ASIIN Seal & Euro-Inf® Label

Accreditation Report

Bachelor's and Master's Degree Programmes
Computer Information Systems

provided by
Near East University, Nicosia, North-Cyprus

Version: 09. December 2016

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A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the name	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Bachelor Computer Information Systems	-	ASIIN, Euro-Inf® Label	-	07, 04
Master Computer Information Systems	-	ASIIN, Euro-Inf® Label	-	07, 04
Date of the contract: August 2014 **Submission of the final version of the self-assessment report:** November 2014 (Ba) / August 2015 (Ma) **Date of the onsite visit:** 08.10.2015 **at:** Near East University, North Nicosia, North Cyprus				
Peer panel: Prof. Dr. Jürgen Friedrich, Universität Bremen Prof. Dr. Bettina Harriehausen-Mühlbauer, Hochschule Darmstadt Prof. Dr. Christian Müller, Technische Hochschule Wildau Günther Müller-Luschnat, iteratec GmbH Mohammed Abubakar[3], School of Computing and Technology, Eastern Mediterranean University, North Cyprus (student peer)				
Representative of the ASIIN headquarter: Dipl. Des. Katrin Wellmann				
Responsible decision-making committee: Accreditation Commission for				

[1] ASIIN Seal for degree programmes; Euro-Inf®: Label European Label for Informatics

[2] TC: Technical Committee for the following subject areas: TC 04 – Informatics/Computer Science; TC 07 – Business Informatics/Information Systems

[3] Student representative peer Mr. Mohammed Abubakar was excluded from the audit team at the end of the on-site visit after admitting that he had not informed ASIIN about having obtained his Master's degree from Near East University.

Degree Programmes	
Criteria used: European Standards and Guidelines as of May 2015 ASIIN General Criteria as of 28.03.2014 Subject-Specific Criteria of Technical Committee 04 – Informatics/Computer Science; TC 07 – Business Informatics/Information Systems as of 12.09.2011	

In order to facilitate the legibility of this document, only masculine noun forms will be used hereinafter. Any gender-specific terms used in this document apply to both women and men.

B Characteristics of the Degree Programmes

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[4]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Ba Computer Information Systems	B.Sc.	-	6	Full time	-	8 Semesters	246 ECTS	fall and spring semester; 01.06.1989
Ma Computer Information Systems	M.Sc.	-	7	Full time	-	4 Semesters	120ECTS (21/30 local CP)	fall and spring semester; 01.06.2009

Near East University presents the following **qualification objectives** in the Diploma Supplement of the Bachelor's degree programme Computer Information Systems: "The Computer Information Systems degree programme aims to teach a wide range of IT and IS skills which are essential to anyone interested in the design and implementation of IT and IS solutions. The programme has been designed to give students both a theoretical and a practical understanding of the fundamental issues related to IT and their use in business life. The programme aims to teach database design and implementation, computer programming, systems analysis and design, and e-business systems."

According to the self-evaluation report (hereafter: SER) of the institution the following **objectives** and **learning outcomes** shall be achieved:

"1. Apply computer technology to address business information system needs.

2. Demonstrate a deeper understanding of at least one area of computing, such as programming, networking, technical support or web technology, enabling the student to gain employment in the information systems field.

3. Demonstrate critical thinking in understanding, evaluating and applying technology solutions to real life problems.

[4] EQF = The European Qualifications Framework for lifelong learning

4. Demonstrate familiarity with e-commerce resources, tools, including web programming, publishing, and database management tools.

5. Articulate ethical and professional standards to the use of computer information systems and computer based data, responsibility and ethical conduct for managing computer related projects.

6. Effectively use personal, interpersonal and communication skills in team work, time management in projects and self-learning.

7. Grow professionally through continuing education, research and development, and involvement in professional activities to recognize the need to engage in continuing professional development and lifelong learning.

8. Identify, analyze and develop solutions for information systems-related business problems/opportunities.

9. Demonstrate knowledge of current information, theories and models, and techniques and practices in all of the major business disciplines including the general areas in information technologies."

The following **curriculum** is presented for the Bachelor's degree programme:

CURRICULUM/COURSE CONTENT

FIRST YEAR – Freshman Year

Fall Semester		***Credits***
ENG 101	English I	3
MAT 171	Mathematics I	3
ECON 101	Principles of Economics I	3
MAN 101	Introduction to Business	3
CIS 131	Intro. to Computer Information Systems	3
ATA 101	Principles of Atatürk's I	0

Spring Semester		***Credits***
ENG 102	English II	3
MAT 172	Mathematics II	3
ECON 102	Principles of Economics II	3
MAN 102	Principles of Management	3
CIS 132	Introduction to Algorithm & Programming	3

ATA 102	Principles of Atatürk's II	0

SECOND YEAR – Sophomore Year

Fall Semester		***Credits***
ENG 201	Business Communication	3
ACC 202	Financial Accounting I	3
MAT 281	Statistics I	3
CIS 205	Programming Language I	3
CIS 243	Data Structures	3

Spring Semester		***Credits***
MAT 282	Statistics II	3
CIS 232	Programming Language II	3
CIS 246	Database Management	3
CIS 202	Operating Systems	3
Elective		3

THIRD YEAR – Junior Year

Fall Semester		***Credits***
MARK 303	Principles of Marketing	3
CIS 331	System Analysis Method	3
CIS 363	Software Engineering	3
CIS 340	Internet Programming I	3
CIS 386	Database Programming I	3

Spring Semester		***Credits***
MAN 308	Operations Management & Research	3
CIS 348	E-Business Systems	3
CIS 352	Programming Language III	3
CIS 342	Ethical & Social Issues in Information Systems	3
CIS 456	Object Oriented Programming Language I	3

Summer Training (45 working days)

FOURTH YEAR – Senior Year

Fall Semester		***Credits***
MAN 404	Human Resource Management	3
CIS 468	Internet Programming II	3
CIS 400	Graduation Project	0
	Technical Elective	3

	Technical Elective	3
	Technical Elective	3

Spring Semester		***Credits***
CIS 400	Graduation Project	3
CIS 412	Management Information Systems	3
	Technical Elective	3
	Technical Elective	3
	Technical Elective	3
	Technical Elective	3

Electives		***Credits***
CIS 242	Animation Technologies	3
CIS 416	Computer Networks	3
CIS 420	Information Systems Security	3
CIS 421	Software Testing	3
CIS 430	Information Systems for Communication	3
CIS 432	Decision Support Systems	3
CIS 435	E-Learning Systems	3
CIS 440	Social Software Applications	3
CIS 450	IT Project Management	3
CIS 460	Mobile Application Development	3
CIS 486	Database Programming II (Oracle)	3
CIS 488	Web Development (PHP, MySQL)	3

The institution presents the following **qualifications objectives** in the Diploma Supplement of the Master's degree programme Computer Information Systems: "The Master degree on Computer Information Systems programme builds on a foundation of strong technical knowledge in IT. The programme reinforces a broad understanding of other disciplines related to information systems, such as management. The MSc programme balances theoretical knowledge with practical skills in developing and administering information systems. While students take core IT fundamental courses, they expose themselves to cutting-edge technologies in Information technologies and systems analyses and development, computer networking, Internet security, database design and administration, Internet and web/mobile applications, and computer networks. Graduates are equipped with lifelong learning habits either as a professional or a researcher in their field."

