ASIIN Seal

Accreditation Report in combination with preceding Evaluation Procedure

National Engineering Diploma programme
Computer Science Engineering

Offered by

Private Higher School of Engineers of Gafsa, Tunisia

Version: 27 June 2025

Table of Content

A About the Accreditation Process

Name of the degree programme (in original language)	(Official) English translation of the degree	Labels applied for [1]	Previous accreditation (issuing agency, validity)	Involved Technical Committees (TC)[2]
Computer Science Engineering	الشهادة الوطنية لمهندس National engineering diploma	ASIIN	–	04
Date of the contract: 31.05.2023 **Date of the onsite visit of the preceding evaluation procedure:** 26./27.10.2023 **Date of the peer team's statement concerning the accreditation:** 15.10.2023				
Peer panel: Prof Dr Frank Hartung, University of Applied Sciences Aachen; Prof Moncef Tagina, National School of Computer Sciences; Dr Martin Witte, Siemens AG; Oumayma Yakoubi (Computer Engineering student of ULT Tunis)				
Representative of the ASIIN headquarter: Dr. Siegfried Hermes				
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 December 07, 2021				

[1] ASIIN Seal for degree programmes
[2] TC: 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 Programmes

Title	Qualification l degree French /English translation)	Areas of Specialization	Correspond ing level of the EQF	Attendance	Duration	Credit points/unit	Intake rhythm & First time of offer
Computer Science Engineering	National Diploma in Computer Science Engineering	Computer Science	7	Full time	Three consecutive yearly enrollments divided in 6 Semesters	180 ECTS	2013

As to the curriculum of the original programme, see the Appendix of the evaluation report (reference report).

ESIP Gafsa has presented the following *revised* curriculum:

Time schedule	Level	Module Code	Module Title	Course Code	Course Title	Hourly volume					Credit
						Integrated course	Lab	Project	Self Study	Total	
Semester 1	SCSE	CSE110	Fundamental and applied mathematics	CSE111	Engineering mathematics	45			35	80	7,5
				CSE112	Applied probabilities and statistics	45			35	80	
				CSE113	Mathematics lab		22,5		12,5	35	
		CSE120	Electronic	CSE121	Analog electronics	22,5			14,5	37	4,5
				CSE122	Digital circuits	30	15		35	80	
		CSE130	Algorithm & programming	CSE131	Algorithm and data structure	45			31	76	6
				CSE132	Programming workshop C++		22,5	22,5	35	80	
		CSE140	Logic and analysis	CSE141	Formal logic	45			33	78	6
				CSE142	Algorithm of numerical analysis	22,5	22,5		33	78	
		LAC150	Languages and cultures I	LAC151	English I: TOEIC B1,1 Certification	22,5			16,5	39	4,5
				LAC152	French I: Communication technique & preparation for Delf B1,1	22,5			16,5	39	
				LAC153	Economics and business management	22,5			16,5	39	
		CSE160	Project	CSE161	supervised project I			22,5	16,5	39	1,5
Semester 2	SCSE	CSE210	Theory and Optimization	CSE211	Language theory and compilation	45			33	78	6
				CSE212	Graph theory and optimization	45			33	78	
		CSE220	Programming & web multimedia	CSE221	Object oriented programming	22,5	22,5	22,5	52,5	120	7,5
				CSE222	Web and multimedia Programming		22,5	22,5	30	75	
		CSE230	preparing to certification I	CSE231	preparing for LPI 101 certification		22,5		15	37,5	4,5
				CSE232	preparing for the CCNA1 certification	22,5	22,5		34,5	79,5	
		CSE240	Architecture and transmission	CSE241	Digital transmission	30	15		33	78	6
				CSE242	Architecture & micro processors	30	15		33	78	
		LAC250	Languages and cultures II	LAC251	English II: Certification TOEIC B1,2	22,5			16,5	39	4,5
				LAC252	French II: Communication technique and preparation for Delf B2,1	22,5			16,5	39	
				LAC253	Introduction to financial systems and banking management	22,5			16,5	39	
		CSE260	project	CSE261	Supervised project II			22,5	16,5	39	1,5
TOTAL						585	202,5	90	660	1560	60

