QU Saudi Arabia

Qassim University جامعة القصيم

COLLEGE OF ENGINEERING

PROGRAM HANDBOOK

M.Sc. RENEWABLE ENERGY ENGINEERING PROGRAM

2024/2025

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Contents

1. MSc_REE PROGRAM

Welcome to MSc. in REE

We extend our heartfelt congratulations to you for making the decision to pursue your educational aspirations. We want to emphasize our unwavering commitment to ensuring that your journey is not only successful but also filled with joy and fulfillment. We would like to stress our dedication to assisting the students in accomplishing their objectives and aspirations. Please feel free to reach out to your faculty advisor or contact any of our knowledgeable and skilled faculty members for any support you may require.

1.1. An Overview

The Master of Science in REE program (MSC_REE) is a general program with one track, supervised by a joint council from Mechanical and Electrical Departments, however it covers different areas within the program such that the student determines his field of study based on the group of elective courses he registers and the research topic of the thesis. The program consists of 30 study hours (6 hours of which are allocated for the thesis + 12 hours for compulsory courses (4 courses) + 12hours for elective courses (4 courses). This handbook has been prepared with the guidance and review of the Development and Quality Unit (DAQU). The contents were made to be extensive with the students need in accordance to the National Center of Academic Accreditation and Evaluation systems (NCAAA).

1.2. Program Mission

MSc Program Mission:

Offering distinguished Renewable Energy Engineering master studies, and performing advanced research and valuable community services in an inspiring, energizing and governable environment to promote self-resources, adopt recent technologies and sustainably develop the Saudi society.

1.3. Program Educational Objectives (PEOs)

According to the Accreditation Board for Engineering and Technology (ABET)
accreditation system, Program Educational Objectives (PEOs) are broad statement about what the student can attain upon graduation to satisfy the job market and other stakeholders. The program educational objectives of the MSc_REE program are shown in table 1:

Table 1: Program Educational Objectives

PEO 1	Attain a successful research, development and leadership careers in the industry, energy, and academic sectors
PEO 2	Properly plan their professional development through self-learning and advanced degrees.
PEO 3	Efficiently progress to positions of leadership in their profession.
PEO 4	Effectively contribute to adopting recent technologies, and experience abilities for performing advanced scientific research and offering innovations.
PEO 5	Skillfully contribute to the sustainable development of the Saudi society.

1.4. Program Strategic Goals (PSGs)

For the NCAAA accreditation system, the MSc program strategic goals have been set to be as follows:

1. Prepare the graduates to have successful research, development, and leadership careers in the industry, energy, and academic sectors.
2. Carry out advanced scientific research and provide engineering consultation services.
3. Strengthen the communication and cooperation with the community, and establish regional and international partnerships.
4. Participate in adopting advanced technologies and offering innovations.
5. Contribute effectively to the sustainable development of the Saudi society.

1.5. MSc Program Learning Outcomes (PLOs)

According to NCAAA accreditation system, the Program Learning Outcomes are the characteristics and qualities gained by the program graduates in the field. The general attributes of the MSc graduates of QEC programs have been set to fit with QU graduate attributes and the needs of job market. The PLOs of the MSc_REE Program are given in Table 2.

Table 2. Program Learning Outcomes (PLOs) for MSc Program

Knowledge and Understanding	
K1	Obtain a comprehensive and specialized knowledge base encompassing theories, ideas, and concepts related to renewable energy engineering and energy efficiency.
K2	Have a thorough understanding of the terminology, practices, materials, processes, and/or conventions that are relevant to renewable energy engineering and energy efficiency.
K3	Possess in-depth knowledge of recent advancements in renewable energy engineering and energy efficiency.
K4	Acquire advanced knowledge and comprehension of a variety of well-established, specialized research and/or inquiry methods in the fields of renewable energy engineering and energy efficiency. .
Skills: Cognitive	
S.1	Apply complex settings, specific theories, ideas, and concepts in the field of renewable energy engineering and energy efficiency.
S.2	Solve problems in complicated and advanced renewable energy engineering and energy efficiency.
S.3	Critically evaluate, examine, and consider important ideas, theories, and concepts. In the field of renewable energy engineering, offer creative solutions to current challenges in complex and sophisticated situations.
S.4	Carry out professional projects or advanced research in Renewable Energy Engineering using specialist research and inquiry approaches.
Skills: Practical and Physical	
S.5	Solve problems in complicated and advanced renewable energy engineering and energy efficiency.