According to the SER of the university the following **objectives** and **learning outcomes** shall be achieved:

"1. Apply the rules of scientific research and ethics to solve problems in structured manner with responsible and professional approach.

2. Ability to design and setup advanced computer networks as well as to analyse and find possible errors in such networks.

3. Ability to apply structured critical thinking in problem solving, system design and choosing suitable computer software packages for an application.

4. Ability to use advanced well known and accepted techniques and skills for the development of computer programs as well as database systems.

5. Ability to write technical reports and technical papers and express their ideas, as well as gain oral presentation skills.

6. Engage in lifelong learning by following the recent advances and innovations in computer information systems by searching and finding technical information to solve computer information based problems.

7. Ability to advice, design, develop, and provide consultancy on advanced network and web based applications."

The following **curriculum** is presented for the Master's degree programme:

CONTENT OF THE DEGREE PROGRAM Course Code	**Credit**	**ECTS**
CIS 500 Master Thesis	NC	54
CIS 501 Project	NC	40
CIS 502 Seminar	NC	10
CIS 503 Advanced Database Management Systems	3	8
CIS 504 Advanced Management Information Systems	3	8
CIS 505 Advanced Information Systems Security	3	8
CIS 506 Scientific Research Methods	3	8
CIS 507 Advanced Object Oriented Programming Languages I	3	8

CIS 508 Mobile Application Development	3	8
CIS 509 Advanced Software Engineering	3	8
CIS 510 Advanced Object Oriented Programming Language II	3	8
CIS 511 Ethical Issues in Information Systems	3	8
CIS 512 IT Project Management	3	8
CIS 513 Advanced Computer Networks	3	8
CIS 514 Advanced E-Learning Systems	3	8
CIS 515 Advanced Operating Systems	3	8
CIS 516 Knowledge Management	3	8
CIS 517 Innovations Management	3	8
CIS 521 Soft Computing	3	8
CIS 522 Wireless and Mobile Networks	3	8
CIS 524 Human Resource Management	3	8
CIS 525 Human Computer Interaction	3	8
CIS 526 Advanced Cloud Computing Systems	3	8
CIS 527 Data Mining and Online Communications	3	8
CIS 528 Advanced Web Development	3	8
CIS 529 Advanced System Analysis Methods	3	8
CIS 530 Data Communication Systems	3	8
CIS 531 IT Communication Technologies	3	8
CIS 532 Internet Technologies	3	8
CIS 533 Computer Graphics	3	8
CIS 534 Advanced Software Testing	3	8
CIS 535 Games Programming	3	8
CIS 536 Advanced Simulation Systems	3	8

C Peer Report for the ASIIN Seal[5]

1. The Degree Programme: Concept, content & implementation

Criterion 1.1 Objectives and learning outcomes of a degree programme (intended qualifications profile)

Evidence:

- Diploma Supplement
- Website: http://www.neu.edu.tr/
- Discussions during on-site visit
- SER

Preliminary assessment and analysis of the peers:
The peers base their assessment and their analysis of the objectives and learning outcomes of the degree programmes on the Diploma Supplements, the self-evaluation report (SER) and the discussions on-site with the university. They cannot find online information on the qualifications objectives of the CIS programmes on the faculty's English website. They concur that the objectives should be better anchored and more easily accessible to the public, i.e. to students, teaching staff and anyone else interested.

The panel considers the objectives and learning outcomes of the degree programme (i.e. the intended qualifications profile) in the SER to be described in a brief and concise way, though generally in a rather abstract wording. Most objectives are formulated in terms of "use", "design", "analyse", "work in teams", "writing reports", "and consultancy" etc.

In the peers' opinion the objectives of the Bachelor's programme are adequate with regard to the business related aspects of the programme but they are missing the computer competences specified. The university argues that one objective is "development of computer programs" and the capstone project also is designed to be very technical. However, the peers do not necessarily find such issues in the current curriculum, i.e. which need a

[5] This part of the report applies also for the assessment for the European subject-specific labels. After the conclusion of the procedure, the stated requirements and/or recommendations and the deadlines are equally valid for the ASIIN seal as well as for the sought subject-specific label.

lot of computer science skills. Accordingly, they find the Bachelor programme lacking with regard to the achievement of this stated objective.

The peers point out that the qualification objectives and intended learning outcomes should describe the academic, subject-specific and professional classification of the qualifications gained in the degree programmes differentiating clearly between Bachelor and Master level. At present it appears to the panel that the main differentiation takes place by adding the terms “advanced” or “research”, which in their eyes is not sufficient to describe qualifications objectives appropriate at Master level. The actual knowledge, skills and competences of a graduated student should be clearly transparent from the programme descriptions and need to be clearly described also in the Diploma Supplement. Furthermore, the panel was not able to fully ascertain to which extent the programmes under review differ from other Computer Programmes such as Computer Science or Software Engineering.

The discussions on site help the panel gain a better understanding of the intended learning outcomes and objectives: The explanations of the institution show that they intend to enable graduates to enter the job markets in their respective home or other foreign countries, being able to analyze and solve IT problems in the field of Business Economics, especially in the fields of network administration, data bases, programming and system analysis. Asked to specify and distinguish between Bachelor and Master objectives the university lists as knowledge and skills to be achieved: Having general information on data bases, computer science in general for the Bachelor which is continued on a higher level in the Master with fuzzy, intelligent systems as well as the ability to write software to check income level of stock for decision support systems, automatic systems to sale, dashboards. The Bachelor is supposed to convey the basics of business administration, teaching less technology, only a thin base of computer science, concentrating on management of information systems, accounting and so forth. On the other hand, the Master contains more computer science topics, and not as much knowledge management and advanced management information systems. Peers feel that business topics are underrepresented, whilst computer science is overweighing the curriculum at present. This seems to be an imbalance of focus of the two programmes, and the peers question whether the Master is an adequate follow-up of the competences achieved in the Bachelor. The peers question whether Bachelor graduates would have adequate competences in regard to computer sciences to follow the Master’s curriculum.

Although the university’s explanations allow the peers to better understand the intentions of the programme, the auditors are not fully equipped to analyze the compliance of the programme objectives with the intended learning outcomes as defined by the Subject-Specific Criteria of the ASIIN Technical Committees Business Informatics/Information

Systems and Informatics/Computer Science. A less abstract wording and a better differentiation between the intended competence profiles is deemed necessary.

Also, the panel takes into consideration the fact that the institution offers two possibilities to achieve a Master's degree: one with and one without a Master's thesis but a so-called graduation project instead. The institution explains that the non-thesis Master is for students who do not wish to achieve a further academic education but seeking direct immersion into industry. Therefore, the graduation project is considered to prove their graduation skills. However, the university points out that this project is not expected to be on Level 7 of the European Quality Framework, Master level. Only very few students choose this option; most study the Master's programme with thesis (out of 20 Master students since 1989, only two have chosen the Master without thesis).

After having evaluated the presented documentation on graduation projects and Master theses the peers agree with the staff that the Master level is not reached by the presented graduation project documentation. Following the criteria of the ASIIN label (ASIIN 1.1, 2.3, 3), they deem it absolutely necessary to complete a Master with a final project or thesis on Master level demonstrating that graduates are able to work on a problem independently and at a level in accordance with the degree. The institution follows the arguments of the panel and states the plan to abandon the Master without thesis. Since the university provides a statement after the on-site-visit (but before the drafting of this report) stating that the Master without thesis has been removed, no further analysis will go into this topic.

