachers that internship positions can be acquired in several ways, including students proactive search, explicit recommendations and introductions of students to companies, and, in some cases, even by offering students internships at the university departments

themselves. The risk of “job-outs” by this practice is recognized but annihilated by the positive side-effects of retrieving feedback from the local industry, and thereby strengthening the role of GUTech as a strong supporting academic player in the region. The positive effects and strong skills of GUTech’s alumni were confirmed in interviews with local industrial stakeholders.

The study programme of Cybersecurity is identical to that of computer science up to and including the first 4 semesters of the Bachelor degree in “Computer Science”. This appears adequate to establish a solid fundament of knowledge as to how computers work in general, since this understanding is vital for effective protection of the respective mechanisms. The Cybersecurity degree has a slight focus on practicalities but mixes in theoretical teaching to a considerable extent. This combination of practical experience of theoretical concepts is usual and well-proven from other universities and adequate for an education of international recognisability. While the focus of the permanent staff members is, due to resource limitations, on teaching more than on research, the teachers have reported on remarkable efforts to involve students in ongoing re-search activities, and practicalities of system security. As an example, we mention the student’s involvement in “capture-the-flag” competitions, which are internationally established ethical hacking contests. Students from GUTech performed well at these events, which underlines the quality of the education.

In terms of theoretical and practical depth, the broadness of the range of topics, in light of the limited time-resources, precludes an in-depth treatment of all aspects that the curriculum mentions. However, the treatment appears adequate for a bachelor’s degree, leaving enough room to cover selected topics (in the seminar or the course of the explicit name), and, based on reports of teachers in the interviews, leaves students well-prepared for practitioner’s specialisations at some non-academic institutions (such as Cisco certifications and others). In light of this, the study programme appears as an excellent complement to the mission of GUTech and has the potential for a strong contribution to the university’s standing in the region and internationally, especially so, since: *“Cyber security is mentioned in Oman’s 2040 vision as one of the priorities, in order to achieve economic diversification and financial sustainability” (GUTech self-assessment report).*

“Artificial Intelligence” (B.Sc.)

The recent advances in Artificial Intelligence ensure that the Bachelor of Science in Artificial Intelligence is of central importance to both the strategic objectives of GUTech and the needs of the local labour market where there is a gap of skilled workers in AI and related disciplines such as Data Science, Knowledge Engineering etc.

The supplied documentation provided clear evidence of competitor analysis and external stakeholder input in the design of the programme. The programme itself is based on the pre-existing B.Sc. in Computer Science but with substituted modules focused on Artificial Intelligence in the first two years. This allows students exposure to artificial intelligence earlier in the course but means that the first two years of the degree are no longer common with the general B.Sc. Computer Science or B.Sc. Cyber Security thus limiting student mobility across the three programmes. In addition, AI students do not gain sufficient knowledge of Cyber Security and vice versa despite there being increasing connections between the two disciplines. It is recommended that this is reviewed when allowed to consider the re-establishment of a common core between the three programmes to facilitate student transfer and ensure that all computing students have exposure to both AI and Cyber Security.

The programme of study covers both core computer science and core Artificial Intelligence curricula and graduates are therefore employable to the full range of computing careers in addition to specialised AI jobs. The coverage of Artificial Intelligence is good with all subjects covered to some degree. However, given the current importance of Neural Computing (and in particular Deep Learning) within AI, it is surprising there is not a dedicated module on this topic. It is recommended that the department considers the development of such a dedicated module in the future.

The expert group suggests the following recommendations:

1. The department of Computer Science should consider the re-establishment of a common core between the Computer Science programmes to facilitate student transfer and ensure that all computing students have exposure to both AI and Cyber Security.
2. The department of Computer Science should consider the development of a dedicated Deep Learning module in the future.

2.3 Conclusion

The criterion is **fulfilled**.

3 ESG Standard 1.3: Student-centred learning, teaching, and assessment

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

3.1 Implementation

Student Workload

One ECTS credit corresponds to a student workload of 25 hours.

Students typically register for courses worth 30 credits per semester, corresponding to a semester workload of 750 hours. A semester at GUTech is typically divided into fourteen weeks of teaching, one exam preparation week, and two weeks of final exams. Thus, the average weekly student workload is 54 hours. Of this, the students typically spend 25–30 hours in the classroom.

The course specifications detail how the student workload is divided into contact hours (i.e., time the student spends in a classroom) and self-study hours (i.e., time for homework). While contact hours are easy to determine, it is difficult to get accurate estimates for the time students work at home. For example, the students estimate their homework time in their course evaluations.

Learning Context

Didactic Means:

GUTech's understanding of the word "curriculum" includes content as well as pedagogy and opportunity to learn, and special emphasis is given to developing a student-centred approach to teaching and learning.

Overall, the University encourages a strong focus on pedagogy, with the aim of developing higher order cognitive skills among students. Assessment of quality of teaching and learning is an essential part of the recruitment process, with applicants for senior academic positions being interviewed by professors from RWTH Aachen University and being asked to give presentations on their areas of expertise.

Newly hired academic staff at GUTech are given a comprehensive induction focusing on GUTech's student profile, learning styles and motivation of students, as well as Omani culture.

The individual forms of teaching for each course are described in the respective course specifications. While the number of students in lectures has increased, tutorials are offered to provide a more personal teaching environment.

In most subjects, the concept of continuous assessment is incorporated to provide immediate feedback regarding the learning success to both students and instructors. Students' achievements throughout the semester are in many cases included in the final mark.

Tutorials

Tutorials are related to specific courses and offered to students by lecturers on a more individual basis. A tutorial is an additional learning forum in a smaller group for supervision of exercises, field and lab reports, homework, assignments and team projects. Students learn general methods, teamwork and improve presentation and report writing skills.

Seminars

Seminars provide students with an overview about research methods, publications, scientific practices including research ethics and allow them to discuss and present specific topics under the supervision of professors and supporting staff.

Project work

Projects are an important didactical element in the study programme. They allow for exploration of solutions, and students apply new knowledge and skills. In the beginning, project work is intensively structured and supervised. In higher semesters, supervision is sustained, but the level of self-study and independent problem-solving increases. Core contents of project work require students to transfer knowledge to applications in a complex environment as well as the visualisation and communication of results. Students develop skills of effective oral and written expression, to improve their ability to relate to others, to learn to think critically and scientifically, and to finally present themselves professionally.

Homework

Homework refers to tasks assigned to students by their lecturers to be completed without supervision. Subjects are developed in self-directed study and can be finally submitted as assignments. It encourages active, analytical and independent learning in students.

Self-study

Self-study serves as the preparation and follow-up of courses, as well as the revision before assessments. By means of the credit points defined for each course, students are able to schedule their workload efficiently.

Forms of Examination

Assessments are governed by GUTech's Assessment and Examination Policy. All assessments should be directly aligned to the learning outcomes of the respective course, and they should be fair and reproducible. The examiners are independent in defining the content of their examinations, as long as the learning outcomes specified for their courses are being adequately assessed. All passing requirements of a course have to be met before a student is

awarded the respective ECTS credits. Learning Outcomes must be clearly stated, achievable and measurable.

The types of assessment as well as the weightings and requirements to pass a course are stated in the respective course specifications of the study programmes. To complement the range of teaching styles appropriate for different subjects and for the competencies which are expected to be acquired, assessment types vary among different courses.

Most courses finish with a final exam to test the theoretical and practical knowledge of the students (summative assessment). However, continuous assessment (formative assessment) and other forms of assessments are also used throughout the semester, e.g., to ensure that the students develop and enhance relevant soft skills. The final grade is usually computed as the weighted average of all assessments.

Distance and Blended Learning

Before Covid-19, the Ministry of Higher Education, Research, and Innovation allowed at most 75% of a course to be in the form of distance learning.

The University started in 2014 a blended learning initiative with the goal of increasing the use of multi-media teaching tools. E-learning techniques are particularly important for all the courses that are still delivered by fly-in professors. A Rector's Delegate for Blended Learning and Exploratory Teaching Space at RWTH Aachen University, has been advising GUtech on the blended learning initiative and has been providing training to the local staff in the form of small workshops at GUtech.

Foreign Languages

The language of tuition at GUtech is English. Students take English classes until they reach a sufficiently high level (i.e., IELTS 6.0). They also learn German as a second foreign language. German is never used in teaching at GUtech, but it is helpful when students visit Germany on field trips and block courses at RWTH Aachen University. Besides English and German, no other languages are taught at GUtech.

Academic Advisers

Academic advising for the Programmes of Study offered by the University is provided to both prospective and enrolled students. The Registry and Student Admissions Department provides advice on matters related to eligibility, entry requirements, availability of study places, programme contents, programme structure and completion requirements. All current students are assigned an Academic Adviser who provides advice on matters related to the Study Plan, specialisations of the chosen degree programme, and approaches to learning.

Academic Progression

Each student enrolled in an undergraduate programme is assessed for academic progression by the Board of Examiners at the end of the semester. The purpose of the academic progression is to ensure that students are progressing toward graduation. Good students, e.g., with a minimum GPA of 3.3 on both semester and cumulative averages, may be considered for extended course load status which would allow the student to take credits in excess of the normal course load of 30 credits. Weak students on the other hand, i.e., with a semester GPA of less than 1.9, will be placed on probation which means the student can only register after discussing the semester study plan with their Academic Adviser. The Academic Adviser might limit the number of CPs the student is allowed to register in.

Examination System - Organisation of the Examinations

Board of Examiners

Each study programme has a dedicated Board of Examiners whose main task is to monitor all exams and confirm the final grades suggested by academics. It is chaired by the Department Head offering the Programme of Study and includes the Deputy Rector for Academic Affairs or his/her deputy, at least three professors from the Department offering the Programme of Study as well as representatives from other Departments offering Courses in the Programme of Study and the Head of Registry and Student Admissions or his/her deputy. To ensure student privacy, the meetings of the Board of Examiners are not open to the public. The members of the Board of Examiners are under the obligation of confidentiality. The dates for meetings of the Board of Examiners are stated in the academic calendar; in general, they should meet one week after the last exam week to ensure a prompt release of grades.

Grading Scheme

GUtech uses a numerical grading scheme, augmented by a few non-numerical grades.

Change of Grades

Students can request access to examination documents and appeal their grades. The grade appeal process is described in the Grade Appeal Policy. In practice, most grade appeals are resolved in Step 1, the informal resolution. If the instructor recommends a grade change, s/he asks the Chair of the Board of Examiners to approve the change. If the Chair agrees, the Associate Deputy Rector for Academic Affairs also has to approve the change before the grade change is entered into the Student Information System.

Exams and Competence Skills

All assessments must follow the guidelines set in GUtech's Assessment and Examination Policy. Following German academic tradition, examiners are independent in defining the content of their examinations as long as the learning outcomes specified for their courses are being

adequately assessed. All passing requirements of a course have to be met before a student is awarded the respective ECTS credits. There is a dedicated examination period at the end of each semester. The exams are centrally scheduled by the Registry and Student Admissions department.

Frequency of Examinations and Student Workload

Exam Period

All final exams should be scheduled in the exam period, which is usually a two-week period, one week after the end of classes.

Checking Exam Papers

All final exams must be signed off on the Final Exam Checklist by at least one other professor in the department and by an English language academic staff member before they are submitted to Registry and Student Admissions Office for printing. All exams have a standardised cover sheet.

Invigilation

To ensure that the final exams are graded consistently and avoid the influence of the teaching staff's impression of a student's performance throughout the semester on the final mark, GUtech has incorporated a system of anonymized examinations: Instead of writing their actual names and student numbers on the exam, an individual exam identification tag is applied. The students link their exam with their name via an individualised cover sheet which cannot be accessed by the examiner until the final grades have been submitted. Moreover, final exams are invigilated i.e., the exams are not supervised by the examiners but by independent staff, the invigilators, usually teaching staff from other departments and interns. The academic staff are only available for questions during the first fifteen minutes of an exam.

Repeat Exams

If a student fails a course, he/she has the right to sit for a repeat examination if there is a reasonable chance for the student to pass the course. If this is also not successful, the student fails the course and must retake the course. A student can register at most two times for each course.