S.6	Carry out complex and advanced practical tasks and procedures in specialized areas related to the renewable energy engineering field.
Skills: Communication and ICT	
S.7	Effectively communicate through diverse mediums to share knowledge, skills, research findings, and innovations pertaining to the field of renewable energy engineering with both specialist and non-specialist audiences.
S.8	Analyze data and information using quantitative and/or qualitative methods within complex and advanced contexts applicable to the field of renewable energy engineering.
S.9	Choose, employ, and customize advanced digital technologies and ICT tools and applications to process and analyze diverse sets of data and information, facilitating the advancement of research and projects within the renewable energy engineering field.
Values, Autonomy and Responsibility	
V.1	Exhibit integrity and uphold professional and academic values when addressing a range of issues.
V.2	Take the lead in professional planning for learning and/or work, as well as professional advance, monitoring learning and performance, and engaging in academic and/or professional strategic decisions with a high degree of responsibility.
V.3	Efficiently oversee specialized tasks and activities within renewable energy engineering and related disciplines with a significant level of independency.
V.4	Successfully engage in collaborative efforts and contribute to research or professional projects or groups, taking on leadership roles and assuming significant responsibility for the work.
V.5	Contribute to enhancing the quality of life within the community.

2. ADMISSION REQUIREMENT

The Deanship of postgraduate studies works in corporate with M.Sc. Program to facilitate the admission and registration procedures at Qassim University. The Deanship has developed procedures for admission in the programs through electronic platforms available to students on the university website (https://guest.qu.edu.sa/login). The Deanship is committed to maintaining the privacy and confidentiality of students' information.

2.1. Admission Conditions

The number of students who can be accepted is determined yearly by the M.Sc. program council and approved by the QEC council, then by postgraduate Council, taking into consideration the program and college capacity.

2.1.1. General Conditions for Admission

The following requirements are required for admission to MSc_REE

- The applicant must be a Saudi or on an official scholarship for postgraduate studies if he is not a Saudi.

- The applicant must have a bachelor's degree in mechanical or electrical engineering or its equivalent, from a Saudi university or from another recognized university.
- Pass all supplementary courses not exceeding one academic year with an average of at least a very good (3.75 out of 5)for students with Bachelor of Technical College.
- Passing the Post-Graduation General Aptitude Test (PGAT) provided by the National Assessment Center.
- Minimum GPA of 3 out of 5 or 2 out of 4 or 72.5 out of 100.
- Minimum English language test score of 6(STEP), or 8 (QUEPT), It is offered by Qassim University
- The applicant must submit two academic recommendations from professors who previously taught him.
- Approval of his reference for the study if he is an employee.
- Application fee :**100** SAR (one hundred non-refundable Saudi riyals)

- Fulfilling any additional requirements from Qassim University (عمادة الدراسات العليا تفاصيل القبول لعام 1445هـ (qu.edu.sa))

2.1.2.Admission requirements international applicants

Admission requirements for non-Saudi applicants residing in the Kingdom of Saudi Arabia (internal and external scholarship students):

- In general, the following requirements are required for admission to postgraduate studies:
- He must have obtained a result in the general aptitude test for university graduates during or before the application period, which is held by the National Center for Measurement and Evaluation.
- The result of passing the specified score for programs that require an English language test STEP or QUEPT during or before the application period.
- The applicant must have a university degree from a Saudi university or another recognized university.

2.1.3. Online Application and Procedures

Documents required to be uploaded to the website when filling out the data on the university website (https://guest.qu.edu.sa/login):

- Bachelor's graduation document for applicants to master's program.
- Academic registration.

- National Identity.
- A copy of a valid passport (at least one year) and residence permit for non-Saudi's applicants.

2.1.4. Fees and Payment

- Tuition fees for the master's degree is 40,000 Riyals (Forty thousand Riyals); paid as 4 payments of 10,000 riyals (Ten thousand Saudi riyals) before the beginning of each semester.
- Tuition fees for one supplementary semester are 5000 Riyals (five thousand Saudi riyals).
- Tuition fees if the regular duration of study at the master's level exceeds 5000 thousand riyals per semester.

2.1.5. Transferring Students

The MSc Program may accept the transfer applications from Saudi Universities or recognized international universities. The transfer depends on the recommendation of the department/program council and subjected to college council approval. The accepted applicant may transfer previously achieved courses to the equivalent courses at the MSc_REE program at the QEC in Qassim University under certain conditions. A student from outside the University may be admitted according to the following Article number 30 in the Regulations governing postgraduate studies in universities (اللائحة المنظمة للدراسات العليا وقوعدها التنفيذية في جامعة القصيم - 1444-7-17.pdf (qu.edu.sa)) that states that:

"Considering Article (No.15) of these regulations, the Executive Management Accepting a student's transfer to the university from a university or educational institution Inside or outside the Kingdom, provided that it is licensed by the competent authority. In the country of study, provided that he is not separated from it for any reason, based on the recommendation of the department and college councils, the academic curricula are confirmed that has been equalized in the student's academic record, and the Council determines"

2.1.6. Visiting Student

A student who studies some courses in another university or colleges or in a branch of the university to which he belongs to:

First: A student from the college who wishes to study as a visitor at another university or college:

- The student must have an academic record (cumulative grade point average) for at least one semester at the university before applying for studying as a visiting student.
- The student should have been studying in a recognized university or college.
- The student should bring a description of the courses to be studied from the other

university to be equated by the college and after determining the equivalent materials to be submitted by an official letter to the Deanship of Admission and Registration to address the university where he would like to study as a visiting student.

