ASIIN Seal & Euro-Inf®

Accreditation Report

Bachelor's Degree Programme
Computer Science

Provided by
South Mediterranean University, Tunis

Final Version: 12 December 2025

Table of Content

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]
الحاسوب علوم ف إجازة / Licence en informatique	Licence in Computer Science	ASIIN, Euro-Inf® Label	-	04
Date of the contract: 10.09.2024 **Submission of the final version of the self-assessment report:** 30.04.2025 **Date of the onsite visit:** 22.-23.07.2025 **at:** The Mediterranean Institute of Technology; Lac II, Tunis, 1053 Tunisia				
Expert panel: Prof. Dr. Georg Schneider, Trier University of Applied Sciences Prof. Dr. Stefan Fischer, University of Lübeck Ahmed Kahlil Boulahia, Mantu Mohamed Anis Oueslati, student at Université de la Manouba				
Representative of the ASIIN headquarter: David Witt				
Responsible decision-making committee: Accreditation Commission for Degree Programmes				
Criteria used: European Standards and Guidelines as of May 15, 2015 ASIIN General Criteria, as of March 28, 2023				

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[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.

Subject-Specific Criteria of Technical Committee 04 – Informatics/Computer Science as of March 29, 2018	

B Characteristics of the Degree Programme

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF[3]	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer
Licence in Computer Science	Bachelor of Computer Science	-	6	Fulltime	-	6 semesters	201 ECTS credits / 140 US credits	WiSe / 2019/20

For the Bachelor's degree programme Computer Science, the institution has presented the following profile on its website and in a published brochure:

„The Computer Science Licence program at MedTech prepares future innovators to design and manage advanced software systems that address complex global challenges. Through a hands-on curriculum covering programming, Artificial Intelligence, cybersecurity, and software engineering, students gain technical expertise and leadership skills. Committed to innovation, ethics, and impact, the program empowers graduates to shape a sustainable digital future.

The main objective of the Licence program in Computer Science is to train future graduates to be successfully employed in the field of computing, or to enroll in advanced degrees in computer Science or any other related discipline.

MedTech's Computer Science Licence program provides students with a combination of advanced technical and theoretical knowledge, best engineering practices, and emerging technologies to develop software that meets high quality standards. The educational program has a thorough basis in the principles and practices of computing as well as real-world learning experiences through team-centered and hands-on projects to prepare students properly to engage in further learning.

Besides technical skills, upon successful completion of the program, graduates will acquire social and entrepreneurial skills."

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

C Expert Report for the ASIIN Seal[4]

1. The Degree Programme: Concept, Content & Implementation

Criterion 1.1 Objectives and Learning Outcomes of a Degree Programme (Intended Qualifications Profile)

Evidence:

- Diploma Supplement

- Module Descriptions

- Objective-Module-Matrices

- Self-Assessment Report

- Discussion during the audit

Preliminary assessment and analysis of the experts:

The experts base their assessment of the learning outcomes on the information provided in the module descriptions and in the Self-Assessment Report of the degree programme under review. SMU has described Programme Educational Objectives (PEO), and Programme Learning Objectives (PLO), and Qualification Profiles. The PEO and PLO are published on the university's website and easily accessible for students as well as other stakeholders. Furthermore, there are regular revision processes in place that take into account feedback by external and internal stakeholders.

The experts refer to the Subject-Specific Criteria (SSC) of the Technical Committee Informatics/Computer Science and use the objective-module-matrices and module descriptions for each programme as a basis for judging whether the intended learning outcomes correspond with the competences as outlined by the SSC.

The experts note that the relationship between PEOs and PLOs has been established in a comprehensible and logical manner. The development of these objectives involves both internal and external stakeholders so that the curricula can be adapted and modified according to the needs of the industry and the graduates on a regular basis. For example,

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[4] 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.

SMU regularly conducts surveys, through which the different stakeholders get the chance to assess the programmes and their main objectives and adapt them if necessary. Internal stakeholders include all of SMU members (students, teaching staff, and non-academic employees), while the external stakeholders include the industry, alumni, the government, and society. A major revision including consultations of stakeholders takes place every four years.

SMU has defined the following PEOs and PLOs for the Bachelor's degree programme under review:

Program Educational Objectives:

- "Core Competency: Equip students with technical and/or professional skills and knowledge of fundamental concepts in computer science, including software development, database management, and information systems.
- Problem-Solving and Critical Thinking: Develop students' ability to think critically and solve complex problems.
- Professional Skills and Lifelong Learning: Prepare students for successful careers in the computer science industry and academia by enhancing their professional skills.
- Practical Application and Industry Readiness: Ensure that students gain practical experience through projects, and internships"

Program Learning Objectives:

- "Developing Functional and Technical Expertise: Gaining in-depth knowledge and practical skills in key areas such as software development, database management, network architecture, and information systems security.
- Analytical and Problem-Solving Skills: Training students to analyze complex systems, identify challenges, and devise effective solutions, emphasizing logical reasoning and systematic approaches.
- Project Management and Teamwork: Educating students on managing projects, coordinating with teams, and understanding the dynamics of working within diverse, multi-disciplinary groups.
- Application of Theoretical Concepts to Real-World Scenarios: Bridging the gap between theoretical knowledge and practical application, ensuring that graduates can apply their learning to real-world problems in information systems and technology.
- Innovation and Continuous Learning: Encouraging innovation and the adoption of new technologies and methods, along with fostering a mindset geared towards continuous learning and adaptability to evolving industry trends.

- <u>Professional and Ethical Responsibility</u>: Instilling a strong sense of professional and ethical responsibility, including understanding the impact of computer science solutions in a broader economic, environmental, and societal context.
- <u>Communication Skills</u>: Enhancing communication skills, both technical and non-technical, to effectively convey ideas, collaborate with diverse teams, and present solutions to various stakeholders.
- Develop the ability to design experiments, analyze data, and draw conclusions. Gain hands-on experience with experimental techniques, data collection and data analysis to solve real-world engineering problems."

Furthermore, SMU names several potential career opportunities for graduates of this programme such as Software Developer, Data Analyst, Web Developer, BI Analyst, Cybersecurity Analyst, AI/ML Developer, Cloud Solutions Architect, and Game Developer.

In the experts' opinion, the intended qualification profiles as well as the programme's educational and learning outcomes are clear, plausible and allow students to take up an occupation, which corresponds to their qualification. They learn that the graduates of SMU are much sought after in the labor market. The representatives of industry emphasize the high quality of the graduates of the programmes under review. In addition, the industry state that they are very satisfied with the scope of the collaboration with the university. Furthermore, students as well as graduates also state that they are satisfied with and well aware of their good job perspectives. The experts emphasize positively that the university is very reactive to market demands and the latest and upcoming developments in the field.

In summary, the experts confirm that <u>the degree programme under review</u> adequately reflect EQF 6 level (Bachelor's programmes). This can also be confirmed based on the module descriptions and discussions. The learning outcomes are consistent with the ASIIN Subject-Specific Criteria of the Technical Committees 04. They aim at the acquisition of specific competences and are well-anchored and binding.

