Accreditation Report

Computer Science (Bachelor's degree)

University: Cihan University Sulaimaniya

Reference Number: IP-0719-1

19th Meeting of the ZEvA Commission for International Affairs on 04th July 2023

Item 04.04

Study Programme	Degree	Programme Duration	Type of Programme	Maximum annual intake
Computer Science	B.Sc.	4 years	Full-time	

Accreditation contract signed on: 26th May 2022

Date of site visit: 7th–8th March 2023

Contact Person at the higher education institution: Dr. Lway Faisal

ZEvA programme officer: Malte Huylmans

Expert Panel:

Prof. Dr. Dieter Baums – Professor for Informatics, University of Applied Sciences Mittelhessen (scientific representation)

Prof. Dr. Carsten Köhn – Professor for Internet and Media Technology, Bochum University of Applied Sciences (scientific representation)

Dr.-Ing. Patrick Müller – Product Manager, CONTACT Software GmbH (professional practice representation)

Maik Dute – Doctoral student, Technical University Dortmund (student representation)

Hanover, 2023

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I. Final Vote of the Expert Panel and Decision of the Accreditation Commission

1.   Decision of the ZEvA Accreditation Commission (4th July 2023)

Will be included in the document after the decision has been taken.

2.   Final Vote of the Expert Panel

2.1.1   Recommendation to the ZEvA Commission:

The expert group recommends the accreditation of the following study programme

- Computer Science (Bachelor's degree)

as offered by the Cihan University Sulaimaniya for the duration of six years under the following conditions:

Conditions:

- A complete catalogue of module descriptions within the new system has to be provided.
- One or multiple question(s) proving a module-based workload monitoring need(s) to be implemented, which could be shown by a sample questionnaire.

To support the university and the programme in their further development and enhancement, the experts give the following general recommendations:

Recommendations:

- The experts recommend a revision of the Diploma Supplement in such a way that it shows the graduates' competencies.
- The experts recommend examining, whether modules could be combined to a greater extent in order to reduce the overall examination load somewhat.
- The experts recommend paying more attention to ensuring that the results of the student surveys are also reflected back to the cohorts surveyed.

II. Evaluation Report of the Expert Panel

1. Introduction: Purpose, Design and Context of the Accreditation Procedure

It is the purpose of the accreditation procedure to assess the quality of the study programme **Computer Science** run by the **Department of Computer Science** at the **Cihan University Sulaimaniya (Iraq)** against international standards. The assessment is based on the framework laid out in the ZEvA Manual for the External Assessment of Study Programmes. This assessment framework is fundamentally based on the "European Standards and Guidelines for Quality Assurance in Higher Education (ESG)" (ENQA 2015), the "Framework for Qualifications for the European Higher Education Area" (2005) and the "ECTS Users' Guide" (European Communities, 2015). In line with the ESG, the assessment was organized as a peer review procedure, involving an expert panel composed of two university professors in the discipline, one professional from outside academia and one student.

For assessing the study programmes, the Department of Computer Science was asked to submit a self-report in English containing a detailed description of the University, the Department and the study programme. Along with the self-report, several additional documents were submitted, including detailed course syllabi, CVs of teaching faculty, comprehensive statistical data as well as relevant rules and regulations. All documents were submitted in English translation.

Due to travel restrictions imposed by regional security issues, ZEvA and the Cihan University Sulaimaniya jointly decided to conduct a virtual site visit in March 2023. The expert panel conducted separate interviews with the leadership board of the University and the Department as well as with academic supervisors and programme coordinators, teaching faculty, students and graduates.

This report is based on the experts' assessment of the University's self-report and on their impressions gained during the digital site visit. It will serve as a basis for the ZEvA Accreditation Commission to decide on the accreditation of the study programme. In the case of a positive decision by the Commission, ZEvA will award its quality seal for a limited period, after which the University can apply for re-accreditation of the programmes.

The experts would like to thank all involved members of the University for the professional organization of the online site visit and for the open and constructive atmosphere during the talks.

## 2.   Governance, Management and Profile of the University

Organizational Structure and Mission of the University

The Cihan University Sulaimaniya is private, state recognized university based in Sulaimaniya, located in the eponymous Governerate of the Kurdistan Region (Iraq).

The university is embedded in the Cihan Group – a regional business conglomerate – which is one of the two sources of funding for the study programme offered. The second financial source is the tuition fees set by the responsible ministry (cf. self-report, p. 19).

Cihan University Sulaimaniya consists of the following faculties / colleges (see fig. below): The Faculty of Administration and Financial Sciences, the Faculty of Science, The Faculty of Law and International Relations and the Faculty of Health Sciences. Besides these faculties, there are the following departments: The Architecture Engineering Department, the English Language Department, the Translation Department, the General Education Department, the Human Resources Management Department and the Digital Media and Marketing Department[1]. All study programmes, with the exceptions of those focussing on law, are offered in English exclusively (cf. self-report, p. 2).