- The course to be studied by the student outside the university should be equalized in the vocabulary and the number of units of study.
- The maximum credits that can be calculated from outside the university for a visiting student is (20%) of the total graduation units from Qassim University.
- Course rates that are equivalent to a visiting student at another university are not counted within their cumulative GPA, and the courses are recorded in their academic record.
- The student must provide the Deanship of Admission and Registration with the results obtained within a week of the start of study in the first semester following the period of study as a visitor.
- The maximum number of semesters a student is allowed to study as a visitor is two semesters.

Second: Another university student who wishes to study as a visitor in the QEC at Qassim University:

- The student should take a description of the courses that he would like to study
- from the QU Engineering College to be equated by the home university.
- The proposed courses to be studied by the visiting student is equivalent in his vocabulary and the number of units of study.
- To obtain the approval of the College to study these subjects.
- The courses should be registered for the student by the competent authority in
- the Deanship.
- At the end of the student's study, the student shall be provided with a letter
- explaining the obtained results of the studied courses.

3. REGISTRATION

The E-register system allows M.Sc. students to register, add and drop courses, cancel registrations, withdraw, make payments, and credit balance refunds, as well as other options. Students must make the required payment before the announced deadline or they will be dropped for non-payments issue.

3.1. Registration Guidelines

- All students who want to register must log to E-register online.
- Late registration starts on the first day of the beginning of classes according to the college academic calendar of the semester and finished on the last day for adding courses.

- A maximum of 12 credit hours can be registered in one semester.
- Students should follow and respect timetables of registration, add, drop and withdrawal according to the college academic calendar.
- Registering new students must follow compulsory courses before they register for specialization.
- Registration steps are:

a) Pay your fees (Scholarship students are considered to be waved).
b) Register online.

3.2. Add/Drop Policies

Students may add or drop courses without any penalties during the first two weeks of each term. An Add/Drop Form can be completed by the student through their QU account online, or by a signed request to the department. Students are advised to consult their academic advisors before registering and enrolling in courses.

3.3. Withdraw Policy

A student may withdraw a course until the end of the 14th week of the term without academic penalty. It will be shown as a "W", withdraw, on his transcript. After week 14 of the term elapsed, all students will be awarded grades for their registered courses based on their assessment.

4. The Curriculum

The curriculum for the MSc degree program is based on the following considerations: Table 3 provides the list of Compulsory courses that are required before taking the courses in the specialization area at the MSc. Program as shown in table 4 and the thesis in table 5.

4.1. Compulsory courses

The student should study four compulsory courses as listed in table 3.

Table 3: Compulsory courses

Course	Course Title	Cr. Hrs.	Prereq
GE 605	Modeling and Simulation of Engineering Systems	3	--------
GE 608	Experimental Methods and Analysis	3	--------
MATH 621	Engineering Mathematics	3	----------
REE 611	Introduction to renewable energy Engineering	3	---------
Total		**12**	

4.2. Elective courses

The student studies four courses (12 credits) selected from the list below considering the area on which his research will focus.

Table 4: Elective courses

Course	Course Title	Cr. Hrs.	Prereq
REE 621	Solar Thermal Energy Applications	3	---------
REE 622	Concentrated Solar Energy Plants	3	----------
REE 630	Energy Conversion	3	----------
REE 631	Energy Storage systems	3	----------
REE 633	Energy and Environment	3	---------
REE 635	Energy efficiency	3	----------
REE 640	Biomass Energy	3	----------
REE 650	Wind Energy	3	---------
REE 660	Photovoltaic Energy Systems	3	----------
REE 665	Electrical Systems Related to Renewable Energy	3	----------
REE 670	Geothermal energy	3	---------
REE 680	Renewable Energy Economics and Planning	3	----------
REE 690	Selected topics in renewable energy	3	----------

4.3 Thesis

The thesis course represents 6 credit hours

Table 5: Thesis

Course	Course Title	Cr. Hrs.	Prereq
EE 699	Thesis	6	---------

4.4. Supplementary Courses

For applicants who lack sufficient learning outcome as determined from the BSc transcripts by the graduate studies committee in the department, are required to take and pass the courses from the following group, in accordance with the requirements of the scientific field desired. The decision to require an applicant to study these courses is determined by the department/program and the college councils. The passing grad of these courses for the applicants is 3.75 out of 5.

Table 6: Supplementary Courses

Course	Course Title	Cr. Hrs.	Prereq
ME371	Thermodynamics 1	3	--------
ME395	Heat Transfer	3	--------
EE318	Fundamentals of Electric Circuits	3	----------
EE339	Electrical Machines	3	---------

5. Course Description

Brief course descriptions provide overviews for course contents in the MSc Program are presented in the following subsections.

5.1. College Requirements

The student must complete four courses (12 credit hours) as compulsory courses before the elective courses and thesis in the department.

GE 605- Modeling and Simulation of Engineering Systems: 3 (3, 0)

Apply modern software packages to conduct analysis of real-world data, General concepts of modeling, discrete simulation, Continuous simulation, Signal flow module of PSM++ - link types, Bond graphs, System Dynamics (SD), and Advanced case study: Stock market simulation using DIs.