Criterion 1.2 Name of the Degree Programme

Evidence:

- Diploma Supplement

- Self-Assessment Report

- Discussions during the audit

Preliminary assessment and analysis of the experts:

The experts confirm that the English translation and the original name of the Bachelor's degree programme Computer Science correspond with the intended aims and learning outcomes as well as the content and the teaching language.

Criterion 1.3 Curriculum

Evidence:

- Diploma Supplement

- Module Description

- Curricula overview

- Objective-Module-Matrices

- Student Guide

- Self-Assessment Report

- Discussion during the audit

Preliminary assessment and analysis of the experts:

Structure and content of the programme

The curriculum of the study programme under consideration is reviewed by the experts in order to identify whether the described PEOs and PLOs (see chapter 1.1) can be achieved by the available modules. Course descriptions as well as overviews and the objective-module-matrices matching the different PLOs and the various module contents were provided for a thorough analysis.

The curriculum of the Bachelor programme is designed for six semesters and offered as a full-time study programme. To complete the programme students must complete 140 US credits (equivalent to 201 ECTS credits, see chapter 1.5 for more details about the conversion of credit points). The main study language of the programme is English.

In its Self-Assessment report, SMU describe the approach of the curriculum as follows (see Appendix for detailed course overview): "The Licence in Computer Science curriculum is designed over three academic years (six semesters). There are no elective courses in the

current program structure; all students follow the same set of modules. The program includes a coherent sequence of mandatory modules across these domains: Mathematics & Problem Solving, Core Computer Science and Technologies, [and] Soft Skills and Personal Development. The program is organized into progressive blocks, as follows:

Semesters 1 and 2: Foundations (Basics)

- Fundamental mathematics: Calculus I and II, Discrete Mathematics
- Introduction to algorithmics and programming
- Foundational courses in communication
- First-year project in Python (L1 Project)

Semesters 3 and 4: Core and Intermediate Studies

- Continued development in algorithmic thinking: Data Structures and Algorithms
- Introduction to core computing concepts: Operating Systems, Networks, Computer Organization, Object-Oriented Design, Distributed Systems and Advanced Programming
- Second-year Agile project (L2 Project),
- Courses on technical writing and management.

Semesters 5 and 6: Advanced Topics and Applied Specializations

- Specialized courses in modern computing: Cloud Computing, Artificial Intelligence and Machine Learning, Big Data and Cybersecurity,
- A comprehensive Software Engineering module including Software Architecture, UI/UX Design, Software Quality & Testing, ERP Systems,
- Capstone Project: Students are required to complete a capstone project that encompasses a four-month full-time industry internship, intended to synthesize and apply their cumulative learning in a real-world professional environment. This project also involves the preparation of a written thesis and its defense before an academic jury through a formal oral presentation.

Specialization

While no formal elective tracks or options exist, students are exposed to key specialization areas in the final year through dedicated modules, including:

- Artificial Intelligence and Machine Learning
- Cloud and Distributed Systems
- Big Data and Cybersecurity

- Full-stack Software Development (Web and Mobile)

These modules act as pre-specialization preparation for future academic or professional focus. All students take these modules, ensuring a balanced exposure to contemporary specializations."

Overall, the experts are very satisfied with the curriculum of the Bachelor's degree programme under review. They see that the programmes are well structured and that the modules build on each other in a reasonable way, enabling the students to effectively reach the learning outcomes as laid down for each programme as a whole. Furthermore, as already stated under criterion 1.1, the experts highly value how quickly the university adapts to market demands and the latest and upcoming developments in the field of studies. Therefore, the experts are very convinced of the structure and content of the entire programme. This is also confirmed by the satisfaction of the various stakeholders, which is evident in the different discussion rounds with students, alumni, industry representatives and teachers.

Since the experts are so satisfied with the general approach, during the audit they mainly discuss detailed questions regarding the curriculum and come up with a number of recommendations that the university could take into account when the curriculum is next revised. In particular, they discuss courses with less relevance to computer science, such as "Introduction to Engineering Mechanics" and "Introduction to Electrical Circuits". The experts understand that it is normal in Tunisia to offer more general engineering courses in technical degree programmes. The lecturers state that these courses are intended to integrate an additional dimension into the degree programme. However, there have already been internal discussions about replacing these courses with courses on AI, for example. The experts also believe that these two courses are not essential for the students' qualification profile. They therefore agree that these courses should be replaced with more computer science-related courses, such as courses on AI. They also discuss the order of courses "Graph Theory & Application" and "Data Structure & Algorithms". Both courses are currently offered in the same semester, and the experts are unsure whether this ensures that students acquire the necessary prior knowledge in time, as the courses build on each other in terms of content. The programme coordinators and lecturers agree that this could be rearranged, if necessary, but also state that the respective lecturers are coordinating with each other to ensure that no problems arise. This is also confirmed by the students. Therefore, the experts do not see any actual problem, but nevertheless recommend reviewing the order of the two courses.

The experts also discuss the content of the course "Operating Systems" which, in their opinion, is at a relatively low level compared to other courses in the curriculum. The focus is

primarily on the use of Linux. In the experts' opinion, this is not entirely adequate. In addition, the experts find that the course "Distributed Systems" begins by teaching content that, in their opinion, could already be taught in the course "Operating Systems", so that the "Distributed Systems" course could start at a higher level. The programme coordinators and lecturers agree with this assessment. The experts therefore recommend to review the content of the course "Operating Systems".

The experts are also discussing the titles and content of the courses "Startup Engineering" and "Multimedia". The "Startup Engineering" course is designed to strengthen students' entrepreneurial skills. Students also say that this course has particularly strengthened their ability to communicate business/startup ideas. The experts generally rate this course positively, but believe that the current title with "Engineering" is somewhat misleading. They would recommend a name such as "Entrepreneurship" instead. This suggestion has also been positively received by the university. Therefore, the experts recommended to review title of the course "Startup Engineering".

Regarding the course "Multimedia", the experts believe that the content currently described does not match the title. Based on the content, they would say that this is a course on "Graphics Design". The programme coordinators agree and report that an internal review had already revealed that the title and content of the course do not perfectly match. Therefore, a potential solution has already been considered, and the plan is now to retain the title and adapt the content. The experts view it as positive that the issue has already been identified by the university's own quality management system and that the university is already working on a solution. To further support this process, the experts also recommend to change the title of the course "Multimedia" to "Graphics Design" or to increase the scope of the content in this course.

In summary, the experts state that the Bachelor's degree programme Computer Science under review is a well-established and appropriately structured programme that ultimately achieves the planned objectives very well. This is further confirmed by the high level of satisfaction among students, alumni and industry representatives.