Time schedule	Level	Module Code	Module Title	Course Code	Course Title	Hourly volume					Credit
						Integrated course	Lab	Project	Self Study	Total	
Semester 3	SCSE	CSE310	Hard Design Methodology	CSE311	Processor design methodology	45			35	80	7,5
				CSE312	Operating systems and concurrent programming	45	22,5		47,5	115	
		CSE320	Algorithms, Database and Operational research	CSE321	Algorithm design and analysis	45			35	80	9
				CSE322	Operational research	45			35	80	
				CSE323	Database design	22,5	22,5		29	74	
		CSE330	Software engineering	CSE331	software engineering & agile method	33		12	35	80	6
				CSE332	Object-oriented analysis and design	22,5	22,5		31	76	
		CSE340	preparing to certification II	CSE341	Preparing for the CCNA2 certification	45			35	80	4,5
				CSE342	Preparing for LPI 102		22,5		14,5	37	
		LAC350	Languages and Cultures III	LAC351	English III: TOEIC B2,1 Certification	22,5			16,5	39	3
				LAC352	French III: Communication technique and preparation for Delf Pre 1	22,5			16,5	39	
Semester 4	SCSE	CSE410	Soft Design Methodology	CSE411	Design and development projects			45	36	81	6
				CSE412	Software engineering II	45			30	75	
		CSE420	IoT and embedded systems	CSE421	Embedded Systems	22,5	22,5		33	78	6
				CSE422	Networking computer	22,5	22,5		33	78	
		CSE430	Decision support and database management	CSE431	Database management systems	22,5	22,5		33	78	4,5
				CSE432	artificial Intelligence	22,5			16,5	39	
		LAC440	Languages and Cultures III	LAC441	English IV: TOEIC B2,2 Certification	22,5			16,5	39	4,5
				LAC442	French IV: Communication technique and preparation for Delf Pre 2	22,5			16,5	39	
				LAC443	Business creation and systems management	22,5			16,5	39	
		CSE450/1	Architecture and programming	CSE451/1	Functional programming	22,5	22,5		33	78	6
				CSE452/1	Software architecture	22,5	22,5		33	78	
		CSE460	Project	CSE453/1	End year project			45	33	78	3
TOTAL						595,5	202,5	102	660	1560	60

Time schedule	Level	Module Code	Module Title	Course Code	Course Title	Hourly volume					Credit
						Integrated course	Lab	Project	Self Study	Total	
THIRD YEAR	SCSE	LAC510	Languages and corporate culture	LAC511	English V: Certification TOEIC C1	15			11	26	3
				LAC512	Human rights	15			11	26	
				LAC513	Project management	15			11	26	
		CSE520/1	Massive data management	CSE522/1	Data Mining and Analysis	15	15		22	52	5
				CSE523/1	Big data framework & technologies	30	15		33	78	
		CSE530/1	Systems Security	CSE531/1	IT security	30			22	52	3
				CSE532/1	Operational safety and fault tolerance	15			11	26	
		CSE540/1	Interactive decision support systems	CSE541/1	Interactive decision support systems	30			22	52	5
				CSE542/1	Advanced machine learning	30	15		33	78	
		CSE550/1	Systems check	CSE551/1	Preparation to certification ISTQB	15	15		22	52	5
				CSE552/1	Verification of Complex Systems	30			22	52	
				CSE553/1	Software architecture project			15	11	26	
		CSE560/1	Software development	CSE561/1	Service oriented engineering	15	15		22	52	6
				CSE562/1	Model driven engineering	15	15		22	52	
				CSE563/1	Development of advanced web applications (JEE/.NET)	15	15		22	52	
		CSE570/1	Mobile programming	CSE571/1	Mobile Programming	15			11	26	3
				CSE572/1	Distributed database	15			11	26	
				CSE573/1	project mobile programming			15	11	26	
		CSE 660	traineeship	CSE660/1	Internship 1(1-2 months)			75	55	130	30
				CSE660/2	Internship 2 (1-2 months)			75	55	130	
				CSE660/3	GRADUATION RESEARCH PROJECT (4-6 months)			300	220	520	
TOTAL						315	105	480	660	1560	60

1 credit ECTS = 26 study hours

Preliminary Note

The following paragraphs are based on the *evaluation report* concerning the same degree programme dated from November 10, 2022, in particular the results of the experts' analysis and assessment summarized in chapter F of the evaluation report. Thus, the evaluation report is the main reference document and substantial base of the accreditation procedure.

This report is entirely based on the ASIIN General Criteria and the Subject-Specific Criteria of the relevant Technical Committees 01 and 02. Hence, ESG 1.1 to 1.10 are fully covered in the combined evaluation and accreditation procedure, as are the respective conclusions of the experts and the Technical Committees (see sec. E – G) and the final decision of the Accreditation Commission (see sec. H).

Since the evaluation procedure from the start is tailored to a potentially ensuing accreditation procedure, the results of the evaluation are summarized accordingly. Thus, it is ensured that they could be easily converted into a proposal of the review team for the Accreditation Commission's final decision on the accreditation of the programme. Consequently, the accreditation procedure has been completed in a shortened manner, in particularly waiving the regular audit visit of the expert group. A progress report of the HEI in response to the evaluation report, though, is a regular part of that procedure and, as a rule, will have been regarded in the expert's assessment.