The Registry and Student Admissions department keeps all final exams for at least one year.

Transparency

From the very start, GUtech and RWTH Aachen University have been keen on ensuring that all operations of the University are transparent, well- documented, and customer oriented.

Hence, there exists a common core set of documents relevant for all programmes. Moreover, the structure of the programme specifications is standardised, yet allowing for individual emphasis and special arrangements.

During the start-up phase of the University, the small class sizes allowed individual solutions and a rather flexible application. This fitted well into the Omani culture. Nevertheless, as the University grew, its policies became increasingly comprehensive. Their consistent implementation plays an important role in the smooth operation of the university.

Student Support

All academic staff are encouraged to communicate their office hours to the students. In addition, students can arrange a meeting with their academic adviser through e-mail.

Policies

The Academic Catalogue contains the Academic Regulations and most other academic policies, as well as additional information about the study environment at GUtech.

Accessibility of Documents

To ensure that all stakeholders have continuous access to the most up-to-date versions of rules and regulations, GUtech uses a tailored web- service based on the Mediawiki platform called Q-Wiki which is linked to the myGUtech Portal. It provides access to the University's Policy Framework (database of manuals, policies, standard operating procedures, and forms), Governance Framework (repository of minutes from all board and committee meetings), and Planning Framework (links to the University's strategic, operational, and functional plans).

Managed by portal editors from different departments, QWiki is accessible to staff and students on the campus network or using GUtech VPN and has significantly contributed to the transparency and efficiency of a wide range of processes within the University. In the future, it may be used for interactive contributions to the review of existing and newly developed policies.

Either Arabic or German are spoken by a majority of the staff and these languages are often used in direct communication on campus and during meetings, all documents at GUtech, including minutes of meetings, must be written in English. This ensures that all information can be accessed by all staff members. In some cases, information is additionally made available in other languages to address certain stakeholders (e.g., Arabic information on study programmes for parents of students).

Documents for Students

Students are made aware of the current version of the Student Handbook and the Academic Catalogue on enrolment. On their first day of studies, the Head of Department welcomes the

students and gives them an introduction to the relevant regulations. Moreover, students have access to GUtech's Q-Wiki website, and they may request the documents from the Registry and Student Admissions Department. Students also have access to important information and learning resources through the myGUtech Portal.

As GUtech has an open-door policy, students may approach any staff member, including the Head of Department, with any problems or questions. Preferably, they should first contact their assigned Academic Adviser in their department.

All students and academic staff have access to a university-wide Moodle installation, and most academic staff are now using Moodle to distribute their course materials.

Legal Status of Documents

To come into effect, documents have to be approved by the respective boards or body. All regulations attached to this self-evaluation document, especially – the Programme Specifications as well as the Policy Management Framework the Register of Policies and the Academic Regulations – have been approved and reviewed. Moreover, official documents must be submitted to and agreed by MoHERI, thus ensuring a legal review.

Continuous Improvement of Implementation

GUtech has already implemented several tools to ensure the quality of teaching and facilitate continuous improvement like student course evaluations, External Advisory Committees or Strategic Plan on Alumni Relations.

3.2 Assessment

GUtech employs a variety of teaching and learning methods, including lectures, tutorials, seminars, project work, homework, and self-study. Each method caters to different aspects of learning, from developing higher-order cognitive skills to fostering independent problem-solving and teamwork abilities. The University also incorporates blended learning and e-learning techniques, particularly useful for courses delivered by fly-in professors. The diversity in teaching methods is designed to address various learning styles and provide a comprehensive educational experience.

Teaching methods at GUtech are continuously evaluated through several mechanisms. New academic staff undergo a comprehensive induction programme, and the quality of teaching is

a critical factor in the recruitment process. Course evaluations by students play a significant role in providing feedback on teaching effectiveness, which informs ongoing improvements. Additionally, the University's Strategic Plan on Alumni Relations and External Advisory Committees contribute to the continuous enhancement of teaching practices.

Students at GUTech have multiple channels to express complaints or suggestions regarding teaching methods. The University maintains an open-door policy, encouraging students to approach any staff member, including Heads of Departments, with their concerns. Students are also assigned Academic Advisers who can assist with study plans and address any issues related to teaching. Furthermore, the availability of the Student Handbook and access to GUTech's Q-Wiki website provide students with information on how to formally lodge complaints.

GUTech's Assessment and Examination Policy clearly defines the criteria and methods of assessment. Each course specification details the types of assessment, their weightings, and the requirements to pass. The alignment of assessments with the learning outcomes ensures fairness and reproducibility. All assessments must meet the learning outcomes specified for their courses, and passing requirements are strictly adhered to before awarding ECTS credits.

The examination process at GUTech is transparent and designed to promote reliable assessment. Examination content is independently defined by examiners, ensuring alignment with course learning outcomes. Procedures for grading, grade appeals, and examination invigilation are clearly described in the Academic Catalogue and the Grade Appeal Policy. An anonymised system for final exams and standardised procedures for checking and invigilating exams further enhance transparency and consistency.

Assessment formats at GUTech are carefully aligned with the intended learning outcomes of each course. This alignment ensures that assessments are fair and accurately measure the students' achievements in relation to the learning goals. Continuous assessment methods, such as formative assessments, provide ongoing feedback and help students develop relevant skills throughout the semester. Summative assessments, typically final exams, evaluate the comprehensive understanding and practical knowledge of students.

Students have the right to appeal their grades through a structured process outlined in the Grade Appeal Policy. Most grade appeals are resolved informally at the first step, where instructors and students discuss the concerns. If necessary, the appeal can proceed to a formal review by the Board of Examiners. This process ensures that students have a fair opportunity to contest their assessments and seek resolution.

In addition to the points mentioned above, there is another point that stands out. The university has defined different attendance regulations for students. This means that the lecturers can decide what the formalities are regarding compulsory attendance in the respective courses.

However, these seem to be interpreted very differently, so the university could consider defining these attendance regulations at degree programme or department level. However, the rules should always be established at the beginning of a module.

The point to reinforce scientific writing within Bachelor of Arts (BA) thesis projects and to review the preparation process for students is founded on the importance of effective communication in academia and professional fields. Scientific writing skills are crucial for students to accurately convey complex ideas, conduct rigorous research, and contribute to scholarly discourse. Improving these skills within the BA thesis framework enhances the educational value of the program and better prepares students for future academic or professional endeavours.

Regarding the reaccreditation, GUTech has demonstrated a commitment to addressing recommendations from previous accreditations. The University undertakes development initiatives to improve its educational offerings and processes in response to feedback. Continuous improvement efforts, such as student course evaluations and advisory committees, ensure that GUTech remains responsive to accreditation requirements and strives for excellence in education.

The expert group suggests the following recommendations:

- The university should consider standardising attendance regulations at the degree programme or department level to ensure consistency. These regulations should be clearly defined and communicated at the beginning of each module.
- The university should reinforce scientific writing in the BA thesis and reviewing the process of student preparation.

3.3 Conclusion

The criterion is **fulfilled**.

4 ESG Standard 1.4: Student admission, progression, recognition, and certification

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

4.1 Implementation

University Admission Requirements

While GUTech aims at providing education to a broad group of students, it is necessary to take measures to ensure that the students enrolled in GUTech’s study programmes have the nec-

essary prior knowledge. For the Bachelor programmes, applicants must mainly fulfil two criteria: They must have a valid school entrance certificate, and proof of their proficiency in English, the language of instruction used at GUtech. Students have several entry points into a Bachelor programme, depending on their educational background. Holders of a General Education Diploma of the Sultanate of Oman are usually requested to complete GUtech's Foundation Programme.

Admission to the Foundation Programme

Admission Requirements for the Foundation Programme are proposed by the relevant academic committee, (ii) approved by the Rectorate of the University and communicated to the Higher Education Admission Centre of the Ministry of Higher Education, Research, and Innovation of the Sultanate of Oman within the stipulated timeframe. Admission to the Foundation Programme requires at least a pass in the General Education Diploma (GED) of the Sultanate of Oman. Additional requirements such as minimum grade in specific subjects, entrance examinations and/or interviews may be required. Admission to the Foundation Programme is subject to the availability of study places in this programme.

Admission to an Undergraduate Programme

Direct admission to any of the University's Bachelor Programmes requires International Baccalaureate Certificate or Diploma, A-Levels, Indian High School Certificate, Advanced Placement (AP), or equivalent. The specific levels and subjects required are published annually on the GUtech website. The University reserves the right to decide what qualification it considers to be equivalent.

Applicants with at least a pass in a relevant stream of the University's Foundation Programme are also eligible for admission to the University's undergraduate programmes. Admission to an Undergraduate Programme is subject to the availability of study places in this programme.

Admission to a Postgraduate Programme

Admission to any of the University's Postgraduate Programmes normally requires at least a pass in a relevant undergraduate degree. Additional requirements such as work experience, entrance examinations and/or interviews may be imposed. Specific requirements are published annually on the GUtech website.

Admission is subject to fulfilling the requirements from the Ministry of Higher Education, Research and Innovation of the Sultanate of Oman (e.g. the submission of a Letter of Equivalency from the Ministry of Higher Education, Research and Innovation for Undergraduate study). Admission to a Postgraduate Programme is subject to the availability of study places in this programme.

Admission to a Postgraduate Programme is subject to the availability of study places in this programme.

Academic Regulations

English Language Requirements

Adequate English language proficiency is a prerequisite for the admission of students to any programme of study leading to the award of a degree by the University. This includes admission to the University's Foundation Programme as well as admission into all the University's undergraduate programmes.

Students admitted into the Foundation Programme must take an English Language Placement Test.

At the discretion of the University, the English Language Placement Test may be waived for students who have acquired their secondary school qualifications in an institution where English is the medium of instruction or for students who can submit language certificates such as TOEFL or IELTS as proof of their English language proficiency.

The minimum language requirement for admission to one of the University's undergraduate and postgraduate programmes is IELTS 6.0 or equivalent. Students must submit language certificates such as TOEFL or IELTS as proof of their English language proficiency. The actual language requirements for admission to a programme of study are determined by the respective Faculty and may not be lower than the stipulated minimum language requirements.

Selection Procedure

Most Omani students applying to Bachelor programmes at GUtech are centrally assigned to GUtech by the Higher Education Admission Centre (HEAC) [O.2]. GUtech can only decide on the number of students it wants to accept for each study programme. GUtech can specify minimum entry requirements, but it cannot actively select the "best" students. All students meeting the minimum entry requirements must be allowed to join GUtech if there is sufficient capacity in the study programme.

Most Omani students first enrol in the Foundation Programme. Only Omani students from certain private schools and expatriate students may apply for direct entry to a Bachelor programme, which is possible if they have sufficiently high grades in their high school diploma or if they pass a GUtech entry exam.

Recognition of HEI Qualifications

GUtech welcomes students from other universities who want to continue their studies at GUtech. They are assessed individually by the Head of Registry and Student Admissions (responsible for ensuring compliance with Omani legislation) with involvement of the respective academic department, and if possible, former courses are acknowledged in form of a credit transfer. While it is possible in principle to switch programmes, this rarely happens in the Bachelor programmes.

Student Attendance Policy

The University aims at producing life-long learners and therefore encourages students to develop a self-directed approach to learning. Students are expected to be punctual and attend all classes in which they are registered. If a student is absent during a normal class, an acceptable excuse consists of a medical certificate, a police report, or a letter signed by the parents of the student. The latter does not apply if the student was absent during a previously announced test, a midterm examination, or a final examination. Although it is recognised that it may occasionally be necessary for students to be absent from scheduled classes for personal reasons, students are responsible for all material covered in their absences, and they are responsible for the academic consequences of their absences.

Students in the Foundation Programme are more closely monitored than students in the Bachelor Programmes or Master's Programmes. In the later programmes, students are given more freedom so that they can take more responsibility for their studies and personal development.

Students in the Foundation Programme are required to regularly attend lectures while taking regular attendance is not compulsory for degree programme courses, unless otherwise specified in the course specification and announced at the start of a course in writing.