Mobility

Regarding mobility, in its Self-Assessment report, SMU admits that currently, they "do not offer individual student mobility (exchange programs). However, we have established five international partnerships that enable students to pursue a master's degree at international universities. These partnerships […] are the following:" Luiss University (Italy), Emporia State University (Kansas, United States), KEDGE Business School (France), CESI

(France), and GIU (Germany). Furthermore, SMU states that "[in] the current academic year 2024-2025, two Licence students were accepted to pursue their master's degree at CESI University in France. They will begin this experience in the next academic year. We also have eight other Licence students who have pursued their Master's degrees or PhD theses at international universities in countries e.g., Spain, Italy, the UK, Poland, and Turkey, among others."

Furthermore, during the audit, the programme coordinators explain that individual stays abroad for students that go beyond these systematic collaborations are always possible and supported. The International Office is responsible for this. In addition, five international students are currently studying the programme under review in Tunis. Most of them come from neighbouring countries such as Algeria and Libya. In general, the university states that it deliberately chose the study model with Bachelor's and Master's programmes of three and two years in order to strengthen internationality and simplify international exchange. Students also state that they are well informed and supported if they are interested in an international Master's programme. Nevertheless, students would also like to see more mobility opportunities that can be taken advantage of within the bachelor's programme. These could be short options such as summer schools, but also full-semester options. In principle, however, students feel well prepared for international stays, especially thanks to the fact that the courses are taught in English.

The experts acknowledge that SMU is a young university that is still in the process of expanding structured cooperation. They view it as positive that teaching is conducted in English and that there are already opportunities for subsequent international master's programmes. They recognise the university's efforts to expand the range of opportunities within the programme and want to encourage this with a corresponding recommendation. Therefore, the experts recommend to increase the mobility opportunities within the curriculum.

Periodic Review of the Curriculum

The curriculum is designed to comply with the PEOs and PLOs and they are, according to SMU regulations, subject to constant revision processes. As such, the curricula will be reviewed regularly and commented on by students and teachers as well as by external stakeholders such as alumni or industry partners. Major revisions are conducted every four years. The experts acknowledge that the university has taken adequate measures and defined processes to regularly review and further develop the curriculum. As already described, the experts see the ability to quickly adapt to market demands and the latest developments as one of the strengths of SMU and this programme.

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Criterion 1.4 Admission Requirements

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Evidence:
- Self-Assessment Report
- Admission Criteria
- Admission letter
- Discussions during the audit

Preliminary assessment and analysis of the experts:

SMU has defined binding admission criteria and clear steps for admission. The admission criteria state the following admission requirements: "Tunisian Baccalaureate, French Baccalaureate, or International Baccalaureate (with M.E.S equivalence for nationals): in a Scientific field or equivalent recognized by the MES. Minimum required GPA: 12/20. Candidates whose averages fall below 12/20 are subject to a preliminary review and validation process before starting the admission process." The admission steps are defined as follows:

1. "The admission procedure starts when the candidate fills out the online application form and submits a complete file.
2. The candidate must pay the applicable admission fees: MEDTECH: 500 TND.
3. The candidate takes the English and Math test.
4. Upon validation of the test(s): English test: 60/100 & Math test: 73/100, the Admission Office schedules an interview with the candidate. (Students who fail to pass either or both of these tests will be required to enroll in preparatory courses for these subjects during the first semester).
5. The admission decision is then communicated to the candidate within a period not exceeding seven (07) business days.
6. Once admitted, an Admission letter is delivered to the candidate after the payment of the first semester which is required as a confirmation. Otherwise, the seat will be awarded to another candidate."

Students during the on-site discussions testify that they are informed in detail about the requirements and the necessary steps to apply for admission into the degree programmes under review.

In summary, the experts see evidence that SMU keeps track of its students' progress and achievements. In this way, an instrument is in place to monitor the performance records of students with various enrolment backgrounds. In their assessment, the experts find the admission rules to be binding, transparent, and based on SMU's written regulations. They confirm that the admission requirements support the students in achieving the intended

learning outcomes. Regarding the credit transfer for students, adequate policies are in place.

Criterion 1.5 Workload and Credits

Evidence:

- Module descriptions

- Self-Assessment Report

- Discussions during the audit

Preliminary assessment and analysis of the experts:

At SMU, "[a] full-time academic year typically corresponds to about 67 ECTS credits, with each credit representing around 25 student hours of work." However, SMU also mainly uses US credits and describes the approach and the conversion from US to ECTS credits as follows: "The conversion scheme from US to ECTS credits is not exactly linear and follows the nature of the contact hours. In fact, contact hours are of two types:

- Lecture hours (if this is the case the conversion follows 1US --> 1.5 ECTS).
- Recitation or Lab hours (if this is the case the conversion follows 1US --> 1 ECTS).

[The] courses are generally 2, 3, 3+1, 3+2 US credits where the 3+1 and 3+2 US credit courses are courses composed of three lecture hours in addition to one or two Recitation/Lab hours per week. This will result to the following conversion table:

US	ECTS
2	2*1.5=3
3	3*1.5=4.5
4=3+1	3*1.5+1*1=5.5
5=3+2	3*1.5+2*1=6.5

Regarding student workload (the working hours), [SMU] should consider not only the teaching hours but also self-studies, office hours, exam hours and exam preparation. In fact, the previous mapping was based on the fact that one Lecture hour requires 1.5 student self-studies hours (out of class workload) and that one Recitation/Lab hour requires only one out of class student workload. The semester is divided to 13 study Weeks in addition to 2 exam Weeks. During an exam week the working hours are computed as the total of exam hours + exam preparation (which is simply equivalent to a week of student out of class workload relative to the number of Lecture hours)." In the end, graduates reach a total of 140 US credits, respectively 201 ECTS credits.

During the audit discussions, the experts want to know from the students how they assess the workload and whether they find the credits assigned per course to be appropriate. The

students state that they are generally satisfied with the workload and its distribution over the semesters and that the credit allocations for the individual courses are also generally appropriate. This also corresponds with the general impression gained by the experts after reviewing the module descriptions. Furthermore, students confirm that the revision of the actual workload of a course is part of the regularly course evaluations.

However, in its Self-Assessment report, SMU states as well that "[not] all the mandatory parts of the degree program are awarded with credits. Indeed, in order to graduate, students are required to validate an e-portfolio showcasing the individual's skills, knowledge, and accomplishments. Although we believe this requirement is fundamentally beneficial for students, as it enables them to reflect on and articulate their learning experiences and acquired competencies comprehensively, it is not associated with specific credit allocation. This is because the e-portfolio is viewed more as an integral aspect of their learning journey rather than a credit-bearing academic exercise. For these reasons, it's not awarded credits. Furthermore, students are also required to enroll to an introductory seminar in their first year at the university. This essential seminar is designed to facilitate a smoother transition into university-level work by helping students understand the expectations and requirements for validating their academic program. […] Consequently, although it is mandatory, this seminar is not assigned credit as its primary purpose is to orient and equip students for success rather than to serve as a formal academic evaluation."

