



# Accreditation Report

**Master's Degree Programme**  
***Renewable Energy and Energy Efficiency in the MENA***  
***Region***

Provided by  
**University of Kassel**

Version: 28 September 2018

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## A About the Accreditation Process

Name of the degree programme	Labels applied for	Previous accreditation	Involved Technical Committees (TC) <sup>1</sup>
Renewable Energy and Energy Efficiency in the MENA Region	AR <sup>2</sup>	2013-2018, ASIIN	02, 04
<p><b>Date of the contract:</b> 21.12.2017</p> <p><b>Submission of the final version of the self-assessment report:</b> 29.06.2018</p> <p><b>Date of the onsite visit:</b> 12.07.2018</p> <p><b>at:</b> Kassel</p>			
<p><b>Peer panel:</b></p> <p>Prof. Ernst Gockenbach, Universität Hannover;</p> <p>Prof. Frank Gronwald, Universität Siegen;</p> <p>Prof. Kathrin Lehmann, Brandenburgische Technische Universität Cottbus-Senftenberg;</p> <p>Peter Elsässer, BBC / ABB / ALSTOM;</p> <p>Laura Witzenhausen, RWTH Aachen.</p>			
<p><b>Representative of the ASIIN headquarter:</b> Dr. Martin Foerster</p>			
<p><b>Responsible decision-making committee:</b> Accreditation Commission for Degree Programmes</p>			
<p><b>Criteria used:</b></p> <p>European Standards and Guidelines as of 15.05.2015</p> <p>Rules for the Accreditation of Study Programmes and for System Accreditation of the Accreditation Council as of 20.02.2013</p>			

<sup>1</sup> TC: Technical Committee for the following subject areas: TC 02 - Electrical Engineering/Information Technology; TC 04 - Informatics/Computer Science.

<sup>2</sup> AR: Siegel der Stiftung zur Akkreditierung von Studiengängen in Deutschland

## B Characteristics of the Degree Programme

a) Name	Final degree (original/English translation)	b) Areas of Specialization	c) Corresponding level of the EQF <sup>3</sup>	d) Mode of Study	e) Double/Joint Degree	f) Duration	g) Credit points/unit	h) Intake rhythm & First time of offer	i) consecutive Master's Degree Programmes and Master's Degree Programmes providing further education	j) Study Programme Profile
Renewable Energy and Energy Efficiency in the MENA Region	M.Sc.	-	7	Full time	Double Degree of University of Kassel and Cairo University (CU) OR University of Monastir (UM)	4 Semester	120 ECTS	WS/SS; WS 2013/14	Master's Degree Programmes providing further education	Application-oriented

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<sup>3</sup> EQF = The European Qualifications Framework for lifelong learning

For the Master's degree programme Renewable Energy and Energy Efficiency for the Middle East and North Africa (MENA) Region (REMENA) the institution has presented the following profile on the programme's website (accessed 25 July 2018: <http://www.uni-kassel.de/eecs/remena/program-description.html>):

„The master program REMENA is offered by the University of Kassel, Germany, the Cairo University, Egypt and the University of Monastir, Tunisia. It is an application-oriented program where graduates are expected to work for companies and institutions in the field of renewable energies to foster the further development on an international level.

The overall duration of the program is 21 months which are divided into three semesters. Students can choose between two study modes. Study mode 1 takes place in Cairo, Egypt and Kassel, Germany whereas study mode 2 takes place in Monastir, Tunisia and Kassel, Germany.“

## C Peer Report

### Criterion 2.1 Qualification Objectives of the Study Programme Concept

#### Evidences:

- Self Assessment Report
- Programme Website (accessed 25 July 2018): <http://www.uni-kassel.de/eecs/remena/home.html>
- On-site discussions

#### Preliminary assessment and analysis of the peers:

For the Master's programme Renewable Energy and Energy Efficiency for the Middle East and North Africa (MENA) Region (REMENA), the Higher Education Institutions presented a description of general learning outcomes in the self-assessment report (SAR) and especially a detailed description in the Diploma Supplement. However, the peers realized that on the website only superficial information about learning outcomes is to be found. In order to increase the programme's transparency and to inform all stakeholders as well as those interested in the programme about its learning outcomes, the information of the Diploma Supplement need to be made accessible on the website as well.

From the presented information, it is clear to the peers that the programme intends to qualify students to build up expertise in the field of renewable energy and energy efficiency and to successfully carry out complex projects in the energy sector for international institutions and companies with a focus on projects in the MENA region. As a programme of further education, it is intended to provide the students with basic as well as advanced engineering skills combined with a special focus on soft skills such as language and intercultural competencies, written and oral presentations, independent and teamwork, and knowledge and experience in project management and on personal leadership skills.