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[1] Cihan University website: Last accessed: April 2023.
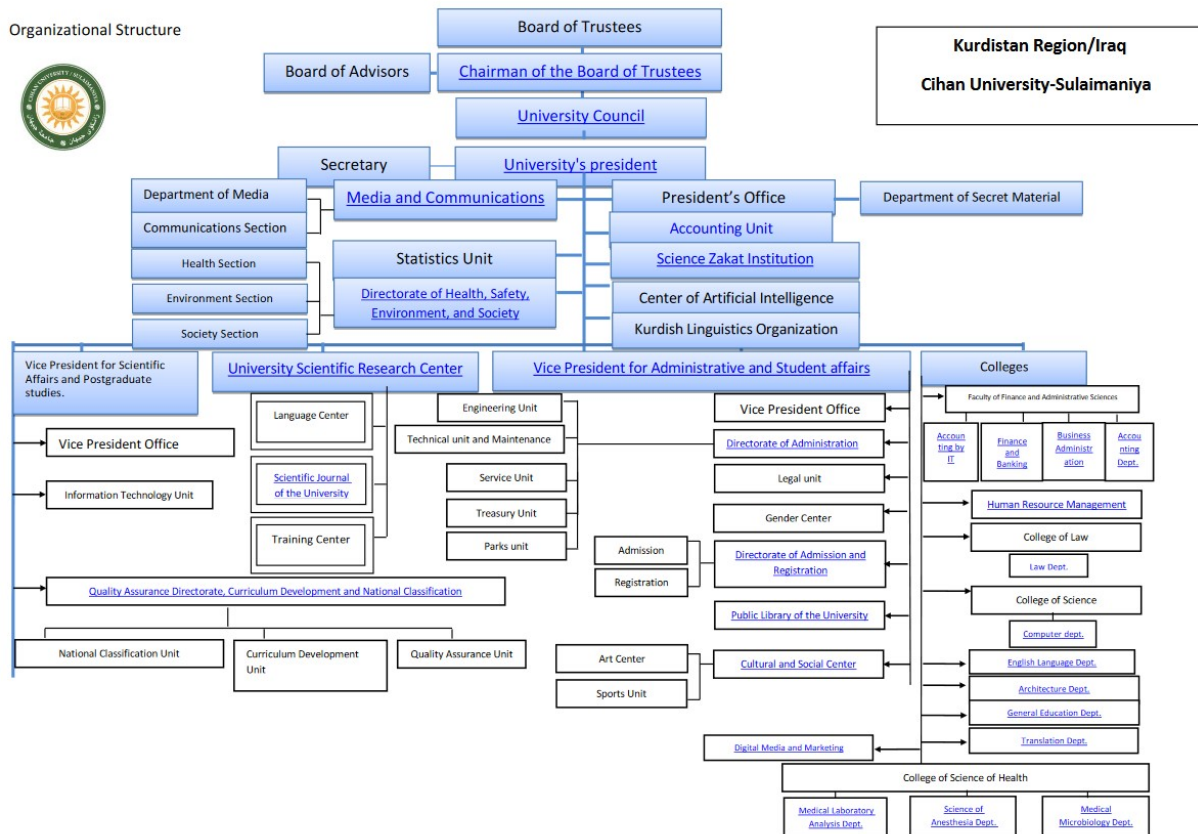
The university is governed by a university board, which is headed by a president and two vice-presidents. Additionally, the board consists of eight members, which are represented by the heads of faculties and colleges within the university[2].

The Computer Science Department, which is part of the Science Faculty, was established in 2011 as part of the original founding nucleus of the university (cf. self-report, p. 5).

On its website[3] the university states its mission as followed:

As a university, our task is to advance and promote the process of learning in Kurdistan as well as the Middle East. The university offers students the knowledge and skills needed to them (sic) *succeed in their personal and professional life. Our institution's values include a belief in a commitment to advance academic consistency, the search for scientific truth, and human development.*

The university is determined to educate students to develop the knowledge and skills that will enable them to achieve their professional goals, improve the productivity of their organizations, and provide leadership and service to their communities.

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[2] Cihan University website: Last accessed: April 2023.
[3] Cihan University website: Last accessed April 2023.

Academics and students engage in vital research projects which are shaping culture, economics, society, and politics. Recent projects have focused on international law, political stability, public administration, community health, and urbanization preparing students for the 21st century's globalized workforce. […]

The university endeavours to connect the academic environment to international academic communities. The university, currently, is making arrangements to implement the Bologna Process which is a process aimed at ensuring comparability in the standards and quality of higher-education qualifications and this is a significant step into a new stage to obtain accreditation and global recognition.

The department's mission is stated as followed:

The *Department of Computer Sciences looks forward to qualifying graduates who are supposed to serve the local society and humanity faithfully. Graduates of this department are efficient in continuing their studies to get higher education in the different fields of computer sciences* (cf. self-report, p. 5).