The experts discuss this approach with the various stakeholders during the audit. They understand the university's approach as to why these courses are seen as outside the regular curriculum and are not awarded credits. The students also state that these courses did not require a great deal of effort and are seen more as an aid to their studies and do not require any extra preparation. The students greatly appreciate the Freshmen Seminar as an orientation guide. In addition, they also find the e-portfolio very helpful and see it as preparation for future applications and interviews. Therefore, the students are very convinced of the courses mentioned and see no problem in the fact that they do not award credits. The experts recognise that the students attend these courses and do not see them as tasks that further increase their own workload (disproportionately). However, they also note that all compulsory parts of the programme must be credited. The programme coordinators understand this and begin working on a solution immediately after the audit. Before this report is completed, they issue the following statement: „Following [the] visit and the feedback you provided, we organized an executive meeting, during which we decided to convert our three PASS/FAIL courses (ISS101 Freshman Seminar, ISS100 EOF – Entrepreneur of the Future, and COM301 E-Portfolio) into credit-bearing courses (0.5 credit each), starting from the academic year 2025/2026. This decision was approved by our Licence Planning Unit on August 25th." The experts greatly appreciate the fact that the university responded

to the feedback so quickly and took action. In their opinion, this is an acceptable solution, and they note that all compulsory parts of the curriculum now also award credits.

In summary, the experts can recognise from the workload information in the module descriptions and the audit discussions that the overall workload is appropriate and generally corresponds with the assigned ECTS credits. During the audit, the students emphasise that they consider the workload manageable and that it is possible to finish the degree programmes within the expected periods.

Criterion 1.6 Didactic and Teaching Methodology

Evidence:
- Module descriptions
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the experts:
Various teaching and learning methods (including lectures, computer training and classroom and lab exercises, individual and group assignments, seminars and projects, etc.) have been implemented. Structured activities include tutorials, homework, assignments (reading or problem exercises) and practical activities. Group project assignments are given in some courses to develop students' skills in teamwork, communication, and leadership. The assignments and exercises should help students to develop their abilities with respect to critical thinking, written/oral communication, data acquisition, problem solving, and presentations. Regarding the ongoing development of the didactics and teaching methodology, SMU describes in its Self-Assessment report that "the Teaching and Learning Center organizes several workshops led by esteemed doctors and professors, focusing on contemporary teaching methods and tools. These training sessions include workshops on digital learning, game-based learning, and the integration of AI tools like ChatGPT into higher education. The programme also embraces blended learning approaches through platforms like Coursera, which are extensively used in many courses to enhance learning. Coursera provides access to a wide range of high-quality resources, allowing students to supplement in-class instruction with self-paced online learning modules."

Furthermore, SMU states in its Self-Assessment report, that "[the] degree programme integrates various elements to promote independent scientific work among students. Dedicated facilities such as makerspaces and research labs provide students with resources to explore and innovate. Furthermore, extracurricular activities, including clubs, hackathons, and research competitions, foster a culture of inquiry and self-directed learning. These activities enable students to apply theoretical knowledge in practical scenarios, develop

problem-solving skills, and collaborate on interdisciplinary projects. The curriculum also includes research-focused courses and capstone projects, which are critical for preparing students to conduct independent scientific inquiries effectively."

In summary, the expert group considers the teaching methods and instruments to be suitable to support the students in achieving the intended learning outcomes. In addition, they confirm that the study concept of the programme under review comprises a variety of teaching and learning forms as well as practical parts that are adapted to the subject culture and study format. It actively involves students in the design of teaching and learning processes.

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

Regarding criterion 1.3:

In its statement, SMU describes that it has already taken up and implemented some of the envisaged recommendations for further curriculum development. The university describes the following changes, some of which are to take effect immediately or from the next academic year: „The former course 'Introduction to AI and ML', previously delivered in Term 5, was divided into two distinct courses: 'Introduction to AI and Data Science' and 'Machine Learning.' The courses 'Introduction to Engineering Mechanics' and 'Introduction to Electrical Circuits' were discontinued and replaced with 'Machine Learning' and 'Prompt Engineering.' The course previously titled 'Multimedia Technology' was renamed 'Graphics Design' in order to broaden and enhance its academic scope. This change will take effect starting from the next academic year. A revised course sequencing was proposed, involving the relocation of 'Object-Oriented Programming' to Term 2, 'Data Structures and Algorithms' to Term 3, and 'Graph Theory and Applications' to Term 4. A new course, 'Introduction to Linux', was proposed for Term 1, covering the foundational content previously addressed in 'Introduction to Operating Systems.' In addition, a new course titled 'Operating Systems' was introduced to focus on core operating systems concepts in greater depth."

The experts greatly appreciate that SMU has responded so quickly to their recommendations and has already planned changes to the curriculum. The measures taken by the university have led the experts to withdraw four of their originally planned recommendations, as they consider these to have already been fulfilled. For example, courses "Introduction to Engineering Mechanics" and "Introduction to Electrical Circuits" have been removed from the curriculum and more AI content has been introduced. In addition, the title of the course "Multimedia Technology" has been changed as recommended by the experts and is now called "Graphics Design." Furthermore, the university has already adjusted the order

of the courses "Graph Theory & Application" and "Data Structure & Algorithms" in line with the experts' recommendations and revised the course "Operating Systems." The experts therefore believe that four of the envisaged recommendations can be waived.

The experts consider criterion 1 to be fulfilled.

2. Exams: System, Concept and Organisation

Criterion 2 Exams: System, Concept and Organisation

Evidence:
- Exemplary exams, projects, and theses
- Module descriptions
- Student Guide
- Self-Assessment Report
- Discussions during the audit

Preliminary assessment and analysis of the experts:
In its Self-Assessment Report, SMU describes the examination system and its approach as follows: "Student performance in each course is evaluated by the instructor or several instructors. A grade is assigned reflecting performance in requirements that may include quizzes, homework, reports, projects, midterms, and final examinations. Students are provided with the grading criteria in each course in the syllabus on the first day of class, and these criteria cannot be changed during the semester. Based on the course subject and format, a variety of measures are utilized to assess the performance of students in a course, as noted below.

Homework and class assignments provide a regular evaluation of the progress of students and their level of comprehension of the subject matter. Homework usually accounts for 15–25% of the total course grade. Students are required to do homework independently and are encouraged to make use of the faculty office hours for inquiries. Popup and announced quizzes, given with varied frequency, are also used to evaluate understanding of the subject matter in a periodic manner. Quizzes usually account for 10–15% of the total course grade. In class assignments may at times replace homework and usually account for 15-30% of the course grade. One midterm exam is commonly given in about the middle of the semester. The midterm may constitute 25–30% of the total course grade, while the final examination constitutes 40% of the total course grade. Students usually work in a group to complete course projects and submit a written report on their work. Instructors

evaluate the submitted reports and, typically, require students to give a presentation about their work. Group work is very much encouraged but at the same time there are in place rigorous ways of assessing individual contribution by directing oral or written questions and requiring peer evaluation."

At the end of their studies, students "are required to complete a capstone project that encompasses a four-month full-time industry internship, intended to synthesize and apply their cumulative learning in a real-world professional environment. This project also involves the preparation of a written thesis and its defense before an academic jury through a formal oral presentation."