C Results of the Evaluation Procedure concerning the ASIIN Seal

In the evaluation report, the analysis of the peer group has resulted in the following statement regarding the fulfilment of the ASIIN criteria:

ASIIN General Criteria + Subject-Specific Criteria 04 – Informatics / Computer Science	**Meeting the Standards**			
	sufficient	*sufficient minor reservations / suggestions*	*partly sufficient major reservations*	*not sufficient critical reservations*
1 Degree programme: Concept, Content & Implementation				
1.1 Objectives and learning outcomes				**x**
1.2 Title of the degree programme	**x**			
1.3 Curriculum (including SSC 04 for Master programme)				**x**
1.4 Admission requirements			**x**	
1.5 Workload & credit points			**x**	
1.6 Didactics and Teaching Methodology	**x**			
2 Exams: System, Concept and Organisation				
2 Exams: System, Concept and Organisation				**x**
3 Resources				
3.1 Staff and staff development	**x**			
3.2 Funds and equipment		**x**		

ASIIN General Criteria + Subject-Specific Criteria 04 – Informatics / Computer Science	**Meeting the Standards**			
	sufficient	*sufficient minor reservations / suggestions*	*partly sufficient major reservations*	*not sufficient critical reservations*
4 Transparency and Documentation				
4.1 Module descriptions			**x**	
4.2 Diploma and Diploma Supplement			**x**	
4.3 Relevant rules			**x**	
5 Quality Management: Quality Assessment and Development				
5 Quality Management: Quality Assessment and Development		**x**		

D Progress Report of the Higher Education Institution (13.10.2023)

After the completion of the preceding evaluation, the institution provided a “Complement Report” along with a range of new or revised documents, including

- Minutes of the Quality Assurance Committee
- Minutes of Meetings with External Experts
- Minutes of the Scientific Council Meetings
- New Curriculum Plan (and link to the website with the original French version)
- Module descriptions / Course descriptions
- Student surveys internships first and second study year (*not accessible*)
- List of final year study projects
- Study and exam regulations (internal study-related rules and regulations)

- Sample Diploma Supplement

E Final assessment of the experts based on the evaluation report and the statement of the HEI (15.10.2023)

The results of the evaluation procedure have been addressed as “critical concerns” equivalent to “conditions” in an accreditation procedure in case the experts found serious deficits, “major recommendations” as equivalent to “requirements”, if they identified shortcomings they consider significant, but also repairable in a reasonable amount of time, and, finally, “minor recommendations” analogous to “recommendations” in case of supporting clues for the future development of the programme/s.

The findings of the evaluation procedure could thus be summarized and converted in the following table of *possible* requirements and *possible* recommendations. In addition, the tables show how the experts judge the changes and modifications, ESIP Gafsa has presented and (partly) implemented in the meantime according to its progress report.

There is no further commenting on the experts’ part concerning those criteria, which have been found adequately met in the evaluation procedure.

Possible Prerequisites

C 1. (ASIIN 1.1) The programme learning objectives need to be specified in order to clearly address the expected competence profile and qualification level of the graduates. In connection with that, core occupational fields of the graduates have to be indicated.

Initial Treatment	
Peers	not fulfilled Justification: The programme learning outcomes (PLOs) are laid out in the “Complement report for accreditation of a Master’s degree program in Computer Science Engineering”. They are extensive (PLO1-PLO10), albeit still very generic. In addition, it is not clear, which technical core competences the programme is targeting. The table “1.1.1. Correlation between the school mission and program objectives” seems devoid of meaning without the prior presentation of the modules that contribute to the acquisition of the mentioned skills. Indeed, the mere correlation between the university’s mission and programme objectives does not fully capture how these objectives are concretely achieved. The omission of details about the specific modules that contribute to the acquisition of these skills leaves a significant gap in the

	overall understanding of the link between the educational mission and the practical implementation of the programme. Apart from this, a direct connection between the PLOs and the professional occupational fields that graduates would enter after completing the degree is not explicitly outlined. In sum, the experts propose to hold up the above as a condition for resuming the accreditation procedure.

C 2. (ASIIN 1.3, 2) The level of teaching and learning as well as the corresponding examinations and qualification projects needs to be raised. This might be achieved, for instance, through increasing the requirements in the individual modules/courses and/or tailoring the curriculum more strictly to the core areas of the discipline, in particular in the later stages of the study (study years 2 and 3).