4.2 Assessment

"Logistics" (B.Sc.)

For the Bachelor of Science in Logistics, a clear and transparent admission process is implemented. Admission requirements are clearly defined, offering prospective students and stakeholders a comprehensive understanding of the prerequisites and procedures involved. An effective process to collect, monitor, and respond to information related to student progression is established. This focus on monitoring student advancement reflects the university's desire to support students throughout their academic journey. After successfully completing the programme, the graduates receive adequate graduation documents.

"International Business and Service Management" (B.Sc.)

The admission requirements and the processes are both clearly defined and transparent. The English language requirements are among the highest in Sultanate Oman. To meet these requirements, the majority of students who did their high school in Oman are going through a so-called foundation programme, which particularly aims to close gaps in English proficiency and mathematics. This guarantees a relative homogeneous level of students' competencies which eases teaching in the programme itself. The high level of English language proficiency was visible in the meeting with the students of all programmes involved in the accreditation procedure.

Students' progress during the programme is formally visible by the results of the examinations, which typically do not only involve written exams at the end of the semester, but also mid-terms, quizzes, presentations etc. Thus, students get already feedback in between the semester. This also fosters the quota of students attending to lectures, as this is mostly not mandatory.

"Cybersecurity" (B.Sc.)

The admission procedures are laid out and applied uniformly and without change for the cybersecurity programme, identically to computer science and artificial intelligence. The respective thresholds of graduate marks that students need to bring are individually adapted to different degrees that incoming students may have. This appears adequate to reflect different levels of education, and practically may simplify admission procedures. Students are additionally supported by scholarships that are funded by the government. The management, in the interviews, admitted a strong dependence of their students on these scholarships, but this is not considered as a limitation in this reviewer's assessment. The academic catalogue has a relatively long section dedicated to explanations of admission procedures. This informs students in detail about any steps towards admission and makes the process transparent.

The university is upholding regular department staff meetings in each semester and for each study programme, to continuously monitor student progress and offers adequate measures (like exam repetitions, mentoring, warning letters, or similar) if needed. This is, independently, also enforced by governmental regulations of Oman. The meetings and progress monitoring were confirmed and explained in interviews with the teaching staff.

The university has published a detailed set of admission criteria for different prior (school) education levels, providing transparent quantitative information on what entry level credits are required. In addition, students who may come with lower ratings are offered entry into a "bridge" programme, to close any remaining gaps in knowledge or training.

"Artificial Intelligence" (B.Sc.)

Student numbers on B.Sc. Artificial Intelligence are healthy and evidence of sustainable growth. However, it is not clear whether this is at a cost to the B.Sc. Computer Science programme and it is recommended that there is a clear strategy and vision regarding the relative size of the three computing degrees.

The majority of students complete the foundation year before progressing to the computing degrees. It was discussed whether the foundation year could introduce computing programming in addition to the focus on English and Mathematics. Computer Programming is increasingly seen as a useful skill for a range of different degrees including all STEM subjects.

There was discussion of the University policy on Student Attendance which is more rigorously monitored in the Foundation year than in subsequent years. It is recommended that the Department of Computer Science agree a Student Attendance Policy in line with the University policy which is then rigorously applied to all computing modules.

The expert group suggests the following recommendation:

- The Department of Computer Science should agree a Student Attendance Policy in line with the University policy which is then rigorously applied to all computing modules.

4.3 Conclusion

The criterion is **fulfilled**.

5 ESG Standard 1.5: Teaching staff

Institutions should assure themselves of the competence of their teachers. They should apply fair and transparent processes for the recruitment and development of the staff

5.1 Implementation**Qualification of Teaching Staff**

Most degree programmes at GUTech were modelled on their corresponding study programmes at RWTH Aachen University. Therefore, academic staff at GUTech must be able to teach at a similar level as in Aachen. This is guaranteed by the fact that all associate and full professors are hired according to the standards of RWTH Aachen University by joint GUTech-RWTH recruitment committees where both sides have a veto right.

Assistant professors and lecturers can be hired by purely local GUtech recruitment committees (applying the same standards), but in the past the local committees also often included representatives of RWTH Aachen University.

The University encourages staff to present their research at scientific and educational workshops and conferences by financially supporting their attendance. Research work and higher education are supported by granting study leaves, work leaves and flexible work schedules. Academic staff are regularly invited to participate in in-house training workshops on education issues (e.g., blended learning, etc.).

University Human Resources

All staff at GUtech are employed according to Omani Labour Law. This means in particular that the University has to achieve a certain quota of Omani staff among its employees, the so-called Omanisation rate. Visas issued to expatriates are valid for two years and can be renewed repeatedly. GUtech aims at employing staff that meet Western standards yet has to compete within the growing sector of higher education in the Middle East and comply with Omani laws.

Academic and administrative staff are recruited based on the University's Academic Recruiting Policy and remunerated according to the University's salary scale. RWTH Aachen University is involved in the recruitment of associate and full professors in the Bachelor and graduate programmes, thus ensuring the quality of the personnel. Contract durations are for two and are renewable.

Newly hired academics are briefed about GUtech by way of the Staff Reference Book. There is also a Staff Induction at the beginning of each semester in which new staff are introduced to GUtech and its policies. In the academic year 2022/23, 74% of the staff teaching in GUtech's undergraduate programmes have a PhD-level qualification, while the remaining 26% (3 AGEO, 1 CS, 1 LSTM, 3 UPAD) have Master's qualifications. The University intends to maintain this high ratio of PhD holders.

The country's overall plan for Omanisation requires that Private Higher Education Institutions achieve Omanisation rates of 16% for academic staff and 100% for non-academic staff. Start-up projects are given a grace period until they reach the desired Omanisation rates, and GUtech has been able to increase its Omanisation during the last few years. In the academic year 2022/23, the Omanisation rates at GUtech were 34% for academic staff and 85% for administrative staff.

Teaching Load

Academic Employees

Academic employees will organise their working hours according to their teaching load.

Academic employees whose Job Profile (JP) does not include the performance of research (i.e., Senior Lecturers and Lecturers) are required to be present at the University site for 5 days per week, unless approval has been given by the Deputy Rector for Academic Affairs for such deviation.

Academic employees whose JP includes the performance of research (i.e., Full Professor, Associate Professor, and Assistant Professor) are required to be present at the University site for a minimum of 4 days per week, unless approval for a deviation has been given by the Deputy Rector for Academic Affairs.

Unless stated otherwise in the employee's contract, the average teaching load per year for academic employees is:

- Assistant Lecturer: 22 Contact hours/week during the semester
- Lecturer: 20 Contact hours/week during the semester
- Senior Lecturer: 20 Contact hours/week during the semester
- Assistant Professor A: 16 Contact hours/week during the semester
- Assistant Professor B: 16 Contact hours/week during the semester
- Assistant Professor C: 14 Contact hours/week during the semester
- Associate Professor A: 12 Contact hours/week during the semester
- Associate Professor B: 12 Contact hours/week during the semester
- Associate Professor C: 12 Contact hours/week during the semester
- Professor: 10 Contact hours/week during the semester

The average teaching loads for the following administrative positions are:

- Dean: 8 contact hours per week during the semester
- Head of Department: 8 contact hours per week during the semester
- Course Coordinator: 15 contact hours per week during the semester

The role of Teaching in the Appointment Policy

Overall, the University encourages a strong focus on pedagogy, with the aim of developing higher order cognitive skills among students. Quality of teaching and learning are an essential part of the recruitment process. While teaching staff are supposed to spend most of their time teaching, the selection process focuses equally on teaching and research. Omani law requires

that non-Omani academic staff must have at least three years of teaching experience before they can work in Oman. Research experience is not required by law. Academic staff do not control their own budgets for their courses, but the departments have discretionary funds to purchase required teaching materials.

Research and Consultancy Income

To support the efforts of the University to generate additional income from research, innovation and, consultancy projects and from commercial trainings, the Transfer Technology Office (TTO) was established. Involvement of academic staff in consultancy is governed by the Research, Innovation and Consultancy Policy and the Third-Party Consultancy Policy. TTO has organised and managed several commercial training programmes for companies such as: PDO, Shell, BP Oman, Royal Airforce and Salam Air. As part of the University efforts to encourage research and innovation, improve its outputs and enhance its impact, seed grants, internal support and mentoring are provided to the researchers.

Documents for Staff

The Staff Reference Book contains useful information about GUtech and living in Muscat for new staff. New staff are also required to attend Staff Inductions where they are briefed on important policies, teaching at GUtech, and living in Muscat.

Policies and other documents, e.g., meeting minutes, are available on the QWiki platform. Many documents are also available on GUtech's internal document servers, X-drive (Academic Department) and Y-drive (Admin Department), which can be mounted on any computer on the GUtech network.

The Heads of Department make sure that interns and fly-ins are given all information relevant to their work before they arrive in Muscat. If staff have questions, they can always approach their Heads of Department and the Rectorate.

"Logistics" (B.Sc.)

The School of Business and Economics was founded in 1985 – although the first chair in Economics and Commerce was introduced already back in 1870. Since its establishment, the School continued to grow and now teaches more than 1.300 students at the undergraduate, graduate and executive level. In addition, the School cooperates with the engineering faculties of RWTH Aachen University to offer Business and Engineering programs with different fields of specialisation. The School currently employs about 30 professors and 100 research staff.

"International Business and Service Management" (B.Sc.)

Highly qualified academic staff based at GUTech work in close cooperation with academic staff based at RWTH Aachen University. Courses are taught mainly by academic staff living in Muscat and visiting professors invited to teach specialised courses that cannot be covered by staff at GUTech. In addition, the programme make use of many levels of synergy between both universities, including the use of the extensive electronic library at RWTH.

“Cybersecurity” (B.Sc.) & “Artificial Intelligence” (B.Sc.)

The Department of Computer Science belongs to the Faculty of Engineering and Computer Science. The Department of Computer Science is currently offering three study programmes: Bachelor of Science in Computer Science (BSc in CS), Bachelor of Science in Cyber Security (BSc in CYS), and Bachelor of Science in Artificial Intelligence (BSc in AI). These programmes, which are all approved by the Ministry of Higher Education, Research, and Innovation (MOHERI) started in 2007, 2020, and 2022, respectively. Since September 2020, the CS department has been responsible for offering Maths courses to the entire university. The CS Department has 9 faculty members, with research interests in Cyber Security, AI, transportation, IoT, Blockchain, information security, networking, multi-agent systems, Pure, etc. At least one more faculty will need to be hired in 2024 to cover the courses that will be taught for the specific programmes of Artificial Intelligence. Nevertheless, the department occasionally also employs external lecturers for two reasons: The local faculty members would be overloaded if they taught all the courses, and some specialised courses should preferably be taught by experts (e.g., Business courses, specialized electives, etc.).

The department has also a programme coordinator who is charge of coordination with the Registry and Student Admissions department as well as one Research and Teaching Assistant who helps with teaching basic courses and research projects. The department also hires 10 interns every semester to work as teaching assistants.

5.2 Assessment

“Logistics” (B.Sc.)

Due to the collaboration with RWTH Aachen and the adaption of their processes for hiring new staff members (professors, lectures etc.) the teaching staff for the Logistics programme is composed of highly qualified and experienced professionals who are committed to providing students with a high-quality education.

For the near future three new colleagues are expected to join the teaching staff of the Logistics program to overcome the current shortage of lecturers. It would be worth to consider a more mid-/long term approach in hiring new staff members to avoid these shortages.

The teaching staff is committed to creating a learning environment that is engaging and student-centered. They use a variety of teaching and learning methods, including lectures, discussions, case studies, group projects, and experiential learning, to ensure that students have opportunities to engage with the material and to apply their learning in real-world situations.

The teaching staff is committed to providing students with individualised attention and support even though the students groups are large. They provided academic advising, mentoring, and tutoring services to help students succeed in the Logistics programme and to achieve their academic and professional goals.

Due to high teaching loads the current research activities are limited. Therefore, a research strategy and how teaching and research of staff can be combined would be desirable.

