جامعة المجمعة
Majmaah University

كلية الهندسة
College of Engineering

COLLEG OF ENGINEERING

Student Guide

STUDENT AFFAIRS

FIRST EDITION-2017

PREFACE

In the name of Allah the most Beneficent and the most Merciful

The College of Engineering (CoE) established in 1430 H (2009 AD). Since its inception, the CoE has been taking great interest in the development and improvement of academic affairs and has been considered as one of the top goal-persuader to achieve its vision, mission and educational objectives amongst others.

The CoE at present has three Departments: Civil & Environmental Engineering, Electrical Engineering, and Mechanical and Industrial Engineering. In its pursuit for academic excellence the CoE looks forward to develop three new departments: Department of Architecture and Interior Design, Department of Systems Engineering, and Department of Mechatronics in near future (God willing).

It gives me immense pleasure to present the "College of Engineering Guide" for students, faculty members and visitors of this college, which contains pertinent guidelines and information. Additionally, the guide contains important information that will help in the understanding the CoE, its vision, mission, and objectives. The guide also contains important information for students such as available academic programs, specialization (Tracks), admission requirements, conditions of graduation and academic plans to name a few.

This guide also presents a description of the curriculum and the distribution of credits and contact hours for various academic programs offered by the college which will facilitate our students to know the scientific content as they grow academically in the due course of study.

The guide apprises the students about supported Deanships and channels to communicate with them. The employees of the Faculty of Engineering, students will get information such as admissions, registration, scientific research, student and faculty affairs, and the available learning resources etc.

I beseech Almighty God that this guide will be of the benefit for all the stakeholders of this University.

Dr. Abdullah Alabdulakrim
Dean, CoE

COLLEGE OF ENGINEERING
MAJMAAH UNIVERSITY

A. College History

The College of Engineering (CoE), being one of thirteen colleges at Majmaah University (MU) was established in 2009 to meet the need in the Kingdom of Saudi Arabia for engineering professionals. Since its establishment, it has been playing a significant role in providing both the private and the public engineering sectors with highly competent professional graduates who are equipped with the most recent knowledge and skills in their engineering fields. CoE currently operates three undergraduate programs running under three academic departments. Electrical Engineering Program, EE, was established in 2009 to cover the need for specialists in electrical engineering that is needed in all engineering organizations and companies. The establishment of this electrical program came to serve the community and to admit students from different cities and regions around Majmaah University region. The EE Program includes general engineering principles and high level of specialized courses in different engineering fields. For these reasons, the courses offered by the program include, besides the theoretical and engineering applications, an engineering practice in industrial companies and engineering organizations that further enhances the qualifications of graduates as a result of the eight weeks' interaction with the engineering implementations on a professional basis.
Although, the review process has been regularly carried out at the University, but this is the initial accreditation ABET review.

B. Program Locations

The college is located at the Al-Yahia Complex of Majmaah University (MU) in Majmaah City. Classrooms and Labs are located in the same building.

GENERAL CRITERIA

CRITERION 1. STUDENTS

Majmaah University has central policies and procedures for admitting and following up the progress of all students throughout the University. This is administered by the Deanship of Admissions and Registration. This Deanship has over the years developed a sophisticated online electronic system called **EduGate** (https://goo.gl/iLqp6R), which is widely available to all students to register, drop, add, and monitor their progress, etc. All answers to the elements required for ABET's Criterion 1, namely Students, are available on this **EduGate** electronic system, and thus can be extracted directly from these general rules. The total number of students currently enrolled in the program is 166, and the program has graduated so far 136 students.

A. Student Admissions

The admission process for all students of MU is performed mainly electronically via the **EduGate** electronic system. Electronic admission starts by student's applying via the internet and ends by MU sending the acceptance letter and files of those who are accepted.

A.1 Major General Admission Requirements:

The following requirements have been stipulated for the admission of the new student:

- An applicant for admission must have a Saudi High School Certificate - Science Section (SHSCSS) or its equivalent. The High school certificate should not be more than five years' old
- Must have an Aptitude Test Certificate (ATC) administered by the National Center for Assessment in Higher Education.
- The minimum qualifying scores in SHSCSS & ATC tests are: A total equivalent percentage of 85% (based on 30% from the SHSCSS + 30% from the ATC + 40% from cumulative Basic Science of SHSCSS).
- Must not have been dismissed from another university for disciplinary reasons.
- When applicants exceed availability, priority is given to the students with higher grades.