Initial Treatment	
Peers	not (completely) fulfilled Justification: ESIP Gafsa explains in its "Complement Report" that it has developed the level of some courses and has deleted, and added, courses without revealing more details about this level adaptation. When looking into the actual changes in the curriculum, e.g. by comparing the previous and the current study plans, the changes in the curriculum are obvious. E.g. for semester 5, the following modules are listed in the previous curriculum (each comprising several courses): LAC510 Languages and corporate culture, CSE520/1 Engineering techniques, CSE530/1 Systems Security, CSE540/1 Artificial intelligence techniques, CSE550/1 Complex Systems, CSE560/1 Software development, CSE570/1 Mini Projects. Meanwhile this has developed into LAC510 Languages and corporate culture, CSE520/1 Massive data management, CSE530/1 Systems Security, CSE540/1 Interactive decision support systems, CSE550/1 Systems check, CSE560/1 Software development, CSE570/1 Mobile programming. Also, the set of underlying courses has changed for most modules. Some useful new courses have been added, such as CSE532/2 Operational safety and fault tolerance [2023], while some courses have been removed, such as CSE561/1 Game design [2022]. Drilling down further, e.g. comparing the exemplary course descriptions of CSE532/1 "IT security" [2022] and CSE51/1 "IT security" [2023], respectively, it becomes obvious that the course description has completely been re-worked, extended, and significantly improved. It now contains appropriate objectives, content description, teaching methods, workload breakdown, and gives literature references. Looking at another exemplary course description, CSE541/1 "Interactive decision support systems" in its

	2022 and 2023 versions, the picture is different: the course coordinator has changed, but the course description has been copied with only minor and mainly editorial changes. The course description has obviously not been reviewed and updated as per ASIIN statement C2. For another randomly selected example course, CSE552/1 "Verification of Complex Systems", no current course description is provided at all. These three exemplary course descriptions illustrate that some have been reviewed and significantly improved, while others have not. In other cases, the volume of course learning content seems to be unrealistic high for the credits awarded. For instance, CSE111/ CSE113 ("Engineering Mathematics") covers the whole range of analysis, linear algebra, numeric, differential equations, and more in just 67.5 hours of learning. Targeting TOEIC C1 for English is also unrealistic with the implied learning effort. The exemplary exam presented ("Circuits numérique") is not considered to be at Master's level. Furthermore, in the third year there are many 15-hour courses which are not consistent, and which deserve to be studied in more depth. In summary, the experts are of the opinion that the requirement should be kept up as a condition for resuming the procedure.

C 3. (ASIIN 1.3) If the module structure is to be maintained, the interconnection and interrelated learning objectives of the constituent courses within the "modules" need to be reasonably implemented and evidenced (for instance through comprehensive module-related projects). Additionally, module handbooks would have to be revised accordingly.

Initial Treatment	
Peers	not fulfilled satisfactorily Justification: In the Complement Report, module and course descriptions are described and made accessible via link. It is however still not clearly outlined how the learning objectives of the constituent courses within the modules are interconnected and interrelated, as there is only a course-level description of outcomes, but no module-level description of the relations and how they complement each other, or how they are brought together in projects. Nor have any projects been introduced bringing together several modules. In fact, some modules seem to be even more split. The experts propose maintaining this as a condition for the resumption of the procedure.

Possible Requirements

A 1. (ASIIN 1.4) Put in place rules concerning the recognition of learning achievements at other universities at home or abroad.

Initial Treatment	
Peers	not adequately fulfilled Justification: The issue as such is not addressed in the "Completion Report". It is said that Private Higher School of Engineers of Gafsa follows the ECTS system, but a statement is missing whether ECTS acquired at other universities are automatically accepted, or whether they are subject to an evaluation procedure. Also, it is not said if and how non-ECTS based credits from other institutions are accepted. The experts still consider this a possible requirement.

A 2. (ASIIN 1.5) Adequately consider the internships of the first and second study years for the workload calculation and credit point allocation.

Initial Treatment	
Peers	not fulfilled / not addressed Justification: The issue has not been adequately addressed. The workload for the internship is still credited formally in the last study year, not while actually accruing. No comprehensive description of the internships is presented. The experts propose keeping the issue up as a potential requirement.

A 3. (ASIIN 1.5) Establish and implement a monitoring mechanism for student workload in order to ensure the timely identification and rectification of significant discrepancies.

Initial Treatment	
Peers	not fulfilled / not addressed Justification: The workload of certain courses, such as CCNA1&2, appears disproportionately high, even when compared to undergraduate programmes. This disparity highlights the need for a reassessment of the workload assigned to these specific courses to ensure a more balanced distribution that aligns with students' capabilities. However, a strategy or mechanism on how to regularly monitor the students' workload and adapt the credit point allocation, where necessary, is not presented.

A 4. (ASIIN 4.1) Revise the module/course handbooks according to the indications in the evaluation report (e.g. workload specification).

Initial Treatment	
Peers	not (completely) fulfilled Justification: There is no indication as to whether the module descriptions have been revised accordingly. In addition, those for the end-of-study project and the internships are still missing. Therefore, the experts consider that the issue too should be re-evaluated in the course of a potential resumption procedure.

A 5. (ASIIN 4.2) Provide a Diploma Supplement entailing additional information about the learning objectives, structure and contents of the study programme as well as the individual performance. Apart from the overall grade, there needs to be an indication of the grade distribution within the relevant student cohort.

Initial Treatment	
Peers	fulfilled Justification: A sample Diploma Supplement fulfilling the requirements has been provided.