To achieve said mission, the university has articulated the following vision:

The department plans to enhance the graduate students' qualifications and form a base of innovators and specialists in computer science and software. These specialists will have a great deal of knowledge, academic skills, and practice in information technology, software and applications. […]

The main objectives of the department are to:

- *To produce graduates with theoretical and practical knowledge to meet the industry needs in the Kurdistan region and the whole of Iraq.*

- *To provide all university graduates with high-quality computer skills to meet the current market needs.*

- *To provide graduates with the necessary ground to pursue Computer Science at the post-graduate level.*

- *To provide graduates with skills needed to communicate with others individually and work within a team.*

- *Prepare students to have the required skills to learn independently to capture future technological advances* (ibidem, pp. 5 f.).

Experts' Appraisal

The expert panel concludes that Cihan University Sulaimaniya has a clear institutional profile. Its mission is clearly stated and transparently published on its website. As a part of the university's founding mass and with being an integral discipline in terms of answering the upcoming challenges of further digitalization, the Department for Computer Science and its programme play an essential part in addressing the university's needs and those of members of the Cihan Group.

As a private university, which at the same time acts as a key connector to the local and regional industry, it highly contributes to the development of the region and its exchange with different stakeholders outside of the Kurdistan region and even beyond Iraq.

Student Mobility and Internationalisation

Recently (and currently ongoing), Cihan University Sulaimaniya embarked on a journey to systematically strengthen and significantly improve (international) student mobility. To do so, Cihan University Sulaimaniya established a roadmap, which includes measures to conduct *promotion and information activities via thematic events and social media* […], increase the university's capacities in terms of *academic activities* […] and *organization and administration* […], monitor and evaluate mobility as well as the achieved results and finally, digitalize the mobility process in an inclusive and ecological way (cf. self-report, pp. 10 f.).

According to statements made during the digital site-visit, the university aims for a rapprochement with the European Higher Education Area by introducing the ECTS-system and picking up on the Bologna Process. The currently pursued international accreditation procedure is to be seen within these efforts.

There are different exchange programmes with other Iraqi Higher Education Institutions in place. During the digital site-visits it was stated that domestic exchanges, rather than international mobility, have been the current focus. It was stated that memoranda of understandings with universities, e. g. in the USA, are in place. These particularly serve to facilitate the transition to a further Master's programme. Since such an advanced Master's programme is currently not allowed to be offered at private universities in Kurdistan for legal reasons. In the aftermath of the assessment, Cihan University Sulaimaniya provided an extensive overview of said MOUs.

The Cihan University Sulaimaniya states that it follows the Lisbon-convention:

As regards (sic) *the European Higher Education Area, CUS following and accepting the three main levels of recognition, as well as the instruments attached to them (as suggested by the Lisbon Convention and the Bologna Declaration):*

1. Recognition of qualifications, including prior learning and professional experience, allowing entry or re-entry into higher education.

2. Recognition of short study periods in relation to student mobility, having as the main instrument the ECTS (European Credit Transfer System).

3. Recognition of full degrees, having as the main instrument the Diploma Supplement.

Cihan University Sulaimaniya recognize the entire Bologna process and certifies that learning outcomes achieved and assessed in another institution satisfy requirements of a particular program.

That is applicable on a condition that the process through which an institution certifies that the learning outcomes achieved and assessed in another context (non-formal or informal learning) satisfy (some or all) requirements of a particular program, its component or qualification. Whereas, the validation of learning outcomes, whether from formal education or non-formal or informal learning, acquired before requesting validation (cf. self-report, p. 9).

A diploma supplement is in place (cf. Appendix 8).

Experts' Appraisal

The experts have gained the impression that the university is generally striving to promote student mobility. Even though until now, this was mainly focused on domestic mobility, the leadership board has clearly stated that international student mobility is an area of intended increase.

The programme is imbedded in an extensive network of regional industrial cooperation, which in the eyes of the experts would greatly benefit from the aforementioned intended increase in international student mobility. Furthermore, the graduates would greatly benefit from an increased international acceptance of their programme. Therefore, the experts appreciate the HEI's efforts to promote and increase mobility.

A diploma supplement is in place and the university clearly stated that it follows the regulations made by the Lisbon-Convention and bears the burden of proof in terms of recognition. Nevertheless, the experts consider the diploma supplement to be of rather rudimentary nature. The experts recommend to revise said diploma supplement in a way that it is more focused on competence-

based learning outcomes.

Equal Opportunities

During the digital site-visit, the university stated that the described regulations are transparently accessible for the students via the university's online platform. It stipulates that the Higher Education Institution strives to enhance equal opportunities regardless of gender or cultural background. The programme to be accredited is open to students of all genders and the teaching staff also includes teachers of different genders and with diverse cultural backgrounds.

All buildings are barrier-reduced and accessible by wheelchair (cf. self-report, pp. 18 f.). Furthermore, the library and campus management staff elaborated that the university provides dormitories with beds for roughly 250 students, of which a certain amount is reserved for students with special needs. Additionally, students with special needs are freed of having to cover tuition fees.

Experts' Appraisal

The expert panel appreciates the fact that a diversity policy is in place and contains regulations to support students with special needs. The experts welcome the comprehensive benefits for students with disabilities, such as the exemption from fees and the preferential treatment in the allocation of places in student dormitories.