The panel notes and welcomes that the staff also seems very eager to analyze the qualification objectives on a regular basis and develop them constantly further if necessary.

With regard to the job opportunities stemming from the graduates' qualifications, the peers understand that the labour market of (Northern) Cyprus is not able to immerse a high number of graduates. Many students who come from developing countries (70-80% of students are non-Cyprus citizens, many from Turkey, others from countries like Nigeria, Lebanon, Syria, Iraq, Iran and Cameroon) start first jobs by developing websites and applications.

Criterion 1.2 Name of the degree programme

Evidence:

- The title of the programmes as well as the main course language, English, are defined in the programmes' regulations.
- SER

Preliminary assessment and analysis of the peers:
The title of the degree programmes adequately reflects the intended aims and learning outcomes as well as the main course language (English): Computer Information Systems in the opinion of the peers.

Considering the curriculum in regard to the title, the peers question whether there is enough content in the modules of the Master's degree programme that reflects the three columns of Computer/Business Information Systems: informatics, economics, and the synopsis of these two, business informatics or computer information systems. They find that the new module descriptions provided after the on-site-visit include vital modules in the fields of Knowledge Management, Innovations Management and Human Resource Management (modules CIS 516, 516 and 524).

While these additions establish that more content imminent to Computer Science exists, the peers still miss a stronger focus towards Computer Information Systems – in particular with regard to the integration of computer and business aspects – in the Master which would adequately justify the title of the programme (see 1.1 and 1.3 for more details).

Criterion 1.3 Curriculum

Evidence:

- Curricula and study plans
- Module Learning Outcomes Matrix (from SER)
- Module descriptions
- Evaluation results

Preliminary assessment and analysis of the peers:
The curricular content of the programmes is assessed with regard to its contribution to the programmes' objectives, also in light of the Subject-Specific Criteria, and the level of education sought. The panel sees that the curriculum generally allows the students to achieve the intended learning outcomes (which nevertheless should be more specified, as detailed in section 1.1) in order to obtain the degrees.

The overall objectives and intended learning outcomes for the degree programmes are systematically substantiated and generally updated in the individual modules, although the panel does miss more detailed information regarding some individual modules.

Considering the curriculum the peer's question – based on the written documentation submitted - whether the Master's degree programme includes enough content in the modules reflecting the three columns of Computer/Business Information Systems: informatics, economics and the integration of these two: business informatics or computer information systems. As mentioned in section 1.2, the additional modules provided after the visit only alleviate this concern to a certain extent.

The panel also questions why different object oriented programming languages are taught instead of focusing on one language by which the key features of this type of programming language are highlighted. The HEI (higher education institution) is of the opinion that it is best to teach different kinds of programming languages because graduates need to be able to program in any language their future employee might use. Also, the institution argues that their algorithm courses do give the theory of programming languages. The peers do not fully agree with this logic but point out that it is most important for students to understand the principal concept of programming languages and then learn one in an exemplary manner in order to be able to adapt it to others which might be used in the students' future workplace. They therefore deem it best to first teach the concept of programming, then exemplify it by instructing one of the currently most used strategic languages (like Java or C++) in order to enable students to develop and program applications (e.g., object oriented programming). This way, students will learn to define which project method they need to apply for each business case, thus being able to interchange the languages for the needs of the industry. The peers acknowledge the university's positive reaction to this line of argument.

Another topic of concern for the panel lies in the field of project management skills and process modelling. The panel gathers from the on-site discussions that graduates of the Bachelor's degree programme very often work in practice at the interface between business and IT. In the panel's opinion students often do not need programming skills in such positions, but the ability to produce a good functional design which includes the usage of modelling. The module Software Engineering (CIS 363) provides these skills only very roughly. In addition, the panel questions why common process modelling languages like BPMN, event driven process chains or activity diagrams are not provided but only data flow diagrams which are not useful for modelling processes. In its view software processing is not interpreted to be technical, but necessary to understand business and transfer it into structures that programmers can understand and implement. The university agrees with the understanding of the peers that process modelling is about the com-

munication between software programmers and business administration and plans to change the concerned modules System Analysis Methods (CIS 331), Software Engineering (Ba CIS 363 and Ma CIS 509 Advanced SE) and IT Project Management (CIS 512) in order to suit the purpose and the related learning outcomes better. The panel welcomes these plans and encourages the university to consider including more modelling content (UML and process modelling languages like BPMN) and modern software process concepts (like agile software development using e.g. the Scrum model) in order to reach the intended learning outcomes and qualification profiles.

In the revised edition of the SER, the peers find that some misunderstandings in this context are evident: agile methods are equated with modelling ("modelling (agile, water fall)") and data flow diagrams are listed as kind of process modelling. The university should take care that these topics are properly described in the published material and are sufficiently taught in the relevant courses. If needed, it might be helpful to the HEI to appoint an external expert to teach the course, before starting the new modules.

With regard to modules ATA 101 and ATA 102 (Principles of Atatürk) in the Bachelor curriculum which are mandatory for external Turkish and Northern-Cypriot students only, the peers question the equal treatment of foreign students in this context. The university explains its plans to create a parallel class for foreign students teaching Turkish as a foreign language (planned modules TUR 101 and TUR 102 in the after-visit-revised version of SER, but still missing from the module descriptions) which the peers welcome as an adequate solution.

Concerning the summer training of Bachelor students the panel intensively discusses its merits and shortcomings. The peers welcome the chance for students to experience professional work firsthand. From their point of view, a professional practice period (working practice interval) should be longer than just a few weeks (planned duration at the moment: 45 days) so that students can reach the intended practical skills. While the institution generally agrees, it argues that it is very difficult for students in Northern Cyprus to find companies that qualify as useful workplaces for the Summer Training on the relatively small island of Cyprus. The department sees no way to find sufficient companies to serve all students if the time-span should be longer than the 9 weeks scheduled. The local situation does hinder students and staff to act as freely as wished. The HEI is intent on compensating this by offering many practical projects to the students (mostly programming of websites and apps). The panel understands the problem but insists on suggesting to further expanding the required practical experience to help students reach the intended learning outcomes fully. In their view, the relation of the familiarisation phase (approximately 1 month) to a possibly productive contribution of the student is skewed, since students need to be properly incorporated and introduced into the new workplace.

Up to the panel's visit the summer training module was not mentioned in the module handbook, but is added to it as CIS 406 after the on-site-visit, which the peers welcome.

Criterion 1.4 Admission requirements

Evidence:

- Admission requirements are defined in the Academic Regulations.
- University provides statistical data regarding the applicants' demographic and national profiles.

Preliminary assessment and analysis of the peers:

In terms of admission, the requirements and procedures are binding and transparently presented. The panel analyzes them and finds that they are not the same for all applicants, though. The university's regulations for the Bachelor state that Turkish citizens, Northern Cypriots and foreign students all need to meet different requirements, while all students are admitted to the university after they complete their high school studies successfully and obtain high school graduation diplomas. Local students (i.e. citizens of the "Turkish Republic of Northern Cyprus") must sit for the university's entrance examination and obtain a pass mark from this examination. Successful students are admitted to the university, but not necessarily to the department of computer information systems. Students from Turkey are chosen based on a nation-wide Student Selection Examination; they have to define the Near East University and the department of computer information systems as their choice, and must obtain successful pass marks from the Turkish university entrance examinations (prepared and administered by the Higher Education Council of Turkey, YOK). Those who obtain the required marks are admitted to the university, but not necessarily to the department of computer information systems. Students from other countries are admitted to the university based on the results of their high school graduation diplomas. The panel sees the university's orientation towards the Turkish system and accepts the different requirements for different applicants because of the particular political Cypriot situation.