A 6. (ASIIN 4.3) Provide evidence of the validity of the internal regulations (study and exam regulations) by making them publicly available to the major stakeholders, in particular students and lecturers.

Initial Treatment	
Peers	fulfilled Justification: ESIP Gafsa has provided evidence of the validity of its internal study-related regulations via a link to the school website, where those provisions have been published and made publicly accessible (see https://www.esip.tn/reglement-interne/; Access: 10.11.2023).

Possible Recommendations

E-1 (ASIIN 1.3) In order to foster the mobility of both students and the teaching staff, it is recommended to enlarge the English language proficiency of students and lecturers (e.g. providing more courses in English or having guest lecturers from partner universities).

Initial Treatment	
Peers	not adequately addressed Justification: Apart from the regular English courses included in the curriculum from the beginning, there are no apparent efforts to improve the English proficiency of the staff or increase the amount of lecturing in English. The experts suggest addressing the issue as a potential recommendation.

E-2 (ASIIN 1.3, 3.1) It is recommended to gather feedback from external academic experts, who are neither engaged in the programme nor employed by or affiliated to ESIP, for the purpose of reviewing and further developing the curriculum.

Initial Treatment	
Peers	partially fulfilled Justification: Some efforts to collect the feedback of external experts and make use of it while developing the quality of the programme are visible. The experts nevertheless are not convinced of the sustainability of these efforts and therefore propose to address this as an additional recommendation.

E-3 (ASIIN 3.2) ESIP is recommended to enlarge its teaching and learning spaces to be able to cope with higher student numbers in potentially new study programmes in the medium term.

Initial Treatment	
Peers	not fulfilled Justification: The improvement report does not address either the insufficient equipment or the narrowness of the teaching places. The experts consider this point to be maintained as a recommendation.

E-4 (ASIIN 5) It is recommended to statistically record the employment rate of the graduates and to establish an Alumni network in order to receive more reliable information about their professional careers and occupational fields.

Initial Treatment	
Peers	not adequately addressed Justification: ESIP's progress report does not entail significant information on this matter, which is why the experts suggest maintaining this issue as a recommendation.

F Summary: Peer recommendations (15.10.2023)

Taking into account the progress report submitted by ESIP Gafsa, the experts summarize their analysis and **final assessment** for the award of the seal as follows:

Degree Programme	**ASIIN Seal**	**Maximum duration of accreditation**
NED/Ma Computer Science Engineering	*Suspension*	

Conditions

C 1. (ASIIN 1.1) The programme learning objectives need to be specified in order to clearly address the expected competence profile and qualification level of the graduates. In connection with that, core occupational fields of the graduates have to be indicated.

C 2. (ASIIN 1.3, 2) The level of teaching and learning as well as the corresponding examinations and qualification projects needs to be raised further, e.g. through increasing the requirements in the individual modules/courses and/or tailoring the curriculum more strictly to the core areas of the discipline, in particular in the later stages of the study (study years 2 and 3).

C 3. (ASIIN 1.3) The interconnection and interrelated learning objectives of the constituent courses within the "modules" need to be reasonably implemented and evidenced (for instance through comprehensive module-related projects). Additionally, the module descriptions would have to be adapted accordingly.

Possible Requirements

A 1. (ASIIN 1.4) Rules have to be put in place concerning the recognition of learning achievements at other universities at home or abroad.

A 2. (ASIIN 1.5) The internships of the first and second study years need to be adequately considered with respect to the workload calculation and credit point allocation.

A 3. (ASIIN 1.5) A monitoring mechanism for student workload must be established and implemented in order to ensure the timely identification and rectification of significant discrepancies.

A 4. (ASIIN 4.1) The module/course handbooks need to be revised thoroughly and consistently according to the indications in the evaluation report (e.g. workload specification).

Possible Recommendations

E 1. (ASIIN 1.3) In order to foster the mobility of both students and the teaching staff, it is recommended to enlarge the English language proficiency of students and lecturers (e.g. providing more courses in English or having guest lecturers from partner universities).

E 2. (ASIIN 1.3, 3.1) It is recommended to gather feedback from external academic experts on a regular basis, who are neither engaged in the programme nor employed by or affiliated to ESIP, for the purpose of reviewing and further developing the curriculum.

E 3. (ASIIN 3.2) ESIP is recommended to enlarge its teaching and learning spaces to be able to cope with higher student numbers in potentially new study programmes in the medium term.

E 4. (ASIIN 5) It is recommended to statistically record the employment rate of the graduates and to establish an Alumni network in order to receive more reliable information about their professional careers and occupational fields.

G Comment of the Technical Committee 04 – Informatics/Computer Science (28.11.2023)

Assessment and analysis for the award of the ASIIN seal:

The TC discusses the procedure and proposes only a minor editorial correction to prerequisite C1 to make it more specific. Otherwise, the TC agrees with the experts' assessment without any changes.