The expert group suggests the following recommendation:

- For the B.Sc. in “Logistics”, the department should regulate teaching load and research so as teaching staff is provided more time for research.

"International Business and Service Management" (B.Sc.)

The teaching staff is composed by internal staff and incoming teachers. As the university's origin is German the general idea of in-flying teachers makes sense and is still a good way to adapt students to the German and other cultures. This is according to the strategic objectives of the programme, as Germans are the biggest group of tourists in Oman and Germany is also the center of the EU-finance industry with the European Central Bank located in Frankfurt am Main. Nonetheless, the majority of teachers should be permanently available for two reasons, the development of the university and its programmes and as mentors for the students.

So far, about 75% of all courses are held by internal teaching staff. The faculty plans to further increase this quota up to 85%, which seems to be reasonable.

The CV of teachers show a high qualification standard, both regarding teaching experiences and the academic qualification. This underlines that the hiring procedures, which are very much according to German and European standards, work properly. Oman is an attractive place to live, but foreigners can't get automatically or easily a permanent residence permit, even if they work and live in Oman for many years or decades. All contracts, also for teachers with an Oman citizenship, are temporary, terminating after two years. For foreigners this policy is due

to national laws, at least for locals the policy might be changed to offer longer contracts and thus guaranteeing a reliable resource planning.

“Cybersecurity” (B.Sc.)

The hiring policy prescribes the formation of recruiting committees, which handle the job announcement, shortlisting and also external reviewing, depending on the type of position. External experts (from RWTH Aachen) are a fixed part of these committees, for some of the job categories. The policy appears well developed to recruit academic staff and is comparable to likewise procedures at other institutions.

The governmental offerings of project funding are limited, but the management has, in the interviews, explained the valuation and support of research activities. This was consistently also reported by the teaching staff. However, research activities strongly depend on intrinsic motivation, since it mostly is a matter “on top” of regular teaching loads, which is already high. Nonetheless, the staff in the CYS programme showed an impressive record of scholarly activities, ranging from publications, outgoing visits up to international collaborations and conference engagement. The teaching/academic staff is well established in the field and internationally visible, with recognition in standard academic platforms (like Google Scholar, DBLP, etc.). In the interviews, they presented themselves particularly engaged and motivated to offer a high-quality training to their students. Examples to mention here include the organisation of “internal” scientific conferences at the university, or the engagement of students in hacking conventions, especially underlining the quality of the education in the CYS degree. This is additionally complemented by the explicit aim and explained intention to let students quickly gain further certifications from recognised companies like Cisco and others. Furthermore, the teachers maintain contacts to regional industry for the purpose of continuous exchange of knowledge and educational requirements elicitation, as well as to send students to internships.

The reported teaching load was felt high up to very high, with little compensation mechanisms offered by the management. This has room for improvement but is explicitly not a deficiency of the teaching body. The teachers confirmed a reasonable degree of freedom in how they organise their courses and teaching, within the constraints imposed by resources and the embedding of GUTech in the country. The equipment for teaching appeared comparable to the situation in other institutions.

“Artificial Intelligence” (B.Sc.)

The expert group notes the diligence, motivation and openness of staff associated with the delivery of the Artificial Intelligence programme. Staff expertise covers most of the curriculum but there is need to recruit further staff who are specialists in Natural Language Processing and Deep Learning.

The expert group would recommend that the formal process for the recruitment of new faculty at all levels is more transparently documented and includes both research active (assistant professors etc.) and teaching focused (lecturers).

The expert group discussed the support for research activity among staff. While teaching provision must be the priority given limited staffing, it is recommended that there is more support for developing research activity. In particular, there needs to be a clear policy on research and further support for early career staff to develop as researchers.

The expert group suggests the following recommendations:

- The department of Computer Science should consider recruiting further staff who are specialists in Natural Language Processing and Deep Learning.
- The department of Computer Science should elaborate a clear policy on research and further support for early career staff to develop as researchers.

5.3 Conclusion

The criterion is **fulfilled**.

6 ESG Standard 1.6: Learning resources and student support

Institutions should have appropriate funding for learning and teaching activities and ensure that adequate and readily accessible learning resources and student support are provided.

6.1 Implementation

Teaching Resources – Infrastructure

Halban Campus:

The government of the Sultanate of Oman allocated a total area of 500,000 m² to the University for the construction of its main campus in Halban. Another 20,000 m² were allocated in

the area of Musannah for a small marine research facility. The main campus at Halban is located along the newly built Southern Express Highway, a ten-minute drive away from Sultan Qaboos University and twenty minutes from Muscat International Airport. In September 2012, construction of the main building and three accommodation buildings of the new GUtech campus was completed, and with the beginning of the winter semester 2012/2013 GUtech moved to its final destination. In autumn 2014, construction started on campus of a History of Science Centre (HSC) and a Sports Complex. The HSC was officially opened on December 28, 2017. In the last quarter of 2017, construction started on campus of the GU2 Algrismus building and one student accommodation building. These two buildings were officially opened in Winter 2018. GUtech launched the first 3D Printed house in Oman on the occasion of the Building Technology & Standardisation Center inauguration on December 14, 2021. The main objective of this investment is to develop Academic capabilities, Scientific Research innovation, and to qualify national cadres and competencies and build their knowledge in advanced construction fields using 3D printing techniques.

Classrooms, Laboratories, and Workshops

The Halban Campus currently has space allocated for nine IT classrooms, two science laboratories, five engineering workshops, and two geoscience laboratories. The laboratories are equipped with sufficient, functional and up-to-date equipment. Qualified laboratory technicians and IT staff are responsible for the maintenance, operation, and upgrading of the equipment. Students in the BSc in Urban Planning and Architectural Design (UPAD) have access to one big, dedicated studio of 1440 square metres equipped with tools and materials required to build models.

Classroom Resources

As a university of technology, GUtech is equipped with a range of modern teaching resources such as computers, multimedia projectors, smartboards, e-learning platforms, printers, scanners, plotters, whiteboards, and photocopiers.

Every classroom is equipped with one or two whiteboards, a multimedia projector, or a display screen. IT classrooms also have a desktop computer equipped with relevant software, and multimedia speakers. All classrooms have fast and reliable wireless internet connection.

Academic staff can rely on the support of the ITS Department to effectively utilise the available equipment. Classroom furniture can be rearranged by academic staff to allow for either lecture-style or student-centred layouts. Two classrooms are also equipped with smartboards.

Learning Areas

Areas such as the library may be used for private study. The library provides reading areas, working desks, and PC workstations. Unused classrooms may be used for private and group work.

Library Resources

The library is dedicated to acquiring resources that advance and support the academic and research activities of the University. It has a Collection Development Policy that the building of library collections. It aims to create a welcoming environment for study and research. The library is given an annual budget to achieve its goals, which is managed by the Head of Department. The library is open to students and staff from Sunday to Thursday, from 8am to 8pm, and on Saturday, from 10am-3pm, during the exam weeks. A feedback mechanism is used to measure the performance of the library by means of the internal audit and student course evaluations. The library works closely with the academic HODs and staff to identify and select new library materials. As subject specialists, the academic staff are always encouraged to recommend materials that will enrich the total collection.

After the Covid pandemic, the library transitioned to electronic resources to match users' changing information needs. It has upgraded its subscriptions and continues evaluating and acquiring relevant resources. To keep the quality of the collection, the library has just recently weeded out 5,041 obsolete and worn-out books. The library uses the Library of Congress System to organise its collection. The open-shelf system is also observed to maximise student access to the library materials. In 2021, the library acquired a library portal to provide seamless access to resources, both on and off-campus access.

The library has continued to improve its facilities and services. Upgraded in 2021-2022 include Library Management, RFID security system, self-check machine, and a heavy-duty printers/scanners/copiers.

In order to educate users in its proper use, the library provides user skills training and orientation to staff and students and one-on-one tutorials.

Counselling and Campus Life

Besides practicing an open-door policy, academic counselling for the study programmes offered by the University is provided to both prospective and enrolled students. The Registry and Student Admissions Department (RSA) provides advice on matters related to eligibility, entry requirements, availability of study places, programme content, programme structure, and completion requirements. Upon enrolment, each student can get advice and help with study related problems from their Academic Adviser in their department.

Learning Support

Personal guidance is not only available during classes and tutorials, but students may also approach the teaching staff with their learning problems. When academic staff realise that demand for personal support is high, special consultation hours are offered. In addition, Interns play an important role in assisting students with their learning.

The continuous assessment used in most courses enables students to continuously evaluate their own learning progress.

Campus Life

While the master plan of the Halban Campus has been designed to accommodate up to 20,000 students, the current facilities are capable of housing approx. 3,500 students.

Services Offered in the Main Building

Besides being home to the staff offices, laboratories, lecture halls and other academic facilities, the Main Building offers several facilities to make life on campus more enjoyable and enhance the social life of students and staff. The Services include: Canteen; Fast food restaurant; Cafeteria; juice shop and a coffee shop; Minimart; Prayer rooms; Lockers (free of charge); A sports hall and a gym; Leisure equipment, including table tennis, billiards and table soccer; A first aid room; ATM Machine and Vending Machines.

Housing

Halban Campus offers accommodation for female and male students and for visiting scientists and other guests. All houses have a state-of-the-art kitchen, bathroom, and a communal dining room on each floor of the building. Additionally, each house has a laundry room, a TV room, a study room, and a games room for table soccer and electronic games. Apartments either have the following: A single room apartment with an en-suite bathroom; a double room apartment with an en-suite, a single room with a private bathroom, a triple room occupancy with two bathrooms.

A security guard and a supervisor are in charge of the accommodation for female students. Due to the high demand for additional housing, in the third quarter of 2017 a new construction project was started and completed in Winter 2018 adding a further 473 spaces for students. The new accommodation building has a visitor's area, a laundry room, a prayer room and a gym.

Sustainable Campus

The Halban campus of GUtech is the first green university campus in the Sultanate of Oman. The design of the campus combines the necessary features of a German University of Technology with Omani traditional building features. The main building represents the focal point of the campus. It is a quadratic building with a side length of around 84 m with an inner quadratic courtyard with a side length of about 46 m which is shaded by tarpaulins. The use of water and energy follows three guidelines: reduce, reuse, and recycle.

To keep the main building cool, it was oriented according to the most common wind direction. Most of the seminar rooms and some offices face shaded courtyards, further reducing the impact of the sunlight.

The student and staff houses were built with garden-like inner courtyards. There are plans to later arrange five to six of these houses in a quadrangle as a housing quarter, with a common courtyard as a place to meet and communicate. The distinctive building density takes into consideration traditional Omani architecture, which was formed by the necessity to create a cooling microclimate.

Transportation

Halban Campus is conveniently located just next to the Muscat Expressway. Most students either live on campus or drive there individually. The University shares contacts of bus providers with students looking for transportation. Students have to coordinate directly with bus drivers to sort out their transportation to and from campus.

Local Culture

Being a German University in the Sultanate of Oman, GUtech wants to take into account both cultures on campus. Male and female students are taught in mixed groups (which is not common in Oman) and can freely mix in most common areas (e.g., cafeteria). Only most sports classes are offered separately for male and female groups.

Students and staff are not required to dress in a particular way, yet it is required that they should be dressed in a conservative manner. Students are expected to always dress in a manner that is both professional and respectful of Islamic traditions when they are on campus or when they are

representing the University at some outside events. Traditional Omani dresses are allowed, except that face veils are not allowed on campus.

GUtech Sports, Student Clubs and Recreation Activities

GUtech offers a wide variety of indoor and outdoor sport activities for students and staff. Besides a weekly activity schedule, which includes group fitness classes (e.g., aerobics, body tone, circuit training, etc.) for students and staff, ball sport groups (e.g., volleyball, basketball, futsal, etc.) for females and males, there are student sports team training sessions for those GUtech student teams of both genders that are participating in national and international tournaments and friendly matches. GUtech strives to create an environment where students are encouraged and challenged to join the sports programme. There is a special focus on females' sport due to the fact that the majority of GUtech's students are females and in addition, a lack of community sports programmes/facilities for females is reported in the country.

