ASIIN Accreditation Report

Master's Degree Programme
Innovation Management

Provided by

École Nationale d'Ingénieurs de Tunis (ENIT)
in cooperation with **École Supérieure des Sciences Économiques et Commerciales de Tunis (ESSEC)** and **Institut des Hautes Études Commerciales Carthage (IHEC)**

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A About the Accreditation Process

Title of the degree Programme	Labels applied for [1]	Previous ASIIN accreditation	Involved Technical Committees (TC)[2]
Innovation Management	ASIIN	n.a.	06

Date of the contract: 22.05.2014   **Submission of the final version of the self-assessment report:** 26.05.2014   **Date of the onsite visit:** 23.-24.06.2014   **at:** ENIT
Peer panel: Hejer Ben Dhahbi, Student, National Engineering School in Bizerte;   Prof. Dr. Dieter Beschorner, University of Ulm;   Prof. Dr. Hans-Christian Brauweiler, University of Applied Sciences Zwickau;   Prof. Dr. Horst Brezinski, Technical University of Freiberg;   Dipl.-Wirtsch.Ing. (FH) Alexander Müller, Maxam Deutschland GmbH
Representative of the ASIIN headquarter: Dipl.-Kulturw. Jana Möhren
Responsible decision-making committee: Accreditation Commission for Degree Programmes
Criteria used: European Standards and Guidelines as of 10.05.2005   ASIIN General Criteria, as of 28.06.2012   Subject-Specific Criteria of Technical Committee 06 – Industrial Engineering as of 06.12.2013

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[1] ASIIN Seal for degree programmes
[2] TC: Technical Committee for the following subject areas: TC 06 – Industrial Engineering

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

B Characteristics of the Degree Programme

a) Name & Final Degree	b) Areas of Specialization	c) Mode of Study	d) Duration & Credit Points	e) First time of offer & Intake rhythm	f) Number of students per intake	g) Fees
Innovation Management, Master (*Mastère Professionel*)	n.a.	Full time	4 Semesters 120 CP	September 2012 Annually in September	30/year	Approx. 50 EUR/semester

For the Master's degree programme Innovation Management, the self-assessment report states the following **intended learning outcomes**:

- To understand the complex environments within which innovation takes place and examine it.
- To recognize and be able to configure suitable responses to different innovation contexts.
- To mobilize cross-functional knowledge in integrated fashion to create value from ideas during the innovation process.
- To understand the importance of networking and external agencies within the innovation process.
- To identify ways of working with external stakeholders and developing an integrated and open approach to innovation management across such networks.
- To evaluate the concept of routines as core patterns of behaviour which are embedded within the organization and reinforced into processes, procedures, policies, etc. as the key enablers of an innovation process.
- To interpret the concept of dynamic capability and be able to deploy this in revising and reconfiguring innovation management routines in the face of a complex and changing environment.
- To analyse the changing external landscape for innovation and be able to interpret this – for example signals about open or user led innovation – in deploying dynamic capability.

These learning outcomes are published on the website of the project in the frame of which the Master has been developed (see below, section 2.2.)

The following **curriculum** is presented:

Two years							
First year (60 ECTS)				**Second year (60 ETCS)**			
September – January		January – June		September – January		January – June	
1st Semester		2nd Semester		3rd Semester		4th Semester	
15 modules							
4 modules		4 modules + project work		4 modules		3 modules + thesis	
120 ECTS							
4 modules x 6 ECTS = **24 ECTS**		(4 modules x 6 ECTS) + 10 ECTS project work = **34 ECTS**		4 modules x 6 ECTS = **24 ECTS**		(3 modules x 6 ECTS) + 20 ECTS thesis = **38 ECTS**	
3600 hours							
4 modules x (60 h of teaching + 120 h of homework) = 240 h of teaching + 480 h of homework = **720 h**		**4 modules** x (60 h of teaching + 120 h of homework) = 240 h of teaching + 480 h of homework = 720 h **Project work** = 100 h of teaching + 200 h of homework = 300 h **Overall** = 720 h + 300 h = **1020 h**		**4 modules** x (60 h of teaching + 120 h of homework) = 240 h of teaching + 480 h of homework = **720 h**		**3 modules** x (60 h of teaching + 120 h of homework) = 180 h of teaching + 360 h of homework = 540 h **Thesis** = 200 h of teaching + 400 h of homework = 600 h **Overall** = 540 h + 600 h = **1140 h**	
30 lectures							
Module 1: Introduction – the content and context for innovation	Lecture 1.1 Lecture 1.2	Module 5: Implementation 1 – managing projects under uncertainty	Lecture 5.1 Lecture 5.2	Module 9: Dynamic capability and changing context for innovation	Lecture 9.1 Lecture 9.2	Module 13: Service innovation	Lecture 13.1 Lecture 13.2

management							
Module 2: Innovation strategy	Lecture 2.1 Lecture 2.2	Module 6: Implementation 2 – adoption and diffusion	Lecture 6.1 Lecture 6.2	Module 10: Creating new ventures	Lecture 10.1 Lecture 10.2	Module 14:Design-driven innovation	Lecture 14.1 Lecture 14.2
Module 3: Search Opportunities	Lecture 3.1 Lecture 3.2	Module 7: Building the innovative organization	Lecture 7.1 Lecture 7.2	Module 11: Open innovation	Lecture 11.1 Lecture 11.2	Module 15: Electives	Lecture 15.1 Lecture 15.2
Module 4: Strategic selection	Lecture 4.1 Lecture 4.2	Module 8: Capturing value and knowledge management	Lecture 8.1 Lecture 8.2	Module 12: User-led innovation	Lecture 12.1 Lecture 12.2	**Thesis: End of Year Two**	
		Project work: End of Year One					

C Peer Report for the ASIIN Seal

1. Formal Specifications

Criterion 1 Formal Specifications

Evidence:

- Self-assessment report, formal specifications

- Decree of the Tunisian Ministry for Higher Education and Scientific Research of 01.08.2012 stipulating the general frame of study regulations and the conditions for the award of the national Master diploma within the three-cycle system

- Discussions during onsite visit

Preliminary assessment and analysis of the peers:

The peers noted that the awarded degree of "Professional Master" corresponds to the Ministerial Decree. They learned that while qualifications are officially given by universities, the administrative and scientific management of degree programmes lies with the so-called schools and institutes. In the case of the Master under review, the overarching universities are University of Tunis (ESSEC), University of Tunis El Manar (ENIT) and University of Carthage (IHEC). As of the visit date, the degree is only awarded by ENIT but the three universities have applied to the responsible Ministry for Higher Education and Scientific Research to be authorized to award a joint degree from the student intake 2015. This authorization was orally given on the day of the visit. The experts asked for the submission of the corresponding Ministerial document.

For the question of the teaching language, see below (section 2.3).

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

The panel learned that the authorization (*habilitation*) to award the degree jointly was not yet received, contrary to what they had understood at the site visit. The reason is that the authorization shall be valid only from the student intake in the fall 2015 and thus is expected to be received only in the spring/summer of that year. Accordingly, the panel noted that any accreditation issued now would only be valid for the degree offered by ENIT. The institutions will have to submit the official documentation once the authorization for the joint degree is received in order to ask for a so-called "substantial change procedure" requesting to expand the accreditation to the joint degree. Apart from that, the panel considered the criterion to be fulfilled.

2. Degree programme: Concept & Implementation

Criterion 2.1 Objectives of the degree programme

Evidence:

- Self-assessment report, section 2.1
- website

Preliminary assessment and analysis of the peers:

Based on the stated objectives of the programme, the peers considered the classification as corresponding to level 7 of the European Qualifications Framework to be justified. Some deficiencies detected in the implementation are described in other parts of this report (see section 2.6).

Criterion 2.2 Learning Outcomes of the Programme

Evidence:

- Self-assessment report, sections 2.2, 2.3
- website
- Discussions with representatives of the university

Preliminary assessment and analysis of the peers:

The panel members analyzed the intended learning outcomes and found them to be overall concise, valid and accessible. While they are not stipulated in any formal regulation, nor yet in the Diploma Supplement (see section 7.2 below), the panel was assured that students referred to the website (www.dicamp.eu) as main source of reference of all programme related details.