The peers understand that graduates shall have the ability to recognize complex problems in the framework of renewable energy and energy efficiency and review their solvability and feasibility within a given timeframe. They can also generate problem solution individually or in interdisciplinary teams, are aware of the particularities of Western European as well as Arabic cultural influences and possess an empathic awareness, that technical, economical, ecological, legal as well as social framework conditions, namely intercultural aspects, must be considered in carrying out projects in the field of renewable energy. The

programme coordinators emphasize that the special focus of the programme lies not on the core engineering elements but on the interdisciplinary approach to it, and on educating the students to be capable to function as a hinge between engineers and management.

A demand for the graduates is still difficult to assess. After running five years, the previous graduates of the programme have usually found jobs in the area of energy efficiency but most of them work in Germany and not in the MENA region. It is still the target of the programme to further support graduates to start working in the targeted area but programme coordinators also realize that more and more demand is coming from other countries outside the MENA region who are interested in the aspect of renewable energy and energy efficiency.

In conclusion, the peers confirm that the envisaged learning outcomes are in accordance with the qualification profile level 7 (Master programmes) of the European Qualification Framework for lifelong learning but again emphasize that the presentation of the learning outcomes needs to be made more transparent.

**Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.1:**

The peers acknowledge that learning outcomes as presented in the Diploma Supplement will be made accessible on the website in the course of the update to the new study regulations. Until then they maintain their critique and consider this criterion to be partly fulfilled.

**Criterion 2.2 (a) Conceptual Integration of the Study Programme in the System of Studies**

*The analysis and assessment of the requirements of the Framework of Qualifications for German Degrees is made within criterion 2.1, in the following detailed analysis and assessment of the compliance with the Common Structural Guidelines of the Federal States as well as in connection with criterion 2.3.*

**Criterion 2.2 (b) Conceptual Integration of the Study Programme in the System of Studies**

**Evidence:**

- Self Assessment Report
- REMENA Study Regulations

- Programme Website (accessed 25 July 2018): <http://www.uni-kassel.de/eecs/remena/home.html>
- On-site discussions

### **Preliminary assessment and analysis of the peers:**

#### *Programme structure and duration:*

According to §3 of the study regulations the regular study duration of the programme is 24 months including three study semesters plus six months for the preparation of the Master thesis. This unusual indication of study duration is necessary due to the slightly diverging semester structures at Cairo/Monastir. In any case, the period of studies comprises a total of 120 ECTS credits and is completed by a Master thesis of 30 credits. Hence, the programme is in line with the German KMK requirements.

#### *Entrance regulations:*

Following §6 of the study regulations anyone is admitted to the programme who has completed a first academic degree in mathematics, natural or engineering sciences or informatics of at least six semesters with a total grade of 2,5 or a comparable international result. Furthermore, any graduate of a degree in law, economy or social sciences of the same qualification may also be admitted if he has completed at least ten credits in the area of mathematics, natural or engineering sciences or informatics. In addition, all applicants need to provide two letters of recommendation. The study council may admit applicants who do not fulfil any of the previous conditions under certain requirements.

All applicants need to have a practical work experience of at least one year in a relevant area related to the degree programme and they need to possess English language skills of at least level B2 if their mother language is not English.

#### *Degree profile:*

The University characterizes the study programme as application oriented which seems reasonable to the peers given the strong emphasis on project work and real-life-related teaching and learning.

#### *Consecutive or further education programmes:*

The programme is characterized as a programme of further education what is accepted by the peers, as all applicants need to have at least one year of previous professional work experience.

#### *Degrees:*



As for a Double degree, the University of Kassel awards the graduates at the successful completion of their studies one degree that is only valid in combination with the certificate issued by the University of Cairo or the University of Monastir, respectively. On the degree certificate, the University of Kassel outlines that both documents together form one graduation certificate. Hence, the legal requirements of the German KMK are fulfilled.

### *Designation of degrees:*

§2 of the study regulations defines that the degree of Master of Science is awarded to all graduates. As to the Diploma Supplement, see Chap. 2.8.

### *Modularization, Mobility and Credits:*

Compliance with the “Framework Guidelines for the Introduction of Credit Point Systems and the Modularisation of Study Courses” is assessed within criterion 2.3 (modularization incl. module size), module descriptions, mobility, recognition), 2.4 (credit point system, student workload, exam load), and 2.5 (exam system: competence-oriented exam).