From the talks held it became obvious that the university offers a highly divers environment as there is a high diversity in terms of culture and gender among both lecturers and students alike.

The experts welcome the efforts to involve the different cultures in the study programme to be accredited in a balanced and egalitarian manner.

3.   Assessment of the Study Programme/s

1.1   Common Features and Strategic Dimension of the Programmes

The programme constitutes a first undergraduate study programme qualifying for a profession.

Until recently, the university used the American Credit Hour System and is just about to entirely switch to the European Credit Transfer System (ECTS). The transformation is cohort-based, so that the first half of the course programme is already offered according to the ECTS-system, whereas the second half of the programme is still taught according to the American Credit Hour-system. Within the ECTS-system one credit point translates to 27 hours of students' workload (cf. self-report, p. 7).

1.2   Intended Learning Outcomes

1.2.1   Bachelor's programme: Computer Science

The intended learning outcomes of the study programme are described by the university to be as stated below:

The department plans to enhance the graduate students' qualifications and form a base of innovators and specialists in computer science and software. These specialists will have a great deal of knowledge, academic skills, and practice in information technology, software and applications. […]

To fulfil this, the departments plans:

To produce graduates with theoretical and practical knowledge to meet the industry needs in the Kurdistan region and the whole of Iraq.

[…] To provide graduates with the necessary ground to pursue Computer Science at the post-graduate level.

To provide graduates with skills needed to communicate with others individually and work within a team.

Prepare students to have the required skills to learn independently to capture future technological advances. […]

On the one hand, the aim is to provide students with subject-related basic knowledge, such as an overview and basic knowledge of the relevant programming languages, as well as problem-solving skills. On the other hand, the study programme imparts an initial deepening of knowledge in selected areas of study. These competences are supplemented by an academic aptitude as well as personal

and social competences, such as the ability to work in teams successfully (cf. self-report, pp. 5 ff.).

The targeted fields of employment encompass:

Graphics designer[s], *Database designer*[s] *and developer*[s], *Network designer*[s] *and developer*[s], *Websites designer*[s] *and developer*[s]*, Mobile applications designers and developers*, *Programmers*, *Security developers*, *Electronics Commercialization*, *E-Commerce* (cf. self-report, p. 6).

Experts' Appraisal

The intended learning outcomes of the study programme are presented consistently through the various formats, such as the module handbooks and the website, and do not contradict each other. They consist of different levels of competencies and skill sets and include dimensions such as acquiring knowledge, getting a basic insight into the scientific methods of the discipline, relevant soft skills, successfully communicating in work environments, and developing a professional self-conception.

1.3 Concept and Structure of the Study Programmes

1.3.1 Bachelor's programme: Computer Science

The programme encompasses eight semesters of study with an evenly distributed amount of 30 credit points per semester, which adds up to a total amount of 240 credit points for the entire study programme (cf. Appendix 1). Courses marked as "core courses" must be passed before any access to further studies is possible. Due to the gradual change to the ECTS-system (as described above), significant parts of the study programme are still offered in the credit hour-system. The curriculum described below therefore represents a mix of the "old" and the "new" system.

The first study year is dedicated to *basic calculus and programming fundamentals* […], *statistics and logic design*, as well as the compulsory courses in *Kurdology* […] and *English* (cf. self-report, p. 7). The former encompasses modules focussing on the Kurdish language, Kurdish culture and history and are designed as compulsory modules at Kurdish Higher Education Institutions. The first year of study thus serves to teach basic skills, especially in the subsidiary sciences of the subject.

**Semester One**										
No.	M Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	T (hr/w)	ECTS	Type	Pre-Request	
1	CUE31003	Algorithm Design and Programming	2		3		6.0	C		
2	CUE68001	Mathematics	2			1	5.0	C		
3	CUE31001	Computer Skills	2		2		4.0	B		
4	CUE31004	Discrete Structure	2			1	4.0	B		
5	CUE61001	General English	2		6		6.0	B		
6	CUE31005	Statistics and Probability Theory	2			1	5.0	C		
		Total	12		11	3	30.0			

**Semester Two**										
No.	M Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	T (hr/w)	ECTS	Type	Pre-Request	
1	CUE31011	Programming Language	2		3		5.0	C	CUE31003	
2	CUE31012	Logic Design	2		2		5.0	C		
3	CUE61002	Academic English	2		6		6.0	B		
4	CUE31013	Advanced Mathematics	2			1	5.0	C	CUE68001	
5	CUE66001	Kurdistan Studies	3				5.0	B		
	CUE66002	Kurdish Language								
6	CUE31014	Computer Applications			4		4.0	B		
		Total	11		15	1	30.0			

The second year of study encompasses *computer-related courses like object-oriented programming, data structure and web design* (cf. self-report, p. 7). In the second year of study, building on the basic knowledge is continued. In-depth knowledge transfer and knowledge broadening takes place for the first time.