The panel acknowledged that the programme had been developed in the frame of an EU-financed programme (Tempus, "DICAMP - Development and Implementation of an Accredited Cross-Universities Innovation Management Master Programme in Tunisia") together with all project partners, i.e. the three Tunisian universities as well as university partners from Germany, the UK and France. They questioned, however, to which extent the employment sector has been and continues to be involved in the design, updating and delivery of the programme. Nevertheless, they found that the programme meets the demands of the country and its companies (see section 2.4).

They found that the programme learning outcomes while referring to a more hybrid programme principally correspond to the competence areas set forth by the Subject-Specific Criteria of the Technical Committee 06 – Industrial Engineering (excluding the more engineering-oriented competences). They found that the area of knowledge is covered by the

exploration of the innovative state of mind, the relation of management tools, the recognition of conceptual models as well as the identification of marketing and innovation diffusion methods. The panel considered skills to be expected in the ability to discuss different innovation strategies, to appraise innovation typologies as well as to examine different innovation models and choosing the appropriate one. Furthermore, graduates are expected to be able to develop market studies, portfolio techniques for identifying hidden opportunities and spreading innovation. They should also have the skill to select tools and techniques and assess influences while taking strategic decisions. With regard to competences, the panel acknowledged the intended capability for innovative entrepreneurship, developing and implementing decision-making processes, matching project structures to innovation tasks and configuring models in order to spread innovation.

The panel discussed the matter of entrepreneurship with the students and teaching staff. Despite the existence of specifically designated programmes about entrepreneurship, some students expressed the wish for further training in this matter. The panel members considered this as an option for the electives but otherwise did not understand it as main objective of the programme.

Criterion 2.3 Learning outcomes of the modules/module objectives

Evidence:

- cf. module descriptions

Preliminary assessment and analysis of the peers:

For each of the modules, the intended learning outcomes are defined in terms of knowledge, skills and competences. The panel members noted that the level of detail of the descriptions for teaching and methods was rather different and urged the programme to update all descriptions to a more informative level. Furthermore, the actual teaching language did not become clear from the descriptions as most indicated it to be "English (French)". They took note that the main intended teaching language was English but that in some cases teaching staff preferred speaking in French. The information as to the extent in which classes are held in English language varied throughout the discussions, apparently also depending on the actual teacher.

The panel also found that modules 3 and 6 were repetitive in terms of objectives and content but learned that the description of module 3 was mistaken. They asked for the corrected version to be submitted. They understood that not all electives modules had yet been offered and that thus not all module descriptions had been provided. However, in order to have a complete picture of the electives, they asked for the descriptions of the four additional elective modules to be submitted.

Criterion 2.4 Job market perspectives and practical relevance

Evidence:

- feedback from industry survey
- Overview of companies for which students are working
- Description of expected learning outcomes
- Self assessment report, section 2.4

Preliminary assessment and analysis of the peers:

For their assessment of job market relevance, the experts took into account the fact that the first cohort of students finishes the programme this summer. But they positively acknowledged that some students already had job or promotion offers and were convinced that graduates were highly suitable for the Tunisian labour market. The latter corresponded with the expectation of the institutions that graduates contribute to the development of companies in Tunisia rather than abroad. Typical positions identified as opportunities for students included those in innovation departments, project management as well as production departments.

The relationship with external stakeholders, in particular employers, was viewed in a differentiated manner. While the schools confirmed that scientific councils exist – composed of academics, students and company representatives – these were on a general, not programme specific basis. Additionally, the expert panel learned that the universities have databases of industry contacts which are to be used for facilitating students' internships. In the same manner, ENIT had, for example, organized open days in cooperation with companies focusing on collaboration between the institution and the industry. In the frame of the project activities, a survey among industry representatives was also carried out. Nevertheless, the experts considered that all of the above activities were either not specific to the programme under review or not established as regular tasks. They therefore would find it advisable that the three institutions set up a joint advisory council, designated for the programme, enabling them to regularly collect stakeholder feedback about the design of the programme, achievement of its objectives and alignment with the stakeholder needs. An additional element that would strengthen the professional outreach of the programme in the view of the expert panel would be to use the industry contacts and events by including lectures from company representatives which are specific to this Master.

In the same line of argument, the experts also discussed the internship (module: "project work"). They found that it contributes to creating a sufficient link to professional practice by requiring students to select topics related to innovation management in companies. In

the past, most students have completed their internship either in a company in their country or in relation with one of the European project partners. The institutions expressed their expectation that students will implement their internship at one of the 200 Tunisian companies shortlisted by the responsible ministry as having an explicit need for innovation.

Criterion 2.5 Admissions and entry requirements

Evidence:

- Decree of the Tunisian Ministry for Higher Education and Scientific Research of 01.08.2012 stipulating the general frame of study regulations and the conditions for the award of the national Master diploma within the three-cycle system

- Admission requirements published on the website of programme, participating institutions

- Self-assessment report, section 2.5

Preliminary assessment and analysis of the peers:

The general admission requirements for Master's degree programmes are stipulated in the Ministerial Decree. Namely, applicants must have an applied or fundamental Bachelor's degree (*diplôme national de licence*) or equivalent. For the programme, the published selection criteria stipulate that an engineering, management or economics degree must have been completed. In addition, English language competences must be proven through the marks in the last three years of study. Based on the type of first degree, the marks in the last three years, the marks in English and professional experience a ranking of applicants is calculated. The programme then carries out face-to-face interviews with approximately 100 students of which 30 are ultimately accepted. The number of applicants in the past years ranged between 700 and 900.

The experts discussed the issue of sufficient professional practice for the students also in relation to the admission requirements. While they learned that graduates of engineering programmes would have at least eight months of professional practice, this would not be the case for graduates of management or economics programmes. They acknowledge positively that the ranking of applications established to determine which applicants can be admitted foresees a higher level for every year of professional experience. They were thus convinced that sufficient practice is ensured.

As currently only ENIT is authorized to award the qualification, all students are officially admitted to ENIT – notwithstanding the positive fact that a joint commission of all three partners devises the above-mentioned ranking of applicants and carries out the interviews. The partners have not yet devised a plan detailing how the official admission of

students will be organized once the joint degree will be implemented, i.e. to which school they will be admitted, which numbers of students can be admitted, etc. The panel thus considered it necessary that an organizational scheme is developed before the admission of new students in the joint programme.

Criterion 2.6 Curriculum/Content

Evidence:

- Curriculum / content overview

- Discussions on site

Preliminary assessment and analysis of the peers:
The panel assessed the curriculum with regard to its suitability to facilitate the achievement of the learning outcomes. Generally, they concluded that the core modules constituted a consistent curriculum. The particularity of the programme lies in its development within a project consortium of Tunisian and European universities. Accordingly, the students of the first year, i.e. during the first year of implementation, were taught by European professors from the EU-partner universities in English language. In the second year of implementation, i.e. for the second cohort of students, teaching was taken over more and more by Tunisian staff. While this in principle would not constitute a problem in itself, the panel acknowledged that the communication of how the programme would be taught was not completely transparent for the incoming students. Furthermore, they learned that some changes to the study plan were expected for the next cohort due to the fact that the European teachers would no longer be available (as financing through the project ends in October 2014). The panel thus asked for the study plan for the next student generation to be submitted before being able to finalize their assessment on the curriculum. Furthermore, they considered the transparency of information about the teaching, in particular the involvement or not of European staff, could be improved. With regard to this aspect, it also became evident that the inclusion of a study or project work period abroad was not clear for the current and future student generations. Again, the peers concluded that the programme would be suitable for the achievement of its objectives independent of international exchange but the communication needs to be clear.

This same argumentation also holds true for the question of teaching language: while the panel confirmed benefits in teaching in English as language used for many international interactions in companies, they did not find that the teaching language in itself had a major influence on the achievement of learning outcomes. In fact, the peers were highly impressed by the level of English the students demonstrated during the discussions. Trans-

parency in the communication of teaching language would be an issue for improvement, though, not least in the module descriptions.