## **Criterion 2.2 (c) Conceptual Integration of the Study Programme in the System of Studies**

### **Evidence:**

- Landesspezifische Strukturvorgaben des Landes Hessen als Handreichung zu den „Ländergemeinsamen Strukturvorgaben für die Akkreditierung von Bachelor- und Masterstudiengängen“

### **Preliminary assessment and analysis of the peers:**

The peers confirm that following the specific structural guidelines for the accreditation of Master degree programmes in Hesse the degree programme allows for a completion of Bachelor and Master studies within ten semesters. The University has defined appropriate entrance regulations for the Master of further education in line with the above-mentioned structural guidelines. Consequently, the peers consider the requirements of the state Hesse to be fulfilled.

## **Criterion 2.2 (d) Conceptual Integration of the Study Programme in the System of Studies**

No binding interpretations by the Accreditation Council must be taken into account at this point.

**Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.2:**

The peers consider this criterion to be completely fulfilled.

**Criterion 2.3 Study Programme Concept**

**Evidence:**

- Self Assessment Report
- REMENA Study Regulations
- REMENA Module Handbook
- Programme Website (accessed 25 July 2018): <http://www.uni-kassel.de/eecs/remena/home.html>
- On-site discussions

**Preliminary assessment and analysis of the peers:**

*Study concept / implementation of learning outcomes:*

The study concept has been modified compared to the previous accreditation and the number of semesters was increased from three to four. Generally, the programme should be studied in full time. The peers assess the present curriculum with a view to the envisaged programme learning outcomes.

The structure of the programme leaves a lot of flexibility to the students who can pursue their individual specializations according to their interest. Generally, all students have to take the basic modules of the first two semesters of a total of 32 credits. In addition, students may choose from a range of electives until they have completed 58 credits in these courses. The fourth semester is reserved to the preparation of the Master thesis with 30 credits. The study modes of the REMENA programme include six versions based on the sites where the studies are accomplished. The basic modules each student has to take comprise general introductions to the subjects of energy efficiency and renewable energies as well as non-technical skills (Engineering Basics, Intercultural Competencies, Energy and Thermodynamics Basics, etc.). In the electives, students can further specialize in certain fields depending on their interest and job perspectives. The Universities that are part of the Double Degree programme offer similar, but not identical courses in order to make sure each student can pass the basic courses and follow similar specializations. The peers especially

appreciate the wide range of electives from which the students can choose. The main question concerning the study concept is, in how far students with a previous non-engineering degree will be able to complete the programme in the indicated four semesters. Since graduates from nearly every discipline maybe admitted as long as they have completed ten broadly subject-related credits, it seems questionable if any of them will be able to follow engineering courses on a master level. As to this, the programme coordinators explained that previously students often had to complete additional courses as a requirement for enrolment. This usually led to an extremely increased workload and a significant extension of the study duration. As a consequence, the programme was extended to four semesters on a regular basis to have more time for the basic modules that will help to balance the knowledge of the students. While the peers appreciate this development they still consider it difficult to bring graduates of law or economy to an adequate level in engineering within only two semesters without overstraining the students. Hence, they consider it helpful to install additional preparatory courses before the start of the programme or parallel tutorials to all those students who do not have an engineering background. Apart from this restriction, the peers are certain that the curriculum is well designed in order to convey the envisaged learning outcomes to the students.

### *Modularization / Module descriptions:*

Concerning the modularization, the peers realized that the programme is fully modularized and that each module is a more or less coherent learning unit. However, the size of the modules varies significantly from three to ten ECTS and especially with some of the larger modules, the peers doubt whether the included learning units are aptly combined to one module. In fact, from discussion with students and programme coordinators it was clear that several modules consist of non-related aspects that are also assessed in non-related exams. With a view to the very purpose of the concept of “module”, this is not wholly convincing. Moreover, from a practical point of view, the peers lamented that the large modules reduce the flexibility of the programme and the opportunity to individually deepen ones specialization in a certain field. The peers therefore would recommend splitting up some of the modules into smaller units allowing for a more deliberate election of focus areas. As was discussed with the programme coordinators, it is being thought of the development of two specialization tracks in electrical engineering and mechanical engineering. The division of larger modules that currently integrate electrical as well as mechanical engineering contents would be a significant step into that direction.

Regarding the module descriptions the peers realized that they are still presented very heterogeneously what is partly understandable given the different study locations. Nevertheless, a homogenization of the presentation especially of contents and learning outcomes would be helpful. Furthermore, the information about module examinations are unclear

and do not inform about the type of exam. In several cases, the peers could not understand if the listed exams refer to the module as whole or to the sub-courses. From the discussion with the programme coordinators, it became clear that especially in the Egyptian context weekly exams are usual and that the University of Kassel has adapted to the local customs which was generally accepted by the peers. Nonetheless, this assessment mode should be made more explicit in the module descriptions.