**Semester Three**									
No.	M Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	T (hr/w)	ECTS	Type	Pre-Request
1	CUE31021	Object Oriented Programming	2		2		6.0	C	CUE31011
2	CUE31023	Data Structures	2		2		6.0	C	CUE31011;CUE31003
3	CUE31022	Database Systems	2		2		5.0	C	
4	CUE31024	Computer Networks	2		2		5.0	C	
5	CUE31025	Software Engineering	2				4.0	C	
6	CUE31026	Communication Skills	2		1		4.0	S	CUE61001
		Total	12		9		30.0		

**Semester Four**									
No.	M Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	T (hr/w)	ECTS	Type	Pre-Request
1	CUE31031	Application Development	2		2		6.0	C	
2	CUE31032	Advanced Database	2		2		5.0	C	CUE31022
3	CUE31033	Web Design	2		2		5.0	C	
4	CUE31034	Network Administration	2		2		5.0	C	CUE31024
5	CUE82001	Academic Debates	2			1	4.0	B	CUE68001
6	CUE31035	Compiler Design	2			1	5.0	C	CUE31025
		Total	12		8	2	30.0		

The third year also *contains other specialized topics* such as *data communications and networking, operating systems, and web programming* […]. *The third year includes a course called "Research Methodology", aimed at gaining knowledge and competencies of standards, methodologies and research processes, which should prepare students for their graduation project in the fourth year* (cf. self-report, pp. 7 f.). The third year of study thus, on the one hand, serves to convey and broaden knowledge in greater depth and, on the other hand, is meant to introduce competences for academic writing.

Semester Five

No.	M Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	T (hr/w)	ECTS	Type	Pre-Request
1	CUE31041	Artificial Intelligence	2		2		5.0	C	
2	CUE31042	Data Science	2		2		5.0	C	CUE31032
3	CUE31043	Web Programming	2		2		6.0	C	CUE31033
4	CUE31044	Operating Systems	2		2		5.0	C	
5	CUE31045	Computer Graphics	2		2		5.0	C	
6	CUE31046	Computer Architecture	3				4.0	E	CUE31012
		Total	13		10		30.0		

Semester Six

No.	M Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	T (hr/w)	ECTS	Type	Pre-Request
1	CUE31051	Machine Learning	2		2		5.0	E	CUE31041
2	CUE31052	Internet of Things	2		2		5.0	C	
3	CUE31053	Dynamic Web Development	2		2		6.0	C	CUE31043
4	CUE31054	Distributed Operating Systems	2		2		5.0	C	CUE31044
5	CUE31055	Image Processing	2		2		5.0	C	
6	CUE31056	Research Methods	2				4.0	S	
		Total	12		10		30.0		

The curriculum also encompasses a range of electives subjects located in the fourth year; two courses have to be selected that generally deal with more topics like mobile networking and/or games development, social media analysis and/or E-Commerce. […] *The fourth year thus includes two courses, "Graduation Project", in which students shall get an introduction to framing their software design or develop devices in terms of research initiation, literature research, and project proposal (first course) and then carry out their project as a team and present a study (second course)* (cf. self-report, p. 8). The fourth year of study thus offers students the opportunity to set individual

specialisations within the framework of the electives and the final thesis.

		Semester Seven							
No.	M Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	T (hr/w)	ECTS	Type	Pre-Request
1	CUE31061	Cryptography	2		2		5.0	C	
2	CUE31062	IT Project Management	2		2		5.0	E	
3	CUE31063	Embedded Systems Applications	2		2		6.0	C	
4	CUE31064	Mobile Application	2		2		6.0	C	CUE31011
5	CUE31065	Social Informatics	2		2		5.0	E	
	CUE31066	E-Commerce							
6	CUE31280	Graduation Project			2		3.0	C	
		Total	10		12		30.0		

		Semester Eight						
No.	M Code	Module Title	CL (hr/w)	L (hr/w)	P (hr/w)	T (hr/w)	ECTS	Type
1	CUE31071	Information Security	2		2		5.0	C
2	CUE31072	Big Data	2		2		5.0	E
3	CUE31076	Mobile Communications Networks	2		2		5.0	E
	CUE31073	Games Developments						
4	CUE31074	Mobile Application Development	2		2		6.0	C
5	CUE31075	Network Security	2		2		5.0	C
6	CUE31280	Graduation Project			2		4.0	C
		Total	10		12		30.0	

Experts' Appraisal

The overall design of the curriculum is convincing and generally enables students to achieve the intended learning outcomes. The respective module structures are compelling, and the modules relate to each other in a meaningful way. A gradual acquisition of competences, which is made possible by the module structure, is provided for.

The programme includes an elective course section and an extensive thesis, which enables students to set individual specialisations to a certain extent and to actively participate in shaping their own course of study.

The module handbook (see Appendix 1) provided gives a good overview of the study programme, but module descriptions exist only for those modules that are already offered within the framework of the changeover to the ECTS system. For the remaining modules, a description also exists (see Appendix 2), but according to statements by those responsible for the programme, these are still to be newly tailored within the framework of the makeover. The experts therefore recommend to the ZEvA Commission that the development of the corresponding module entries be made binding as part of a condition. The deadline for fulfilling the condition would also give Cihan University

Sulaimaniya sufficient time to prepare the module entries with the necessary care. The experts further recommend that the university uses this opportunity to examine to what extent modules could be combined in order to create larger modules and thus a lower the examination load.