The panel questioned the meaning of the teaching hours indicated the module descriptions for the "project work" and "thesis" modules. The number of contact hours stated seemed comparably high for this type of module. They learned that the teaching contact hours consist of provision of information on carrying out research projects, writing reports and supervision of activities abroad by the European partners. As this was not properly reflected in the module descriptions – with regard to content, teaching methods and workload – they need to be revised.

Concerning the issue of carrying out research projects and writing reports satisfying scientific standards, the peers did not consider the outcomes provided to be on a sufficiently high level. Some of the reports and thesis works did not follow scientific structuring, did not contain research of literature, work outlines, citations, bibliographies as essential elements of Master level student results. While the teaching staff of some modules explained that they provide the students with research and reporting techniques, and some of the partner institutions offer corresponding courses in other programmes, the panel considered a systematic inclusion to be recommendable.

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

From the comments, the panel learned that the institutions are planning to update and revise the programme website after the end of the current project financing. However, the website shall continue to be the primary source of information for applicants and students. The university website must be a save and complete source for students, covering all necessary information for a successful course of study. As this is currently not the case, neither on the designated project website nor on the institutions' websites, the panel therefore alerted the institutions to ensure that the publication of the programme objectives continues to be visible on the website. The panel adds a related requirement.

The panel positively acknowledged the information that the institutions are willing to increase the involvement of the employment sector and the related agreement to implement so-called Innovation Days at three Tunisian companies.

The peers also found their understanding of the topic of entrepreneurship to be reinforced in the sense that it does not constitute a main objective of the programme under review but that the participating institutions do offer programmes and courses which more directly target this issue.

The revised module descriptions of modules 3 and 6 as well as the descriptions of the additional electives allowed the panel to complete their picture of the curriculum. The peers also acknowledged that one elective had to be deleted due to the change of job position of the designated lecturer. Nevertheless, they still considered that all module descriptions need to be updated with regard to issues described in different sections of this report (weighting of exams, actual detailed teaching methods and content, study plan, actual teaching language).

The panel took note of the efforts of the institutions to set up an advisory council or advisory board and the difficulties encountered, in particular the lack of motivation from companies in responding to requests and identifying suitable persons. The approach of establishing contacts through graduates of the programme thereby seemed reasonable and the described conference "Innovation Masters 2014" was considered as a good step. In view of longterm development and lining with the Tunisian employers – who, as it appeared, did have an interest in the graduates of the programme – the peers nevertheless found it advisable to set up a designated, specific Advisory Council or Board in order to allow the institutions regular stakeholder feedback from different groups and companies about the design of the programme, the achievement of its objectives and the alignment with their varying needs. In a similar manner, the panel acknowledged that hiring external lecturers from companies was not trivial due to the low amount of reimbursement available. This was still considered to be a development opportunity in view of continuous quality management and keeping the programme up-to-date.

The comments from the universities confirmed the understanding of the peers that the information about the admission requirements and the links to the admission process itself were available on the programme website. However, the institutions also stated that they had not yet designated a scheme how the admission for the joint programme would work from the next intake (2015). As this intake would fall during the accreditation period, the panel considered it necessary that a clear and transparent process is set up. They questioned whether the proposal to change the institution responsible for the admission every two years would be feasible as it might cause confusion and administrative difficulties. The question of students' enrollment after admission would not be solved by this procedure in the sense that the institutions must clarify whether students would be enrolled at all three or just one institution, and in the latter case how many at which one.

The panel also took into account the information about the study plan for the next year, 2014-2015. It confirmed their understanding that the modules can be taken in different order, with the exception of modules 1 and 9 at the beginning of each year respectively. This would allow flexibility in the actual delivery of the modules (notwithstanding the questions of exam periods as analyzed below, section 4).

They positively noticed the clarification in the modules "project work" and "Master's thesis" as to the content of the teaching hours. They nevertheless still questioned whether the time allocated to the teaching hours alluded rather to the tasks of teaching staff than to the students' experience as it still seemed to be quite high (100h and 200h respectively). This questions needs to be re-considered when the module descriptions are updated.

The peers understood from the comments of the institutions that the Master's theses as reviewed during the onsite visit were still to be revised by the students after the defense. However, the correction of mistakes and revision according to suggestions of the defense committee did not seem to be a sufficient means for fully clearing up the deficiencies detected. Instead, the peers would expect that the thesis at the time of the defense were of a sufficient scientific quality. The question of language, i.e. whether a thesis is written in English or French, should not make any difference to the quality of its content. The peers did positively note that the institutions had realized the question of the quality as a concern for further development and announced the development of a guideline booklet for students for project report and Master's thesis drafting. Overall, they still ascertained a need for improvement in this regard (see also below, section 4).

Finally, the panel considered the other aspects of criterion 2 to be fulfilled.

3. Degree Programme: Structures, Methods & Implementation

Criterion 3.1 Structure and modularity

Evidence:

- Self-assessment report

- Website

Preliminary assessment and analysis of the peers:
The peers considered the modules to be well developed. They resemble coherent and consistent packages of teaching and their size and duration allow for flexibility. The sequence seemed adequate in as far as the modules of the first year should be completed before the beginning of the second year but among themselves did not have any interdependencies. The latter was relevant as some modules might be offered in parallel in short blocks when European teaching staff was available. The panel acknowledged that normally all modules of a semester were offered by the same institutional partner in order to facilitate the mobility of the students.

Criterion 3.2 Workload and credit points

Evidence:

- Self-assessment report

- Discussions with students

Preliminary assessment and analysis of the peers:

With regard to the workload and the allocated time for contact and self-study hours, the panel concluded that they were at an adequate level and corresponded to the ECTS-credits allocated. The students confirmed that the workload was feasible and did not put any constraints on them.

Criterion 3.3 Educational methods

Evidence:

- cf. module descriptions

- Discussions with teaching staff and students

Preliminary assessment and analysis of the peers:

The teaching methods were considered to be suitable to support the achievement of the programme objectives. Both students and teaching staff commended a variety of methods, in particular the use of different media, group works and case studies. In the frame of the project, a teaching toolkit has been developed for each module under the supervision of a British university.

Coordination among the teaching staff was achieved in a designated workshop last year which was used to review the programme based on the experiences of the first year and in preparation of the upcoming changes (due to the end of the project). The panel generally commended this approach but would find it useful to systematically ensure the exchange among the teaching staff (see also section 5.1, 6.1).

With regard to the availability of elective modules, the panel understood that not all of the eight electives foreseen had been offered so far. It remained somewhat unclear whether this was due to a lack of interest as students commented that they had not been aware of any opportunity for *selecting* modules but took all which were on offer. The panel acknowledged that Tunisian regulations stipulate that electives cannot be offered for less than eight students. The experts also discussed the question of streamlining the electives to the degree that students with a background in either engineering or business studies should be guided to select electives from the other field in order to enhance their competences.

Criterion 3.4 Support and advice

Evidence:

- Self-assessment report: office hours of teaching staff, mandatory attendance of lectures, mentoring by students for next generation, website, facebook group
- Discussions during onsite visit

Preliminary assessment and analysis of the peers:

The panel concluded from the discussions with students and teaching staff that the support and advice offered were suitable. The involvement of students of the first cohort in mentoring and supporting students of the second cohort was commended as particularly motivating and helpful.

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

The panel understood from the comment of the institution that they had been relying on the proposals of the teaching staff concerning the delivery of elective modules. The institutions were now planning to develop and implement a new elective policy in order to make the selection more transparent and beneficial for students. The panel commended this move but pointed out that the delivery and selection of elective modules should be based on their contribution to the programme objectives and enhancement of students' competences rather than teachers' preferences. They thus considered the recommendation for guiding students in choosing the electives modules depending on their previous studies to still be valuable. Similarly, they recommended including designated courses on scientific research and writing in preparation of the thesis.

In the context of programme delivery, the panel also considered that it must be made transparent to future students to which extent the programme will be taught by non-Tunisian teaching staff and will include stays abroad. The teaching language must also be made completely transparent.