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

Degree Programme	**ASIIN Seal**	**Maximum duration of accreditation**
NED/Ma Computer Science Engineering	*Suspension*	

Proposed editorial complement in condition C 1:

C 1. (ASIIN 1.1) The programme learning objectives need to be specified in order to clearly address the expected competence profile and qualification level of the graduates and meet EQF 7. In connection with that, core occupational fields of the graduates have to be indicated.

H Decision of the Accreditation Commission (08.12.2023)

Assessment and analysis for the award of the ASIIN seal:

The Accreditation Commission discusses the procedure. From the experts' assessment, it observes that the programme still bears considerable deficits in terms of the overall quality and qualification level. The Commission therefore confirms the recommended solution of the experts and decides to suspend the procedure with three conditions for resumption.

The Accreditation Commission decides on the procedure as follows:

Degree Programme	**ASIIN Seal**	**Maximum duration of accreditation**
NED/Ma Computer Science Engineering	*Suspension*	

Conditions

C 1. (ASIIN 1.1) The programme learning objectives need to be specified in order to clearly address the expected competence profile and qualification level of the graduates and meet EQF 7. In connection with that, core occupational fields of the graduates have to be indicated.

C 2. (ASIIN 1.3, 2) The level of teaching and learning as well as the corresponding examinations and qualification projects needs to be raised further, e.g. through increasing the requirements in the individual modules/courses and/or tailoring the curriculum more strictly to the core areas of the discipline, in particular in the later stages of the study (study years 2 and 3).

C 3. (ASIIN 1.3) The interconnection and interrelated learning objectives of the constituent courses within the "modules" need to be reasonably implemented and evidenced (for instance through comprehensive module-related projects). Additionally, the module descriptions would have to be adapted accordingly.

Possible Requirements

A 1. (ASIIN 1.4) Rules have to be put in place concerning the recognition of learning achievements at other universities at home or abroad.

A 2. (ASIIN 1.5) The internships of the first and second study years need to be adequately considered with respect to the workload calculation and credit point allocation.

A 3. (ASIIN 1.5) A monitoring mechanism for student workload must be established and implemented in order to ensure the timely identification and rectification of significant discrepancies.

A 4. (ASIIN 4.1) The module/course handbooks need to be revised thoroughly and consistently according to the indications in the evaluation report (e.g. workload specification).

Possible Recommendations

E 1. (ASIIN 1.3) In order to foster the mobility of both students and the teaching staff, it is recommended to enlarge the English language proficiency of students and lecturers (e.g. providing more courses in English or having guest lecturers from partner universities).

E 2. (ASIIN 1.3, 3.1) It is recommended to gather feedback from external academic experts on a regular basis, who are neither engaged in the programme nor employed by or affiliated to ESIP, for the purpose of reviewing and further developing the curriculum.

E 3. (ASIIN 3.2) ESIP is recommended to enlarge its teaching and learning spaces to be able to cope with higher student numbers in potentially new study programmes in the medium term.

E 4. (ASIIN 5) It is recommended to statistically record the employment rate of the graduates and to establish an Alumni network in order to receive more reliable information about their professional careers and occupational fields.

I Resumption of the procedure

Comment/opinion of the university (21.04.2025)

ESIP Gafsa has provided a detailed "Response to ASIIN Accreditation" for its Computer Science Engineering programme under review.

ESIP Gafsa presented the following documents showing the curricular changes and additional measures taken to raise the overall quality level of the programme:

- Revised Programme and Learning Objectives and corresponding meeting minutes, comparative tables, and analysis reports
- Revised Course descriptions
- Examples for new module-level projects ranging from mini-projects to practical case studies
- Examples of international agreements and documentation of scientific activities
- Documentation/regulations regarding the recognition of external achievements
- Regarding Internships: samples of student evaluation reports, internship assessment criteria, and official documentation
- Surveys on Workload
- Report from external formal curriculum evaluation process
- Information on expenses, including a formal budget statement
- Survey templates, alumni feedback summaries, and sample employer testimonials

Assessment of the experts (11.06.2025)

Prerequisites

C 1. (ASIIN 1.1) The programme learning objectives need to be specified in order to clearly address the expected competence profile and qualification level of the graduates and meet EQF 7. In connection with that, core occupational fields of the graduates have to be indicated.

Initial Treatment	
Experts	fulfilled Justification: ESIP Gafsa has provided an improved description of competences to be acquired by students. The new formulation (PLO1 – PLO10) describes the specific knowledge and skills in

	Computer Science that is expected on the EQ7 in a systematic way. It additionally describes the role the finished students can take in their professional life (in Industry). Also, a relation between competences and professional occupation fields has been provided for some of the competences, yet not for all of them.