### *Didactical concept / Practice orientation:*

The peers learn from the teaching staff and students that each lecture includes practical elements and that there are no particular laboratory units. Of special importance in the programme are the many excursions; there are usually three to five such excursions offered every semester. All stakeholders confirmed that they are an important element to bring the students into contact with the subject-specific work environment and also with former graduates who are now working in the industry. The most relevant aspect of practice orientation is the requirement of the programme that the students need to write their Master thesis in a company where they do an internship at the same time. Originally, it has been the intention that all students choose companies active in the MENA region for their internships and Master theses, but it turns out that the vast majority does this in Germany. Part of the problem is that the subject-related industry in the MENA region is still developing and often less attractive than German companies. The fact, that many international students want to find a placement for their internship in Germany, however, results in another difficulty for the students. As the programme does not officially include a mandatory internship, many students have difficulties in finding placements since the companies would have to pay them significantly higher wages as for students in an official internship. As a result, many students confirmed that they lost much time searching for companies to be able to write their thesis. Consequently, although this is not the original intention of the programme, it might be thought of additional support measures to facilitate the process for the international students.

### *Entrance regulation:*

The entrance regulations were already discussed under criterion 2.2.

### *Recognition / Mobility:*

As the programme is already an international one where students spend time in at least two different countries, the peers understand that further offers for international mobility are not possible nor requested. According to §20 of the General study regulations of the

University of Kassel, competencies gained at other universities can be acknowledged in line with the Lisbon convention.

### *Study organisation:*

Apart from the small restrictions mentioned above, the peers conclude that the general study organization is adequate to ensure the achievement of the defined learning outcomes.

*For the consideration of the interests of handicapped students please refer to the assessment and analysis made within criterion 2.4.*

### **Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.3:**

From the comment of the HEI the peers understand that students of diverse backgrounds have been able to deal with the technical courses in the programme. Nevertheless, they appreciate that additional support for the students shall be offered. They also accept the HEI's declaration that a development of two specialization tracks shall not be envisaged in order not to endanger the interdisciplinary character of the programme. Concerning the module descriptions they welcome that a revision and inclusion of more detailed information about the assessments will take place.

The HEI further explains, that additional support in finding work placements is already offered to the students in the form of the UniKasselTransfer Career Service. They share the HEI's assessment that finding a placement is also an important part of the students' education. However, the peers point to the difficulties with this process expressed by the students and recommend at least to improve the communication of already existing support offers to the students.

In conclusion, the peers consider the criterion to be predominantly fulfilled.

## **Criterion 2.4 Academic Feasibility**

### **Evidence:**

- Self Assessment Report
- REMENA Study Regulations
- REMENA Module Handbook

- Programme Website (accessed 25 July 2018): <http://www.uni-kassel.de/eecs/remena/home.html>
- On-site discussions

### **Preliminary assessment and analysis of the peers:**

#### *Entrance requirements:*

The entrance regulations and requirements have already been discussed under criterion 2.2.

#### *Student Workload:*

As described above the study plans envisage a workload of more or less 30 credits per semester, one credit being equal to 25 working hours. While usually at the University of Kassel one credit equals 30 working hours, the reduction to 25 hours is made in order to meet the additional time requirements for the international students for dealing with visa applications, accommodation, etc. This measure is considered to be very thoughtful by the panel, but the peers still hear from students that the changing living environments pose challenges to them that cannot be purely met by a reduction of workload. Especially the search for student housing in Germany is considered to be difficult and students would wish for some more support in this direction so that they do not lose time at the beginning of the semester looking for a place to stay.

Furthermore, as was already mentioned above, the student workload, especially during the first semesters when students have to take the basic courses, can be very high for those students who do not have an engineering background. Although the peers realize that up to now the programme has a drop-out rate of 0% they hear from the students that the few with different study backgrounds regularly struggle and need to invest much more time than the usual student. The peers understand, that the workload needs to be an average and cannot take into account every individual but since the programme is designed to be very interdisciplinary they recommend at least to introduce special tutorials or preparatory summer courses for those applicants who struggle with the engineering basics. In addition, discussion with the programme coordinators revealed that the student workload is not regularly assessed. The peer panel acknowledges that the different study locations and changes of places as well as the heterogeneous student backgrounds may make it difficult to assess the workload and find an average acceptable to everyone. However, the peers underline the importance of a continuous workload assessment and of procedures that follow up if significant deviations in the workload/credit ratio are being detected. This is considered to be even more important as the programme has adapted the North African tradition of multiple examinations throughout the semester. As this is very uncommon for

German students and Universities, it must be assured that the workload does not exceed certain limitations.