The panel considered the other aspects of criterion 3 to be fulfilled.

4. Examination: System, Concept & Implementation

Criterion 4 Exams: System, concept & implementation

Evidence:

- Decree of the Tunisian Ministry for Higher Education and Scientific Research of 01.08.2012 stipulating the general frame of study regulations and the conditions for the award of the national Master diploma within the three-cycle system

- Discussions during onsite visit

Preliminary assessment and analysis of the peers:

The panel members acknowledged that exams were regulated by the general Ministerial decree on the one hand and the institution offering the individual modules on the other hand. Consequently, the way exams are organized, taken and graded might differentiate among the institutions involved. The general descriptions of the exam in the module descriptions were rather vague. The experts learned that, on principle, exams are not marked in detail, i.e. only the overall mark is indicated but not any actual mistakes or errors. Students are thus not able to understand how grades have been calculated, nor can they improve from learning from their mistakes. While the experts understood that this was common practice in Tunisia, they did not consider the exam and grading systems to be sufficiently transparent and just. They discovered significant room for improvement in this matter, not least with a view to the expected joint offer of the programme by the three institutions which will require clear, transparent and fair rules and regulations, applicable for all modules.

Concerning the timing of exams, the peers noted that the Tunisian regulations stipulated exams period to take place at the end of each semester. As the modules are often offered as blocks over a period of six weeks, the exam could be significantly delayed.

Additionally, with regard to the exam form, the experts did not consider the module descriptions to be sufficiently clear, in particular when several exams forms were indicated. They found, for example, in the module "leadership" (module 15) that the description indicated a written exam which did not seem to match the intended learning outcomes of the module. While the experts were content with learning that different forms of exams were used, they asserted the need for a better alignment of exams forms and exam organisation to the intended learning outcomes. Furthermore, the form, duration and weighting of exams within a module should be clearly transparent from the module descriptions.

The exams and Master's theses provided for the peers' revision were not fully satisfactory as the lack of detailed comments and marks in the exams complicated the assessments. The thesis reports presented offered a range of quality. While generally all theses were rather short, some demonstrated a sufficient level whereas a majority did not adhere to scientific writing standards, despite their supervision by a European partner university. With regard to its scientific quality in some instances the final thesis has more the quality of a limited, small scale project work than of a final capstone project. Furthermore, they discovered that in some cases basic principles of scientific work such as a thorough literature search with an accompanying citation index, a description of the methods used and a juxtaposition of the topic in a broader scientific framework are deficient. The panel also noted that no statement was included stipulating that the thesis was written by the student himself. Conflicting information was received about the existence of any regulations concerning the length of the Master thesis. Overall, the panel concluded that rules and regulations must be set up which guarantee the scientific level and value of the Master's thesis, including also means for protection against plagiarism.

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

Concerning grading and marking of exams, the peers wished to reinforce that they did not mean to imply that this was actually done in an unfair manner. However, neither the documentation available nor the actual exams do not allow any reader (student, other teaching staff or else) to understand how any grade was constituted as neither mistakes nor correct results were indicated. While the panel noted positively that provisions are made to ensure the anonymity while grading through a blind review, this information did not seem sufficient to ensure a proper grading and marking as common in international higher education practice. Furthermore, the peers remarked that students were well aware of the current practice of not marking exams and did not complain about this methodology. On the contrary, the practice as described by the peers, i.e. indicating all mistakes and correct results in the exam, would actually facilitate the justification by the institutions against possible complaints of unjust grading by students. The panel thus concluded that a need for clear, published evaluation criteria and revision of the way exams are marked was still at hand.

As mentioned above, rules and regulations for the Master's thesis must be set up. The panel noted that the issue of plagiarism had not yet occurred but considered it in the best interest of the institutions to protect against themselves against this issue. They welcomed the readiness of the institutions to tackle this and other issues raised by them by means of workshops and guidelines to be implemented in the upcoming academic year.

Finally, while the institutions did not comment on this, the information about the offer of the modules during different months of the semester in the newly submitted study plan, confirmed the recommendation of the panel that the institutions should consider ways to allow exams to take place in an adequate delay after the teaching had taken place.

Other aspects of this criterion were considered to be fulfilled.

5. Resources

Criterion 5.1 Staff involved

Evidence:

- cf. staff handbook

- list of and information about research projects in the CVs

- discussions during onsite visit

Preliminary assessment and analysis of the peers:

The programme is designed to be jointly taught by teaching staff from the three Tunisian institutions. As mentioned above, in the first year of its implementation, the modules were taught by staff from the European partner universities, whereas their engagement was greatly reduced in the second year and will cease to exist for the new term. While this does not constitute a deficiency in itself, the peers noted that the circumstances of who will run the programme need to be clearly communicated to future and current students. The research activities of the teaching staff as described in their CVs were considered sufficient. Staff members confirmed that the organization of teaching allowed them to carry out research activities in their respective field which was found particularly relevant as the teaching staff was overall young and highly motivated. Overall, the experts considered the qualification of the Tunisian teaching staff to be adequate to ensure the achievement of the intended learning outcomes.

Criterion 5.2 Staff development

Evidence:

- SAR: capacity development offers by Tunisian Ministry of Higher Education and Scientific Research: career advancement, international scientific and technical co-operation programme, EU Tempus programmes, sabbatical

- Discussions during onsite visit

Preliminary assessment and analysis of the peers:

During the discussions with the teaching staff of the different partner universities, the experts found that the further education offers as described in the report were known to them and made use of. The panel positively noted that staff members very open-minded and eager to improve their skills. Staff in this regard confirmed the collaboration with European professors as having contributed to their personal development. The Ministry particularly encouraged research and publications in English. Additionally, in the frame of the project developing the Master's degree programme at hand, staff members had benefitted from English language courses at the British Council as well as from training in using e-learning methodologies.

Criterion 5.3 Institutional environment, financial and physical resources

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Evidence:

- Descriptions in self-assessment report

- Inspection of so-called innovation lab at ENIT

Preliminary assessment and analysis of the peers:

While acknowledging that the development and first implementation of the programme had been financed through the EU-project DICAMP, the panel was aware that this financing will cease in October 2014. During the discussions, the panel was not convinced that the management of all three partner institutions was aware of the concrete situation of the programme and the need for financial support which its implementation at least during the next five year would entail. The statement of the academic directorship that the programme would be run as any other Master, that is with the normal budget and with normal teaching obligations for staff was not convincing for the peers since the programme would be run *in addition* to other programmes and thus would require *additional* resources, i.e. in the form of staff delegated to teaching the particular modules only to the Master's students. Whereas national law seemed to prohibit student fees for professional Master's degree programmes, there were also a number of plans for attracting further financial support from sources such as the DAAD, but the panel did not understand these to be more than intentions, not laid down in any strategic or management plan. In summary, they considered the necessity of a written commitment from the management of all three partner institutions about the financing of the programme for the duration of the accreditation.

The need for financial planning and security could also include the possibility of procuring financial support for future students to carry out the project work and/or master thesis

abroad as this had been noted as a major asset, but also expectation of the first and second generation students and could contribute to the sustainability of the programme.

As mentioned elsewhere in this report, the panel members learned about the plans of the three participating institutions to sign a so-called Memorandum of Understanding. In order to be able to assess to which extent this document would be suitable to serve as a contract stipulating the future implementation of the programme, they asked for it to be submitted together with the statement on this report.

In the same line of concern, there was no evidence of a clearly laid out (written down) management structure for the programme once it will be officially run by all three partners. Currently, each institution nominates an official coordinator who then forms part of the management committee which is responsible, among other tasks, for the selection of students to be admitted. However, while the collaboration among the universities was perceived to work in practice, it did not become clear how the success depended on the personal commitment of individuals and whether the composition, tasks and distribution of responsibilities was actually defined and published. The peers thus saw the need for further clarification and formalization of the management structures. On the same token, the responsibilities for quality management need to be clarified (see section 6).

The resources at the campus of ENIT visited by the experts were satisfactory. In particular, the experts acknowledged that the books cited in the module descriptions were available in copies for each student thanks to the EU-financing. The same was found for the computers. Nevertheless, the designated seminar room did not fully serve the need expressed by the students to have designated working areas for carrying out their group work tasks.