The students confirm that the examination regulations are effective and properly managed, and experts agree that provisions for disability compensation, illness, and other exceptional circumstances are clearly established.

During the on-site visit, the experts had access to a selection of exams and final projects. They confirm that these represent an adequate level of knowledge as required by EQF-Level 6. The forms of exams are oriented in-line with the envisaged learning outcomes of the respective courses, and the workload is allocated in an acceptable way. Regarding the final thesis, respectively capstone projects, the experts conclude that their technical aspects and content are in line with EQF-6 level and address up-to-date topics.

The experts only discuss the chosen form of examination in the course "Introduction to AI & Machine Learning". A written examination is planned for this course. However, the experts believe that the content and learning objectives of the module would be very suitable for integrating a project into the module. The programme coordinators agree and report that there have already been semesters in which a project was used in this course. However, depending on the size of the group, these are significantly more complex and require more time. Nevertheless, the teachers agree that a project would make sense in this course. The experts therefore recommend that this be implemented.

The experts conclude that the criteria regarding the examinations system, concept, and organization are fulfilled and that the examinations are suitable to verify whether the intended learning outcomes are achieved or not. However, they recommend to only use projects as examination in the course "Introduction to AI & Machine Learning".

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

The experts consider criterion 2 to be fulfilled.

3. Resources

Criterion 3.1 Staff and Development

Evidence:

- Self-Assessment Report

- Staff handbook

- Faculty Candidate Interview Evaluation Form

- Discussions during the audit

Preliminary assessment and analysis of the experts:

HR Resources

As SMU states in its Self-Assessment report, "the program has 32 professors and lecturers with 21 Full Time Professor and 11 Part Time Professors. [...] Faculty members are recruited based on strict criteria aligned with the program's academic and professional standards. Minimum qualifications typically include Ph.D. in computer science or a closely related field, along with proven teaching experience and/or industry expertise. [...] Faculty performances are reviewed annually by the dean through teaching evaluations based on student feedback, research contribution, and administrative tasks." Regarding the administration and coordination of teaching staff, there are weekly "Executive Meetings" from the dean, programme directors and the head of quality. Following the Self-Assessment report, "[these] meetings serve to allocate teaching staff to different courses in the upcoming term as well as monitor workloads and align staff resources with course requirements. They are also used to assess whether recruitment is necessary for the upcoming term." Furthermore, SMU holds weekly faculty meetings to "discuss ongoing challenges".

During the on-site discussions, the experts want to know whether external individuals are also employed as lecturers for entire courses and/or individual events. Although the experts are convinced that SMU has sufficient and appropriately qualified staff, they believe that a programme can only benefit from the use of external lecturers. In addition, the experts consider SMU to be well prepared to integrate international, external lecturers due to its existing structure and the high level of English proficiency among its lecturers and staff. The SMU states that only a few external individuals have been integrated into teaching so far, and that no external individuals have ever been employed in the programme under review. As mentioned above, the experts already view the current composition of the teaching staff positively. Nevertheless, they would like to recommend that the university include external (visiting) teachers from industry to hold single lectures, seminars, workshops or certificate courses.

In summary, the experts emphasise the highly committed and motivated staff and the satisfaction of the students. They conclude that SMU has defined adequate measures for staff selection and that the programme under review can be carried out effectively with the existing staff. The experts also highlight the positive fact that the majority of teaching staff have already spent time at international universities – during their studies, doctoral studies and research. This is also reflected in the very good level of English among the teaching staff. However, they recommend including external (visiting) teachers from industry to hold single lectures, seminars, workshops or certificate courses.

HR Development

SMU encourages the training of its academic staff to improve their didactic abilities and teaching methods. In its Self-Assessment report, SMU states that "[faculty] members are encouraged and supported to pursue professional development opportunities, such as attending conferences, publishing research, and obtaining advanced certifications in emerging fields. The program allocates time and funds if necessary for training to ensure teaching staff remain at the forefront of academic and technological advancements." For that purpose, SMU introduced a teaching and learning center (TLC) which "is a department responsible for organizing training and workshops on innovative teaching methods, curriculum design, and the use of technology in education."

The experts discuss the various opportunities available for personal skill development with the teaching staff members. The teachers express their satisfaction with the internal and external offers to improve their didactic skills. Additionally, they can attend conferences, workshops, and seminars abroad. However, the teaching staff also mentions that it would like to have further opportunities for international mobility. Especially, they mention that they would like to have international exchange programmes for professors.

They acknowledge that the university is constantly promoting internationalisation and is also working to offer teaching staff appropriate opportunities. The experts also recognise that the university is already active and is trying to establish appropriate programmes. However, it should also be noted that this is still a relatively young university that is in the process of establishing various programmes. Nevertheless, the experts understand the wishes of the teaching staff and would like to address them accordingly. They therefore recommend increasing the mobility opportunities for teaching staff.

In summary, all interviewed staff demonstrate high motivation and attachment to the institution. In the opinion of the experts, SMU offers sufficient support mechanisms and opportunities for teaching staff members who wish to strengthen their professional and teaching skills. However, the recommended to increase the mobility opportunities for teaching staff.

Criterion 3.2 Student Support and Student Services

Evidence:

- Self-Assessment Report

- Evaluation/survey results

- Discussions during the audit

Preliminary assessment and analysis of the experts:

During the on-site discussions with programme coordinators, lecturers, and particularly the students, the experts gain a thorough understanding of the available support services for students. SMU provides both subject-specific academic counselling and general non-academic guidance.

For academic advising, the programme directors are the first contact points when students need help with their study organisation, e.g. regarding selection of courses and potential study paths and schedules. In addition, each faculty member is available for students during his official faculty office hours. Furthermore, there is a peer-to-peer tutoring system in place, "where senior students or faculty assist juniors in challenging subjects".

For non-academic advising, SMU has the so called Advising Counseling Center (ACC). As described in its Self-Assessment report, "ACC provides essential support for students dealing with stress, anxiety, or personal challenges that may affect their academic performance. These services are particularly valued during exam periods or when students face significant workloads."

Also, SMU offers "[workshops] on technical topics or emerging trends in computer science further enhance the students' knowledge base" as well as "[access] to online platforms such as Coursera, and supplementary materials." What is more, SMU also provides the opportunity to take part in extracurricular activities, e.g. "Clubs, hackathons, and student organizations host events for personal and professional growth outside the classroom."

In summary, the experts positively note the good and trustful relationship between the students, the teaching staff and the entire SMU. Enough resources are available to provide individual assistance, advice and support for all students. The support system helps the students achieve the intended learning outcomes and complete their studies successfully. The students, in general, have access to sufficient information about the programmes and are well-informed about the services available. Furthermore, the students confirm during the on-site discussions that they feel valued and that any issues can be solved quickly in cooperation with teachers and the university. Overall, the experts recognize a high level of satisfaction among all the various stakeholders, which creates a very good (learning)

atmosphere and ensures that students feel comfortable and have no problems reaching out to the university with questions or issues.