GE 608- Experimental Methods and Analysis: 3 (3, 0)

Design of Experiments, the application of statistical techniques and concepts to maximize the amount and quality of information resulting from experiments. and Use of Commercial Software for Analysis of Experiments (LabView, MiniTab).

MATH 621- Advanced Mathematics: 3 (3, 0)

Fourier Analysis and Partial Differential Equations (PDE), Complex Numbers and Functions, Complex Integration, Power Series, Taylor Series, Laurant Series and Residue Integration, Complex Analysis to Potential Theory.

REE 611-Introduction to Renewable Energy Engineering: 3(3, 0)

Introduction meteorology, the sun as a radiation source, solar geometry interaction of solar energy with atmosphere, solar. Irradiance and modeling balances of the horizontal wind field, wind climatology, wind flow in the atmospheric boundary layer, wind resource assessment dust problems solar radiation, wind velocity, pressure and humidity, measuring devices. Lab experiment: solar radiation measurements and analysis Lab experiment: temperature measurements and analysis Lab experiment: pressure and humidity measurements and analysis Lab experiment: wind velocity measurements and analysis Lab: Error analysis of experimental methods.

5.2. Program Requirements

The program and/or departmental requires that the student must complete four courses (12 hours) as elective courses and 6 hours considered for thesis as a compulsory requirement.

REE 621- Solar Thermal Energy Applications: 3(3, 0)

Solar radiation, its measurement and precision Solar collectors Solar thermal heating, components of solar thermal plants solar swimming pools Solar thermal cooling and solar thermal air conditioning, absorption cycles, other thermally driven cooling systems Solar using for desalination and cooking, Examples of installed systems Simulation tools for solar thermal systems monitoring and optimization.

REE 622-Concentrated Solar Energy Plants: 3(3, 0)

CSP collectors, line and point focusing collectors, concentrators. Tracking mechanisms. General energy balance and explanation of different terms, evaluation of thermal losses, storage effect, transient effect, analysis of specific types of reflective concentrators. Parabolic trough, Fresnel concentrators. Temperature distributions, performance indices. Central-tower receiver. Economic and environmental impacts. Assessment of CSP potentials, quantify renewable electricity potentials. Term Project.

REE 630- Energy Conversion: 3(3, 0)

Energy classification, Solid, liquid and gaseous fuels, sources, utilization. Energy conversion to thermal, electrical, and mechanical energies. Economics impacts of energy conversion. Fundamentals of fuel cells. Technologies and applications of fuel cells.

REE 631- Energy Storage systems: 3(3, 0)

Types of energy storage systems, sensible and latent heat storage. Application of thermal energy storage for short and long time. Storage materials. Power to gas, batteries, hydro power and air storages. Efficiency of the conversion Costs for different technologies, calculation of capacity and costs of energy storage system.

REE 633-Energy and Environment: 3(3, 0)

Earth energy systems Ecological principles. Environmental impacts assessment and consequences of energy use and production. Air pollution Water use and pollution. Natural disasters, Sea level rise Migration, Land use and climate changes Global warming. Political framework. Risk management. National and international standards ISO for environmental management systems. Sustainability.

REE 635-Energy efficiency: 3(3, 0)

Energy management systems, energy auditing procedure. Energy balance and analysis of thermal systems, power factor correction. Heat pumps. Cogeneration. Thermal insulation, air conditioning and ventilation, combustion control steam systems. High efficiency motors and generators, high efficiency lighting. Moisture problem and solutions. Passive and green home. Energy efficiency in transport-services-commercial

sectors. Energy codes, standards and norms.

REE 640-Biomass Energy: 3(3, 0)

Formation of biomass. Resources and classification, chemical an, chemical and physical characteristics of biomass. Energy generation from wastes, biomass conversion processes. Hydrogen energy. Bio fuels. Emissions in the burning process. Utilization of the specific characteristics of bio energy systems with other renewable energies, applications.

REE 650- Wind Energy: 3(3, 0)

History of Wind Power. Wind Characteristics and Resources. Aerodynamics of Wind Turbines. Dynamics of wind turbines. Electrical Aspects of Wind Turbines. Wind Turbine. Materials and Components. Wind Turbine Design and Testing Wind Turbine Control Wind Turbine Siting, System Design, and Integration Wind Energy System Economics Environmental Aspects and Impacts.