### *Exam system:*

It was already pointed out that the exam system follows largely North African standards with a considerable amount of smaller assessments better comparable to homework. This results in dozens of assessments every semester but the students confirm that they are okay with it, mostly because they are used to it. Since the programme coordinators do not regularly assess the students' workload, it is difficult to say if the multiple exams are leading to a higher workload of the students but at this moment, the peers agree that the general acceptance of this practice among the students supports the examination system as it is. Nevertheless, in case a workload assessment indicated otherwise, the system would need to be reviewed. The dates of assessments are communicated to the students at the beginning of the semester and in case students fail an exam they have the opportunity to repeat it shortly afterwards at the same site. If no other option can be found exams can even be repeated at different study sites. In general, the peers gain the impression of a very individual and flexible exam organization as the coordinators and teaching staff very well take into account the challenging curricula with changing sites. All exams are offered at least twice a year and failed exams can be repeated twice. In conclusion, the peers are convinced that the exam system is supportive for a successful completion of the degree programme despite it being very different to usual German practice.

*The exam system is furthermore analysed and assessed in detail within criterion 2.5.*

### *Support and Assistance:*

In general, the peers see that all coordinators of the programme as well as the teaching staff is very interested in offering the best support and assistance possible to the students. Individual solutions can usually be found and with the limited number of students in the programme, every one of them can be individually supported. A few critical points were outlined above, mostly referring to the provision of student housing and the finding of internship placements in Germany. The peers understand and explicitly support that especially the excursions are a helpful measure to bring students into contact with employers and industry in general. Concerning the difficult compilation of individual study plans, the students confirm that they receive individual support but generally, it is the students' task to decide what direction and courses are best for ones' needs. As the programme is one of further education and students come from very different backgrounds with professional experience the peers agree that such decisions are best made by the students themselves. In conclusion, the support and assistance for the students is absolutely adequate.

### *Students with handicaps:*

According to § 11 of the General Provisions for Subject Area Examination Rules for Degrees at the Bachelor's and Master's Level at the University of Kassel, any student who makes plausible that he is handicapped in any way may be provided with alternative forms of examinations, be it through the provision of more time to work on assessments, other examination forms, or other compensations.

After all, the described aspects of study and examination system including entrance requirements (see criterion 2.2) ensure the feasibility of the degree programme.

### **Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.4:**

The peers appreciate the HEI's statement, that after the modification of the programme the coordinators will closely observe and monitor the workload through continuous evaluations. However, they maintain that a documentation of this renewed evaluation procedure must be documented and presented to the peers in the aftermath of the procedure. In conclusion, the peers consider the criterion to be partly fulfilled.

## **Criterion 2.5 Examination System**

### **Evidence:**

- Self Assessment Report
- REMENA Study Regulations
- REMENA Module Handbook
- Programme Website (accessed 25 July 2018): <http://www.uni-kassel.de/eecs/remena/home.html>
- On-site discussions

### **Preliminary assessment and analysis of the peers:**

During the on-site-visit the peers examine several examples of assessments and final projects coming to the conclusion that they do reflect the envisaged qualification level of the programme. As was already outlined, modules usually have more than one exam but the peers accept this practice due to the internationality of the programme. The discussions with students and teachers show that a variety of examination types is applied that correspond to the envisaged learning outcomes of the respective module. Nevertheless, as was pointed out before, the peers underline that the form of assessments, their adherence to



certain sub-lectures, and their respective scope is not sufficiently indicated in many module descriptions. Especially with the high number of examinations, the peers emphasize that this structure should be made absolutely transparent in the module descriptions for all students, above all for the Germans that are not yet acquainted with the Northern African examination system.

*With regard to the regulations for compensating disadvantages of handicapped students please refer to criterion 2.4. For the binding force of the submitted rules and regulations refer to the analysis and assessment within criterion 2.8.*

### **Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.5:**

The peers consider this criterion to be completely fulfilled.

### **Criterion 2.6 Programme-related Co-operations**

#### **Evidence:**

- Self-Assessment Report
- Memorandum of Understanding UKAS-CU
- Memorandum of Understanding UKAS-UM
- Memorandum of Understanding UKAS-US

#### **Preliminary assessment and analysis of the peers:**

The peers confirm that the cooperation between the University of Kassel and its partners in Cairo and Monastir is working very well and has been regulated in adequate cooperation agreements. However, they notice that the agreements do not yet cover the whole accreditation period; in the case of Cairo, the agreement was extended until 2021, with Monastir it officially ended already in March 2018. From the discussion, the peers learned that although the contracts do not cover the whole period they guarantee that all students beginning the degree programme within this time period will have the opportunity to finish it. Nevertheless, the peers ask that a valid agreement with Monastir shall be presented in the aftermath of the on-site-visit.