A.2 Distribution of Students among Various Fields of Engineering:

Before starting any program at CoE, all students study a common preparatory year (two semesters of 29 credit hours). Once admitted to the COE they will complete one

semester in the general engineering level (part of Common CoE requirements) and then seven semesters in one of the offered programs:

1- Bachelor of Science in Electrical Engineering
2- Bachelor of Science in Civil and Environmental Engineering
3- Bachelor of Science in Mechanical and Industrial Engineering

After completing the third semester, the students are distributed to various programs of CoE; so that they can start their designated program requirements in at semester four. The distribution process to the various programs at CoE is carried out according to the interest of the students and the capacity of programs. When applicants exceed availability, priority is given to the students with higher grades. The final status of all students is then submitted to the Deanship of Admission and Registration within a pre-specified period each semester.

A.3 Registration Procedure:

The student is automatically registered at the beginning of each semester for some credit hours according to his academic standing. Students with GPA of 2.0 are eligible to register up to 14 credit hours, while those of 4.5 GPA or above are eligible for up to 20 units as a maximum. Students register online (through the **EduGate** system).

A.4 Withdrawal:

The student has the right to withdraw from an academic semester within the withdrawal period announced in the academic calendar for that semester. No withdrawal is allowed during the last five weeks before the final examination. The college's vice dean for academic affairs must approve the withdrawal request after reviewing the authenticity of the student's reasons for withdrawal

B. Evaluating Student Performance

Offered programs, similar to all other programs at MU, follow the semester system. Two semesters are offered in each academic year (each semester is also called a level). The duration of each semester is fifteen weeks excluding examinations; in addition, there is an optional 8- weeks summer semester. The B.Sc. is a five-year program which consists of a two semester preparatory period at preparatory year deanship, one general preparation semester in CoE and seven semesters in one of the offered programs Teaching during summer is in fact administrated whenever faculty is available;

B.1 Examination and Grading System:

The examination and grading system of the program abide by the following regulations:

- Success in a course is usually based on the combination of a grade awarded for the course work, plus a grade for the final examination.
- Each course will have a total of 100 points, and these are distributed as follows: 60% for the coursework (quizzes, assignments, homework, mini-projects and midterm exams) and 40%for the final examination.
- The passing mark in each course is 60% out of the total.

The program grading system follows the requirements at MU which is based on a maximum of 5 as shown in the following **Table 1-1**.

Table 1-1: Grading system at MU

Letter Grade	Numerical	Point Average
A+	95-100	5.0
A	90-less than 95	4.75
B+	85-less than 90	4.5
B	80-less than 85	4.0
C+	75-less than 80	3.5
C	70-less than 75	3.0
D+	65-less than 70	2.5
D	60-less than 65	2.0
F	Below 60	1.0

A student's grade point average is determined by dividing the cumulative point value of all courses attempted by the number of units in the student's semester schedule. An example is the following hypothetical student's report having six courses in a particular semester is shown in **Table 1-2**.

Table 1-2: Grade Point Average (an example)

Course No.	Credit Hours	Letter Grade	Point Average	Grade Point (Credit Hours × Point Average)
1	2	A	4.75	9.5
2	3	C+	3.5	10.5
3	3	B	4.0	12.0
4	3	D	2.0	6.0
5	3	F	1.0	3.0
6	2	B+	4.5	9.0
Total	16			50

This student's semester grade point average GPA is (50/16) = 3.125. Similarly, for all the semesters taken, the Cumulative Grade Point Average (CGPA) is calculated.
The cumulative grade point value is translated into performance standing as shown in **Table 1-3**

Table 1-3: Cumulative Grade Point Average

Grade Range	Standing
4.50 upwards	Excellent
3.75- 4.50	Very Good
2.75- 3.75	Good
2.00- 2.75	Pass
Less than 2.00	Fail

B.2 Attendance:

Considering that regular course attendance is necessary for academic success, MU University requires that students should attend at least 75% of the lectures and labs Students failing to meet this requirement in any of the courses will be prohibited from attending the final examination of that course and will have an F (Fail) grade in that course. Furthermore, the student who is absent in the final examination of a course(s) will not be given a substitute examination, except for a valid reason accepted by the college council.