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

The explanation of the institutions that the licenses given to them by the ministry to implement the programme until 2016, with the new license for the joint degree expected in 2015 did not fully convince the panel as to the financial soundness of the programme. To this regard, the panel understood that the license indirectly ensures funding for the programme which is to be used both for equipment and staff development. It did not become clear, however, how exactly the license would ensure that resources for teaching staff was actually available as the courses of this Master could not be used for other degree programmes. Furthermore, while the institutions state that the ministry had agreed to the joint degree starting from 2015, no official authorization could be presented. The panel thus questioned whether such an agreement could, at least theoretically, be withdrawn. Overall, the panel still found the need for a clear confirmation of commitment

from the management of all three partner institutions about the financing of the programme for the duration of the accreditation (which would go beyond the current license). Such a commitment might be part of the application to the ministry but this documentation was not available to the panel.

With regard to the finances, the panel also upheld a recommendation to systematically provide resources so that students can carry out the project work and/or master thesis abroad. Again, they considered the overall availability of institutional funds but would find a more specific allocation for the programme under review to be helpful.

The panel took into account the partnership agreement submitted as well as the additional explanation by the institutions that formal management systems were not common in Tunisian higher education. However, they again considered it in the best interest of the institutions to clarify issues of a joint programme management, not least with regard to the management of students as well as future changes in the management of the institutions or the individuals currently engaged in running and organizing the programme. The partnership agreement in this regard had provisions for the implementation of courses, assessment, programme duration, degree delivery, study fees and programme management. However, the agreement either referred to the individual rules of the partner institutions or was left rather vague. For example, with regard to the programme management, it was stated that a committee set up from the programme responsible from each institutions would meet at least twice a year to coordinate the pedagogic content and find solutions for identified problems. It was not clear how the designation of responsible persons would come about or what authority the committee would have to implement any rules, regulations or changes in the partner institutions. The panel also noted that the partnership agreement was not dated and thus it was not clear when the designated validity of three years would end.

The panel ascertained the expectation of the Tunisian partners that the designated computer room would be fully operational before the end of the current EU-financed project.

6. Quality Management: Further Development of Degree Programmes

Criterion 6.1 Quality assurance & further development

Evidence:
- Self-assessment report: Master programme quality assurance activities as part of the EU Tempus project

- Discussions during onsite visit

Preliminary assessment and analysis of the peers:

The panel was informed that the programme would be subject to the regular internal quality assurance mechanisms of the participating institutions. However, it did not become clear how these would be carried out in practice, in particular as the panel was told that no official student survey system exists in Tunisia, and that in principle, there is no obligation for teaching staff to undergo such surveys. Nevertheless, the idea of student surveys was quite welcomed and organized by individual departments at the different institutions. Additionally, in the frame of the project, a questionnaire about students and industry satisfaction' was developed and a survey carried out. The results were discussed during a workshop of all project partners, including students, carried out to discuss the further improvement of the programme. It was not clear, though, whether similar surveys or workshops were foreseen as regular activities after the lifetime of the financing project.

The experts welcomed the idea of student delegates in classes (to be understood here as student generation) who would serve as intermediary between students and the academic director while the direct communication between students and teaching staff was also lauded, not least due to small group sizes. They also learned about plans to establish an alumni club of the programme which could be useful for gathering graduates' feedback about the achievement of programme objectives and their application in working environments.

Overall, the panel saw the need for the establishment of a quality management system with clearly defined structures, responsibilities, tools and feedback loops. The system should be set up in a way that allows the partners to check whether the established goals are achieved and to react to any deviations encountered. Due to the small size of student numbers, it could well include very participatory rather than formal elements but should take into account the distribution of responsibilities among the three higher education institutions.

Criterion 6.2 Instruments, methods and data

Evidence:

- Report evaluating the interim results for the EU-financed DICAMP project
- SAR: identified steps for quality assurance processes: input: admission and selection process; learning process: programme, teaching staff and modules relevance; output
- Discussions during onsite visit

Preliminary assessment and analysis of the peers:

In line with the findings above, the peers considered that some instruments had been used and data gathered to internally assess the quality of the programme. However, it was not clear to which extent these instruments were institutionalized and would thus continuously enable those responsible for the programme to regularly review and revise its quality. All participants in the discussions expressed a high interest in contributing to quality assurance and improvement activities. The need for systematic quality assurance was expressed above.

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

The panel fully valued the fact that the programme under review had been set up as part of an EU-financed project aiming not only at implementing the programme itself but also at capacity building at the Tunisian partner institutions. They noted that the institutions are planning to implement several workshops on quality assurance during the next academic year. The panel concluded that in order for the programme to be continuously quality-assured in the sense of further development and delivery, a quality management system has be set up with clearly defined structures, responsibilities, tools and feedback loops. It should also envision means to gather the feedback of graduates.

7. Documentation & Transparency

Criterion 7.1 Relevant Regulations

Evidence:

- Decree of the Tunisian Ministry for Higher Education and Scientific Research of 01.08.2012 stipulating the general frame of study regulations and the conditions for the award of the national Master diploma within the three-cycle system

Preliminary assessment and analysis of the peers:

As mentioned elsewhere in this report, the general rules for admission, operation and graduation are stipulated in the Ministerial Decree. Additionally, the rules and regulations of the degree-awarding institution, currently ENIT, apply. In particular with view to the expected joint award of the degree by the three participating institutions, the peers found a need for further clarification and elaboration of documents which will govern the programme implementation in the future.

Criterion 7.2 Diploma Supplement and Certificate

Evidence:

- Self-Assessment Report

Preliminary assessment and analysis of the peers:

The peers were informed that the issue of an English language Diploma Supplement was expected from the responsible Ministry for Higher Education and Scientific Research in June 2014. Upon submission of the draft document, they will be able to assess whether it fulfils the expectations towards information about objectives, intended learning outcomes, structure and level of the degree.

Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 7:

The panel welcomed that the institutions are considering the further development of the programme after the initial phase of implementation. This concerns in particular the programme sustainability, links with the industry, implementation of the joint degree and quality management. As mentioned in different sections of this report, the panel reminded that several aspects of the programme implementation and expected changes after the authorization to award a joint degree and its implementation must be clarified and made more transparent.

The panel also assessed the draft Diploma Supplement submitted. They considered the model to be suitable to provide information about the objectives, intended learning outcomes, structure and level of the degree as well as the individual graduate's performance. However, it was not quite evident whether the model corresponded to the official Tunisian format as a description of the Tunisian higher education system was missing (usually the section describing the national system is more elaborated than a mere hint to the relevant law) The panel also pointed out that statistical data in accordance with the ECTS User's Guide would be helpful to assist external readers in interpreting the value of the individual degree. For students pursuing a PhD at another university and competing with students from other institutions this relative grade is of utter importance. As there are standardized form for diploma supplements in Europe readily available, the panel considered the issue to be a necessary addition in light of the international mobility.

The other aspects of this criterion were considered to be fulfilled.

D Additional Documents

Before preparing their final assessment, the panel asked that the following missing or unclear information will be provided together with the comment of the Higher Education Institution on the previous chapters of this report:

D1. English language Diploma Supplement

D2. Module descriptions of the 4 additional electives, corrected description of module no. 3

D3. Contract (MoU) between the 3 participating institutions

D4. Study plan for the next generation

D5. National authorization (*habilitation*) to award the degree jointly by the 3 institutions

E Comment of the Higher Education Institution (13.08.2014)

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

- Partnership agreement, signed by the directors of the three institutions
- English language Diploma Supplement model
- Module descriptions for modules 3, 6, and 3 electives out of module 15
- Study plan for 2014-2015 (classes 2 and 3)
- Revised module descriptions for modules "project work" and "Master's thesis"

F Summary: Peer recommendations (25.08.2014)

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

Degree Programme	ASIIN seal	Subject-specific Label	Maximum duration of accreditation
Ma Innovation Management	With requirements	n/a	30.09.2019

Requirements

A 1. (ASIIN 5.3) There must be a written commitment from the management of all three partner institutions about the financing of the programme for the duration of the accreditation.