REE 660- Photovoltaic Energy Systems: 3(3, 0)

Introduction to Solar Energy and PV Systems. Overview of Solar Industry Systems Grid-Tie and Off-grid. Electricity Basics. Power, Energy and Electricity. Electricity Arithmetic. PV System Components and configurations. Solar panels, inverters, mounting. Solar Energy Fundamentals. Sun – earth relationship, sun path. System Design. Solar Site Survey. The elements of site survey. Hands-on Lab: Site analysis. Roof measurement and Site Worksheet. PV System Sizing. Grid-Tie Systems. Site factors affect performance. Sizing the PV System, using manual and online tools. Electrical Connection & Major Components of a PV System. Electrical Integration. Safety of DC and AC Power. The main electrical components. Wire sizing, specifications and rating DC and AC. Utility Integration. Breaker sizing and the 120% Rule. Utility and code regulations PV cells, modules and arrays. All about solar cells and modules. Modules specifications: Watts, Voc, Isc, Vnominal. IV curves, Series and parallel array circuits. Inverters. Operation and Efficiency. Model and size, Specifications. Online sizing and performance tools. Mechanical Integration. Regulation and Maintenance. Commissioning, Maintenance, Installation. Commissioning - Starting it up. Maintenance, service, Trouble shooting. Performance Monitoring. Permitting. Jurisdiction and authority. National Electrical Code NEC. Safety (again) Live Installation. Off-grid and remote power applications Batteries and charge controllers. Back-up, Hybrid and Bimodal systems. Economic Analysis. System Cost. Payback/Return. On Investment (ROI)

REE 665-Electrical Systems Related to Renewable Energy:3(3, 0)

Asynchronous Generator Construction, Operational Ranges of Asynchronous Machines, Modeling and Simulation, Design Aspects. Synchronous Generator Construction, Operational Ranges of Synchronous Machines, Modeling and Simulation, Design Aspects. Power Electronics Converters for Renewable Energy: Soft Starters Switched Capacitor Banks, Rectifier Inverters AC voltage controller Transfer of Electrical Energy to Power Grid: Power Conditioning, Grid Protection, Resonance Effects, Remedial Measures, Grid Control.

REE 670-Geothermal Energy: 3(3, 0)

High and low temperature geothermal areas. Utilization of geothermal around the world geological, geophysical- and geochemical methods in assessing well testing, drilling technology, design of well heads and well equipment. two-phase flow in vertical and horizontal pipes, steam separators and safety equipment, pipe lines control, corrosion and sealing problems in geothermal systems. design of geothermal utilization systems, direct and indirect heat exchanger's multi-purpose use of geothermal energy. ground heat pump environmental aspect and impacts of geothermal utilization.

REE 680-Renewable energy economics and planning: 3(3, 0)

Energy Resources, renewable and non-renewable. Status, prospects and sustainability issues. Non-renewable energy resources. Renewable energy resource introduction. The origin of renewable energy flows. Modeling renewable energy flows. Circulation modeling. Climate: definition and modeling. Climate: interference and change. Summary of energy and related matter cycles. Individual renewable energy resources evaluation. Direct solar energy. Wind flows. Water flows and reservoirs, waves and tides. Heat flows and reservoirs. Biological conversion and stores. Technologies for converting and handling renewable energy. General principles. Heat energy conversion processes. Mechanical energy conversion processes. Solar radiation conversion processes. Electrochemical energy conversion. Bioenergy conversion processes. Energy Transmission. Energy storage technologies. Planning and socio-economic issues. Energy system planning. The methodologies of renewable energy planning. Demand scenario construction. Overall system scenarios. Consistency simulation and implementation studies. Local, Regional and Global systems. Social and economic framework. Scale of analysis. Life-cycle approach. Assessment issues. Communication and policy dimensions.

REE 690-Selected Topics in Renewable Energy: 3(3, 0)

Advanced and recent topics in the field Renewable Energy,

5.3. COURSE PLAN PER SEMESTER

The M.Sc. Program plan the courses in four (4) semesters as per detailed below:

Year 1 – Level 1 (Semester 1)			
Course	**Course Title**	**Cr. Hrs.**	**Prereq**
GE 605	Modeling and Simulation of Engineering Systems	3	---
MATH 621	Engineering Mathematics	3	---
REE 611	Introduction to renewable energy Engineering	3	---
Total		**9**	

Year 1 – Level 2 (Semester 2)			
Course	**Course Title**	**Cr. Hrs.**	**Prereq**
REE 6--	Elective 1	3	---
REE 6--	Elective 2	3	---
REE 6--	Elective 3	3	---
Total		**9**	

Year 2 – Level 3 (Semester 3)			
Course	**Course Title**	**Cr. Hrs.**	**Prereq**
GE 608	Experimental Methods and Analysis	3	---
REE 6--	Elective 4	3	---
Total		**6**	

Year 2 – Level 4 (Semester 4)			
Course	**Course Title**	**Cr. Hrs.**	**Prereq**
REE 699	Thesis	6	---
	Total	**6**	

Total Hours in M.Sc.- REE Program	**30 Cr. Hrs.**

6. GRADES & GRADUATION REGULATIONS

6.1. Grade Point Average (GPA) Semester/Level

It is the average of the total points of all academic units divided by the number of credit hours for the specific semester. Points are calculated by multiplying each academic unit by its corresponding weight of points.

6.2. Grade Point Average, Cumulative

It is the average of total points divided by the number of credit hours for all completed credit hours by a student for all semesters.

6.3. Grade Reports

Semester grade reports are not mailed to students. Semester final grades are typically available online. Students may view their grades by logging onto E-register.