B.3 Scholastic Probation:

All students at MU University are required to maintain a grade point average of at least 2.0 out of 5.0. Those who fail to maintain this average are placed on scholastic probation and are given two semesters to which they must attain a GPA of 2.0. If this condition is not met within the two semesters of probation, the student may then be dismissed from his studies at the College of Engineering. One last opportunity of a third semester to raise the average can be given, after review of the academic record by the academic supervisor and approval of college council. They will be taken off probation if they can attain the 2.0 GPA based they study a minimum of 12 credit hours and score an overall B average (48 points).

B.4 Discontinuity Status:

The following rules apply to students who discontinue their education progress:

1. The student is considered to be on discontinuing status if he withdraws from a semester or fails to register, with or without a valid reason.
2. It is permissible for a student to be on a discontinuing status for a maximum of two consecutive semesters or a maximum of three non-consecutive semesters during his enrollment. The student's enrolment will be terminated if he exceeds these limits.
3. Any student who loses his status as a student at MU due to the condition mentioned in point (2). If this occurs, a student is entitled to appeal to be readmitted to the university based on the following conditions:

- The student should satisfy all the admission conditions announced at re-admission.
- The student should keep the same University Identification Number and the records he had before discontinuing his study.
- The student's appeal should be approved by his College Council, which has the right to require the student to retake any course that he has passed.
- If the student's discontinuity exceeds four semesters, he can apply for admission as a new student without looking into his previous record, provided that his discontinuity was not because of misconduct.

C. Transfer Students and Transfer Courses

C.1. Transfer Students:

Transfer to the college can be done through three different channels as follows

Transfers from other universities:

- The student should have a cumulative GPA of at least 3.75 (out of 5.00) or equivalent from a reputable engineering program.
- The student should satisfy the condition of having percentage grade at least 85% in High School basic sciences.
- The procedure for evaluating transfer applications to the college from outside the university is as follows:
- Fill in the university application form
- Upon receiving all applications, the university registrar office sends all applications that satisfy the college requirements to the college vice dean of academic affairs office. The college vice dean of academic affairs office prepares the applicant's information for the program chairman, who evaluates the presented applications information and write a report and forward it to the college council for approval.
- The maximum allowable percentage of credit hours that could be transferred to students from other universities is 40% of the total credit hours in the curriculum.

Transfers from other engineering colleges within the university:

Students can apply for transfer only after studying at least one semester (excluding summer semester) in the college where they are transferred from.

- The student should have a cumulative GPA of 3.75 (out of 5.00)
- The student should satisfy the college admission conditions.

Transfers from other programs within the College of Engineering:

The procedure for evaluating transfer applications to the program from other programs within the college is as follows:

- Student should have a cumulative GPA of more than 3.0 (out of 5.00)
- Fill in the between Departments Transfer Form
- The departmental committee studies the application and recommends acceptance for approval by departmental council. Then the recommended applications will be forwarded to the college council for final approval.
- All of the previous courses he has studied including his grades, his term and cumulative averages, will be entered into the academic record of a student who has changed from one major to another according to the provisions of the regulations governing examination.

C.2. Transfer Courses:

Students can transfer courses that have been studied in other universities. The maximum allowable percentage of credit hours that could be transferred to students from other universities is 40% of the total credit hours in the curriculum. These courses are evaluated by the Undergraduate Program Committee and faculties who teach these courses and approved by the Department head. Transferred credits are not included in the GPA, and a passing grade is assigned to those courses.
Students who wish to study and then transfer some courses from other universities must do the following:

- Student wishing to transfer courses taken at other universities must fill in a course transfer form and submit it to the chairman of the department.
- The chairman consults the faculty who teaches the course.
- The faculty reviews the syllabus of the transfer course in light of the departmental course syllabus checking the equivalency of the syllabus and credits. If two courses have the same credit hours and 80% of syllabi are matching, the two courses are considered equivalent.
- The chairman approves the equivalency and signs the form.
- The student then should get the approval of the vice dean of academic affairs.
- The student hands in the form to the university registrar office and gets an official acceptance letter to study the course at the specified university.
- After studying the course, the student should get a formal completion letter and the transcript from the registrar office of the university where the transfer course was completed
- Finally, the student should hand the official completion letter to the MU registrar office.