Criterion 3.3 Funds and equipment

Evidence:

- Self-Assessment Report

- On-site visit of participating institutes and laboratories

- Discussions during the audit

Preliminary assessment and analysis of the experts:

In its Self-Assessment report, the university explains that "[the] program is primarily funded through budget allocation and tuition fees paid by enrolled students. For the budget, the university allocates around 7% of its budget to the program. Furthermore, students are required to pay tuition fees on a per-semester basis, with the amount set at around 10.000 TND (3000 euros) per semester. These fees are used to cover the costs of academic resources, laboratories maintenance, and student support services. In case of failure, students must retake the failed class. The cost is calculated based on the number of credits, typically at a rate of 475 TND (140 euros) per credit." SMU also offers various scholarships that provide financial support to students and cover up to 100% of tuition fees, depending on the scholarship. These are primarily awarded on the basis of academic and extracurricular achievements, but are also based on social, geographical, and medical criteria.

The university has various laboratories available that can be used for teaching and research. In the programme under review, they primarily use the computer laboratories, the electronics laboratories, and the physics lab. In addition, SMU has a library that provides students with all the "textbooks, reference books, and academic publications" they need for their studies. Furthermore, additional information and literature can be requested and ordered through the library. All facilities and equipment are regularly validated and calibrated. This includes evaluating, maintaining and improving the physical facilities and infrastructure of the university, such as teaching and learning facilities, laboratories, equipment, and tools, to meet the needs of education, research, and service. As the university states in its SAR, regular student surveys reflect a "high levels of satisfaction with the equipment and facilities provided, citing their modernity, availability, and alignment with academic and industry needs. This satisfaction is reflected in the midway and final evaluation conducted by students each term."

The experts had a close look at the equipment used for practical training in the laboratories. The experts value the students' presentation of their practical work in the laboratories. They judge the facilities, including teaching labs, as adequate for teaching and confirm that

they are very well-equipped and up-to-date, and contain everything necessary for the programme's objectives. The experts find no severe bottlenecks due to missing equipment or infrastructure. The basic technical equipment for teaching students is available in sufficient numbers. In the discussion with the expert group, the students confirm that they are generally satisfied with the available equipment. Moreover, the teaching staff emphasise that from their point of view, the degree programmes receive sufficient funding for all teaching and learning activities

Students are satisfied with the library and the literature, most of which is available digitally. They can access international literature, scientific journals, and publications online through different host services. Students have sufficient access to current international literature and databases, and they can access them remotely.

In summary, the expert group assesses that the available funds, the technical equipment, and the infrastructure (laboratories, library, seminar rooms, etc.) are very well suited to the requirements for providing the Bachelor's degree programme under review.

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

The experts consider criterion 3 to be fulfilled.

4. Transparency and Documentation

Criterion 4.1 Module Descriptions

Evidence:
- Module descriptions

Preliminary assessment and analysis of the experts:
The experts observe that the module descriptions of the degree programme under review contain all the necessary information about module title, person(s) responsible for each module, teaching method(s), credits and workload, intended learning outcomes, module content, admission and examination requirements, form(s) of assessment and details explaining how the module mark is calculated, and the recommended literature.

Criterion 4.2 Diploma and Diploma Supplement

Evidence:
- Exemplary Diploma Supplement
- Exemplary Diploma
- Exemplary Transcripts of Records

Preliminary assessment and analysis of the experts:

The experts confirm that the students of the degree programme under review are awarded a Diploma and a Diploma Supplement upon graduation. The Diploma consists of a Diploma Certificate and a Transcript of Records. The Transcript of Records lists all the courses that the graduate has completed, the achieved credits, grades, and cumulative GPA. The Diploma Supplement contains all required and necessary information about the degree programmes

Criterion 4.3 Relevant Rules

Evidence:
- Self-Assessment Report
- All relevant regulations as published on the university's website

Preliminary assessment and analysis of the experts:

The experts confirm that the rights and duties of both SMU and the students are clearly defined and binding. All rules and regulations are published on the university's website and hence available to all stakeholders. In addition, the students receive all relevant course material at the beginning of each semester.

The experts appreciate that the websites of the programme include sufficient information about the intended learning outcomes, study plan, module descriptions and academic guidelines of the degree programme and are made available to all relevant stakeholders.

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

The experts consider criterion 4 to be fulfilled.

5. Quality management: quality assessment and development

Criterion 5 Quality management: quality assessment and development

Evidence:

- Self-Assessment Report

- Student Guide

- Survey samples

- Discussions during the audit

Preliminary assessment and analysis of the experts:

SMU has established a comprehensive quality management system that defines measures for obtaining feedback from various stakeholder groups in order to continuously develop SMU and its programmes.

Internal feedback from the students is mainly collected through the course evaluations. In its Self-Assessment report, SMU explains that "[the] Quality Team is collecting feedback through surveys at the middle and the end of courses to understand students' experiences and perceptions of the teaching quality, course content, and overall learning environment. This feedback provides insights into areas that need attention, such as course design, teaching methods, or resource availability."

In order to keep up with current industry trends, SMU uses its Industrial Advisory Board (IAB) as well as its Career and Alumni Center (CAC). Following the Self-Assessment report, the CAC "typically serves as a bridge between students, alumni, and the professional world", while the IAB "is typically composed of experts and professionals from various industries who provide strategic guidance and advice to the university to enhance their programs." Through specific surveys, SMU collects also feedback from alumni on how the programme has prepared them for their further academic and professional career.

SMUS also has a Teaching and Learning Committee. Following the Self-Assessment report, this committee "is typically established to oversee and enhance the quality of education and academic experiences within an institution. This committee focuses on ensuring that both teaching methodologies and learning environments are continually improving to meet the needs of students, faculty, and the wider academic community. The specific functions include: Offering support for instructors to improve their teaching practices through workshops, training, and resources on pedagogy. Encouraging the adoption of new technologies, teaching methods, and best practices to enhance student engagement and learning

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outcomes. Overall, this committee plays a critical role in shaping a positive and effective learning environment by prioritizing faculty development and continuously improving educational standards."

Furthermore, the university goes through international accreditation procedures. In addition to the ASIIN accreditation carried out here, the university has already carried out ABET accreditations.

During the audit, the experts asked about student and industry satisfaction with their involvement in decision-making. Students expressed high satisfaction, noting that their feedback was genuinely taken into account and had an impact on programme improvements. They also confirm that they are informed about evaluation results and actions undertaken due to students' feedback. They explain that on the online platform moodle, there is a section "continuous improvement" where lecturers state changes being made within the course due to students' feedback. Industry partners echoed this sentiment, acknowledging SMU's commitment to incorporating their insights and observing tangible changes. Overall, both groups confirmed their high satisfaction, highlighting SMU's inclusive and responsive approach to stakeholder feedback.