Also, although all Master applicants need to have a Bachelor's degree, the official regulations do not state from which field of study. It is only ruled therein that to be eligible for admission one has to show a Bachelor in a field that is decided by the Senate upon the recommendation of the Graduate School Administrative Board, this not defined more transparently or closely.

The assessment of applications for the Master's programme is based on an undergraduate cumulative grade point average (mandatory for Turkish students only), and a written

examination and interview conducted by the Department. The institution states that interviews consist of an oral evaluation, taking into consideration the letter of recommendation and the letter of intent submitted by the applicant. The peers find the admission requirements sufficient, especially because there is an Academic Preparation Program to apply in case Master applicants need to compensate for their deficiencies, if they hold a Bachelor's degree from a field other than Computer Information Systems or if they hold a Bachelor's degree from an institution of higher education other than this university. It is also defined that compulsory courses in the Academic Preparation Program cannot be substituted for the courses necessary for completion of the concerned graduate program. The discrepancies between the formal entrance requirements stated in the regulations and the apparent effective means which take into account the subject-specific previous education should be cleared up to ensure transparency to all stakeholders (see criterion 5).

In this context, the peers welcome that students attending the Academic Preparation Program can take graduate courses besides academic preparation courses upon the recommendation of the Department Chairperson and approval of the Administrative Committee of the Graduate School.

The further analysis of requirements by the panel shows that students who transfer from other programs or universities are supposed to provide a transcript approved by their registrar's office and course descriptions from their former institution. The decision about applications for transfer meeting the admission requirements set by the Senate is made by the Graduate School Administrative Board upon the positive and reasoned recommendation of the Department.

The admission requirements generally seem to be structured in a way that supports the students in achieving the learning outcomes, including the required level of English language proficiency as the programmes are taught in English. In terms of language requirements the peers welcome to see that all students have to provide an official test result (TOEFEL, IELTS or similar) or have to carry out a language proficiency examination which is assessed by the Faculty of English language of the university.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 1:

The HEI points out that it has decided to provide information about the qualification objectives of the CIS programmes online and thereby make it easily accessible to all stakeholders. In addition, the objectives of the Bachelor's programme were modified in order to specify the computing skills as well as computer and information literacy skills.

The HEI also states that it will add more information to the qualifications objectives of the Master's programme to clearly differentiate such qualifications from the Bachelor's programme.

The HEI wants to clarify that 61% of the total courses in the Bachelor's programme are related to computing (programming, software, hardware, database, networks & security), whereas 75% of the total courses are related to computing at Master level. The number of computing courses may be increased by increasing the number of technical electives in the future.

The CIS Department intends to include more business related elective topics in the Master's degree programme. It agrees with the peers that once the principle of algorithms is known it is not too difficult to use any programming language to implement the algorithm. The department points out that employers ask for working knowledge of programming languages (e.g. C++, C#, or Java) and for this reason the students should have working knowledge of various popular programming languages.

In addition, the panel questions why common process modeling languages like BPMN, event driven process chains or activity diagrams are not provided. The peers suggest that in order to reach the intended learning outcomes and qualifications profiles this would be important. The Department of CIS agrees with the peers to add functional design including the usage of modeling to the Software Engineering (CIS 363) module, to enhance the CSI 509 Software Engineering (Masters) and IT Project management (CIS 512) modules with modeling content (UML and process modeling languages like BPMN) and modern software process concepts (like agile software development using e.g. the Scrum model).

The Department of CIS plans to include the modules TUR 101 and TUR 102 into the mandatory curriculum for all foreign students.

With respect to the length of the summer training the Department of CIS points out that they judge a period of 45 days to be sufficient. However, the tasks and practicality of the summer internship will be enriched as proposed by the peers.

The Department of CIS intends to clarify from which fields the postgraduate students should be accepted to the Master programme and will ensure that all students must provide an official test of proficiency in English**.**

Finally the HEI declares that it will stop the Master's programme without a final thesis.

The peers welcome learning that several of their suggestions will be implemented and are looking forward to receiving the necessary documents during the further procedure of the accreditation process.

2. The degree programme: structures, methods and implementation

Criterion 2.1 Structure and modules

Evidence:

- Module Learning Outcomes Matrix (from SER)
- Module descriptions
- Statistical data
- Discussions during on-site visit

Preliminary assessment and analysis of the peers:
The peers analyze the course structure of the programmes and find it to be sensible, each module being a sum of teaching and learning whose contents are generally concerted, and allowing students to define an individual focus by choosing Technical Electives in addition to mandatory courses. The curriculum seems to be structured in a way to allow students to complete the degree without overly exceeding the regular course duration, but almost 50 % of Bachelor students do need longer to graduate. The HEI argues that those who prolongate their studies seem to need longer because they work part-time to finance their studies, need to improve their English skills to follow the courses (i.e., one year of English preparatory school) or because they need to take care of personal family matters stemming from problems in their home countries (some students being from Iran, Iraq, Syria). The peers understand these reasons but do feel that it would be useful to further analyze and evaluate this problem in the future, especially in light of the questions regarding work load (see criterion 2.2).

The panel concludes that modules have been adapted to the requirements of the degree programmes. They ensure that each module's objectives help to reach both the qualification level and the overall intended learning outcomes.

As mentioned above, the university will introduce two additional modules (Turkish Language for non-natives instead of the mandatory ATA-modules for Turkish/Northern Cypriot students). This will, from the panel's point of view, ensure that the curricular structure will be the same for all students.

The question of the practical work experience was already discussed within criterion 1.3.

While the students' diversity regarding gender and nationality is welcomed by the panel, it finds that very few students and staff are involved in international academic exchange. The HEI argues that, since most students are already abroad from their point of view (and could be seen as "incomings"), very few take or ask for the chance to spend a semester at

another HEI. In the discussions with the students, the panel learns that many of them would be very interested in becoming "outgoings" but see no individual possibilities and receive no sufficient information on that topic from the university. Also, there is no organization to support staff to spend time internationally, the universities of Northern Cyprus not being included in the ERASMUS programme. Although welcoming the international atmosphere at Near East University in general, the peers would welcome more support of students and staff in international outgoing activities by organizing international academic exchange on an institutional level.

Criterion 2.2 Work load and credits

Evidence:

- Discussions during on-site visit
- Module descriptions (SER)
- Academic regulations

Preliminary assessment and analysis of the peers:
The panel analyzes the estimated work load transparent from the SER, paying special attention to the calculation of estimated time budgets since many students exceed the regular course duration. They find the work load calculation to be rather inconclusive because the HEI does include both attendance-based learning as sum of classroom and lab sessions and self study in the work load calculation but does not include exam preparation. It also seems to estimate a working day with 12 full hours (rather than the common 8 hours), seemingly also including break times such as lunch and dinner or even the time needed to travel to and from university (which differs greatly since some students live on campus and others as far as Girne/Kyrenia).