D. Advising and Career Guidance

The process of advising the CoE students starts with an orientation program specifically designed to inform the new students of the various programs at the college. Lectures are presented by faculty members from each program. CoE has a system for student advising which includes a college committee for advising, where each program is represented by a faculty member.
A system for advising is in place for the EE students. Each student in EE is assigned to an academic advisor, who assists him in getting familiar with the available services, understanding the University and Program policies, explaining the curriculum, and resolving problems or issues they might face. The academic advisor is also responsible for monitoring and guiding the student progress throughout his academic education. Each semester, EE holds a meeting with students where the students and faculty exchange views and opinions regarding curricular, extracurricular and career matters. Recently the advising process has been supplemented with an online monitoring system of the student records and schedule. This system also allows the faculty advisor and department head to check on the student's record and academic activities via the EduGate System. EE students benefit from the CoE annual advising day event through interacting with advisors and faculty members. Also, the main component of EE

program is the internship where our students benefit from visiting industrial cities, communications companies and power stations cities. This procedure helps the students to build a vision about their future career plans and help in their career decisions.

E. Graduation Requirements

To obtain the Bachelor's degree in Electrical Engineering, the student must complete 165 credit hours (29 credit hours from preparatory year are included) and pass the engineering practice after finishing 90 credit hours of his EE program.
The distribution of credit hours is listed in the **Table 1-4**.

Table 1-4: Distribution of EE program credit hours

N	Item	Number of Credit Hours	Percentage (%)
1	University Requirements	12	7.2
2	Preparatory year	29	17.6
3	College Requirements	42	25.5
4	General Courses in the XE program	48	29.1
5	Specialized courses in the XE program	34	20.6
6	Total Credit Hours	165	100

After completing 48 credit hours in the XE program, students are distributed among tracks to study 34 credit hours. For XE graduation requirements, the student has to first complete a total of 56 XE courses (Theoretical courses, Labs and senior designs). To ensure that the student completed the course work, the electronic system (EduGate) is available to both the student and program management for checking. After the student completes the Engineering practice and after obtaining a release form from Deanship of Admission and Registration, he would be eligible for obtaining his Bachelor's degree certificate. **The graduation requirements are:**

1-Complete the preparatory year (29 credit hours)

2-Complete 136 credit hours of college and program requirements

3-Passing the engineering practice

F. Engineering Practice

Engineering Practice is essential part of the curriculum and taken up by the students as per the following guidelines

1. The registration for Engineering Practice starts at the beginning of the third week of second semester and lasts for one week.
2. The student must have attained a total of 90 credit hours including registered credit hours. This restriction is applicable at the time of registration for EP.

The registration steps are:

- The applicant for Engineering Practice program should contact the coordinator of his department to complete the registration form (No. 2).
- Should the student decide to drop the Engineering Practice, he MUST complete form (No. 3), two weeks before the final examination.
- Engineering Practice Unit (EPU) contacts companies and governmental organizations to seek Engineering Practice opportunities.
- EPU provides departments with updated list of Engineering Practice opportunities.
- Department Engineering Practice Coordinator appropriately deputes students to training opportunities.
- Companies provide the university a letter that shows the starting date of the training and the training site, also the name and address of the supervisor.

Role of EPU

- Prepares letter of assignment to be sent to companies
- Collects acceptance letters from training sides.
- Handles a copy of the obtained letter of acceptance to student and Department Engineering Practice coordinator.
- Prepares a letter of training placement and acknowledgement to institutions and evaluation form.
- Arranges a seminar for the accepted Engineering Practice students before the end of the second semester

After the Engineering Practice, students should visit the EP coordinator at the beginning of the spring semester following the period of Engineering Practice to submit his report and schedule his presentation.

EP Coordinator's Responsibility:

- Collects reports from students and get reports from the companies
- Schedules presentations
- Reports grades to department council
- Department Council reports grades to college council.
- College reports the final results to the Deanship of Admission and Registration.

1- Purpose of the engineering practice

Engineers work in various research and development fields. They carry out both planning and managing activities, oversee and coordinate the operation of complex systems, conduct maintenance and perform commercial tasks. Characteristic of these responsibilities is that a synthesis forms between the various disciplines and aspects. This should also be reflected in the engineering practice, in which the student acquires know-how and experience from the work world. The internship is designed not only to familiarize students with specific technologies and work flows, but also to give them

practical insights into various activities and fields of work. An additional aspect involves comprehending the social elements of such work. The student must perceive the operation as a social structure and become familiar with the manager-employee relationship in order to understand their position within the organization and how they can be effective on the job frequently as a supervisor. Generally, the engineering practice can be viewed as part of the student's training and education and an important experience that serves as a building block for the career.