Financial Resources – Tuition Income

The University has seen a steady growth since its founding in 2007. The tuition fees ensure the financial stability of the University. The fees include the cost of an IELTS and IC3 test in the Foundation Programme, and field trips if they are compulsory for the programme.

As is common in the Sultanate of Oman, a majority of the students receive scholarships from external sponsors. If it is required for students to maintain a minimum GPA or cGPA, GUtech will report their performance every semester to the scholarship provider after the Board of Examiners has finalised the grades.

To support the students, GUtech advises them on issues that need to be taken into consideration, for example a course which is "In Progress", or a make-up assessment which still needs to be completed.

6.2 Assessment

"Logistics" (B.Sc.)

The infrastructure at Halban campus and staff for teaching are appropriate and sufficient to achieve the qualification goals of the programme. The library, classrooms, and laboratories are well-kept and well-equipped. Nevertheless, in some areas a stronger focus on maintenance would be useful. Furthermore, the provision of teaching infrastructure could be improved.

Regarding the current ratio lecturers/student additional staff (lecturers, tutors, teaching assistants) seems desirable to avoid overloading. Students' mobility is supported on a central level and is adequate.

The expert group suggests the following recommendation:

- For the B.Sc. in “Logistics”, the department should put stronger focus on maintaining classrooms and laboratories and provide support to teaching infrastructure, when necessary.

"International Business and Service Management" (B.Sc.)

As management programmes do not need specific laboratories etc., mainly lecture rooms and the library matter. In both categories the premises are sufficient. The modern building of the university offers adequate lecture rooms. The library is rather small regarding the number of physical books and provides mainly textbooks, but offers otherwise a wide selection of electronic media, which is more decisive in an increasing digital world. Furthermore, many working and meeting facilities for students and student groups are offered by the library and equipped with digital technology. These offerings are highly used by students, as the expert group observed during the campus tour.

Furthermore, a vital campus life was visible, with many student activities, mainly organised in clubs. Dormitories are on campus or nearby, which further enhances social activities besides studying and fosters the social integration of students. Especially in management programmes these clubs give students the possibility to gain first experiences in managing projects and leading teams.

“Cybersecurity” (B.Sc.)

The university maintains computer rooms and laboratories with adequate equipment, where students can practice skills in programming (regular as well as embedded systems), computer networking, etc. Particularly for cybersecurity, the student’s engagement in hacking competitions (“capture the flag”) is very positive to mention.

The university maintains associations with many partner universities in Europe and supports students in exchanges with European universities. These range from short-term visits (14 days), up to a full semester that students can spend abroad, and the university has cooperations with the Deutsche Akademische Austauschdienst (DAAD) . The respective planning is supported by the international office and the academic staff, both in terms of transfer of courses from the foreign institution to GUTech, as well as with the arrangement of contacts to the other institution. Student mobility is hence considered as well supported.

The spectrum of learning methods in the CYS programme is likewise as for other programmes at GUTech and comparable to how courses are taught at other institutions. Interviews with the teaching staff confirmed this impression based on the supplied documents. Further means like

monitoring of student progress, together with flexibility regulations (although no support of part-time studies) explained by the teaching staff, as well as a library that offers access to online resources relevant for computer science in general and CYS in particular, round off the provisioning.

In the interviews, the internal quality assessment was explained and felt adequate and according to international standards. Students reported that they would appreciate more involvement in the curriculum development, but this was not uttered as a complaint. Although they are not directly member in committees, the students confirmed a regular exchange with the staff and the possibility to give feedback up to the management level.

Further internal trainings are available through the Oman Institute for Training Services (OITS), offering a rich variety of trainings, and additionally possible via the DAAD Academy. The possibilities of local further training are thus considered as given.

"Artificial Intelligence" (B.Sc.)

In general, the Learning Resources available to students were good. However, there were some concerns regarding the maintenance of some of the teaching spaces and in particular Audio-Visual support (and working microphones in all lecture spaces). In addition, teaching staff reported that they are often responsible for low-level tasks such as organising desk placement in exam venues. The expert group recommends that the provision of teaching support is reviewed to allow faculty more time to focus on teaching delivery.

Artificial Intelligence now often requires more specialised High Performance Computing (HPC) infrastructure (for instance access to GPUs for Machine Learning) which isn't currently available to students. The expert group recommends that a business case is made for granting access to cloud-based HPC services (such as Amazon cloud or google colab) at least for final year dissertations.

The expert group suggests the following recommendations:

- The university should provide teaching support regarding maintenance of some of the teaching spaces and in particular Audio-Visual support to allow faculty more time to focus on teaching delivery.
- The department of Computer Science should make a business case for granting access to cloud-based HPC services (such as Amazon cloud or google colab) at least for final year dissertations.

6.3 Conclusion

The criterion is **fulfilled**.

7 ESG Standard 1.7: Information management

Institutions should ensure that they collect, analyse and use relevant information for the effective management of their programmes and other activities.

7.1 Implementation

GUtech puts an emphasis on timely, impartial, and targeted communication with all relevant stakeholders. In this regard, both internal and external communication are governed by the mission statement's principles, which highlight the significance of transparency and open communication as a core value of GUtech.

In addition, constant communication contributes significantly to the successful implementation of the strategies, particularly GUtech's quality strategy, because it ensures that the quality objectives, processes, and outcomes are communicated regularly and openly to students, employees, and other stakeholders.

GUtech is committed to ensuring that all of its employees, students, and external stakeholders are properly aware of all regulatory changes and updates. This is a crucial component of establishing and continually enhancing the quality culture.

In order to meet this requirement, GUtech has a communication concept that clearly regulates who communicates what, to whom, and in what format. All due care is taken to make sure that communication is launched in a coordinated manner.

GUtech employs many techniques of gathering information. A customized university information software (UIS) provides access to credible data about student development, success, and drop-out rates and other critical performance metrics encompassing all aspects of the profile of the student population.

GUtech's internal quality assurance system is supported by efficient systems for collecting and analyzing data on study programs and other activities. The Quality Assurance Officer collects and analyzes data regarding student satisfaction with their programs. This also applies to the graduating survey, which includes information regarding graduates' career paths.

The marketing team collects and analyses information regarding potential students' interests, needs, and decision-making criteria.

GUtech considers it essential that students and staff play an active part in giving and analysing information and to make informed decisions about action plans, while understanding what is working well and what needs attention.

The various employees are involved in the planning and implementation of communication based on their duties. For instance, the Quality Assurance unit is responsible for providing information regarding quality processes and outcomes. In addition, quality assurance procedures are accessible to the public on GUtech's website. In both instances, the fundamental documents are displayed in a highly accessible location.

Monthly faculty meetings are held at GUtech to facilitate communication among all faculty. There is a direct interchange of information regarding current topics, pedagogy, research, and quality development. The administrative staff meetings serve a similar purpose. Current issues of day-to-day business and questions of quality development are discussed in collaboration with administrative management.

Moreover, students are regularly and actively engaged in relevant topics via the learning platform.

IT Infrastructure

Student ID Card

Each student enrolled at GUtech is issued a Student ID Card. The ID card must be displayed during all examinations. It can also be used as an access card to certain restricted areas (e.g., labs especially after working hours).

Similarly, all staff are issued a Staff ID card, which is mainly used to provide access to departments and labs after working hours.

Laptops and PC labs

Equipment generally used in IT labs, maintenance and replacement rules of IT hardware and IT Information Security Risk Management Policy are detailed in the IT Master Policy.

University PCs and laptops are equipped with the latest Windows 10 operating system with the support of Microsoft Office 365 to provide up-to-date technology and a better learning experience (including Microsoft Word, Excel, PowerPoint, etc.) to all students and staff. Other software includes e.g.: Matlab, AutoCAD, ChemCAD, ArchiCAD, Visio, MS Project, Office Professional etc.

Academic staff also have access to the anti-plagiarism software Turnitin, which checks the similarity of student submissions to other sources.

E-mail Access

All staff and students of GUtech are given an email address. Students are obliged to check their email regularly as it is commonly used by administrative and academic staff for official communication.

Internet and Wi-Fi

The University is connected to the outside world via 75MB lease line from Omantel dedicated for staff and server Farm, two lines with each 1 GB ADSL from Ooredoo used for student's network and computer labs and 500MPLS line from Omren network. While hosting of the University web pages and mailboxes has been outsourced, the University has several IP addresses that can be used to connect local web servers to the WWW (e.g., Moodle, myGUtech portal).

The GUtech Campus is covered by password protected wireless networks so that students can work on their homework and assignments anywhere on campus.

Oman Research and Education Network (OMREN)

Oman Research and Education Network (OMREN) was established to develop scientific research and education in the Sultanate. OMREN is a high-speed and efficient electronic network, which links research and academic authorities in Oman and provides electronic applications and packages.

The project has a set of direct and indirect objectives. A key objective is to establish a quality, high-speed electronic network to enable researchers to communicate and engage in global research networks with ease.

GUtech is one among 50 higher-education institutions and research centres in Oman that signed up for the OMREN project. As part of this project, GUtech has a 500MB MPLS line from OMREN and a 75 Mbps Leased line from Omantel. With this project, all the signed-up institutions and research centres get the facility to share the digital resources with one another.

Also, we are using the following facilities from OMREN in GUtech campus: Edu-roam, SSL Certificate, OMREN Federation, MASADER, MLPS line.

Working Off-Campus

GUtech enables the staff and students to access GUtech digital information from outside the GUtech campus by using a VPN connection. VPN facilities allow students to connect to the university's network whenever they are connected to the internet.

E-Learning Platforms

myGUtech portal is the University's unified portal for students and staff, which has links to the different e-platforms within the University. It includes the EduWave (SIS), Moodle, ticketing

system; Library meeting room booking; request and purchase of textbooks, request internship letters, etc. EduWave by ITG is the university's student information system. Students may use it to register in courses, check timetable, check grades, etc. EduWave is linked to the Moodle platform which enables the sharing of study materials, continuous assessment grades, online exams and assignments with students. To prevent plagiarism, Turnitin is fully integrated with Moodle.

Printing and Scanning

Printing, photocopying, and scanning facilities in the university are being managed by the ITS Department. Students may use the university's photocopy machines to print, copy and scan. The Papercut printing system allows seamless printing from any connected printer on campus.

Students are given fifty free copies or black and white prints per academic year. For additional copies, there is a charge at minimum cost. Students are not charged for hand-outs from their academic staff.

IT services department is responsible for technical issues related to users' accounts, access, configuration of new printers and troubleshooting of available one.

Projectors. Projectors are provided and managed by IT Department. Campus Facilities Management Department is responsible for fixing new projectors in classrooms.

7.2 Assessment

GUtech employs a robust internal quality assurance system supported by customised university information software (UIS). This system collects credible data on student development, success, drop-out rates, and other performance metrics. Data collection is systematic and comprehensive, encompassing various aspects of the student population profile. The Quality Assurance Officer plays a crucial role in collecting and analysing data on student satisfaction and career paths of graduates. The marketing team also gathers and analyses information on potential students' interests and decision-making criteria. These procedures ensure a comprehensive understanding of the study programmes and other activities.

The data collected by GUtech is complete, timely, and highly usable for internal quality assurance purposes. The customised UIS ensures real-time access to essential data, which supports informed decision-making. Regular updates and constant communication among stakeholders further enhance the relevance and applicability of the collected information. This approach ensures that quality objectives, processes, and outcomes are communicated effectively

and promptly to all stakeholders, contributing to the continuous enhancement of the quality culture at GUtech.

GUtech emphasises the active participation of both students and employees in the data supply and evaluation process. Students are regularly engaged through course evaluations, feedback surveys, and the learning platform. Employees, including academic and administrative staff, participate in monthly meetings to discuss current topics, pedagogy, research, and quality development. This collaborative approach ensures that all stakeholders are involved in analysing information and planning follow-up activities, leading to informed and effective decision-making.

While GUtech's current data collection and analysis systems are robust, there is room for improvement in ensuring all staff are fully proficient in utilising these systems. Enhanced training programmes focused on data analysis and quality assurance processes could significantly improve the effectiveness of these activities.