Furthermore, in the SER the university states that they expect Bachelor students to work around 70 hours per week and Master students to work 80 hours. The panel deems this to be a massive overload for students if understood correctly – and that this could explain why many cannot complete the grade in the regular time span estimated. The peers point out that the normal working hours of a full-time employee in Europe is 40 hours/week. Thus, peers ask the university to re-evaluate whether the workload they have indicated is realistic.

In regard to the Master thesis which is now mandatory for all Master students, it is rewarded 54 ECTS. In the documentation it seems that the entire work load related to these ECTS would take place in only the fourth semester, whereas students according to the

curriculum start working on the thesis already in the third semester. It needs to be made more transparent when work load is expected, not only when the credits are rewarded.

The panel feels that university should take the necessary time to check the modules, respective work load and corresponding national CPs and ECTS points more closely to ensure that they reflect reality, are transparent and in line with the ECTS Users' Guide. To this extent, it would be advisable to include a work load survey in the frame of quality management activities.

Criterion 2.3 Teaching methodology

Evidence:

- Discussions on-site
- Module descriptions (SER)

Preliminary assessment and analysis of the peers:
Generally, the teaching methods and instruments found by the panel support the students well in achieving the learning outcomes. During the on-site visit and the discussions with staff and students as well as in the revised version of the SER, peers are able to establish that teaching methods and instruments are much more interactive than originally thought and vary sufficiently. Projects are included in the modules, many having grown from only single to group projects; and modern technology (such as E-Learning and the modern U-shaped set-up of one of the computer laboratories) is used actively. Still, a majority of classes seems to be conducted in a rather traditional front-lecturing manner. The panel indicates that, from their point of view, each teaching format should be aligned with the intended learning outcomes of the respective module (e.g.: seminar to enhance critical thinking, discussion and argumentation skills).

Criterion 2.4 Support and assistance

Evidence:

- SER
- Discussions on-site with students
- the HEI's website: http://neu.edu.tr

Preliminary assessment and analysis of the peers:
Overall, the students' satisfaction with the amount and quality of individual assistance, advice and support by teachers and other staff is considered by the panel to be a strong

indicator of the well functioning system of the HEI's support and consultation offers. The relationship between lecturers and students seems to be very good, with teaching staff being accessible also on short notice (open door policy) and described as very helpful by the students, taking care also of individual cases. Lecturers seem to be strong advisors also regarding the elective modules so that an adequate selection of elective courses and the make-up of a meaningful individual schedule are ensured.

Only with regard to international activities the peers recommend to advice students and staff more extensively and on an institutional level (see criterion 2.1).

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2:

The Department of CIS intends to gather statistical data about the reason for prolonged studies and to analyse the results in order to find solutions for this problem.

Since very few students and staff members show academic mobility, the Department of CIS plans to provide more support to students and staff members that are interested in a stay abroad and to organize international academic exchange programmes.

The Department of CIS will take into account that the Masters students start working on their thesis already in the third semester although the ECTS-credits belong to the fourth semester. It will also ensure that each teaching format will be aligned with the intended learning outcomes of the respective modules.

The peers appreciate all intended changes and are awaiting the necessary documents that will show that all measures have been implemented.

3. Exams: System, concept and organization

Criterion 3 Exams: System, concept and organization

Evidence:

- Module descriptions (SER)
- Academic regulations
- Discussions during on-site visit

Preliminary assessment and analysis of the peers:

The achievement of learning outcomes in the programme modules is ascertained by mid-term and final exams as well as additional quizzes and assignments. While the majority of

exams are written, students' performance in presentations or group tasks also contributes to the module grades. Nevertheless, the panel considers oral exam forms to be missing from the programmes. While the revised SER states that, depending on the nature of the module, oral examinations are conducted (example given by HEI: "in some information technology modules, instructor directs some questions during the lecture sessions individually to student"), it also states that "The department does not offer any oral examinations." which could be meant only in regard to make-up exams. Either way, the peers consider oral exams to still be missing from the module descriptions and are unsure whether HEI is indeed planning to start orally examining students in order to reach the intended communicative learning outcomes. Thus the panel recommends that the form of examination should be aligned with the intended learning outcomes of the respective module (e.g. oral). In particular with regard to the intended communication skills, they would seem to be an adequate means of establishing whether students have acquired the intended skills.

Considering the make-up (or retry) exams, the panel learns that students have two weeks to study for a make-up exam after having failed or out of illness having not attended the first offered exam. This time span appears to the peers to be too short to really compensate and study extensively. The HEI explains that the exams' outcomes are needed in a timely manner to determine the further studies of the student, with spring semester starting directly after the end of fall semester. While peers understand the difficulty of coordination, they consider it helpful for students to be able to study during a lengthier period of time in order to demonstrate that they have fully acquired the intended skills.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 3:

Since the panel considers oral exams to be missing from the programmes, the Department of CIS will include oral exams in appropriate modules of the programme. It also thinks about the peers` suggestion to lengthen the period between the first exam and a possible redo.

The peers accept the HEI's plans but do not alter the requirement A4.

4. Resources

Criterion 4.1 Staff

Evidence:

- Staff handbook and staff involvement matrix (SER)
- Discussions on-site

Preliminary assessment and analysis of the peers:
The panel finds that the composition, scientific orientation and qualification of the teaching staff team are adequate and suitable for sustaining the degrees. Nevertheless, they do see the demand for an additional expert on Software Engineering to teach the aforementioned modules (see criterion 1.3) and strongly advise the HEI to consider adding this staff member.

There are sufficient staff resources available for providing assistance and advice to students. Nevertheless, the panel feels that many administrative tasks are taken on by teaching staff which binds their academic resources for their own research work (see further criterion 4.2).

Criterion 4.2 Staff development

Evidence:

- SER
- Discussions on-site

Preliminary assessment and analysis of the peers:
Teaching staff seems to the peers to be very motivated, communicative in the exchange with students and each other and engaged in many activities. The HEI explains that it encourages lecturers to attend external seminars and conferences in order to renew and broaden their technical knowledge. But there is no record of lecturers conducting research elsewhere on the basis of a sabbatical leave. The university offers some incentives to academic staff to publish academically as promotion is based on research and publication status. It provides financial assistance to those who wish to present papers abroad, supporting and financially rewarding international publications through the newly founded Center of Excellence. Analyzing the publication lists of the teaching staff the panel concludes that the research and development activities carried out by the teaching staff could be intensified to support the level of academic qualification aimed at. The peers value current improvements in this regard.

Criterion 4.3 Funds and equipment

Evidence:

- List of labs and facilities for students (SER)
- Discussions on-site

Preliminary assessment and analysis of the peers:
The peers welcome that funds at Near East University seem to be adequate. The budget of the university stems from students' fees as well as the university-owned bank and hospital, the initial funding going back to the private founder of the university. As a campus university, the panel finds that the HEI provides many amenities to students and staff.

Nevertheless, the peers find that third party funding and engagement – in particular with regard to research financing does not seem to exist. This may not be absolutely necessary from a purely monetary point of view but the peers consider that third party engagement (companies, but also other institutions of education) will advance and positively influence the HEI's development.