2- Engineering Practice Typical activities include:

- Examining, developing, designing, calculating and testing engineering concepts, machines, components, materials, processes and methods.
- Production development and planning Activities that significantly enhance or expand the university course of study are highly recommended. Examples include:

- Project management: planning, coordinating and monitoring the technical and business aspects of projects
- Technical monitoring of complex equipment and systems.
- Creating complex technical proposals
- Engineering-oriented corporate planning
- Reviewing existing or planned technical systems and products to determine the demand, requirements and impact under the aspects of the environment and society.

These activities are carried out at small-to-medium and large companies and government agencies and organizations. The student should strive to gain experience 6/1/4/R139/1 in a variety of activities and also within different positions in order to become familiar with the various department and corporate cultures. Since most of these activities require a certain learning curve, students are advised to organize practical training that lasts several weeks.

3- Training report

Successful completion of the internship, or the individual aspects, shall be documented as follows: • For the engineering practice, in addition to the product and organization descriptions outlined in section 2, the student should also document the work activities carried out during the training. The latter can be omitted if the student can provide a copy of the technical report that was written for the company that offered the practical training, provided it covers the timeframe of the practical training.

- Certificates (forms), acknowledgements from the company. In addition, the company must provide a stamped separate forms for progress and student performance(6 and 7).
- Confirmation of the training activities occurs once the Engineering practice Unit has received the progress and performance report and reviewed the student's report.

4- Training supervision

At training companies, students are typically supervised by a qualified trainer who ensures they receive proper practical training in accordance with the available opportunities at the company and in line with the internship guidelines. The trainer also provides technical instruction through various discussions with the students. Members from college of engineering staff and engineering practice committee visit the training sites to make sure the students follow the training plan and safety measures.

5- Guidelines for the intern's conduct

Students are not afforded special treatment during their practical training. They can gain the respect and recognition of their supervisors and colleagues by conscientiously observing company regulations and work schedules and exhibiting exemplary operational discipline, an eagerness to learn, diligence, outstanding performance and a willingness to help. Apart from the organizational contexts, engineering technology and the relationship between machine and manual labor, the intern should also acquire an understanding of the human side of the operation and how it impacts the production flows.

6- Vacation, illness, missing days

If the student misses more than three days of the engineering practical training, these days must be made up. This includes days missed because of illness, vacation or other reasons.
Company holidays also count as missed days. Legal holidays are the only exception. If days are missed, the student should seek an extension with the training enterprise in order to complete the affected part of the training as required.

7- Students' safety

The committee assesses the dangers which may happen to the students during their training in the site and make plans to reduce and avoid these dangers.

8- Insurance

Insurance issues are covered under applicable laws of Kingdom of Saudi Arabia.

9- Committee follows up

The committee members visit the sites to have a clear knowledge about the nature of the tasks that students do during the training. The visits to the training sites include give consultation to the students and have notes about the company and the benefits that students gain during their training period

For more details http://www.mu.edu.sa/en/colleges/college-engineering/engineering-practice

G. Senior Design Projects

Senior Design Project is compulsory for the students. It has two parts XX498, XX499. Following are the guidelines

1- Eligibility of senior design project

- GE 306.
- 96 Credit Hours. (After PYP)
- Specialization course in the track.

2- Number of student for each group:

- Minimum two students.
- Maximum five students.
- Could be more than five in some exception cases.

3- Number of group supervisor can take

Two groups for academic year.

4- Report Format

Report must follow consistent format for Senior Design Project Report published by Engineering Faculty (page size, margining, font type, font size, spacing, caption of figure/table…etc.).

5- Final Report submitting for examination:

Two (2) days before the Lab-Exam Week at the 14th week.

6- Exam/presentation Schedule Senior Design Project

The senior design exams are During the Lab-Exam Week, at the 15th week (In coordination with Exam Timetable Committee).

7- Corrected Final Report:

Two (2) weeks after the exam week.

For more details http://www.mu.edu.sa/en/colleges/college-engineering/senior-design-committee