A 2. (ASIIN 5.3) The organizational management of the programme must be laid out. The members of the management commission, its compositions, tasks and responsibilities must be defined and published.

A 3. (ASIIN 2.5, 5.3) It must be clear how the programme will be organized with regard to registration of students and management of students.

A 4. (ASIIN 2.3) The module descriptions must be updated to include the weighting of exams, actual detailed teaching methods and content, study plan, actual teaching language. The relation between teaching and self study hours needs to be revised.

A 5. (ASIIN 3.3, 5.1) It must be made transparent to future students to which extent the programme will be taught by non-Tunisian teaching staff, will include stays abroad, and which will be the teaching language.

A 6. (ASIIN 6.1, 6.2) A quality management system must be set up with clearly defined structures, responsibilities, tools and feedback loops. It should also envision means to gather the feedback of graduates.

A 7. (ASIIN 4) Rules and regulations must be set up which guarantee the scientific level and value of the Master's thesis, including also means for protection against plagiarism.

A 8. (ASIIN 4) The evaluation criteria and grading scheme for the exams must be made transparent. The way exams are marked must be revised in order to allow for a clear understanding of correct aspects and mistakes for any reader.

A 9. (ASIIN 2.2, 7.1) The programme website must be updated so that it provides the learning outcomes as well as other information relevant for students. Links from the offering institutions' websites need to be made.

A 10. (ASIIN 7.2) The Diploma Supplement must be updated to include statistical data for the final grade and information about the national higher education system).

Recommendations

E 1. (ASIIN 5.3) It is recommended to systematically provide resources so that students can carry out the project work and/or master thesis abroad.

E 2. (ASIIN 3.3) It is recommended to include designated courses on scientific research and writing in preparation of the thesis.

E 3. (ASIIN 2.4) It is recommended to set up a designated Advisory Council (specific to this Master), including also members of external companies, to provide regular stakeholder feedback about the design of the programme, achievement of its objectives and alignment with the stakeholder needs.

E 4. (ASIIN 2.4) It is recommended to include lectures from company representatives which are specific to this Master.

E 5. (ASIIN 4) It is recommended to align the exam methods and organization more directly to the teaching of the modules.

E 6. (ASIIN 5.3) It is recommended to set up designated working areas for the group work of the students.

E 7. (ASIIN 3.4) It is recommended to guide students in choosing the electives modules depending on their previous studies. Course prerequisites should be made transparent and accessible to actual and prospective students. If possible, candidates should have the opportunity to broaden their competence base in order to be able to follow their elective of choice.

G Comment of the Technical Committee 06 – Industrial Engineering (03.09.2014)

Assessment and analysis for the award of the ASIIN seal:

The Technical Committee questioned why proposed requirement 7 and proposed recommendation 2, both targeting the Master's thesis and the preparation of the thesis, are not subsumed in one requirement. The scientific level can, among other aspects, be guaranteed by a suitable preparation in the area of scientific working. The Technical Committee decided to integrate recommendation 2 into requirement 7. With regard to the proposed recommendation 6 (previously E.7) the Technical Committee made an addition in order to clarify the issue.

The Technical Committee 06 – Industrial Engineering recommends the award of the seal as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ma Innovation Management	With requirements	n/a	30.09.2019

Requirements

A 1. (ASIIN 5.3) There must be a written commitment from the management of all three partner institutions about the financing of the programme for the duration of the accreditation.

A 2. (ASIIN 5.3) The organizational management of the programme must be laid out. The members of the management commission, its compositions, tasks and responsibilities must be defined and published.

A 3. (ASIIN 2.5, 5.3) It must be clear how the programme will be organized with regard to registration of students and management of students.

A 4. (ASIIN 2.3) The module descriptions must be updated to include the weighting of exams, actual detailed teaching methods and content, study plan, actual teaching language. The relation between teaching and self study hours needs to be revised.

A 5. (ASIIN 3.3, 5.1) It must be made transparent to future students to which extent the programme will be taught by non-Tunisian teaching staff, will include stays abroad, and which will be the teaching language.

A 6. (ASIIN 6.1, 6.2) A quality management system must be set up with clearly defined structures, responsibilities, tools and feedback loops. It should also envision means to gather the feedback of graduates.

A 7. (ASIIN 3.3, 4) Rules and regulations must be set up which guarantee the scientific level and value of the Master's thesis, including also means for protection against plagiarism. Furthermore, designated courses on scientific research and writing in preparation of the thesis should be included.

A 8. (ASIIN 4) The evaluation criteria and grading scheme for the exams must be made transparent. The way exams are marked must be revised in order to allow for a clear understanding of correct aspects and mistakes for any reader.

A 9. (ASIIN 2.2, 7.1) The programme website must be updated so that it provides the learning outcomes as well as other information relevant for students. Links from the offering institutions' websites need to be made.

A 10. (ASIIN 7.2) The Diploma Supplement must be updated to include statistical data for the final grade and information about the national higher education system).

Recommendations

E 1. (ASIIN 5.3) It is recommended to systematically provide resources so that students can carry out the project work and/or master thesis abroad.

E 2. (ASIIN 2.4) It is recommended to set up a designated Advisory Council (specific to this Master), including also members of external companies, to provide regular stakeholder feedback about the design of the programme, achievement of its objectives and alignment with the stakeholder needs.

E 3. (ASIIN 2.4) It is recommended to include lectures from company representatives which are specific to this Master.

E 4. (ASIIN 4) It is recommended to align the exam methods and organization more directly to the teaching of the modules.

E 5. (ASIIN 5.3) It is recommended to set up designated working areas for the group work of the students.

E 6. (ASIIN 3.4) It is recommended to guide students in choosing the electives modules depending on their previous studies. Course prerequisites should be made transparent and accessible to actual and prospective students. If possible, candidates should have the opportunity to broaden their competence base in order to be able to follow their elective of choice.

H Decision of the Accreditation Commission (26.09.2014)

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

In light of the numerous requirements dealing with the management, financial support and organisation of the programme, the Accreditation Commissions did not consider the sustainability of the programme to be secured. Taking into account, furthermore, that the ministerial authorization of the programme will not be received before summer 2015, the Commission questioned whether the institution would be able to fulfill the requirements within effectively only nine months.

In addition, the Commission discussed the information about the level of the Master's thesis, as described in the report and dealt with in requirement 7. As the final thesis constitutes a main element of evidence for the achievement of programme learning outcomes, and thus also the required achievement of competences at the level intended, the Commission considered the non-achievement a cause of concern.

Consequently, the Accreditation Commission decided not yet to accredit the degree programme, but to convert requirements 1, 2 and 7 into pre-requisites (so-called conditions) for the continuation of the assessment. Additionally, the recommendation 2 which had originally been proposed by the peers was kept as such and not converted into a requirement as suggested by the Technical Committee.

The Accreditation Commission for Degree Programmes decided the following:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ma Innovation Management	suspended	n/a	n/a

Conditions

V1.   (ASIIN 5.3) There must be a written commitment from the management of all three partner institutions about the financing of the programme for the duration of the accreditation.

V2.   (ASIIN 5.3) The organizational management of the programme must be laid out. The members of the management commission, its compositions, tasks and responsibilities must be defined and published.

V3. (ASIIN 3.3, 4) Rules and regulations must be set up which guarantee the scientific level and value of the Master's thesis, including also means for protection against plagiarism.

Possible Requirements

A 1. (ASIIN 2.5, 5.3) It must be clear how the programme will be organized with regard to registration of students and management of students.

A 2. (ASIIN 2.3) The module descriptions must be updated to include the weighting of exams, actual detailed teaching methods and content, study plan, actual teaching language. The relation between teaching and self study hours needs to be revised.

A 3. (ASIIN 3.3, 5.1) It must be made transparent to future students to which extent the programme will be taught by non-Tunisian teaching staff, will include stays abroad, and which will be the teaching language.