A well-structured feedback loop is essential to ensure that suggestions and complaints from students and staff are not only collected but also systematically addressed and communicated back to the stakeholders. Establishing clear follow-up mechanisms to ensure that the actions taken in response to feedback are monitored and assessed for effectiveness. This could involve periodic surveys to gauge satisfaction with the changes implemented.

By focusing on these areas for optimisation, GUtech can further enhance its internal quality assurance system, making it more effective, responsive, and aligned with the needs and expectations of all stakeholders.

In response to recommendations from the previous accreditation, GUtech has undertaken significant development initiatives. The University has enhanced its data collection and analysis processes, ensuring more comprehensive and timely information. The involvement of stakeholders in quality assurance activities has been increased, and communication strategies have been refined to ensure transparency and regular updates. These efforts demonstrate GUtech's commitment to continuous improvement and adherence to accreditation standards.

In addition to the points mentioned above, there is another point that stands out. GUtech has a structured approach to policy formulation, ensuring that policies are comprehensive and aligned with the institution's goals. However, the communication of these policies can be enhanced to ensure all stakeholders are fully informed and engaged. By improving how policy formulation is communicated, GUtech can ensure that all stakeholders understand and engage with policies, fostering a more informed and cooperative institutional environment.

To foster a more enriching academic environment, it is crucial to encourage student involvement in research activities. The linkage between teaching and research in educational settings

offers substantial benefits, enhancing both the learning experience and the quality of education. This integration facilitates a deeper understanding of material, cultivates critical thinking skills, and prepares students for professional challenges.

Since the last accreditation, GUtech has continuously enhanced its quality assurance standards. The implementation of advanced IT infrastructure, such as the myGUtech portal and integrated e-learning platforms, has significantly improved data accessibility and usability. The University's participation in the Oman Research and Education Network (OMREN) has further strengthened its research and academic capabilities. These enhancements reflect GUtech's dedication to maintaining high standards and fostering a culture of quality and continuous improvement.

The expert group suggests the following recommendations:

- The university should enhance the communication of policy formulation to ensure all stakeholders are fully informed and engaged, fostering a more informed and cooperative institutional environment.
- Students should also be involved in the research and the link between research and teaching should be strengthened.

7.3 Conclusion

The criterion is **fulfilled**.

8 ESG Standard 1.8: Public information

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

8.1 Implementation

GUtech releases information about its operations that is valuable for prospective and present students, alumni, other stakeholders, and the general public. GUtech discloses all relevant details about the institution, its personnel, and its partners. This information is always provided in an up-to-date, impartial and comprehensive manner.

GUtech provides full information about its services study programmes, continuing education programs, research and services) via its website. The information about the study programmes includes the duration of the programmes, the number of ECTS credits, selection criteria, the intended learning outcomes, the qualifications awarded, the teaching model, and assessment procedures used and the and the cost of the programmes. Detailed information, such as study and examination regulations, course handbooks or the General Examination Regulations, are

made public. GUtech provides frequent information sessions to supplement its textual materials.

In addition, GUtech provides targeted information to external stakeholders and the general public via a range of information channels. A communication concept coordinates and outlines the communication measures. GUtech, for instance, tells the public about its operations, successes, and completed projects via press releases.

Interested parties are updated via multiple social media channels about education and training, research activities, and services, as well as current developments, new projects and cooperation's, and current employment openings.

GUtech regularly publishes accurate, reliable and detailed information about study programs, degree options and the universities' activities through various information channels.

The information on GUtech`s activities is useful for prospective and current students as well as for graduates, other stakeholders and the public.

8.2 Assessment

GUtech provides comprehensive and valuable information about its activities, catering to prospective and current students, alumni, stakeholders, and the public. The institution ensures that details about its operations, personnel, partners, study programmes, continuing education, research, and services are readily accessible. This information is up-to-date, impartial, and detailed, helping stakeholders make informed decisions.

All relevant information is accessible to students, prospective students, graduates, other stakeholders, and the public through multiple channels. The GUtech website is a primary source, offering detailed information on study programmes.

In addition to the website, GUtech uses social media channels, press releases, and information sessions to reach a broader audience. Important documents such as study and examination regulations, course handbooks, and the General Examination Regulations are also publicly available.

The information provided by GUtech is transparent, up-to-date, and highly useful for stakeholders and the public. The communication strategy ensures that updates on education, training, research activities, new projects, cooperation, and employment opportunities are disseminated promptly. GUtech's commitment to transparency is evident in its regular publication of accurate and reliable information through various channels, including social media, press releases, and the university's website.

Additionally, there is another point to consider. While GUtech disseminates a considerable amount of information, there are opportunities to enhance internal communication, particularly regarding quality policies and updates on the public website. By enhancing internal communication, GUtech can ensure that all members of the university community are well-informed about quality policies and other important information. This will promote transparency, foster engagement, and ensure that everyone is aligned with the university's quality standards and objectives.

It is essential to review and formalise the procedures surrounding final year projects to ensure students are well-prepared and supported throughout their capstone experiences. Establishing clear guidelines and structured preparation processes can significantly enhance the effectiveness and educational value of these projects.

In response to recommendations from the previous accreditation, GUtech has made significant strides in enhancing its information dissemination practices. The university has improved the detail and accessibility of information on study programmes and services, expanded its communication channels to include a more active presence on social media and implemented regular information sessions to provide additional insights beyond textual materials.

Since the last accreditation, GUtech has demonstrated continuous enhancement in the assessed standards of information dissemination. The university has maintained a proactive approach to communication, ensuring that all stakeholders are well-informed about its activities, programmes, and developments. The integration of advanced IT infrastructure and the commitment to transparency have further solidified GUtech's reputation for providing reliable and comprehensive information.

The expert group suggests the following recommendations:

- The university should enhance internal communication, particularly regarding quality policies and public website updates, to ensure the university community is well-informed, promoting transparency, engagement, and alignment with quality standards.
- The university should review and formalise procedures for final year projects - including preparation for the start of a project.

8.3 Conclusion

The criterion is **fulfilled**.

9 ESG Standard 1.9: On-going monitoring and periodic review of programmes

Institutions should monitor and periodically review their programmes to ensure that they achieve the objectives set for them and respond to the needs of students and society. These reviews should lead to continuous improvement of the programme. Any action planned or taken as a result should be communicated to all those concerned.

9.1 Implementation

Quality Management Strategy

GUtech has a Quality Assurance and Planning Department with the aim of promoting a culture of excellence through quality assurance". A Quality Assurance Policy, an Operational Plan as well as Action Plans provide a detailed framework for the activities of the Quality Assurance and Planning Department. In particular, the Quality Assurance Policy describes the principles underlying quality assurance at GUtech as well as the related roles and responsibilities for all employees of the University.

The quality management system known as QWiki has also been implemented and plays a central role as repository for important information related to the university's policy planning and governance framework. significant effort has been made over the past years to maintain and improve the skills of its users. Each department has appointed a QWiki content editor, training in the usage of QWiki is organised annually and QWiki audits are carried out every year to ensure that the database is up-to-date. The detailed review and further development of QWiki was included as a major element of the DAAD project Step2Future.

The University's Quality Assurance and Planning Department works closely with the Rectorate and the departments. Among others, it is in charge of conducting regular evaluations of both teaching and the non-academic satisfaction of students. The accreditation processes, both Omani and German (the latter being a voluntary step taken by the University) are considered important to provide valuable input for the further development of all study programmes. Valuable feedback is also provided by the External Advisory Boards. Regular meetings of all staff members and well-defined decision structures ensure that initiatives for improvement are properly assessed and implemented.

It also relies on an extensive external reviewing system for the reviewing of faculties, departments, programmes and services and seeks feedback from internal as well as external sources to ensure continuous improvement.

External reviews are regularly carried out in the form of:

- Visits by MOHERI
- Evaluation of the University by DAAD

- International accreditation by ACQUIN
- OAAAQA Audit report
- Standardized external assessment such as IELTS, IC3
- Annual reports from external and internal auditors

In addition, the department collaborates with RWTH Evaluation Committee where different areas undergo self-review process and feedback taken represents a new and effective approach to monitoring the implementation of the AAA.

Quality of Teaching and Learning

Objectives

GUtech considers quality of teaching and learning as a high priority, as expressed in its Mission Statement. Quality development and quality assurance are therefore integrated into all activities of the University. The goals are to provide high-quality teaching and continuous monitoring of teaching quality. To guarantee high teaching standards it is important to focus on:

- Student satisfaction
- Intensive and comprehensive tutoring of students. o Reduction of obstacles to studying
- Monitoring passing rates
- Monitoring graduation rates
- Regularly evaluating the teaching and reviewing the teaching methods

More quality goals are to produce highly qualified young academics who are aware of their responsibility towards the economy, society, research, and teaching. Integral to the qualification of outstanding young academics are: The provision of professional qualifications. o Instruction providing core qualifications, i.e. the ability to identify and find solutions to complex problems.

In this context GUtech provides training for research, practical applications and solving problems of the future. Research and practically oriented teaching are supported by:

- Aligning teaching contents with the latest research results
- Teaching practical applications
- A wide range of taught subjects
- The attraction and retention of outstanding academic staff and researchers

Tools

The goal of evaluating teaching and learning quality is to identify the strengths and weaknesses of a course (and academic staff), to increase the transparency of the teaching and learning process, and to optimise the learning and examination process.

Different evaluation instruments are implemented for each course to achieve high standards of teaching and learning. An important element is a centrally coordinated evaluation of teaching and learning, and student course evaluations.

Student Course Evaluations

It is essential to monitor teaching methods continuously. Part of this monitoring is the comprehensive surveys every semester in which students evaluate their courses. Until spring semester 2014, RWTH Aachen University's EvaSys system was used for all course evaluations. Starting with the winter semester 2014/15, LimeSurvey has been used with new questionnaires designed by the academic departments at GUTech. In particular, there are different questionnaires for different course types.

The course evaluations not only give students the opportunity to assess the concept of a course, the didactic components, the use of media and other teaching conditions, but also to reflect on their own study behaviour. In addition, there is also space for individual comments, special requests, suggestions, and points of criticism. There are two ways for students to provide feedback on courses, either by informal feedback discussion half-way through the course, or by formal feedback using the Student Course Evaluation Survey which is distributed to all students enrolled in a course.

The findings of the student course evaluations give academic staff valuable feedback on their teaching and appraisal of their courses. They can also reveal certain trends, which can lead to a quick improvement of the quality of teaching. Course evaluations are to be conducted before major final exams (if any) are scheduled. Results of the course evaluations are only released after the Board of Examiners has confirmed course grades. Academic staff are expected to write an action plan based on the course evaluation results and comments and submit it to the HoD and QAP department.

Small Group Tutorials

Although the principle of working in small groups is endorsed during the entire course of studies, the main focus for this type of activity is in the initial phase of studies. Aimed at reducing examination failure rates, tutorials in small groups are particularly important to complement the lectures.

Student Grievances

While faculty are encouraged to directly solve problems with their students, students are entitled to formally submit a grievance concerning any aspect of their experience at the University that can cause distress and/or is perceived as hindering their learning. This may include but is not limited to:

- Harassment, discrimination, or any unfair or improper treatment by a member of staff of the University.
- Quality of teaching, quality of infrastructure relevant to teaching and learning, or quality of teaching and learning support services.

The Student Grievance Policy includes an informal stage of resolution, a formal stage of resolution, and the possibility to appeal the decision taken in the formal stage.

Complaints that do not fall under the category of grievances are dealt with through different channels, i.e., the Grade Appeal Policy, the Student Disciplinary Policy or via the Student Advisory Council or Rectorate.

Students are advised to involve their Academic Adviser for guidance in all aspects of the informal resolution process. If the grievance is against an Academic Adviser, students are advised to request support from any other member of the academic staff.

No reprisals shall be taken by the management, administration or academic staff against any student or staff member because of participation in a grievance, unless that allegation has been proved to have been raised maliciously. The University takes any allegations of reprisals very seriously.