C 2. (ASIIN 1.3, 2) The level of teaching and learning as well as the corresponding examinations and qualification projects needs to be raised further, e.g. through increasing the requirements in the individual modules/courses and/or tailoring the curriculum more strictly to the core areas of the discipline, in particular in the later stages of the study (study years 2 and 3).

Initial Treatment	
Experts	Fulfilled Justification: ESIP Gafsa has reviewed and updated all course descriptions and they are now substantially improved. Relations between courses are part of the program, e.g. CSE 131 (Algorithm and data structure) and CSE 132 (C++ programming). In addition, the university specifies several measures (review by external professors, new internal regulations, etc.) to improve quality and ensure it in the long term. However, these can only be partially substantiated by the documents submitted. Overall, the experts come to the conclusion that sufficient adjustments have been made for the condition to be considered fulfilled. However, elaboration on the volume of course learning content in relation to the contact hours should be undertaken and evidence of the measures described should be submitted subsequently.

C 3. (ASIIN 1.3) The interconnection and interrelated learning objectives of the constituent courses within the “modules” need to be reasonably implemented and evidenced (for instance through comprehensive module-related projects). Additionally, the module descriptions would have to be adapted accordingly.

Initial Treatment	
Experts	fulfilled Justification: All module descriptions have been revised. Learning outcomes and courses are mapped in a mapping matrix, giving an overview of how the learning objectives of the constituent courses within the modules are interconnected and interrelated. Project I (CSE160), Project II (CSE260) and Project III (CSE460) have been defined that bring together several modules. The project (potato disease analysis) is of high quality and shows usage

	of AI, web technology and authentication. The new concepts of courses in Sem.5 show the intent of improvement the pedagogical concepts between modules.

Requirements

A 1. (ASIIN 1.4) Rules have to be put in place concerning the recognition of learning achievements at other universities at home or abroad.

Initial Treatment	
Experts	fulfilled Justification: A clarification on the acceptance of European ECTS has been provided. The process for the recognition of non-ECTS credits has been described. The admission procedure is formally coherent, partly due to new regulations on "Registration Requirements for International Students" of the Tunisian Government, but also due to the formalized admission procedure of ESIP.

A 2. (ASIIN 1.5) The internships of the first and second study years need to be adequately considered with respect to the workload calculation and credit point allocation.

Initial Treatment	
Experts	fulfilled Justification: It is explained that all projects from the first year up to the final project are shown on the study plan while accruing. The internships are now sufficiently described in the course descriptions for CSE660/1 and CSE660/2. A summary table has been developed to outline the workload and credits allocated to each internship activity and practical project for the first and second study years.

A 3. (ASIIN 1.5) A monitoring mechanism for student workload must be established and implemented in order to ensure the timely identification and rectification of significant discrepancies.

Initial Treatment	
Experts	fulfilled Justification: ESIP Gafsa declare that a comprehensive and well-documented mechanism for monitoring student workload is already in place and actively implemented. It provides evidences showing that surveys of student workload, with standardized forms and evaluation procedure exist.

A 4. (ASIIN 4.1) The module/course handbooks need to be revised thoroughly and consistently according to the indications in the evaluation report (e.g. workload specification).

Initial Treatment	
Experts	fulfilled Justification: ESIP Gafsa confirms that the module and course handbooks have been comprehensively updated in response to the comment. Revised module descriptions have been created for each course. Verified module description samples are of satisfying quality. ESIP has developed internship module descriptions for CSE660/1 and CSE660/2 and an internship description form. The course outlines and module descriptions are well written and comprehensive.

Recommendation

E 1. (ASIIN 1.3) In order to foster the mobility of both students and the teaching staff, it is recommended to enlarge the English language proficiency of students and lecturers (e.g. providing more courses in English or having guest lecturers from partner universities).

Initial Treatment	
Experts	Not fulfilled Justification: ESIP Gafsa has demonstrated activities that target more English-language exposure and exchange. These activities are positive. However, the only international activity was participation at a competition of the “Sino-North Africa Education Innovation Association”. The “International conference on scientific & pedagogical mechanics & Energy” is mainly national. The experts miss contacts and exchange with institutions in France, Europe, US or other countries. Furthermore, the proposal of increasing the amount of lecturing in English has not been realized yet.

E 2. (ASIIN 1.3, 3.1) It is recommended to gather feedback from external academic experts on a regular basis, who are neither engaged in the programme nor employed by or affiliated to ESIP, for the purpose of reviewing and further developing the curriculum.

Initial Treatment	
Experts	Not fulfilled

	Justification: ESIP Gafsa has undertaken a formal curriculum evaluation process conducted by two qualified and independent external experts. This is a positive step into the right direction. However, two persons are a too small number to cover all fields of the study program. Also, it is not discussed how this activity will be continued regularly. Furthermore, two reports are given, one from 2022 and one from 2023. Nothing is presented for 2024. The feedback is rather generic, not on module or course level.