A 4. (ASIIN 6.1, 6.2) A quality management system must be set up with clearly defined structures, responsibilities, tools and feedback loops. It should also envision means to gather the feedback of graduates.

A 5. (ASIIN 4) The evaluation criteria and grading scheme for the exams must be made transparent. The way exams are marked must be revised in order to allow for a clear understanding of correct aspects and mistakes for any reader.

A 6. (ASIIN 2.2, 7.1) The programme website must be updated so that it provides the learning outcomes as well as other information relevant for students. Links from the offering institutions' websites need to be made.

A 7. (ASIIN 7.2) The Diploma Supplement must be updated to include statistical data for the final grade and information about the national higher education system).

Possible Recommendations

E 1. (ASIIN 5.3) It is recommended to systematically provide resources so that students can carry out the project work and/or master thesis abroad.

E 2. (ASIIN 3.3) It is recommended to include designated courses on scientific research and writing in preparation of the thesis.

E 3. (ASIIN 2.4) It is recommended to set up a designated Advisory Council (specific to this Master), including also members of external companies, to provide regular stakeholder feedback about the design of the programme, achievement of its objectives and alignment with the stakeholder needs.

E 4.   (ASIIN 2.4) It is recommended to include lectures from company representatives which are specific to this Master.

E 5.   (ASIIN 4) It is recommended to align the exam methods and organization more directly to the teaching of the modules.

E 6.   (ASIIN 5.3) It is recommended to set up designated working areas for the group work of the students.

E 7.   (ASIIN 3.4) It is recommended to guide students in choosing the electives modules depending on their previous studies. Course prerequisites should be made transparent and accessible to actual and prospective students. If possible, candidates should have the opportunity to broaden their competence base in order to be able to follow their elective of choice.

I   Resumption of the Procedure

Statement of the HEI (26.01.2016)

I- Conditions

V1 : The three institutions have already signed a joint agreement and have received authorization from the Ministry of Higher Education and Scientific Research to deliver a common Diploma. Each Director has signed an engagement whereby the teaching hours realized by the teachers from each institution involved in the DICAMP Master program, will be considered and calculated as part of their teaching hours duty. They also agree that the DICAMP Master program will be financed by their respective institutions, as is the case for all other Master programs they deliver. In the Appendix, you will find the signed statements in French, along with their translations into English.

V2 : The organizational management of the Master program is currently assured by a Management Committee composed of six members, two from each institution, one with Academic and the other with Executive responsibilities. The members from ENIT are : Pr. Ridha BEN CHEIKH and M. Anis Allagui, from ESSECT : Pr. Zeined MAMLOUK and Dr. Amen KHALIFA and from IHECC : Pr. Olfa ZRIBI and Dr. Kaouther BEN MANSOUR. Each local Committee is responsible for the ten students enrolled at their institution and for the delivery of the teaching Modules in their charge.

V3 : All the three institutions, ENIT, ESSECT and IHECC have their own Master Theses Template which describe the requirements for the acceptance of the Master Report manuscript. For the DICAMP Master Program, a common Template has been developed. Means against plagiarism are added in the template, and an electronic version of the Master thesis is required from the students, that is checked by the program "Compilatio". Enclosed You will find a copy of the template in the appendix.

II- Possible Requirements

A1 : In the beginning of each new Academic year, the 30 selected students will be distributed randomly between the three institutions. Thus 10 students will be enrolled in each institution, and will pay their registration fees respectively in the institution where they are assigned. The local committee is in charge of the management of the students enrolled in their institutions.

A2 : The module descriptions have been updated, including new literature references and contents. Regarding the weighting of the exams, a column has been added indicating for each module the weight of the written exam, the oral exam and the personal projects. At the beginning of each academic year and for each Module, the detailed teaching methods, the content and study plan, are discussed by the Management Committee of the Master Program with the teacher in charge of the respective module . Regarding the actual teaching language, the general rule is that the modules should be taught in English. However, of the 15 proposed modules, 4 are taught in French, with English bibliographic references and slides, because the teachers in charge are very efficient in French and don't have sufficient master of English. These Modules are :

The relation between teaching and self study hours has been revised as required by the ASIIN assessment. Indeed, for each module, at the beginning of its teaching, the teacher in charge defines with the students the relation between teaching and self study hours for the considered module. As a general rule, one teaching hour requires about 2.5 self study hours, but each module has its specificity which is presented in the syllabus of the module, and which is explained to the students by the teachers.

A3 : Regarding non-Tunisian teaching stuff, starting from the second cohort, the general rule is that all the Master Modules are taught by Tunisian teachers. Nevertheless, each time that we have an opportunity to invite non-Tunisian colleagues, specialized in the innovation management, and especially, those who helped in the design of the DICAMP Master program, and who taught the first cohort, we take it. Thus the following teachers . Dr. Habich Hagen and Dr.Anna Trifilova were invited to teach the second cohort. This year, Dr. Nizar Abdelkafi and Pr. Torsten Posselt, from Leipzig University, will teach some Modules through an Erasmus+ project involving ENIT and CLIC, (see the project agreement in appendix). Dr. Patrick Crehan, from Belgium, a specialist in Innovation Management, and Dr. Attef Ben Abdallah from Canada, a specialist in Project Management, will also teach the third and forth cohorts this semester. Regarding the student- stays abroad, for internships and for Master thesis internship, the rule is that after the first cohort, each time that we have an opportunity to send students abroad, either through national scholarship or international cooperation projects such as DAAD in Germany or Erasmus+ with European Union, the best students which are the first ones after the second semester, will benefit from these internships. Thus for the second cohort, the best students spent three months after the second semester (summer internship), and four months after the third semester (Master thesis project), and the first student of the third cohort spent three months after the second semester (summer internship) at the University of Pforzheim in Germany, financed by DAAD bilateral cooperation projects between ENIT and Pforzheim University. ENIT and the University of Leipzig applied for an Erasmus+ bilateral

cooperation project, and this has been accepted. Thus, for the third cohort, the three best students will realize their four months Master theses internships at the University of Leipzig (see the project agreement in the appendix,).

A4 : The University of Tunis El Manar is involved in a national quality support project, financed by world bank entitled PAQ (*Projet d'appui à la qualité*). ENIT is intensely engaged in this program, and one of the DICAMP Master program teachers, is a member of the University quality committee and is working on the implementation of a Total Quality Management system for the different training programs provided by ENIT, among them the DICAMP Master program. An internal evaluation is already realized in each institution of the University, and an external one is currently run.

A5 : The exams, in the Tunisian Higher Education System, are governed by national laws that are published in the National Official Journal, and application decrees and rules which are recalled each year to all institutions. The ASIIN recommendations concerning the exams of the DICAMP Master Program are taken into account by these National Rules (see in appendix the last recall sent by the Ministry and the University Tunis El Manar Council concerning the conduct of the examinations).

A6 : The website www.dicamp.eu, is still functional and describes relatively well the current Master program. We are in communication with the team who designed the site, and have asked them to give us the possibility of intervening on the site in order to update it as recommended by the ASIIN requirements. The ENIT website offers a link to the dicamp.eu site. We have asked IHECC and ESSECT to do the same as required by ASIIN recommendations.

A7 : The Diploma supplement has been updated, as required by ASIIN recommendations, and statistical data for the final grade have been added. A bibliographic reference (Number and pages of the Official Journal of the Tunisian Republic) to the Laws and Rules of the national higher education system for the Professional Master Degrees has been added to the Diploma Supplement

III- Possible Recommendations

E1 : In the Tunisian Master Degree System, there is no mechanism, analogous to the European one (Erasmus+) which supports the systematic mobility of students abroad. But we always encourage DICAMP students to apply to all National Programs and International Cooperation Projects, for internships in order to carry out their project work and/or Master Thesis abroad. For the second and third cohort, the best students were chosen to participate in DAAD and Erasmus+ projects, and did their summer trainings and final study projects in Germany.

E2 : Starting from the second cohort, we asked all the Master Thesis Supervisors, to dedicate some sessions with the students they supervise, to teach them the scientific methodology, deontology and scientific writing. Furthermore, as recommended by ASIIN, we will try to include in the program a designated course on scientific research and writing. In addition to this decision, a on line cours on scientific methodology is offered in the website of the national program PARENIS, financed by the EU.