Resources are distributed where needed to maintain lecturers and other staff as well as laboratories and class rooms. Staff reports that any request brought forward is met within due time, e.g. new laboratory equipment. Also, students' access to laboratories as well as the well-equipped library is adequate which is reflected in students' high satisfaction with the university's offerings.

The panel points out that some outdated equipment may be replaced more quickly (e.g. computers run on Windows 7), which is met with consent.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 4:

Since the panel suggests that there should be an additional expert on Software Engineering among the teaching staff, the Department of CIS considers either to train an existing staff accordingly, or to employ an additional staff member for teaching this module**.**

The Department of CIS intends to motivate and encourage all staff members to carry out research and to publish their work or present it at conferences or seminars. It also plans to encourage the staff to look for and engage in joint projects with companies. Finally, the HEI points out that outdated equipment will be replaced as soon as funds are available**.**

The peers appreciate the HEI's efforts to improve the resources and wait for the relevant documents to be submitted in course of the fulfillment of requirements.

5. Transparency and documentation

Criterion 5.1 Module descriptions

Evidence:

- Module descriptions

Preliminary assessment and analysis of the peers:
Analyzing both the first and the second version of the SER, the panel comes to the conclusion that generally the module descriptions contain the necessary information as stated in the criterion. There are some modules, though, which do not offer the full information on the modules' content and the teaching methods, as peers find out in the discussions with the lecturers. Also, qualification objectives related to the modules are mostly not specific enough. Some miss (up-to-date) literature recommendations, and, of course, the aforementioned correct credits and make-up of grades, the correct work load and duration of each module. The panel deems the module handbook as being in need of overall revision.

Furthermore, the peers point out that module descriptions have to be made available to all stakeholders which is currently not the case.

Criterion 5.2 Diploma and Diploma Supplement

Evidence:

- Student record cards
- Diploma Supplements
- Transcripts of Records

Preliminary assessment and analysis of the peers:
The peers learn that shortly after graduation, a diploma or degree certificate is issued together with a Diploma Supplement printed in English. These documents provide information on the student's qualifications profile and individual performance as well as the classification of the degree programmes with regard to its applicable education system. The individual modules and the grading procedure on which the final mark is based are explained in a way comprehensible to all stakeholders. In addition to the final mark, statistical data as set forth in the ECTS User's Guide is included to allow readers to categorize the individual result/degree.

Criterion 5.3 Relevant rules

Evidence:

- rules and regulations, namely: Academic Regulations for Undergraduate Students, Academic Regulations for Postgraduate Students, Ordinance of Transfer Regulations at BA and Associate Degree Level, Master Thesis Guidelines of Graduate School of Applied Sciences, Student Disciplinary Regulations

Preliminary assessment and analysis of the peers:

The rights and duties of both the higher education institution and students are clearly defined and binding (guidelines, statutes etc.). The relevant course-related information is available in the language of the degree programme, but not accessible on the website (English content missing for CIS). The peers point out that transparency of all rules and regulations for all stakeholders is an important means of quality assurance.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 5:

The Department of CIS intends to revise the module descriptions and make them easily available to all stakeholders; in addition, changes to the Diploma and Diploma Supplement are planned. Since the peers point out that not all course-related information is accessible on the website of the department, all relevant rules and regulations will be made available on the department`s website for all stakeholders.

The peers are satisfied that their suggestions will be taken into account.

6. Quality management: quality assessment and development

Criterion 6 Quality management: quality assessment and development

Evidence:

- Regulations (SER)
- Sample surveys
- Evaluation outcomes

Preliminary assessment and analysis of the peers:

The programmes are subject to regular internal quality assessment procedures aiming at their continuous improvement. All responsibilities and mechanisms defined for the purposes of continued development are binding. The peers analyze the documentation of

the HEI and find different kinds of evaluations: dropout rates, questionnaires for students after completion of the programme about their satisfaction, follow-up of students considering their employment, feedback from employers. The HEI explains that it uses different tools for quality assurance: departmental audits, assessments, improvement plans, analysis of exam results, student attendance, student employment, student satisfaction, teaching material, assessment of teachers, students, and syllabus. When asked for evidence, e.g. a template of different surveys, the HEI presents their student evaluation of satisfaction, which the peers consider to be very general. As mentioned above, student workload is not evaluated.

The panel finds that in 2010 - 2014 there was a strong increase of students' intake but at the same time a decrease of graduation exists. Furthermore, the duration of the studies seems to last an average of around 9 semesters with a maximum of 14 semesters. The peers consider the possible high workload to be a reason for this. The university cannot fully underline its analysis (namely the part time work and students' personal issues as discussed in section 2.2) with statistical evidence. The peers therefore consider a more detailed research of the reasons for long study durations to be needed so that the university can take sensible counter actions.

In general, there seems to be a system of quality management in operation at the HEI, the programmes are subject to regular internal quality assessment procedures aiming at continuous improvement. However, the panel cannot yet determine that sufficient analysis of the data gathered is carried out and that the university effectively reacts on shortcomings.

Students and other stakeholders take part in the quality assurance process but are not informed about the outcomes consequently in the way of receiving feedback and being involved in further development. The peers point out that the closing of feedback loops and involvement of students in all stages of quality management activities are good and expected practice in European higher education.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 6:

The Department of CIS will improve the quality management system and will provide detailed information about departmental audits, assessments, improvement plans, analysis of exam results, student attendance, student employment, student satisfaction, teaching material, assessment of teachers, students, and the syllabus. In addition, statistical analysis will be gathered to find the discrepancies in the study durations for the Bachelor's degree, so that corrective actions can be taken.

The peers appreciate the HEI's plans to improve the quality management system and to involve the students in all stages of quality management activities.

D Additional Documents

1. The analysis of statistical data from evaluations (courses, workload, drop-out rate, graduates, alumni jobs) including interpretation and planned consequences.
2. Capacity matrix (showing the relation of number of students to teaching staff as well as to courses).

E Comment of the Higher Education Institution (10.11.2015)

The institution provided a detailed statement as well as the following additional documents:

- Information on course evaluation process
- Matrices for teaching capacity for the Bachelor`s and the Master`s degree programme
- Additional information about the degree programmes
- Statistical data about students, alumni and staff members
- Information about the student work load

F Summary: Peer recommendations (16.11.2015)

Taking into account the additional information and the comments given by the HEI the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific Label	Maximum duration of accreditation
Ba Computer Information Systems	With requirements for one year	Euro-Inf® With requirements	30.09.2022
Ma Computer Information Systems	With requirements for one year	Euro-Inf® With requirements	30.09.2022

Requirements

For all degree programmes

A 1. (ASIIN 1.1) The qualification objectives/learning outcomes should describe the academic, subject-specific and professional classification of the qualifications gained in the degree programmes differentiating clearly between Bachelor and Master level and should be implemented in a way that the stakeholders can refer to them.

A 2. (ASIIN 1.3) Methods and tools to improve systematic project management and modeling should be part of the curricula.

A 3. (ASIIN 2.2) The university should demonstrate that the expected workload is not hindering students to graduate within the regular study period.

A 4. (ASIIN 3) The form of examination should be aligned with the intended learning outcomes of the respective module (e.g. oral).

A 5. (ASIIN 5.1) The module descriptions should include reliable information about the content, qualification objectives, literature, ECTS credits and grades, workload and duration of each module. The students and the teaching staff should have access to the latest module descriptions.