6.4. Grades Breakdown

The following grades have been adopted:

Marks	Grade	Points	GPA	Description
95 – 100	A+	5.00	4.75 - 5.00	Exceptional
90 – 94	A	4.75	4.50 - < 4.75	Excellent
85 – 89	B+	4.50	4.25 - < 4.50	Superior
80 – 84	B	4.00	3.75 - < 4.25	Very Good
75 – 79	C+	3.50	3.25 - < 3.75	Good
70 – 74	C	3.00	2.75 - < 3.25	Pass
Below 70	F			Fail

7. ACADEMIC PROGRESSION, DISRUPTION AND DISMISSAL

7.1. Academic Progression

M.Sc. students must maintain the grade point average (GPA) at least 3.75. Moreover, each graduate student should, at start of enrolment in a program, have an academic guide to direct the study, assist in selecting a thesis topic and preparing a research plan according to M.Sc. program requirements initiated by the Deanship of postgraduate Graduate Studies. The student should follow the process and procedures regarding all the required credit hour for graduation condition (where applicable).

7.2. Attendance

Students are expected to attend all classes and to participate actively in class discussions. Absence should not exceed 25%, which is equivalent to 4 classes, of any course attendance requirements.

7.3. Disruption

Qassim University recognizes that freedom requires order, discipline, and responsibility, and stands for the right of all students to pursue their legitimate goals without interference. Therefore, will not tolerate any attempt by any individual or group to disrupt the regularly scheduled activities of the University. Any such effort to

impede the holding of classes, the carrying forward of the University's education objective, or the arrangements for properly authorized and scheduled events would constitute an invasion of the rights of faculty and students and cannot be permitted. If any such attempt is made to interfere with any University education objective, the leaders and participants engaged in disruptive tactics will be held responsible and will be subject to appropriate legal and disciplinary action, including expulsion.
Students who commit a disruption or attempt a disruption shall be subject to University disciplinary procedures, which may include probation, suspension, or exclusion from the University. Disruption is any action that interferes with, interrupts, or impedes the holding of classes, the carrying out of University business, or the arrangements for properly authorized and scheduled University events. A person attempts to disrupt when, with intent to disrupt, that person does any act that constitutes a substantial step toward disruption.

7.4. Dismissal from the University

The student shall be dismissed from the university in the following cases:

1. If he receives three consecutive alarms for his cumulative GPA being below (2.0 out of 5).
2. If he does not complete the graduation requirements within a maximum period of half of the period prescribed for graduation in addition to the duration of the program.
3. If the student does not complete the graduation requirements within a maximum of eight semesters, the College Board may give an exceptional opportunity.
4. If it becomes apparent that the student is not serious about his failure to do so, the College Council may terminate his registration.

8. CODE OF CONDUCT

The rules and regulations governing the actions and interactions of administrative personnel, faculty, and students are intended to ensure that the aims and objectives of the MSc Program are accomplished according to the highest standards of academic rigor and ethical behavior.

8.1. Academic Misconduct

The MSc student is expected to act in a responsible manner, as expected in a department and college setting, in all activities connected with his studies.

Incidents of cheating, plagiarism, lying, violating courses rules, copyright infringement, or damaging/destroying the department/College facilities or equipment, violate the Code of Student Ethics. If it is determined, by a faculty or other university official, that a student has acted unprofessionally, he will be subject to a disciplinary action. Such action shall include but not to be limited to: a failing grade on the work submitted a failing grade in the course, or expulsion from the program. The MSc program and the Postgraduate Graduate Studies shall jointly determine the severity of the action. However, the student has the right to appeal to the department, and in writing, stating the reason for the appeal.

8.2. Cheating

Using or attempting to use or provide unauthorized assistance, materials, information, study aids or mobiles in any form in any academic exercise or environment. The term academic exercise includes all forms of work submitted for credit or hours.

1. Using or attempting to use books, notes, study aids mobiles, calculators, or any other documents, devices, or information in any academic exercise or environment without prior consent by the instructor.
2. Copying or attempting to copy from another person's paper, report, computer labs, computer program, or other work material in any academic exercise.
3. Sending a substitute or acting as a substitute for another student to take one's examination, test, or quiz, or to perform one's field or lab work.
4. Conducting a research, preparing a project, or any assignment for another student without prior consent by the faculty.
5. Changing a grade, score, answers on a returned exam, or assignment for credit.

8.3. Plagiarism

Plagiarism is copying another student's work, lending work to another student, or representing extracts or whole articles and texts from books or handouts as one's own work. Presenting the words or ideas of someone else as one's own in any academic exercise, such as:

- Submitting any course related articles, assignments, projects by another person or by a commercial writing service.

- Exact reproduction of someone else's words without identifying the words with quotation marks, and without properly citing the quotation in a footnote or reference.
- Paraphrasing or summarizing someone else's work without acknowledgment in the footnotes or references.

The following rules are applied for the similarity check:

- The permitted similarity index for the entire thesis is 20%; any similarity checks beyond this threshold requires a review.
- Quoting from a single source should not exceed 5%
- Similarity (plagiarism) checks to be applied for all course work not only master's thesis with a permitted similarity index of 25%.
- When checking similarity of a thesis, the following sections are excluded to ensure a fair evaluation:
    - Thesis title, author, and institution information.
    - Thesis summary, Table of contents, Acknowledgement and List of Acronyms.
    - Lists of chapters and sections.
    - Appendices, supplementary material, such as raw data or additional information.
    - References and Bibliography.
    - Any published work out of the thesis.