1.4   Teaching Faculty

The HEI described the policy for staff recruitment in length in its self-report, the staff handbook and during the site-visit (cf. self-report, p. 51 ff.; Appendix 6). *The hiring and recruitment procedure begins as an internal process in which the Faculty Deans report their planning for personnel resources to the University Council, which decides on approving the plans. After the publication of vacancies, the incoming applications are assembled into a shortlist and candidates are invited for interviews. A Recruitment Committee, with the participation of the Dean and respective Head of Department, then evaluate the visiting candidates and propose. A central Hiring Committee then decides on the hiring.*

The university has set criteria and required documentation for hiring academic staff. These include general characteristics such as professional competence and academic preparation but also minimum requirements, including holding at least a Master's degree, a 'pedagogical formation certificate', a verifiable level of English and good computer skills. For the promotion of academic faculty, an elaborated system of promotion ('Continuous Academic Development') has been documented, based on defined issues that take into account, e.g., scientific and research activities, students' evaluation ('Student Feedback') and other evaluative instruments like classroom observation by peers. […]

For the Computer Science Program, the following staff has been documented and CVs provided:

7 Full-time academic staff at the Computer science department

4 Full-time academic staff from the English Language Department

2 Part-time academic staff

Of these 13: 6 PhD and 7 MSc; and 2 with a BSc. ([…] see *Appendix 3)* (cf. self-report, pp. 12 f.).

According to statements made during the digital site-visit, there also are additional lab assistants. During the digit site-visit, the experts expressed concerns regarding the verifiability of the teaching capacity. In the follow-up to the assessment, a detailed capacity planning has been provided by the HEI (see Appendix 4), which indicates the respective number of teaching hours per lecturer: The amount of teaching hours for assistant lecturers is set to 14 per week, whereas lecturers teach twelve hours and assistant professors ten hours per week. In case individual lecturers spent more

time on teaching, these are paid within overtime payments (ibidem).

Experts' Appraisal

The experts have gained the overall impression that there is sufficient and sufficiently qualified staff to teach in the programme. A significant number of staff members involved hold a Ph.D.

Fair and merit-based regulations for recruitment and promotion seem to be in place and have been provided by the university.

The enclosed capacity planning is comprehensible and, in the opinion of the experts, fundamentally viable, although it appears to have some imbalances. This should be closely monitored in the future.

1.5 Infrastructure, Resources and Student Support

Infrastructure and Technical Equipment

The university describes its physical facilities in detail in its self-report (cf. self-report, pp. 14 ff.). A photographic documentation has been presented to the experts.

In addition to lecture halls and seminar rooms, of which four are fully equipped with multimedia equipment, the university hosts a total of ten general computer laboratories, which are used for teaching. Additionally, a robotic laboratory is provided, which is used for logic and smart graduation projects. Each of these laboratories is equipped with 25 computers (see self-report, p. 19). According to staff members, computer laboratories are openly accessible by students from 08:30 am until 07:00 pm. There might be access during weekends, but this needs to be coordinated with staff members, as it requires generators to be operated to provide electricity.

Library

Links to websites showing the library inventories are provided within the self-report (see self-report, p. 19). During the digital site-visit, the library management staff explained that the library currently roughly holds 740 books covering the subject of computer science. Additionally, the university provides access to online resources through the platform JSTOR. The library itself is equipped with a reading area for 50 students and 17 computers for literature search or browsing of the digital inventories. An access to eBooks via the use of JSTOR was stated to be possible on campus or off

campus by the use of a VPN-connection.

Teaching and Learning Environment

Students and lecturers both described the learning environment and the atmosphere as encouraging and confirmed there was a generally constructive and open feedback culture.

Teaching staff members explained that the average course size usually does not exceed 25 students.

Student Support Services

Students have access to course materials and the regulations of their studies via a digital campus management system. Even though, the programme is generally financed by tuition fees, there is a cost reduction in case of a long-term illness or similar circumstances. Students with special needs and family members of martyrs are freed from paying tuition fees. The respective regulations are set by the responsible ministry (cf. self-report, p. 19).

There are cafeterias and cafés on campus. Furthermore, the university offers extensive extracurricular activities in the area of sports, art and health care. For example, the campus includes a cinema for students as well as an art gallery. The university also organises its own sports events, such as football matches, at departmental level. In addition, the HEI provides on-campus accommodation for students (see self-report, pp. 14 ff.). Also, the university provides for safe off and on campus transportation by providing a private taxi service for students. In the future, it is planned to also provide an on-campus bus station.

Experts' Appraisal

Computer pools are numerous and the modernity of the equipment is described. Nevertheless, it seems that the Department for Computer Science is oriented one-sided to MS technology. The experts would like to point out that graduates nowadays need to have a broad knowledge in technologies, e. g. Linux, Android and iOS. Of these, only Arduino is mentioned as an alternative platform for the robotics lab. The library inventories presented within the two web links show slight inconsistencies, but this might be due to the circumstance that one link represents a static list and the other one is a database excerpt. Not all books seem to represent current needs (e.g. there are books concerning Working with MS Office 1996 while computer rooms provide Office 2020).