An important new development is the creation of a growing REMENA network that is supposed to include ever more universities of the MENA region and beyond. As a first step the

University of Sfax, Tunisia, has signed a cooperation agreement with the University of Kassel that will allow REMENA students to spend a semester at Sfax University instead of moving to Germany. This development targets two aspects. First of all, it will allow Arab students to remain longer in MENA countries, thus avoiding the high German living costs. Secondly, it broadens the perspective of the programme and contributes to a general awareness of the thematical aspects of energy efficiency and renewable energies. It is hoped that a large network of cooperating institutions will further enhance the international mobility as well as job-perspectives of the students. The peers support this initiative and agree that it will contribute to the successful development of the programme.

### **Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.6:**

The peers understand that in the aftermath of the accreditation procedure a renewed cooperation agreement with the University of Monastir could not yet been produced but will be presented as soon as possible. Until then, the peers uphold this requirement and consider this criterion to be partly fulfilled.

### **Criterion 2.7 Facilities**

#### **Evidence:**

- Self-Assessment Report
- Discussions during the on-site visit

#### **Preliminary assessment and analysis of the peers:**

##### *Human Resources:*

From the documents provided with the SAR the peers gained an impression of the staff involved in the implementation of the reviewed programme. They learned that all staff members at the respective universities have an individual contract with the programme management binding them for the provision of certain lectures in addition to their regular teaching load at their home university. Consequently, the staff available is sufficient for the

implementation of the programme and undoubtedly well qualified according to the staff handbook.

### *Staff development:*

Concerning staff development, the peers understand that the teaching staff of the programme may partake in all the optional professional development offers at their home universities since they have only a private contract with the programme management. From the discussions during the visit, the peers gained the impression that all institutions do provide courses of professional development and didactical schooling.

### *Financial and technical provision:*

The financial provision for the programme is ensured via the students' study fees. As the programme is ever more requested by applicants, there is no reason to doubt its financial stability for the upcoming accreditation period. The technical equipment and laboratories were presented during the on-site visit in form of a video and picture presentation for all participating institutions and all peers agree that they are of high quality and offer a good study environment for the programme.

### **Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.7:**

The peers consider the criterion to be completely fulfilled.

## **Criterion 2.8 Transparency and Documentation**

### **Evidence:**

- Self-Assessment Report
- REMENA Study Regulations
- REMENA Module Handbook
- Programme Website (accessed 25 July 2018): <http://www.uni-kassel.de/eecs/remena/home.html>
- Memorandum of Understanding UKAS-CU
- Memorandum of Understanding UKAS-UM
- Memorandum of Understanding UKAS-US
- Diploma Supplement

- Master Certificate

**Preliminary assessment and analysis of the peers:**

The peers establish that for the programme under review all relevant regulations as well as degree certificates are presented and well communicated to the students.

Detailed information about the degree programme, its content, grading structure and information about the German System of Higher Education is provided through the Diploma Supplement issued to the students at graduation.

**Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.8:**

The criterion is considered to be completely fulfilled.

**Criterion 2.9 Quality Assurance and Further Development**

**Evidence:**

- Self-Assessment Report
- UKAS „Handlungsrahmen für gute Lehre“
- On-site discussions

**Preliminary assessment and analysis of the peers:**

The special challenge of the quality assurance process of the programme is the internationality of the partners. From the discussions the peers do have the impression that despite the distance a constant flow of information and a joint interest in quality management is secured. Most important element of the quality management system for the programme is the course evaluation that is carried out each semester. The evaluation is made online and analysed centrally. The results are then being discussed by the joint advisory board that meets on a regular basis discussing the further development of the programme. Besides this board there is a steering committee involving more stakeholders of the programme. The committee meets not regularly but as often as possible.

As was outlined before, the programme coordinators generally show great interest in enhancing the programmes' quality and are open to any contributions from the students. As an exemplary result, programme coordinators point to the extension from three to four semesters as the evaluation showed that many students struggle with completing the programme in the given time.

However, the peers also noted that official student participation and representation in the quality assurance cycles is limited to the course evaluation. The students clearly expressed their wish to be better informed about the outcome of the evaluations but according to the coordinators this is neither possible nor necessary. As students change their place of study often immediately after the semester, a feedback would be difficult and students would not be interested since they would not return to this course or university. The peers could not follow this argumentation and point out that the students should receive at least some kind of feedback of the results of the course evaluation.

### **Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.9:**

From the statement of the HEI the peers learn that students will not receive a direct feedback for every individual course because the number of participating students in the evaluations is low and statistically not significant. The coordinators will provide averaged evaluation results for each semester to the students. Although this is a helpful step the peers emphasize that especially in student groups of only limited size an immediate feedback to the students is an important loop of the quality management circle which should be maintained. Consequently, the consider this criterion to be partly fulfilled.

### **Criterion 2.10 Study Programmes with a Special Profile Demand**

The Master programme's special profile is one of further education. All aspects related to the accreditation criteria are handled in the respective chapters of this report.