A 6. (ASIIN 5.3) All information concerning the degree programme should be available to the students in the language of the degree programme.

A 7. (ASIIN 6) The system of quality management needs to ensure that meaningful statistical data about the achievement of the intended learning outcomes, the academic mobility and feasibility, the student and staff workload and drop-out rates is acquired. Students should be involved in the quality assurance processes at committee level. All students and teachers should receive the feedback of quality assurance instruments' results (to close feedback loops).

For the Master's degree programme

A 8. (ASIIN 1.3) It should be ensured that students acquire sufficient competences in business and skills in the integration of computer science and business.

Recommendations

For all degree programmes

E 1. (ASIIN 2.1, 4.2) It is recommended to support students and staff in international outgoing activities by organizing international academic exchange on an institutional level.

E 2. (ASIIN 2.3) It is recommended to align the teaching format with the intended learning outcomes of the respective module (e.g.: seminar to enhance critical thinking, discussion and argumentation skills).

E 3. (ASIIN 4.2) It is recommended to encourage and enable academic staff to do more research and engage in personal academic and didactic development.

E 4. (ASIIN 4.3) It is recommended to acquire third party funding and engagement in order to advance and positively influence the programmes' development.

For the Bachelor's degree programme

E 5. (ASIIN 2.1) It is recommended to further expand the required practical experience (additional or extended summer practice).

For the Master's degree programme

E 6. (ASIIN 2.3) It is recommended to focus on concepts and methods of object-oriented programming in order to enable students to apply acquired skills onto other programming languages.

G Comment of the Technical Committees

Technical Committee 04 – Informatics (24.11.2015)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discussed the procedure. In particular, it was discussed that in other parallel procedures implemented at the same university a different wording had been proposed with regard to the student workload and ECTS credits. The Technical committee therefore questions whether the corresponding requirement (A3) could be deleted as the same issue seemed to be dealt with in A7. The Technical Committee decided against this as the intention of the two requirements was understood to be different. The Technical Committee asked the Accreditation Commission to ensure that all procedures at the same university were aligned. The Technical Committee thus proposed no amendment to the requirements and recommendations as proposed by the peers and made a few editorial changes.

Assessment and analysis for the award of the Euro-Inf® Label:

The Technical Committee deemed that the intended learning outcomes of the degree programmes do comply with the Subject-Specific Criteria of the Technical Committee 04 - Informatics.

The Technical Committee proposed the award of the seals as follows:

Degree Programme	**ASIIN seal**	**Subject-specific Label**	**Maximum duration of accreditation**
Ba Computer Information Systems	With requirements for one year	Euro-Inf® With requirements	30.09.2021
Ma Computer Information Systems	With requirements for one year	Euro-Inf® With requirements	30.09.2021

Requirements

For all degree programmes

A 1. (ASIIN 1.1) The qualification objectives/learning outcomes should describe the academic, subject-specific and professional classification of the qualifications gained in the degree programmes. They should differentiate clearly between Bachelor and Master level and should be implemented in such a way that all stakeholders can refer to them.

A 2. (ASIIN 1.3) Methods and tools to improve project management and modeling skills should form part of the curricula.

A 3. (ASIIN 2.2) The university should demonstrate that the expected workload allows students to graduate within the assigned study period of 8 semesters.

A 4. (ASIIN 3) The means of examination for each module should be aligned with the intended learning outcomes.

A 5. (ASIIN 5.1) The module descriptions should include reliable information about the content, qualification objectives, literature, ECTS credits and grades, workload and duration of each module. The students and the teaching staff should have access to the latest module descriptions.

A 6. (ASIIN 5.3) All information concerning the degree programme should be available to the students in the language of the degree programme.

A 7. (ASIIN 6) The system of quality management needs to ensure that meaningful statistical data about the achievement of the intended learning outcomes, the academic mobility and feasibility, the student and staff workload and drop-out rates is acquired. Students should be involved in the quality assurance processes at committee level. All students and teachers should receive appropriate feedback regarding the results returned by the instruments of quality assurance.

For the Master's degree programme

A 8. (ASIIN 1.3) It should be ensured that students acquire sufficient competences in the field of business as well as skills in the use of computer science in business.

Recommendations

For all degree programmes

E 1. (ASIIN 2.1, 4.2) It is recommended to support students and staff, wishing to pursue international academic exchange on an institutional level.

E 2. (ASIIN 2.3) It is recommended to align the teaching format with the intended learning outcomes of the respective module (e.g.: seminar to enhance critical thinking, discussion and argumentation skills).

E 3. (ASIIN 4.2) It is recommended to encourage and enable academic staff to do more research and to engage in personal academic and didactic development.

E 4. (ASIIN 4.3) It is recommended to acquire third party funding and involvement, in order to advance and positively influence the programmes' development.

For the Bachelor's degree programme

E 5. (ASIIN 2.1) It is recommended to further expand the required practical experience (additional or extended summer practice).

For the Master's degree programme

E 6. (ASIIN 2.3) It is recommended to focus on concepts and methods of object-oriented programming in order to enable students to apply acquired skills to other programming languages.

Technical Committee 07 – Business Informatics (17.11.2015)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discussed the procedure. They fully agreed with the proposals of the peer panel and made no changes to the wording of requirements and recommendations. Der Fachausschuss diskutiert das Verfahren und folgt der Beschlussempfehlung der Gutachter ohne Änderungen.

The Technical Committee proposed the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific Label	Maximum duration of accreditation
Ba Computer Information Systems	With requirements for one year	Euro-Inf® With requirements	30.09.2021
Ma Computer Information Systems	With requirements for one year	Euro-Inf® With requirements	30.09.2021

H Decision of the Accreditation Commission (11.12.2015)

Assessment and analysis for the award of the subject-specific ASIIN seal:

The Accreditation Commission discussed the procedure. The Commission principally agreed with the analysis of the panel and Technical Committees and made a number of editorial changes to the requirements and recommendations, in line with the proposals by Technical Committee 04 and in order to align them with the other clusters at the same university wherever an identical situation was concerned. The Commission added a requirement to include statistical data in the Diploma Supplement.

Assessment and analysis for the award of the Euro-Inf® Label:

The Accreditation Commission deems that the intended learning outcomes of the degree programmes comply with the Subject-Specific Criteria of the Technical Committee 04 - Informatics.

The Accreditation Commission for Degree Programmes decides to award the following seals:

Degree Programme	ASIIN seal	Subject-specific Label	Maximum duration of accreditation
Ba Computer Information Systems	With requirements for one year	Euro-Inf® With requirements	30.09.2021
Ma Computer Information Systems	With requirements for one year	Euro-Inf® With requirements	30.09.202

Requirements

For all degree programmes

A 1. (ASIIN 2.1) The educational objectives/learning outcomes should describe the academic, subject-specific and professional classification of the qualifications gained in the degree programmes. They should differentiate clearly between Bachelor and Master level and be made accessible to all stakeholders.

A 2. (ASIIN 1.3) Methods and tools to improve systematic project management and modeling skills should form part of the curricula.

A 3. (ASIIN 2.2) It should be verified that the awarded ECTS credits for the modules correspond to the actual workload of the students (e.g. based on results of the teaching evaluation).

A 4. (ASIIN 3) The means of examination for each module should be aligned with the intended learning outcomes of the respective module (e.g. oral).