Nevertheless, overall, the resources appear to be sufficient to run the study programme in an appropriate manner, although the experts still see potential for improvement in the provision of literature.

The extra-curricular support provided is to be considered exemplary.

1.6 Methods of Teaching and Student Assessment

Admission to the Programme(s)

In the programme, the admission requirements are formulated as follows:

Students are accepted according to the rules declared by Ministry of Higher Education and scientific Research in Kurdistan Region of Iraq. […]

- *For Iraqi students, the ministry exam results and proficiency exam results are considered.*

- *For International students, interview, graduation grades and proficiency exam results are considered.*

- *During the application, students fill in a form and can select three of the departments on this form. The students will be placed according to their selection order.*

- *Students who are registered to another university have to withdraw their application form from that university in order to register at CUS.*

- *For Computer Science Department, High school graduates of the scientific branch are allowed to apply with a minimum average of 58%.*

- *For Computer Science Department, Graduates of a five-years computer institute are allowed to apply with a minimum average of 55%.*

- *For Computer Science Department, Technical Institutes graduates and specialists in networking are allowed to apply with a minimum average of 55%.*

- *For Computer Science Department, IT Technical Institute graduates can apply at a minimum average of 65%.*

[…]

The students who fill up the application form must have the following conditions:

- *The students must have a high school diploma which is approved by the General Directorate of Education.*

- *The international students must have certificate of equality/accreditation from the Ministry*

of Education.

[…]

- *The application forms have to be approved by high schools and General Directorate of Education* (self-report, pp. 9 f.).

Student Assessment

A large variety of teaching methods is applied at bachelor's level. Teaching units combine lectures with practical sessions, presentations, and case studies (cf. self-report, p. 20). Usually there is at least one mid-term and a final exam, which make up for a total of 70 % of the module's grade. The remaining 30 % of the grade is accounted for by semester-related contributions such as assignments, presentations, etc. Attendance is usually compulsory in all modules (ibidem). *Failed exams can be repeated and retaken as a 2ⁿᵈ attempt* […]*, specific dates are set by the administration* (ibidem). All regulations concerning student assessment are stated to be transparently accessible by students via the online platform

The students expressed their general satisfaction with the way the assessments were designed and with the attributed workload.

Teaching Methods

The applied teaching methods mainly consist of standard lectures, programming sessions, group projects and lab classes. According to the coherent statements of students and programme managers, lectures are dynamic and interactive in their design. The teaching staff mentioned that they usually tried to generate a more dynamic classroom situation by using whiteboards, videos, and assignments, which are then also discussed in the classroom.

Experts' Appraisal

The university has proven that fair and merit procedures for student admission and assessment are in place. The students' assessment seems well-suited to allow for a continuous monitoring of students' progress during a module. It covers are variety of different ways of assessing students and is competency-based in general, even though there seems to be a surplus of written examinations overall. The university has also shown that there are mechanisms in case students need to repeat

exams.

1.7 Quality Assurance

General Procedures and Underlying Regulations

The university has installed a quality management system, which includes student satisfactory surveys of each module and is extensively described within the HEI's self-report (cf. ibidem, pp. 28 ff.).

The quality assurance and development processes include different tools and evaluative instruments, including a Risk/Opportunities Assessment, monitoring of achievement of quality objectives, pre-graduation survey, alumni survey, employers' satisfaction service, internal auditing cycle, and students' survey.

The process is like that:

1. The academic calendar of the Quality Assurance Directorate starts on 1/6 and ends on 1/6 of each year. All files/confirmation letter issued within the QA academic calendar should be uploaded to QMS no later than 1/6.

2. The online Student Feedback starts on 15/4 and ends on 1/5. Using the electronic system through the QA website assigned to Feedback evaluation are carried out and results announced

3. The online Teacher portfolio evaluation starts on 1/6 and ends within 15 working days.

4. The CAD (Continuous Academic Development) assessment committees starts evaluation on 15/6 and ends on 1/7 (self-report, p. 29).

The university also monitors key indicators such as the number of students, drop-out-rates, transfer rates to other programmes and so on, which can be seen by the respective tables provided (see self-report, p. 34).

Responsibilities and Stakeholder Involvement

As mentioned earlier in this chapter, employer satisfaction is measured through surveys. Furthermore, the programme managers explained that there are regular meetings with industry representatives – especially from the Cihan Group – in which the changing requirements of the industry are discussed and can thus find their way into the ongoing enhancement of the curriculum.

The quality management is headed by the Director of the Quality Assurance Unit under the responsibility of the Vice President for Educational Affairs.

In addition, each Faculty and Department designates a decentral quality assurance representative. Responsibilities and an overall yearly timetable make the system transparent. Quality management is supported by an additional Coordinator of QMS and Accreditation, which also organizes external assessments like ISO certification and Ministry audits (self-report, p. 28).