E 3. (ASIIN 3.2) ESIP is recommended to enlarge its teaching and learning spaces to be able to cope with higher student numbers in potentially new study programmes in the medium term.

Initial Treatment	
Experts	Not fulfilled Justification: ESIP Gafsa done construction work, resulting in the expansion and refurbishment of classrooms, learning spaces, and laboratory facilities. Further, ESIP has made investments in new equipment and expansion for existing infrastructure. However, photos documenting the new facilities are announced, but not actually provided in the report appendix. In addition, 118600 DT (ca. 35000 $) equipment cost for an unknown time span (one year?) for a university with a master program is unusual low. The experts miss equipment for AI (graphic processors) or electrical engineering. The amount of 20 SW licenses (for which SW? Matlab? ChatGPT4o? Cloud access?) is too low invest to teach with modern SW environment.

E 4. (ASIIN 5) It is recommended to statistically record the employment rate of the graduates and to establish an Alumni network in order to receive more reliable information about their professional careers and occupational fields.

Initial Treatment	
Experts	Not fulfilled Justification: ESIP Gafsa has established alumni tracking. A documentation of the employers of recent graduates is provided. But, the documents on survey templates or employee testimonials are not provided. The list of alumni indicates though that there must be a survey and a tracking method, but it is not clear how employment evolves over time. There are now alumni groups on Facebook or WhatsApp, but those are not a systematical approach.

Conclusion and recommended resolution of the experts

Taking into account the progress reports and comments given by ESIP Gafsa, the experts are of the opinion that all conditions are met. 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
NED/Ma Computer Science Engineering	With requirements for one year	30.09.2030	–	–

Requirements

A 1. (ASIIN 1.3) The scope of the learning content in relation to the contact hours must be evaluated and verified.

A 2. (ASIIN 1.3) Provide further documentation on the measures undertaken to raise the level of teaching and learning, the corresponding examinations, and qualification projects, such as the external evaluation report and the reviewed internal regulations and examination laws.

Recommendations

E 1. (ASIIN 1.3) In order to foster the mobility of both students and the teaching staff, it is recommended to enlarge the English language proficiency of students and lecturers (e.g. providing more courses in English or having guest lecturers from partner universities)

E 2. (ASIIN 1.3, 3.1) It is recommended to gather feedback from external academic experts on a regular basis, who are neither engaged in the programme nor employed by or affiliated to ESIP, for the purpose of reviewing and further developing the curriculum.

E 3. (ASIIN 3.2) ESIP is recommended to enlarge its teaching and learning spaces as well as the available Soft- and Hardware to be able to cope with higher student numbers in potentially new study programmes in the medium term.

E 4. (ASIIN 5) It is recommended to statistically record the employment rate of the graduates and to establish an Alumni network in order to receive more reliable information about their professional careers and occupational fields.

Assessment 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 assessment of the experts without any changes.

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
NED/Ma Computer Science Engineering	With requirements for one year	30.09.2030	–	–

Decision of the Accreditation Commission (27.06.2025)

Assessment and analysis for the award of the ASIIN seal:

The Accreditation Commission discusses the procedure and basically agrees with the assessment of the experts and the Technical Committee. However, it is in favour of reformulating the requirement A 1 in order to clarify it. In addition, the Commission makes an editorial change to recommendation E 1. Otherwise, the Accreditation Commission agrees with the assessment of the experts and the Technical Committee without any further changes.

The Accreditation Commission decides to award the following seals:

Degree Programme	ASIIN Seal	Maximum duration of accreditation	Subject-specific label	Maximum duration of accreditation
NED/Ma Computer Science Engineering	With requirements for one year	30.09.2030	–	–

Requirements

A 1. (ASIIN 1.3) The university must provide evidence that the module content in relation to contact hours is realistic in all modules.

A 2. (ASIIN 1.3) Provide further documentation on the measures undertaken to raise the level of teaching and learning, the corresponding examinations, and qualification projects, such as the external evaluation report and the reviewed internal regulations and examination laws.

Recommendations

E 1. (ASIIN 1.3) In order to foster the mobility of both students and the teaching staff, it is recommended to improve the English language proficiency of students and lecturers (e.g. providing more courses in English or having guest lecturers from partner universities)

E 2. (ASIIN 1.3, 3.1) It is recommended to gather feedback from external academic experts on a regular basis, who are neither engaged in the programme nor employed by or affiliated to ESIP, for the purpose of reviewing and further developing the curriculum.

E 3. (ASIIN 3.2) ESIP is recommended to enlarge its teaching and learning spaces as well as the available Soft- and Hardware to be able to cope with higher student numbers in potentially new study programmes in the medium term.

E 4. (ASIIN 5) It is recommended to statistically record the employment rate of the graduates and to establish an Alumni network in order to receive more reliable information about their professional careers and occupational fields.