E3 : In addition to the Management Commission of the Master Program, we will, as recommended by ASIIN, set up an Advisory Council, specific to the DICAMP Master Program, composed of the Master Commission and members of external companies, in order to provide regular stakeholder feedback about the design of the program, achievement of its objectives and alignment with the stakeholder needs. Indeed, we have a previliged partner which is the GIZ agency in Tunis, who knows very well the market needs, in terms of innovation, and which works tightly with the Ministry of Industry, and who will give us the feedback of the stakeholders.

E4 : Starting from the second cohort, some Modules such us Project Management, open innovation and social innovation are taught by local and not local non academic lectures, who either have their own consultancies or work in companies. As recommended by ASIIN, we will increase the number of such cases.

E5 : When this is not the case, we will as recommended by ASIIN, align the exam methods and organization more directly to the teaching of modules. In this spirit we would very much welcome any more specific orientations that you are to provide.

E6 : DICAMP Master students already benefit from access to the fab-lab workshop at ENIT, which is available for the prototyping of ideas if necessary, in addition to near the workshop a room for group work, equipped with armchairs, chairs, tables, computers , a library, and a large screen TV where they can meet, work and entertain each other. They are also encouraged to join students clubs at the three institutions involved in the Master Program, and thereby get access to facilities that are available to all students at these institutions.

E7 : Regarding the electives, in general students are free to choose among the offered modules those they prefer. However, we advise them to take those which are complementary to their initial training. Indeed, given that DICAMP Master students are either engineers or managers, we try to offer electives in both specialties, and try to convince the students to avoid to choose only modules of their specialty, and to select electives different from those they know and master. However, given the ASIIN recommendation, we will try to ensure that the prerequisites will be made transparent and accessible to

actual and prospective students, and that the students who choose an elective module will broaden their competence base in order to be able to follow the chosen module.

Analysis of the Peers (29.02.2016)

Condition V1

The panel considered the confirmation letters of the involved universities' presidents as well as the partnership agreement among the three universities to be sufficient evidence for the commitment to jointly run the programme. While the partnership agreement is only valid until 2017, it can be renewed without administrative burden.

Condition V2

The panel noted that a management committee had been set up and that its existence was stipulated in the partnership agreement. While the roles and responsibilities described in this agreement were still somewhat vague, the panel considered the set-up to be reasonable for the management based on the experience in collaboration among the three universities.

Condition V3

The panel appreciated the template for the Master thesis provided by the universities. Furthermore, the universities will now submit all thesis reports to anti-plagiarism software. The template included rules for the layout and style of the thesis, including citation indications, though provisions might be added as how the level of achievement would be ensured.

Overall, the panel considered all conditions to be sufficiently fulfilled so as to accredit the programme.

Possible requirement A1

The universities explained that each would be responsible for the enrolment and administrative supervision of one third of the newly enrolled students. The panel in principle accepted this approach.

Possible requirement A2

The module descriptions were updated with regard to the contribution of different exam forms to the final module grade. The panel pointed out that it was acceptable that a number of modules were taught in French rather than English but this should be clearly indicated.

Possible requirement A3

The universities made efforts to continue involving international teaching staff in the pro-gramme as well as securing funding for student mobility. The panel highly appreciated these efforts and the corresponding agreements.

Possible requirement A4

The panel appreciated that the participating universities are involved in ongoing projects about quality management and that the universities themselves were in the process of setting up internal and external evaluation systems.

Possible requirement A5

The university referred to national rules regarding the grading of exams which contained detailed rules regarding the grading of students exams and papers.

Possible requirement A6

The panel noted that the project website contained information about the degree pro-gramme and that the project website was now transferred to ENIT as lead university which could update it.

Possible requirement A7

The panel considered the Diploma Supplement to be an important issue for graduates of this programme the issue in order to find appropriate job opportunities nationally and abroad. They found that the model submitted now contained extensive information about the national educational system as well as about the grading scheme. The only item not fully implemented was statistical data about the reference group. The university would be recommended to add this for easier comparison of final degrees.

Overall, the panel considered all possible requirements to be no longer necessary.

Possible recommendation E1

As the universities had made efforts to obtain funding from different sources, in particu-lar through Erasmus Plus and the DAAD, the panel considered that they were on the right track and would continue their efforts in the future.

Possible recommendation E2

As the university had not introduced a course about scientific research and writing as proposed in the past years, the panel again encouraged them to do so. The proposed online course might be suitable but the panel received no further information about this

course and therefore could not analyze it. It was also not clear to which extent this course was made available to the student of the DICAMP programme.

Possible recommendation E3

While the university had not made any progress in setting up an Advisory Council in the past years, the panel encouraged them to do so with the proposed partners.

Possible recommendation E4

The panel took note of the tact that non-academic lecturers were involved in some of the courses and lauded this approach by the universities. They considered the recommendation to be no longer needed.

Possible recommendation E5

The panel noted that no changes to the exam methodologies had been made. The members iterated that the assessment methods should be aligned to the intended learning outcomes. Currently, the majority of the modules contained a written exam in some cased with an additional personal project work. However, other exam forms might be more suitable to assess the actual achievement of learning outcomes, for example, written exams, in some cases.

Possible recommendation E6

The panel appreciated that students had access to a designated room for group work and the innovation lab which could also be used for group work. They found that this possible recommendation was already fulfilled.

Possible recommendation E7

While the panel took note of the universities' policy for choosing electives, and while they considered this policy to be adequate, no evidence was provided how this policy was published or implemented.

Overall, the panel considered the possible recommendations 4 and 6 to be obsolete but recommended to uphold the other recommendations.

Taking into account the information and evidence provided by the institutions, the peers summarize their analysis and **final assessment** for the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific Label	Maximum duration of accreditation
Ma Innovation Management	Without requirements	n/a	30.09.2021

Recommendations

E 1. (ASIIN 5.3) It is recommended to systematically provide resources so that students can carry out the project work and/or master thesis abroad.

E 2. (ASIIN 3.3) It is recommended to include designated courses on scientific research and writing in preparation of the thesis.

E 3. (ASIIN 2.4) It is recommended to set up a designated Advisory Council (specific to this Master), including also members of external companies, to provide regular stakeholder feedback about the design of the programme, achievement of its objectives and alignment with the stakeholder needs.

E 4. (ASIIN 4) It is recommended to align the exam methods and organization more directly to the teaching of the modules.

E 5. (ASIIN 3.4) It is recommended to guide students in choosing the electives modules depending on their previous studies. Course prerequisites should be made transparent and accessible to actual and prospective students. If possible, candidates should have the opportunity to broaden their competence base in order to be able to follow their elective of choice.

E 6. (ASIIN 7.2) It is recommended to include statistical data for the final grade in the Diploma Supplement.

Comment of the Technical Committee 06 – Industrial Engineering (18.03.2016)

The technical committee discusses the procedure. It judges the assessment of the peers to be adequate in all points.

The Technical Committee 06 – Industrial Engineering recommends the award of the seals as follows:

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ma Innovation Management	Without requirements	n/a	30.09.2021

Decision of the Accreditation Commission (08.04.2016)

The Accreditation Commission discussed the programme. In particular, the Commission discussed whether the fact that no statistical data was provided in the Diploma Supplement should not lead to a requirement since the provision of such data, more specifically of grade distribution tables, was foreseen in the ECTS Users' Guide. However, the application of this guide was not specifically recommended in the European Standards and Guidelines. The Commission therefore considered it sufficient that the benefits of such information for students were pointed out and the inclusion of corresponding data recommended.

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

Degree Programme	ASIIN seal	Subject-specific labels	Maximum duration of accreditation
Ma Innovation Management	Without requirements	n/a	30.09.2021

Recommendations

E 1. (ASIIN 5.3) It is recommended to systematically provide resources so that students can carry out the project work and/or master thesis abroad.

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E 6. (ASIIN 7.2) It is recommended to include statistical data for the final grade in the Diploma Supplement.