8.4. Intellectual Property

Qassim University has a big Center for Innovation and Intellectual Property (CIIP) protects and commercializes intellectual properties (IP). The CIIP manages the entire IP lifecycle management from the discovery process and IP protection such as copyright, trademark, trade secret or patent to the deployment of the technology to industry partners or inventor-led startups as well as raising the technology readiness level.

9. STUDENT RIGHTS

9.1. Appeals

The M. Sc program convene to monitor the academic progress of all students at least once result/report in each semester, this result/report may case academic honors, places poorly performing students on probation, and issues suspensions and dismissal according to the postgraduate policies. Also considers and adjudicates on matters of disciplinary action. A faculty member (Instructor/Supervisor) normally brings cases forward to the Postgraduate Studies through online monitoring. The student who has been accused of academic misconduct also will be reported. Decisions of the Electrical Engineering department meeting council will be conveyed to the Dean of postgraduate for final decision.

9.2. Academic Rights of Postgraduates Students

1. Understand the procedures and rules of graduate studies, which is available on the webpage of the M. Sc program and Deanship of Graduate Studies. It includes the rules regulating postgraduate studies of objectives and degree requirements, terms of admission and registration, deletion and postponement, withdrawal, enrollment dismissal, extra opportunities, and thesis proposal and final presentation.
2. Obtain the necessary orientation to clarify rules and regulations of the postgraduate studies
3. Have an academic advisor to help plan the schedule and provide guidance and direction for the best ways to advance in the academic and scientific research process to achieve the goal of joining the program
4. Have the academic calendar with important dates and deadlines
5. Have a study plan for compulsory and elective courses
6. Have course descriptions (course objectives and educational outcomes - course timetable - course evaluation methods - grade distribution - and references)
7. Have the right to add – drop compulsory or elective courses
8. Obtain a list of faculty members, specializations and research directions
9. Get a scientific supervisor for the thesis after approving the research proposal plan.
10. Change the thesis supervisor after submitting a written statement to justify the request.

11. Get one additional opportunity to improve the marks for one semester (after the completion of all courses given that the student's grades are less than very good and have been received a warning letter to improve the GPA)
12. Postpone the admission for one or two semesters
13. Postpone the study for one or two semesters and submit a written statement to justify the request.
14. Ensure confidentiality of complaints
15. Solving problems and obstacles that negatively impact the academic progress
16. Get the graduation certificate upon completion of the graduation requirements

9.2.1. Disciplinary Issues

Violations may be of academic or non-academic nature. All those who attend activities outside the University as their representatives to attend academic or non-academic activities are subject to the same disciplinary action in case of violation of the charter.

9.2.2. Academic Issues

Students may appeal a faculty member's decision regarding a grade. The student can formally appeal or communicate to the faculty member, either orally or in a written form with the reasons; he believes the grade to be unfair or inappropriate. If the disagreement continues, a student may appeal in writing to the head of the department. In this case the decision will be made according to the EE department council meeting.

9.2.3. Students Complaints

All complaints must be submitted in writing with name of the students and sent to the head of the department/ Dean of Postgraduate Studies. Students should not discuss any academic issues with any of the MSc administrators due to confidentiality purposes.

10. THESIS SUPERVISION

Each graduate student should, at start of enrolment in a program, have an academic guide to direct the study, assist in selecting a thesis topic and preparing a research plan according to University Council regulations initiated by Deanship of Graduate Studies and implemented by MSc Program. The procedure is permissible after meeting all admission requirements and completing at least 60% credit hours, once it recommends a proposal for approval, the Department Council should name a supervisor (and an Assistant Supervisor where applicable) of the thesis.

10.1. Rules of Supervision of Theses

10.1.1. Rules related Thesis

An academic work introduced by the requirements of obtaining the Master's Degree, which its title and proposal have been approved by the board of the Department Council and Deanship of Graduate Studies as per the recommendation of both the councils of Scientific Department and College. This has to be done according to the Manual of Theses Preparation approved by the MSc program following the rules of Graduate Studies Deanship.

10.1.2. Rules related Students

A graduate student who registers for attaining the theses after getting his thesis accredited along with appointing an academic supervisor by the Deanship of Graduate Studies Council as per the recommendation given by the meant two councils of Department and College.

10.1.3. Rules related Advisor

He is a faculty member chosen by the academic section dedicated for each graduate student at the beginning of his joining the program. His duty is to guide and assist the student in their selection of the subject required and preparing the research plan proposal.

10.1.4. Rules related Supervisor

He is a faculty member appointed by the Council of the Graduate Studies to supervise a graduate student as per the recommendation of the two councils of Department and College. He is the main supervisor in case of more than one supervisor is chosen to supervise the Thesis.