Students are obliged to fill out the surveys, before receiving access to the exam results. Most lecturers do not discuss the results with the surveyed student cohort.

Applied Instruments and Methods

The surveys use quantitative methods to measure students' satisfaction with the respective courses. A blank questionnaire is provided (see Appendices 4–6). The questionnaire is in Arabic with an English translation given. It shows that no question meant to measure the accredited workload is included.

Quality Assurance of the Programme(s): Evaluation Results, Conclusions Drawn and Measures Taken in Response

A summary of evaluation results was not provided, but discussion of key figures, such as the drop-out rates was given to the expert panel during the site-visit.

Experts' Appraisal

The experts conclude that a quality management system has been established that is appropriate for ensuring the continuous monitoring of the success of the study programme and that it is appropriate for ensuring the continuous monitoring of the requirement to adjust the professional and content-related intended learning outcomes. A cohort-tracking seems to be in place.

The experts recommend paying more attention to ensuring that the results of the student surveys are also reflected back to the cohorts surveyed. Furthermore, a question proving a module-based workload monitoring needs to be implemented, which could be proven by a respective sample questionnaire.

1.8 Transparency and Public Information

The website of the Department of Computer Science[4] of the Cihan University Sulaimaniya does not provide extensive information concerning the bachelor's programme in Computer Science, but rather basic information. Nevertheless, there is a Student Information Portal, which according to students and programme managers provides all necessary information, including assessment regulations and such. The website is mainly offered in English, even though parts of it are only available in Arabic. The website does offer a description of the institution's profile in teaching and research and the organisational structure.

The programme's website provides a brief overview of the module structure, key learning objectives, professional qualifications, and some of the content. Furthermore, teaching staff is meant to be introduced and possibilities to contact lecturers are provided. Unfortunately, the link introducing the staff members is currently broken. Links to relevant advisory services and regulations are also presented. The HEI submitted a revised version of the module descriptions in the follow-up to the assessment.

Experts' Appraisal

From the discussions during the review, it became clear that some of the information or advisory services under discussion are communicated to the students in other ways, e. g. via online platforms. However, the experts would like to point out that it is comparatively difficult – especially for potential international students – to obtain reliable information about the study programme in this way.

The quality of the module catalogue can be rated as good overall, although some of the module descriptions in accordance with the ECTS system are still missing.

1.9 Summary of the Findings and Appraisal

The expert panel has gained a very positive overall impression of the educational infrastructure Cihan University Sulaimaniya provides for students in the field of Computer Science. Students benefit from

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[4] Website of the Department for Computer Science: Last accessed: May 2023.

generally good facilities and a wide range of extracurricular activities. The experts were impressed by the extent to which the university cares for the well-being of its students and also addresses aspects such as safety, health care and the like.

The diversity of the teaching staff can be seen as positive overall and is to be welcomed.

Overall, the experts express a positive view of the study programme to be accredited. Although it became clear that there is a clear vision for the design of the second half of the curriculum, which is partly due to the existing structures from the current programme, the changeover of the second part of the curriculum is certainly the greatest outstanding challenge of the study programme. However, the experts are optimistic that this transformation can be successfully implemented in the future and that the corresponding condition can be fulfilled. The experts see potential for greater improvement in particular in an increased transparency of the documents provided - both in the context of the self-report submitted and the examination regulations and the feedback from the evaluations to the student cohort surveyed.

Appendix

1. Statement of the University in Response to the Expert Report

<u>First recommendation:</u> We continuously strive to enhance the educational process and encourage competition among students. The certificate awarded to students is constantly evolving to highlight their talents and ability to compete through their examination grades. In fact, a committee at university level was formed last year to study and produce the best graduation certificate design and content in order to achieve the above goals.

<u>Second and third recommendations:</u> At Cihan University Sulaimaniya, although, we see exams as an important stage for assessing students, but, we also assign and supplement students with various activities to enhance their understanding of the exam material. Further, these activities include report submissions, projects, assignments, industrial, scientific field visits, and engagement in community services. As a result, our graduates face no difficulties in entering the job market. Reducing the emphasis on exams is part of our future plans, which we will study in the next intake (academic year 2023-2024) to enhance student satisfaction. Additionally, we will ensure that the results of student surveys are reflected back to the surveyed cohorts.

We strongly agree that additional efforts should be dedicated to implementing the current and proposed new modules. And, that is to facilitate greater involvement of the Academic Department, the QA Committee comprise representatives from each department, who are conducting weekly meetings, organizing, arranging various seminars to address this matter.

In conclusion, Cihan University Sulaimaniya remains committed to continuous improvement and excellence in the field of Computer Science Education. We appreciate the valuable insights provided by the experts' report and assure you that all recommendations will be thoroughly implemented to further enhance the quality of our programs. With the collaboration of our dedicated staff, proactive academic committees, and the support of our students, we are confident in our ability to create a dynamic learning environment that prepares graduates for success in the ever-evolving world of technology. We extend our gratitude to everyone involved in this process and look forward to the exciting advancements and achievements that lie ahead.

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