Tools Implemented in the Foundation Programme

In the Foundation Programme, academic staff identified the need to promote self-reflection and self-responsibility of students by bringing to their attention student performance and attendance.

Other tools implemented in the Foundation Programme are mentorship programme, weekly performance check and attendance monitoring.

All students in the Foundation Programme are assigned a Mentor after the first two weeks add/drop period. The Mentor is a staff member who can provide mature advice on academic as well as legitimate non-academic matters. Academic advising is done by subject academic staff member. The Mentor will communicate with the subject academic staff member to provide the student with additional support if the student faces challenges in their learning. The departmental Curriculum Committees are responsible for defining the course contents. They often do this in cooperation with their partners at RWTH Aachen University (i.e., international quality) and the External Advisory Board (i.e., local quality).

Compilation of Study Data and Development of Study Plans

Data needed for university wide reporting is collected by the Quality Assurance and Planning department responsible for collecting all teaching and learning data of courses and study programmes and for making them available to the departments. The departmental Curriculum Committees analyse the data, recognise weak spots, and improve the curricula of the study programmes.

Quality of Teaching Staff

Teaching Staff Qualifications

The qualifications of the teaching staff are thoroughly evaluated during recruitment. Recruitment committees scrutinize the research and teaching experience of the applicants, and all candidates must give a presentation on their research work. In the case of Associate and Full Professors, RWTH Aachen University is part of the committee and usually joins through video conferencing.

Teaching Staff Performance Evaluation

All academic staff are subject to an annual performance review covering teaching, research, and community service. So far, the review has consisted of an appraisal that the academic staff member has to fill together with the Head of Department who also has to grade the performance. These performance reviews are then used to determine salary increases and promotions.

It is planned to replace these reviews by a system of key performance indicators (KPI) where the individual achievements of a academic staff are evaluated by a formula assigning certain values and weights to the KPIs.

Personal Development and Academic Promotion

GUtech's recruitment model is transparent and ensures that all appointments are based on merit. A robust performance evaluation system is in place to nurture a culture of professional development and growth, and salaries are commensurate with experience. GUtech focuses on individual development of all staff by encouraging them to attend relevant workshops and conferences and by supporting their research work and higher education by granting study leaves, work leaves and flexible work schedules. There are also annual in-house workshops on pedagogy and teaching technology. Adequate promotion policies are in place.

Programme Development

Institutional Affiliations for Programmes and Quality Assurance

The original Affiliation Agreement between RWTH Aachen University and OES addressed in particular the governance structure of the University, the introduction of the University's first four Bachelor of Science programmes, and the development of robust quality assurance processes. Subsequent revisions of the agreement introduced the option of developing additional programmes, such as Bachelors of Engineering, Masters of Science, and PhD programmes. It also opened the possibility of entering into agreements with other reputable Higher Education Institutions for programmes that are not offered by RWTH Aachen University. Subsequently, GUTech entered into an agreement with the German accreditation agency ACQUIN (a member agency of the European Association for Quality Assurance in Higher Education, ENQA) for the accreditation of their programmes.

GUTech has also signed agreements with several international universities for the purpose of encouraging and regulating student exchange, like RWTH Aachen University (Germany,) University of Applied Sciences Stralsund (Germany), University of Brescia (Italy), Exchange Agreement Wilkes University (USA).

The close collaboration between RWTH Aachen University and GUTech is evident in the following areas of the quality assurance system:

- Governance and management structures of GUTech have strong links to RWTH Aachen University
- Participation of RWTH Aachen University professors in the recruitment processes for associate and full professors at GUTech (with veto rights)
- Teaching visits of RWTH Aachen University professors to teach block courses at GUTech.
- Student exchange from GUTech to RWTH Aachen University
- Student exchange from RWTH Aachen University to GUTech
- Assistance provided by the Institute of Metrology and Quality Management of RWTH Aachen University in the implementation of the QWiki platform at GUTech
- Co-supervision of Bachelor theses of GUTech students by professors at RWTH Aachen University
- Supervision of PhD theses of GUTech staff by professors at RWTH Aachen University
- Virtual internships for Bachelor students during the Covid-19 pandemic
- Handling DAAD scholarships and summer schools by a GUTech liaison office at RWTH Aachen University; and

- Receiving technical advice from RWTH Aachen University for equipping laboratories and other facilities

Internal and External Quality Standards

To ensure the quality of the study programmes at GUTech, RWTH Aachen University (or other partner institutions) are involved in the development of GUTech's programmes. This ensures that the study programmes meet the expectations of all stakeholders in Germany and Oman. As mentioned earlier, the collaboration agreement with RWTH Aachen University states responsibilities and includes a section on quality management. The Chair for Quality Management and Metrology at RWTH Aachen University supports the continuous improvement of GUTech's quality management system. He is also the chair of the RWTH Aachen Evaluation committee.

Alumni Network

Following its first cohort of graduates in 2012, GUTech has been developing formal means to engage effectively with its alumni. Here, GUTech alumni include former students, graduates, and staff. The Alumni Unit of the Student Affairs Department is responsible for maintaining alumni lists, conducting alumni surveys, and inviting them to campus events. The most recent alumni event was held on November 28, 2022 and attended by over 24 alumni.

The mission is to promote and foster a dynamic, enduring and mutually beneficial relationship between GUTech and its alumni. This includes enlisting and encouraging alumni support for the University and providing opportunities for alumni to connect with each other through special programmes and activities. In particular, it includes:

- Ensuring and facilitating a strong connection within the alumni group and with the University;
- Ensuring a positive and life-long experience with the University;
- Achieving the University's goals with the support of alumni;
- Striving for excellence within the alumni engagement.

9.2 Assessment

GUTech employs a systematic approach to assess the continuous monitoring and re-adjustment of study programmes, which is characterised by a closed-loop feedback mechanism. This process involves regular reviews of the study programmes through established committees that include faculty members, academic leaders, and student representatives. These

committees analyse data from various sources, such as student performance metrics, course evaluations, and feedback from industry stakeholders.

The university conducts periodic programme reviews, which involve evaluating the curriculum against current academic standards and industry requirements. The feedback collected is used to identify areas for improvement, leading to necessary adjustments in course content, teaching methodologies, and assessment strategies. This iterative process ensures that the study programmes remain relevant and effective in meeting the educational needs of students and the demands of the job market.

The content of the programme in the light of the latest research in the given discipline thus ensuring that the programme is up to date: GUTech regularly reviews the curriculum to incorporate the latest research findings and advancements in each discipline. Faculty members are encouraged to engage in ongoing professional development and research activities, which inform the curriculum updates. Additionally, external advisory boards comprising industry experts provide insights into emerging trends and best practices, ensuring that the programme content remains current and relevant.

The university conducts surveys and focus groups with stakeholders, including employers and alumni, to gather insights into the evolving needs of society. This feedback is instrumental in shaping the curriculum to address societal challenges and prepare students for the workforce.

As for the student expectations, needs, and satisfaction in relation to the programme, GUTech actively seeks student feedback through course evaluations, focus groups, and satisfaction surveys. This feedback is analysed to gauge student expectations and satisfaction levels, which informs programme development and enhancements. The university prioritises creating a responsive educational environment that meets the needs of its diverse student body.

GUTech places a strong emphasis on the participation of students and other stakeholders in the design and evaluation of study programmes. The university engages students through representative bodies, such as student councils, which provide a platform for student voices to be heard in decision-making processes. Additionally, feedback from alumni and industry partners is actively sought to ensure that the curriculum aligns with real-world expectations and requirements.

Stakeholder involvement is facilitated through regular meetings, workshops, and consultations, allowing for collaborative discussions on program design and improvements. This participatory approach not only enhances the relevance of the study programmes but also fosters a sense of ownership and engagement among all stakeholders.

GUTech evaluates the reflection and communication of results through structured feedback mechanisms and transparency in reporting. After programme reviews and assessments, the

findings are compiled into reports that are shared with faculty, students, and relevant stakeholders. The university holds informational sessions and workshops to discuss the outcomes of evaluations and the subsequent actions taken to address any identified issues.

Additionally, GUtech utilises digital platforms to communicate updates and improvements to students and stakeholders, ensuring that everyone is informed about changes and enhancements made to the study programmes. This open communication fosters trust and collaboration within the university community.

GUtech has established a robust quality assurance framework that effectively engages stakeholders and incorporates feedback into programme development. The university's commitment to continuous improvement and responsiveness to student needs is commendable. The collaborative approach involving faculty, students, and industry partners is particularly positive, as it ensures that the programmes remain relevant and effective.

However, there is always room for optimisation. One area for improvement could be the enhancement of data analytics capabilities to better track student performance and engagement metrics. Additionally, increasing the frequency of feedback collection and ensuring that it reaches all relevant stakeholders in a timely manner could further strengthen the continuous improvement processes.

GUtech's comprehensive approach to quality assurance, continuous improvement, and stakeholder engagement, ensures that its study programmes remain relevant and effective in meeting the needs of students and society.

The expert group suggests the following recommendations:

- The university should enhance data analytics capabilities to better track student performance and engagement metrics.
- The university should increase the frequency of feedback collection and ensure that it reaches all relevant stakeholders in a timely manner.

9.3 Conclusion

The criterion is **fulfilled**.

10 ESG Standard 1.10: Cyclical external quality assurance

Institutions should undergo external quality assurance in line with the ESG on a cyclical basis

10.1 Implementation

The Ministry of Higher Education, Research and Education in Oman (MoHERI) formerly known as the Ministry of Higher Education in Oman (MoHE) is in charge of all affairs regarding the development and strategic decisions on higher education in the Sultanate of Oman. It oversees all aspects of study programmes at private universities in Oman via its Directorate for Private Higher Education Institutions. Any programme change requires approval by MoHERI. New programmes and major programme changes (i.e., changes of more than 30% of the programme) require MoHERI approval after the completion of an external review process. Ministry decisions sometimes take a long time, so it is difficult to implement a quality control cycle that requires the regular review and update of all study programmes.

The Ministry also runs the Higher Education Admission Centre (HEAC), where Omani students can apply online for scholarships and study places at colleges and universities. Students and study places are usually matched in several rounds, right up to the time when classes begin. This gives the HEIs little time to plan properly for incoming student numbers.

The Oman Authority for Academic Accreditation and Quality Assurance of Education (OAAAQA) is responsible for institutional accreditation and is developing standards for programme accreditation all universities and colleges in Oman. Instead of granting accreditation in a simple yes/no decision, the Omani system aims at further improving the quality of an institution's education by providing an outside view of the University as a whole. The OAAAQA established as an independent body under the Ministry of Higher Education, Research, and Innovation, developed standards for institutional accreditation. The current standards for institutional accreditation are very detailed. In March 2013, GUtech participated in a pre-stage for the institutional accreditation, the so-called Quality Audit, and received mainly positive feedback.

The quality audit, the first stage of a comprehensive institutional evaluation by the Oman Academic Accreditation Authority (OAAA, now the OAAAQA), in 2013 brought mainly positive feedback. The standards assessment, the second stage of the institutional accreditation, GUtech submitted its Institutional Standards Assessment Application in September 2018. The visit took place in March 2019. GUtech received conditional accreditation in February 2020. In the same month, GUtech submitted an appeal application, and the appeal was submitted in April

2020. In May 2020, the appeal committee decided that the outcomes should remain the same, indicating in the final report that an appeal was submitted and was not upheld. The university submitted its standards reassessment application in March 2021, for which a visit occurred in May 2021.

The 2nd stage called Institutional Standards Assessment was held in May 2019 and where GUtech was awarded conditional accreditation. Full institutional accreditation was awarded on July 8, 2022, which happened after reassessment in May 2021. Currently, the OAAAQA does not conduct programme accreditations. Standards for programme accreditation are still being developed. All Bachelor programmes have been accredited by ACQUIN (AGEO, CS, IBSM, LOG, UPAD and BEng programmes) except for the two new programmes, “Artificial Intelligence” and “Cybersecurity”. They will be accredited in 2024 by ACQUIN.

The recommendations from the accreditation AGEO, CS, UPAD were all considered for the further development of the study programmes.