10.1.5. Rules related Co-supervisor

He is a faculty member appointed as an assistant supervisor for the student' to help the main supervisor. He can also be selected to supervise a part of the thesis.

11. EDUCATION RESOURCES

The MSc program offers a range of resources and expertise to help students making their target of success. The resource strategies and education literature may be new domains for you and your colleagues. The list of resources is stated below:

- Textbooks
- Lectures
- The World Wide Web (Internet)
- Seminars
- Conferences

- Training Courses

11.1. Students Affairs Office

The students' Affairs Office which is headed by the vice dean of student's affair and has two full-time expert members. The office is supported and linked to the Deanship of Postgraduate for Registration. The office is equipped with computers connected to the university local area network. The main tasks of this office are:

- The office helps in the registration of students, and supplies the necessary data concerning the students' enrolment and their progress. These documents help in the evaluation process.
- The office staff has access to the registration program to help solve problems which face the students during the registration.
- The office director participates in the committee which distributes the students after the first level to the different departments of the college.
- The office monitors the attendance of the students so that the rules of exclusion of attending the final exams are firmly applied.
- The Student Affairs Office arranges and controls all matters related to the midterm, final written exams and written outcomes achievement exam. In this regard, the office prepares the exams time table, assigns exams places,assigns exams supervisors, collects the exam questions from the faculty members, and arranges for supplying the answer sheets.
- The office also participates in informing the students about any important activities, dates, news, rules through the college website and/or by cellularSMS's.

11.2. Students' Activities

The student affairs deanship supervises most of the students' activities. This includes cultural, recreational, and social activities. These activities enhance the students' learning ability as well as it demonstrates good chance for entertainment and stress relief. Samples of these activities are:

1- Cultural activities: in all fields
2- Social activities like traveling and visiting major industrial cities and large-scale engineering projects.
3- Recreational activities such as arranging races in football, tennis and billiards.

In addition, the college has a mosque, a cafeteria, and a student club. The club is a

complementary part to of the college mission and it is a center for student activitiessuch as discussions, workshops, competitions, culture, training, sports, social and various student related activities. Students from various departments are enrolled as club members. Members usually contribute with their creative ideas, and discuss events for the future planned activities, during meetings held by the club. All teaching staff supporting student activities can participate in this club.

11.3. College Scientific Journal

The college of engineering supervises the publication of the bi-annual Qassim University Journal of Engineering and Computer Sciences. Contributions to this journal are not limited to staff members of the college but are open to contributorsfrom inside and outside the Kingdom of Saudi Arabia. Papers are published after being refereed by national and international specialists. This journal is considered a good journal for publication and its papers are considered by the scientificcouncils in all KSA universities for promotion.

11.4. Physical Facilities

In addition to the specialized laboratories in each department, the college contains a number of laboratories, drawing halls, teaching halls and computer laboratories which will serve all the college departments. These physical facilities are:

- Workshop
- Computer laboratories
- Active learning halls
- Teaching halls

11.5. Workshop

A workshop with many equipment and tools is used. The workshop is located in the Department of Mechanical Engineering and has Lathes, Milling machines, Shaper, Drill Press, Band Saws, Grinder, Welding and Hydraulic Cutter. Students of the junior levels get trained in the workshop and perform experimentalexercises for different industrial programs. Moreover, the students can carry out manufacturing of equipment and experimental models for their master thesis (if needed). The workshop is utilized also in research projects performed by the college staff members as well.

11.6. Computer Laboratories

The college has two computer laboratories supervised by teaching staff members. The laboratories are well equipped with extensive licensed software libraries and up• to-date printers and scanners. The laboratories are utilized in graduation projects and in teaching computer sciences as well as these engineering courses which require

computer application. The computer facilities include the service of electronic mail, internet. The capacity of each laboratory is about 40 students.

11.7. Teaching Halls

The college contains a number of teaching halls. The halls are equipped with the most recent educational equipment like whiteboards, overhead projectors, internet connections, electric supplies, air conditioners and more.

12.FACULTY MEMBERS

No	Faculty Name	Rank
1	Abdulrahman F. Almarshoud	Professor
2	Sulayman Alahya	Professor
3	Radwan Elmasry	Professor
4	Ahmed Alaa Taha Mahfouz	Professor
5	Abdelaziz Alaboudi	Professor
6	Abdullah Alghafis	Associate Professor
7	Muhannad Ali Saleh Alaraj	Associate Professor
8	Abdelrahaman Alrobaian	Associate Professor
9	Abrahim Alsaidan	Associate Professor
10	Abdulelah Mufreh Yousef Al-Harbi	Assistant Professor
11	Talal Khalaf Alharbi	Associate Professor
12	Abdulhakeem Nasser Alsaleem	Assistant Professor
13	Ahmed Mohammed Alshweirkh	Associate Professor
14	Anas Alwataban	Associate Professor
15	Faisal Altwejery	Assistant Professor
16	Hesahm Othman	Assistant Professor
17	Yasser Alfolayeh	Assistant Professor
18	Abdullah Alburidy	Assistant Professor

13.COLLEGE ADMINISTRATION

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