### **Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.10:**

The peers consider the criterion to be completely fulfilled.

### **Criterion 2.11 Gender Justice and Equal Opportunities**

#### **Evidence:**

- Self-Assessment Report
- University of Kassel support services (accessed 27 July 2018): <https://www.uni-kassel.de/uni/universitaet/organisation/zentrale-einrichtungen/einrichtungen-a-z/>

- Programme Website (accessed 25 July 2018): <http://www.uni-kassel.de/eecs/remena/home.html>

### **Preliminary assessment and analysis of the peers:**

Every participating university offers a variety of support services for students in order to improve on gender justice and equal opportunities. Generally, these offers are also available to REMENA students. Being a programme of further education, the most relevant programme-specific offers refer to the visa application process and the information about scholarships for which students can apply. In conclusion, the peers approve of the existing information and supporting services.

*Concerning the compliance in dealing with the interest of handicapped students please refer to criterion 2.4.*

### **Final assessment of the peers after the comment of the Higher Education Institution regarding criterion 2.11:**

The peers consider the criterion to be completely fulfilled.

## **D Additional Documents**

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

1. Cooperation Agreements with the University of Monastir

## E Comment of the Higher Education Institution (06.09.2018)

The institution provided a detailed statement in a separate document

## F Summary: Peer recommendations (10.09.2018)

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

Studiengang	Siegel Akkreditierungsrat (AR)	Akkreditierung bis max.
Ma Renewable Energy and Energy Efficiency in the MENA Region	With requirements	30.09.2025

### Requirements

- A 1. (AR 2.1, 2.8) The programme learning outcomes are to be made accessible to all stakeholders, for instance through the website.
- A 2. (AR 2.4) The student workload must be continuously assessed and adjusted to the awarded credits in case of inconsistencies.
- A 3. (AR 2.9) Students have to receive feedback about course evaluation results.

### Recommendations

- E 1. (AR 2.3) It is recommended to further homogenize the module descriptions and to give more information about the type and duration of module examinations.
- E 2. (AR 2.3) It is recommended to review the modularization structure aiming at smaller modules allowing for a more subject-specific specialization of the students.
- E 3. (AR 2.3; 2.4) It is recommended to offer additional preparatory courses for students without engineering background before the start of the programme or parallel tutorials.



- E 4. (AR 2.3; 2.4) It is recommended to enhance the support for finding work placements for the Master thesis in Germany in order to prevent an extension of the study duration.

## G Comment of the Technical Committees

### Technical Committee 02 – Electrical Engineering (14.09.2018)

#### *Assessment and analysis*

The Technical Committee discusses the procedures and agrees with the assessment of the peers.

The Technical Committee 02 – Electrical Engineering recommends the award of the seals as follows:

<b>Studiengang</b>	<b>Siegel Akkreditierungsrat (AR)</b>	<b>Akkreditierung bis max.</b>
Ma Renewable Energy and Energy Efficiency in the MENA Region	With requirements	30.09.2025

### Technical Committee 04 – Informatics (12.09.2018)

#### *Assessment and analysis*

The Technical Committee discusses the procedures and agrees with the assessment of the peers.

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

<b>Studiengang</b>	<b>Siegel Akkreditierungsrat (AR)</b>	<b>Akkreditierung bis max.</b>
Ma Renewable Energy and Energy Efficiency in the MENA Region	With requirements	30.09.2025

## H Decision of the Accreditation Commission (28.09.2018)

### *Assessment and analysis*

The Committee discusses the procedure and agrees with the assessment of the peers and Technical Committees.

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

<b>Studiengang</b>	<b>Siegel Akkreditierungsrat (AR)</b>	<b>Akkreditierung bis max.</b>
Ma Renewable Energy and Energy Efficiency in the MENA Region	With requirements	30.09.2025

### **Requirements**

- A 1. (AR 2.1, 2.8) The programme learning outcomes are to be made accessible to all stakeholders, for instance through the website.
- A 2. (AR 2.4) The student workload must be continuously assessed and adjusted to the awarded credits in case of inconsistencies.
- A 3. (AR 2.9) Students have to receive feedback about course evaluation results.

### **Recommendations**

- E 1. (AR 2.3) It is recommended to further homogenize the module descriptions and to give more information about the type and duration of module examinations.
- E 2. (AR 2.3) It is recommended to review the modularization structure aiming at smaller modules allowing for a more subject-specific specialization of the students.
- E 3. (AR 2.3; 2.4) It is recommended to offer additional preparatory courses for students without engineering background before the start of the programme or parallel tutorials.
- E 4. (AR 2.3; 2.4) It is recommended to enhance the support for finding work placements for the Master thesis in Germany in order to prevent an extension of the study duration.