However, the experts note that exchanges with industry largely take place via the existing advisory board. However, this board mainly consists of people from the executive management of the respective companies. In the opinion of the experts, this is generally acceptable and also speaks for the good relations with industry. However, the experts also note that exchanges with employees from the companies, who may be even closer to the practical and day-to-day work, could be expanded. In particular, internships and joint thesis projects could be used (more) to obtain feedback from this level of personnel. During the audit, the participants in the discussion round with industry also stated that they could imagine even more extensive cooperation and even stronger exchange with the university. On the one hand, industry can imagine offering courses or individual events in the curriculum, which the experts would also like to recommend to the university (see criterion 3.3). On the other hand, they also state that they would like to see an exchange that goes beyond the advisory board. Like the experts, they also believe that the supervisors of the internships in particular could be more closely involved in the further development of the programme. The experts therefore recommend to further strengthen the exchange with industry in addition to the existing advisory board.

In summary, the experts are of the opinion that SMU has established a very sophisticated and comprehensive quality management system, guided by internal and external feedback loops, and involving students, alumni and industry stakeholders which ensures a

comprehensive and continuous approach to programme improvement. They only recommend to further strengthen the exchange with industry in addition to the existing advisory board.

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

SMU states that "[an] additional survey was distributed to industry representatives to collect further feedback on the Licence in Computer Science program, complementing the input obtained during the Advisory Board meeting." The experts note positively that SMU has already taken action and is further expanding its exchange with industry. They endorse the introduction of this additional survey and see it as a good opportunity to gather further feedback on the programme's further development. However, the experts would like to maintain the recommendation in order to review, as part of the reaccreditation process, which measures have been implemented in the medium term and what impact these have had on the programme.

The experts consider criterion 5 to be fulfilled.

D Additional Documents

No additional documents needed.

E Comment of the Higher Education Institution

The institution provided the following statement after the on-site visit:

„Following [the] visit and the feedback you provided, we organized an executive meeting, during which we decided to convert our three PASS/FAIL courses (ISS101 Freshman Seminar, ISS100 EOF – Entrepreneur of the Future, and COM301 E-Portfolio) into credit-bearing courses (0.5 credit each), starting from the academic year 2025/2026. This decision was approved by our Licence Planning Unit on August 25th. "

Furthermore, the university provided the following supporting documents:

- The minutes of the Executive and Planning Unit meeting
- The updated syllabi of the three courses

In addition, SMU provided the following comment on the report, especially addressing potential recommendations:

- "The former course **'Introduction to AI and ML',** previously delivered in Term 5, was divided into two distinct courses: **'Introduction to AI and Data Science'** and '**Machine Learning.'**

- The courses **'Introduction to Engineering Mechanics'** and '**Introduction to Electrical Circuits'** were discontinued and replaced with '**Machine Learning'** and '**Prompt Engineering.'**

- The course previously titled **'Multimedia Technology'** was renamed **'Graphics Design'** in order to broaden and enhance its academic scope. This change will take effect starting from the next academic year.

- A revised course sequencing was proposed, involving the relocation of **'Object-Oriented Programming'** to Term 2, '**Data Structures and Algorithms'** to Term 3, and '**Graph Theory and Applications'** to Term 4.

- A new course, **'Introduction to Linux',** was proposed for Term 1, covering the foundational content previously addressed in '**Introduction to Operating Systems.'** In addition, a new course titled **'Operating Systems'** was introduced to focus on core operating systems concepts in greater depth.

- Preparations are currently underway for the launch of a new transfer program for Licence students.

- Consideration is being given to revising the delivery of the newly introduced course **'Introduction to AI and Data Science'** by adopting a project-based learning approach.

- An additional survey was distributed to industry representatives to collect further feedback on the Licence in Computer Science program, complementing the input obtained during the Advisory Board meeting."

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F Summary: Expert recommendations

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

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Computer Science	Without requirements	30.09.2031	Euro-Inf®	30.09.2031

Recommendations

E 1. (ASIIN 1.3) It is recommended to review title of the course "Startup Engineering".

E 2. (ASIIN 1.3) It is recommended to increase the mobility opportunities within the curriculum.

E 3. (ASIIN 1.3 & 3.1) It is recommended to increase the mobility opportunities for teaching staff.

E 4. (ASIIN 2) It is recommended to only use projects as examination in the course "Introduction to AI & Machine Learning".

E 5. (ASIIN 3.1) It is recommended to include external (visiting) teachers from industry to hold single lectures, seminars, workshops or certificate courses.

E 6. (ASIIN 5) It is recommended to further strengthen the exchange with industry in addition to the existing advisory board.

G Comment of the Technical Committee 04 – Informatics/Computer Science

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee discusses the procedure and follows the experts' assessment without any changes.

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

The Technical Committee deems that the intended learning outcomes of the degree programme do comply with the Subject-Specific Criteria of the Technical Committee 04 – Informatics/Computer Science.

The Technical Committee 04 – Informatics/Computer Science recommends the award of the seals as follows:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Computer Science	Without requirements	30.09.2031	Euro-Inf®	30.09.2031

H Decision of the Accreditation Commission (12.12.2025)

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

The Accreditation Commission discusses the procedure and makes minor editorial changes to recommendations E 1 and E 4. Otherwise, the Accreditation Commission follows the assessment of the experts and the technical committees without any further changes.

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

The Accreditation Commission deems that the intended learning outcomes of the degree programme do comply with the Subject-Specific Criteria of the Technical Committee 04 – Informatics/Computer Science.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
Ba Computer Science	Without requirements	30.09.2031	Euro-Inf®	30.09.2031

Recommendations

E 1. (ASIIN 1.3) It is recommended to review the title of the course "Startup Engineering".

E 2. (ASIIN 1.3) It is recommended to increase the mobility opportunities within the curriculum.

E 3. (ASIIN 1.3 & 3.1) It is recommended to increase the mobility opportunities for teaching staff.

E 4. (ASIIN 2) It is recommended to use projects as examination in the course "Introduction to AI & Machine Learning".

E 5. (ASIIN 3.1) It is recommended to include external (visiting) teachers from industry to hold single lectures, seminars, workshops or certificate courses.

E 6. (ASIIN 5) It is recommended to further strengthen the exchange with industry in addition to the existing advisory board.

Appendix: Programme Learning Outcomes and Curricula

According to the programme's website, the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Bachelor's degree programme Computer Science:

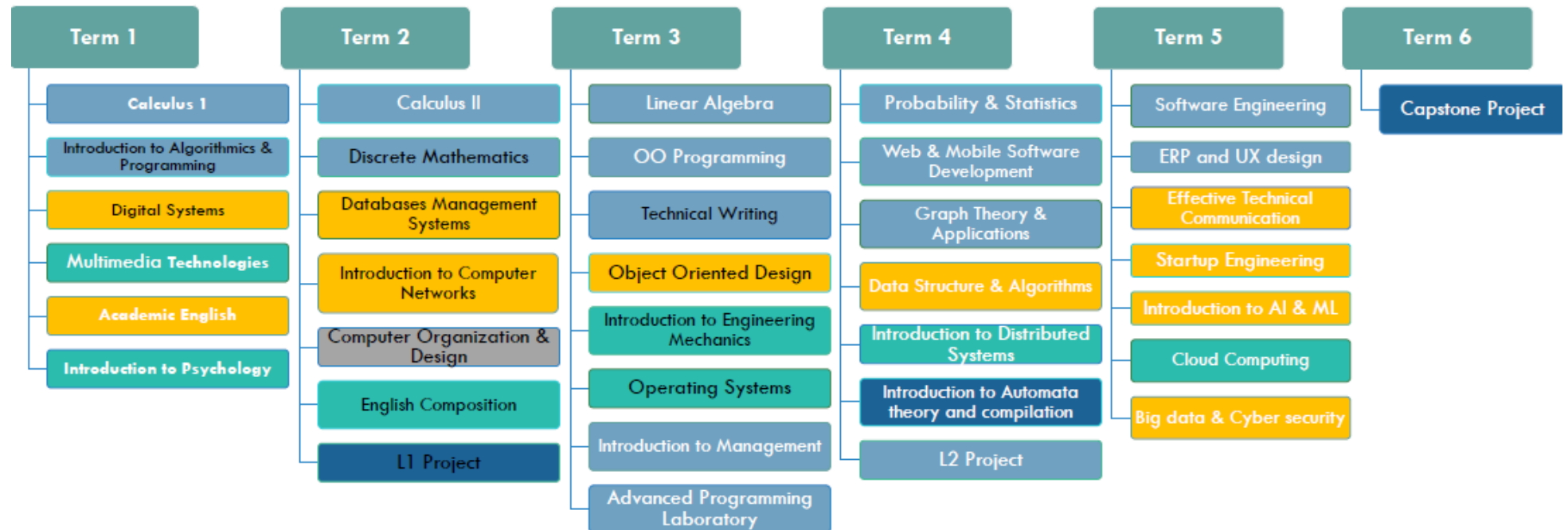**Program Educational Objectives:**

- Core Competency: Equip students with technical and/or professional skills and knowledge of fundamental concepts in computer science, including software development, database management, and information systems.
- Problem-Solving and Critical Thinking: Develop students' ability to think critically and solve complex problems.
- Professional Skills and Lifelong Learning: Prepare students for successful careers in the computer science industry and academia by enhancing their professional skills.
- Practical Application and Industry Readiness: Ensure that students gain practical experience through projects, and internships

Program Learning Objectives:

- Developing Functional and Technical Expertise: Gaining in-depth knowledge and practical skills in key areas such as software development, database management, network architecture, and information systems security.
- Analytical and Problem-Solving Skills: Training students to analyze complex systems, identify challenges, and devise effective solutions, emphasizing logical reasoning and systematic approaches.
- Project Management and Teamwork: Educating students on managing projects, coordinating with teams, and understanding the dynamics of working within diverse, multi-disciplinary groups.
- Application of Theoretical Concepts to Real-World Scenarios: Bridging the gap between theoretical knowledge and practical application, ensuring that graduates can apply their learning to real-world problems in information systems and technology.
- Innovation and Continuous Learning: Encouraging innovation and the adoption of new technologies and methods, along with fostering a mindset geared towards continuous learning and adaptability to evolving industry trends.

- <u>Professional and Ethical Responsibility</u>: Instilling a strong sense of professional and ethical responsibility, including understanding the impact of computer science solutions in a broader economic, environmental, and societal context.
- <u>Communication Skills</u>: Enhancing communication skills, both technical and non-technical, to effectively convey ideas, collaborate with diverse teams, and present solutions to various stakeholders.
- Develop the ability to design experiments, analyze data, and draw conclusions. Gain hands-on experience with experimental techniques, data collection and data analysis to solve real-world engineering problems.

The following **curriculum** is presented before & during the audit:

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Calculus 1	Calculus II	Linear Algebra	Probability & Statistics	Software Engineering	Capstone Project
Introduction to Algorithmics & Programming	Discrete Mathematics	OO Programming	Web & Mobile Software Development	ERP and UX design	
Digital Systems	Databases Management Systems	Technical Writing	Graph Theory & Applications	Effective Technical Communication	
Multimedia Technologies	Introduction to Computer Networks	Object Oriented Design	Data Structure & Algorithms	Startup Engineering	
Academic English	Computer Organization & Design	Introduction to Engineering Mechanics	Introduction to Distributed Systems	Introduction to AI & ML	
Introduction to Psychology	English Composition	Operating Systems	Introduction to Automata theory and compilation	Cloud Computing	
	L1 Project	Introduction to Management	L2 Project	Big data & Cyber security	
		Advanced Programming Laboratory			

The following **updated curriculum** is presented after the audit:

Level	Term	Code	Title	US credits	ECTS	Pre requisites
L1	Fall	ENG111	Academic English	3	4,5	-
		MATH141	Calculus I	3	4,5	-
		CS101	Introduction to Algorithms & Programming	4	5,5	-
		ECE143	Digital Systems	4	5,5	-
		CS100	Graphics Design	3	4,5	-
			Introduction to Linux	3	4,5	
		PSY101	Introduction to Psychology	3	4,5	-
			Studying at University	1	1,5	
				24	35	
	Spring	MATH243	Discrete Mathematics	3	4,5	-
		MATH142	Calculus II	4	5,5	MATH141
		CS201	Object Oriented Programming and advanced Laboratory	5	6,5	CS111
		CS131	Databases	4	5,5	-
		CS130	Introduction to Computer Networks	3	4,5	-
		CS261	Computer Organization & Design	4	5,5	CS111
		ENG121	English Composition	3	4,5	ENG111
		ISS195	L1 Project	3	4,5	-
				29	41	
L2	Fall	MATH241	Linear Algebra	3	4,5	-
		CS341	Data Structures & Algorithms	4	5,5	CS201
		CS225	Web Dev	3	4,5	
		MATH244	Probability & Statistics	4	5,5	MATH141 MATH243
		COM205	Technical Writing	3	4,5	ENG111
		CS222	Object Oriented Design	4	5,5	-
		CS213	Operating Systems	3	4,5	-
		MGMT101	Introduction to Managemnent	1,5	2,25	-
				25,5	36,75	
	Spring	CS226	Mobile Dev	4	5,5	CS225
		MATH348	Graph Theory and Applications	3	4,5	MATH243 CS111
		CS204	Introduction to Distributed Systems	4	5,5	
		CS341	Data Structures & Algorithms	4	5,5	CS201
		CS286	Introduction to AI and Data Science	3	4,5	
		CS220	Introduction to Automata theory and compilation	3	4,5	
		ISS295	L2 Project	3	4,5	ISS195
				24	34,5	
L3	Fall	CS314	Software Engineering	5	5,5	
		COM307	Effective Technical Communication	3	4,5	COM205
		ISS197	Startup Engineering	1,5	2,25	ISS295
		CS320	Prompt Engineering	3	4,5	CS286
		CS395	Machine Learning	3	4,5	CS286
		CS353	Cloud Computing	3	4,5	
			Eportfolio	0,5	0,75	
		CS312	Big data & cyber security	3	5,5	
				22	32	
	Spring	ISS399	Capstone Project	21	30	
		Total		**145,5**	**209,25**	