A 5. (ASIIN 5.1) The module descriptions should include reliable information about the content, qualification objectives, literature, ECTS credits and grades, workload and duration of each module. The students and the teaching staff should have access to the latest module descriptions.

A 6. (ASIIN 5.3) All information concerning the degree programme should be available to the students in the language of the degree programme.

A 7. (ASIIN 6) The system of quality management needs to ensure that meaningful statistical data about the achievement of the intended learning outcomes, the academic mobility and feasibility, the student and staff workload and drop-out rates is acquired. Students should be involved in the quality assurance processes at committee level. Students and teachers should receive relevant feedback of quality assurance instruments' results.

For the Master's degree programme

A 8. (ASIIN 1.3) It should be ensured that students acquire sufficient competences in the field of business as well as skills in the use of computer science in business.

Recommendations

For all degree programmes

E 1. (ASIIN 2.1, 4.2) It is recommended to support students and staff wishing to pursue international academic exchange on an institutional level.

E 2. (ASIIN 2.3) It is recommended to align the teaching format with the intended learning outcomes of the respective module (e.g.: seminar to enhance critical thinking, discussion and argumentation skills).

E 3. (ASIIN 4.2) It is recommended to encourage and enable academic staff to do more research and to engage in personal academic and didactic development.

E 4. (ASIIN 4.3) It is recommended to acquire third party funding and involvement, in order to advance and positively influence the programmes' development.

E 5. (ASIIN 5.2) It is recommended that, in addition to the final mark, statistical data are provided in the Diploma Supplement according to the ECTS Users' Guide.

For the Bachelor's degree programme

E 6. (ASIIN 2.1) It is recommended that students should acquire more practical skills in industrial environments.

For the Master's degree programme

E 7. (ASIIN 2.3) It is recommended to focus on concepts and methods of object-oriented programming in order to enable students to apply acquired skills onto other programming languages.

I Fulfilment of Requirements (09.12.2016)

Analysis of the peers and the Technical Committee (23.11.2016)

For all degree programmes

A 1. (ASIIN 2.1) The educational objectives/learning outcomes should describe the academic, subject-specific and professional classification of the qualifications gained in the degree programmes. They should differentiate clearly between Bachelor and Master level and be made accessible to all stakeholders.

Erstbehandlung	
Peer	Fulfilled Explanation: Overall, the peers assessed this requirement to be fulfilled. However, the peers still see room for improvement as some educational objectives/learning outcomes for the Masters' degree programme are still rather generic formulated. For example the objective "To acquire graduates common competencies that are essential for carrying out fundamental processes in their life-long profession and learning within society" could be further specified. In addition, the role of scientific work and research could be further strengthened in the Masters degree learning outcomes.
TC 07	Fulfilled
TC 04	Fulfilled

A 2. (ASIIN 1.3) Methods and tools to improve systematic project management and modeling skills should form part of the curricula.

Erstbehandlung	
Peer	Not Fulfilled Explanation: According to the module descriptions on the website modelling techniques are now a bit more present in the curriculum. In addition, modern software process techniques (esp. agile methodologies) are indeed mentioned in the objectives of module

	CIS 512 (IT project management). However, it is not represented in the content of the module description. Furthermore, these techniques are not mentioned in the recommended literature. In the module description of CIS 450 (IT Project Management) no agile methodologies are mentioned. Also the wording in some module descriptions (e.g. CIS 331) “agile modelling” (instead of agile software process) suggests that the requirement is not fulfilled. Consequently, the peers assume that modern software process techniques are not taught.
TC 07	Not Fulfilled Explanation: The Technical Committee follows the argumentation of the peers. Methods and tools to improve systematic project management and modeling skills are not mentioned in the course content and literature of the respective modules. Furthermore, it should be explained in detail how “agile modeling” will be implemented in the curriculum.
TC 04	Not Fulfilled

A 3. (ASIIN 2.2) It should be verified that the awarded ECTS credits for the modules correspond to the actual workload of the students (e.g. based on results of the teaching evaluation).

Erstbehandlung	
Peer	Fulfilled Explanation: According to the evaluation results of the modules and feedbacks by students and instructors, the awarded ECTS credits for the modules have been revised.
TC 07	Fulfilled
TC 04	Fulfilled

A 4. (ASIIN 3) The means of examination for each module should be aligned with the intended learning outcomes of the respective module (e.g. oral).

Erstbehandlung	
Peer	Fulfilled Explanation: The type of examination for each module was revised and aligned to the intended learning outcomes e.g. oral examinations take now place.
TC 07	Fulfilled
TC 04	Fulfilled

A 5. (ASIIN 5.1) The module descriptions should include reliable information about the content, qualification objectives, literature, ECTS credits and grades, workload and duration of each module. The students and the teaching staff should have access to the latest module descriptions.

Erstbehandlung	
Peer	Fulfilled Explanation: The module descriptions now include reliable information about the content, qualification objectives, literature, ECTS credits and grades, workload and duration of each module. The students and the teaching staff have access to the latest module descriptions on the websites of the degree programmes.
TC 07	Fulfilled
TC 04	Fulfilled

A 6. (ASIIN 5.3) All information concerning the degree programme should be available to the students in the language of the degree programme.

Erstbehandlung	
Peer	Fulfilled Explanation: All programme information is now available in English on the websites.
TC 07	Fulfilled
TC 04	Fulfilled

A 7. (ASIIN 6) The system of quality management needs to ensure that meaningful statistical data about the achievement of the intended learning outcomes, the academic mobility and feasibility, the student and staff workload and drop-out rates is acquired. Students should be involved in the quality assurance processes at committee level. Students and teachers should receive relevant feedback of quality assurance instruments' results.

Erstbehandlung	
Peer	not fulfilled Explanation: The peers assessed that the requirement is only partly fulfilled. While it is plausible to the peers that statistical data are now collected and measures, if necessary will be implemented the peers could not assess whether students are involved in the quality assurance processes at committee level. Furthermore, it still seems unclear if the students and teachers receive relevant feedback of quality assurance instruments' results.
TC 07	not fulfilled Explanation: According to the provided documentation students are not jet involved in the quality assurance processes at committee level. In addition, students and professors do not receive relevant feedback of quality assurance instruments' results so far.
TC 04	not fulfilled

For the Master's degree programme

A 8. (ASIIN 1.3) It should be ensured that students acquire sufficient competences in the field of business as well as skills in the use of computer science in business.

Erstbehandlung	
Peer	Fulfilled Explanation: Three new business / management related modules for the Masters degree programme were added. The balance between the three columns computer science, information systems and business administration is still equal. Nevertheless, the peers assess this requirement to be fulfilled.

TC 07	Fulfilled
TC 04	Fulfilled

Decision of the Accreditation Commission (09.12.2016)

The Accreditation Commission for Degree Programmes discusses about the provided documents. They decide to follow the judgment of the peers and the Technical Committees and consider the requirements 2 and 7 to be not fulfilled.

The Accreditation Commission for Degree Programmes decides the prolongation of the accreditation as follows:

Degree Programme	**ASIIN-seal**	**European Label**	**Max. accreditation period**
Ba Computer Information Systems	Requirements 2 and 7 not fulfilled	Euro-Inf®	6 months prolongation
Ma Computer Information Systems	Requirements 2 and 7 not fulfilled	Euro-Inf®	6 months prolongation