## Appendix: Programme Learning Outcomes and Curricula

According to the Diploma Supplement the following **objectives** and **learning outcomes (intended qualifications profile)** shall be achieved by the Master degree programme Renewable Energy and Energy Efficiency in the MENA Region:

“The qualification for the Master's program degree is the successful completion of modules to be chosen from the module handbook catalogue and totalling 90 credits. The latter include 30 credits of the Master thesis. Learning outcomes, skills: Profound knowledge and capability to work either independently or in interdisciplinary cooperation in the field of Renewable Energy and Energy Efficiency for MENA. /

Qualification Profile of the Graduate: Graduates of the Master course REMENA shall

- have academic and practical expertise in specific working areas, intercultural and organizational competence as well as regional and language skills in order to contribute substantially in the future as experts in renewable energy projects between Europe and the Arab region.
- supervise projects in the field of sustainable energy supply, take technically profound decisions to promote related development processes.
- have the ability for written and oral presentation, self-organisation, teamwork, skills and experience in project management, and as far as possible have personal leadership qualification intended to conduct efficiently in the framework of international cooperations.
- have abstraction ability, creativity, ability for critical reflection of their own work and the readiness to take over responsibility for the results of the individual working outcome.
- have the empathic awareness, that technical, economical, ecological, legal as well as social framework conditions, namely intercultural aspects, must be considered in carrying out projects in the field of renewable energy.
- have the capability to recognize complex problems in the framework of renewable energy and energy efficiency and review their solvability and feasibility within a given time frame.
- have the ability to integrate peculiarities of Western European and Arab cultural influences in the framework of renewable energy and energy efficiency into these activities.
- contribute their job performance to interdisciplinary working groups.

## 0 Appendix: Programme Learning Outcomes and Curricula

- be capable of generating problem solutions on the basis of state-of-the art research papers.
- be qualified to work autonomously in industry and commerce in the field of renewable energy and energy efficiency.
- be capable of taking up advanced trainings and studies in application oriented areas, and qualify for doctoral studies.”

The following **curriculum** is presented:

The schematics of modules for the different modes are shown in Tab. 1 through Tab. 6. The tables present the total sum of module ECTS offered at a given term out of which students can choose their modules. For instance, in Tab. 1, a student has to study basic modules comprising 16 ECTS, while elective modules can be done up to 30 ECTS. Clearly, the student will visit modules of about 14 ECTS in parallel to the basic modules, though, in order to meet the regular 30 ECTS per term.

Mode “1”: starting in the winter semester					
semester	winter semester (WS)/ summer semester (SS)	site	credits (ECTS)		
			Total Basic	Total Elective	Thesis Project
1	WS	CU	16	30	-
2	SS	UKAS	16	49	
3	WS	UM	16	30	
4	SS	MENA region	-		30

Tab. 1: Mode “1” starting in the winter semester

Mode “2”: starting in the winter semester					
semester	winter semester (WS)/ summer semester (SS)	site	credits (ECTS)		
			Total Basic	Total Elective	Thesis Project
1	WS	UM	16	30	-
2	SS	UKAS	16	49	
3	WS	CU	16	30	
4	SS	MENA region	-		30

Tab. 2: Mode “2” starting in the winter semester

Mode “3”: starting in the summer semester					
semester	winter semester (WS)/ summer semester (SS)	site	credits (ECTS)		
			Total Basic	Total Elective	Thesis Project
1	SS	UKAS	16	49	-
2	WS	CU	16	30	
3	SS	UKAS	16	49	
4	WS	MENA region	-		30

Tab. 3: Mode “3” starting in the summer semester

Mode “4”: starting in the summer semester					
semester	winter semester (WS)/ summer semester (SS)	site	credits (ECTS)		
			Total Basic	Total Elective	Thesis Project
1	SS	UKAS	16	49	-
2	WS	UM	16	30	
3	SS	UKAS	16	49	
4	WS	MENA region	-		30

Tab. 4: Mode “4” starting in the summer semester

Mode “5”: starting in the summer semester					
semester	winter semester (WS)/ summer semester (SS)	site	credits (ECTS)		
			Total Basic	Total Elective	Thesis Project
1	SS	UKAS	16	49	-
2	WS	CU	16	30	
3	SS	US	-	36	
4	WS	MENA region	-	-	30

Tab. 5: Mode “5” starting in the summer semester

Mode “6”: starting in the summer semester					
semester	winter semester (WS)/ summer semester (SS)	site	credits (ECTS)		
			Total Basic	Total Elective	Thesis Project
1	SS	UKAS	16	49	-
2	WS	UM	16	30	
3	SS	US	-	36	
4	WS	MENA region	-	-	30

Tab. 6: Mode “6” starting in the summer semester