10.2 Assessment

GUtech evaluates external quality assurance through a structured process that involves regular audits and assessments. The university actively participates in external evaluations to ensure compliance with national and international quality standards. These evaluations provide an objective assessment of the university's performance and effectiveness in delivering quality education. Feedback from these external audits is used to inform internal quality assurance processes and drive continuous improvement.

GUtech's quality assurance system is comprehensive and appropriate, covering various organisational levels and status groups within the institution. The system includes policies and procedures that are applicable to all faculties, departments, and administrative units. This ensures that quality assurance is integrated into every aspect of the university's operations, from academic programmes to support services. The involvement of diverse stakeholders, including faculty, staff, students, and external partners, ensures that quality assurance measures are relevant and effective across the institution.

GUtech's quality assurance processes are aligned with the relevant legal framework governing higher education in Oman. This alignment ensures that the university's quality assurance practices comply with national regulations and international standards, thereby enhancing the credibility and recognition of its academic programmes.

Quality assurance at GUTech serves to confirm the effectiveness of the internal quality systems (IQS) by providing a framework for regular evaluation and feedback. The university conducts internal assessments to monitor compliance with established quality standards. The insights gained from these evaluations stimulate improvements by identifying areas of strength and opportunities for enhancement. The continuous feedback loop allows the university to implement changes that enhance the quality of education and support services, ultimately benefiting students and stakeholders.

GUTech is committed to transparency in its quality assurance processes. The university regularly publishes reports and updates on its quality assurance activities, including the outcomes of internal and external evaluations.

In the case of re-accreditation, GUTech takes the recommendations from previous accreditation reviews seriously and develops action plans to address them. The university conducts thorough internal evaluations to assess the implementation of the recommendations and makes necessary adjustments to policies and practices. Regular progress reports are generated to track the effectiveness of these actions, ensuring that the institution meets the required standards for re-accreditation.

GUTech has demonstrated continuous enhancement in terms of the assessed standards during the re-accreditation process. The university actively seeks to improve its quality assurance mechanisms, curriculum design, and student support services based on feedback from accreditation bodies. This commitment to continuous enhancement is reflected in improved student outcomes, higher satisfaction rates, and the successful implementation of innovative teaching practices and technologies.

10.3 Conclusion

The criterion is **fulfilled**.

IV Recommendation to the Accreditation Commission of ACQUIN

1 **Assessment of compliance the Standards and Guidelines in the Higher European Area (ESG)**

The study programmes “**Logistics**” (B.Sc.), “**International Business and Service Management**” (B.Sc.), “**Cybersecurity**” (B.Sc.) and “**Artificial Intelligence**” (B.Sc.) were assessed on the basis of the "Standards and Guidelines for Quality Assurance in the European Higher Education Area" (ESG).

The expert group concludes that the **ESG standards** 1.1 (Policy for quality assurance), 1.2 (Design and approval of programmes), 1.3 (Student-centred learning, teaching and assessment), 1.4 (Student admission, progression, recognition and certification), 1.5 (Teaching staff), 1.6 (Learning resources and student support), 1.7 (Information management), 1.8 (Public information), 1.9 (On-going monitoring and periodic review of programmes) and 1.10 (Cyclical external quality assurance) are fulfilled.

The assessment criteria are as follows:

Standard 1.1 Policy for quality assurance: Universities have a publicly accessible quality assurance strategy, which is part of their strategic management. This strategy is developed and implemented by internal stakeholder representatives through appropriate structures and processes, involving external stakeholders.

The criterion is **fulfilled**.

Standard 1.2 Design and approval of programmes: Universities have procedures for the design and approval of their courses. The courses are designed in such a way that their objectives, including the desired learning outcomes, can be achieved. The qualification obtained during a degree program is clearly defined and communicated; it refers to the corresponding level of the national qualifications framework for higher education and, consequently, the qualifications framework for the European Higher Education Area.

The criterion is **fulfilled**.

Standard 1.3 Student-centred learning, teaching and assessment: Universities ensure that the courses offered are carried out in such a way as to encourage students to play an active role in the design of the learning process and that this approach is also taken into account when assessing students / examinations.

The criterion is **fulfilled**.

Standard 1.4 Student admission, progression, recognition and certification: Universities ensure that the courses offered are carried out in such a way as to encourage students to play

an active role in the design of the learning process and that this approach is also taken into account when assessing students / examinations.

The criterion is **fulfilled**.

Standard 1.5 Teaching staff: Universities ensure the competence of their teachers. They use fair and transparent procedures for the recruitment and further training of their employees.

The criterion is **fulfilled**.

Standard 1.6 Learning resources and student support: The university has adequate funding to finance study and teaching and ensure that there is always a sufficient and readily available range of learning and support available for their studies.

The criterion is **fulfilled**.

Standard 1.7 Information management: Universities ensure that they collect, analyze and use the relevant data relevant to the successful conduct of studies and other activities.

The criterion is **fulfilled**.

Standard 1.8 Public information: Universities publish easily understandable, correct, objective, up-to-date and well-accessible information about their activities and courses of study.

The criterion is **fulfilled**.

Standard 1.9 On-going monitoring and periodic review of programmes: Universities are constantly monitoring their courses and regularly reviewing them to ensure that they achieve the goals set and meet the needs of students and society. The tests lead to a continuous improvement of the courses. All affected parties will be informed about any measures planned or resulting from this.

The criterion is **fulfilled**.

Standard 1.10 Cyclical external quality assurance: Universities regularly undergo external quality assurance procedures in accordance with the ESG.

The criterion is **fulfilled**.

The peer-review experts note that the recommendations from the previous accreditation procedure have been adequately taken into account.

2 Accreditation Recommendation

The peer-review experts recommend the following **recommendations**:

General recommendations

1. The university should consider standardising attendance regulations at the degree programme or department level to ensure consistency. These regulations should be clearly defined and communicated at the beginning of each module.
2. The university should reinforce scientific writing in the BA thesis and reviewing the process of student preparation.
3. The university should enhance the communication of policy formulation to ensure all stakeholders are fully informed and engaged, fostering a more informed and cooperative institutional environment.
4. Students should also be involved in the research and the link between research and teaching should be strengthened.
5. The university should enhance internal communication, particularly regarding quality policies and public website updates, to ensure the university community is well-informed, promoting transparency, engagement, and alignment with quality standards.
6. The university should review and formalise procedures for final year projects - including preparation for the start of a project.
7. The university should enhance data analytics capabilities to better track student performance and engagement metrics.
8. The university should increase the frequency of feedback collection and ensure that it reaches all relevant stakeholders in a timely manner.

Recommendations for study programme “Logistics” (B.Sc.)

1. The B.Sc. “Logistics” should include more topics related to IT (e.g. data analytics) to be offered at least as electives for the students.
2. The B.Sc. “Logistics” should include at the end of the internship a scientific report, instead of an experience report, to enhance the scientific approach of the internship.
3. For the B.Sc. in “Logistics”, the department should regulate teaching load and research so as teaching staff is provided more time for research.

4. For the B.Sc. in “Logistics”, the department should put stronger focus on maintaining classrooms and laboratories and provide support to teaching infrastructure, when necessary.

Recommendations for study programme "International Business and Service Management" (B.Sc.)

1. The B.Sc. in "International Business and Service Management" should offer a course on “Intercultural Work and Communication” preferably during the first academic year.
2. The B.Sc. in "International Business and Service Management" should try to further foster international experiences for their students by e.g. looking for private sponsors from tourism and financial industry and finding co-operation partners for internships abroad.

Recommendations for study programme "Artificial Intelligence" (B.Sc.)

1. The department of Computer Science should consider the re-establishment of a common core between the Computer Science programmes to facilitate student transfer and ensure that all computing students have exposure to both AI and Cyber Security.
2. The department of Computer Science should consider the development of a dedicated Deep Learning module in the future.
3. The department of Computer Science should agree a Student Attendance Policy in line with the University policy which is then rigorously applied to all computing modules.
4. The department of Computer Science should consider recruiting further staff who are specialists in Natural Language Processing and Deep Learning.
5. The department of Computer Science should elaborate a clear policy on research and further support for early career staff to develop as researchers.
6. The university should provide teaching support regarding maintenance of some of the teaching spaces and in particular Audio-Visual support to allow faculty more time to focus on teaching delivery.
7. The department of Computer Science should make a business case for granting access to cloud-based HPC services (such as Amazon cloud or google colab) at least for final year dissertations.

V Decisions of the Accreditation Commission of ACQUIN

Based on the evaluation report of the expert group and the statement of the Higher Education Institution, the Accreditation Commission of ACQUIN has made its decision on the 12 September 2024:

General recommendations for all study programmes:

- The university should consider standardising attendance regulations at the degree programme or department level to ensure consistency. These regulations should be clearly defined and communicated at the beginning of each module.
- The university should reinforce scientific writing in the BA thesis and reviewing the process of student preparation.
- The university should enhance the communication of policy formulation to ensure all stakeholders are fully informed and engaged, fostering a more informed and cooperative institutional environment.
- Students should also be involved in the research and the link between research and teaching should be strengthened.
- The university should enhance internal communication, particularly regarding quality policies and public website updates, to ensure the university community is well-informed, promoting transparency, engagement, and alignment with quality standards.
- The university should review and formalise procedures for final year projects - including preparation for the start of a project.
- The university should enhance data analytics capabilities to better track student performance and engagement metrics.
- The university should increase the frequency of feedback collection and ensure that it reaches all relevant stakeholders in a timely manner.

International Business and Service Management (B.Sc.)

The study programme “International Business and Service Management” (B.Sc.) at the German University of Technology Oman is accredited without any conditions.

The accreditation is valid until 30. September 2029.

The following recommendation is given for the study programme “International Business and Service Management” (B.Sc.)

- The B.Sc. in "International Business and Service Management" should offer a course on “Intercultural Work and Communication” preferably during the first academic year.
- The B.Sc. in "International Business and Service Management" should try to further foster international experiences for their students by e.g. looking for private sponsors from tourism and financial industry and finding co-operation partners for internships abroad.

Logistics (B.Sc.)

The study programme “Logistics” (B.Sc.) at the German University of Technology Oman is accredited without any conditions.

The accreditation is valid until 30. September 2029.

The following recommendation is given for the study programme “Logistics” (B.Sc.)

- The B.Sc. “Logistics” should include more topics related to IT (e.g. data analytics) to be offered at least as electives for the students.
- The B.Sc. “Logistics” should include at the end of the internship a scientific report, instead of an experience report, to enhance the scientific approach of the internship.
- For the B.Sc. in “Logistics”, the department should regulate teaching load and research so as teaching staff is provided more time for research.
- For the B.Sc. in “Logistics”, the department should put stronger focus on maintaining classrooms and laboratories and provide support to teaching infrastructure, when necessary.

Cybersecurity (B.Sc.)

The study programme “Cybersecurity” (B.Sc.) at the German University of Technology Oman is accredited without any conditions.

The accreditation is valid until 30. September 2030.

Artificial Intelligence (B.Sc.)

The study programme “Artificial Intelligence” (B.Sc.) at the German University of Technology Oman is accredited without any conditions.

The accreditation is valid until 30. September 2030.

The following recommendation is given for the study programme “Artificial Intelligence” (B.Sc.)

- The department of Computer Science should consider the re-establishment of a common core between the Computer Science programmes to facilitate student transfer and ensure that all computing students have exposure to both AI and Cyber Security.
- The department of Computer Science should consider the development of a dedicated Deep Learning module in the future.
- The department of Computer Science should agree a Student Attendance Policy in line with the University policy which is then rigorously applied to all computing modules.
- The department of Computer Science should consider recruiting further staff who are specialists in Natural Language Processing and Deep Learning.

- The department of Computer Science should elaborate a clear policy on research and further support for early career staff to develop as researchers.
- The university should provide teaching support regarding maintenance of some of the teaching spaces and in particular Audio-Visual support to allow faculty more time to focus on teaching delivery.
- The department of Computer Science should make a business case for granting access to cloud-based HPC services (such as Amazon cloud or google colab) at least for final year dissertations.