

"To be a pioneer in engineering education, innovative research and sustainable development of the community"





College of Engineering Handbook

King Khalid University, Abha, Kingdom of Saudi Arabia





College of Engineering

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A MESSAGE FROM THE PRESIDENT

Introducing to you, the King Khalid University (KKU), which includes nearly 50 colleges spread in 13 provinces in Asir region, and in it are more than 7,000 working faculty members and employees. The university provides services for more than 72,000 students. King Khalid University is looking forward for the continuous



development and improvement of educational processes and the curricula. It has contacted a number of international agencies, and has held a large number of seminars and conferences that will support the development and improvement of curricula as well as educational and research operations. As a result, the university has achieved advanced leaps in respect of scientific research at the local and global levels, all thanks to Allah. The institution includes a large number of research and scientific centers which work to bring out a lot of relevant researches in all the disciplines of the university, whether health, scientific, humanitarian or educational. The university seeks to achieve the third main goal - which is serving the community). For that, it has made many community partnerships with different sectors. The most pioneer example is holding the community partnership forum recently. In the forum, the university has cooperated with a number of governmental agencies and various private institutions. This comes to prove that the university is an integral part of the society, and the society is an integral part of the university. Praise be to Allah, the university has received in this year, the highest historic budget since its inception. This generous budget is credited to God Almighty, and then to this great country, led by the Custodian of the Two Holy Mosques King Salman bin Abdul Aziz Al Saud, and the Crown Prince, His royal Highness Prince Mohammed bin Naif bin Abdul Aziz, the Deputy Crown Prince, His royal Highness Prince Mohammed bin Salman bin Abdul Aziz, as well as to the continuous support of His Excellency the Governor of Asir region, Prince Faisal Bin Khalid bin Abdul Aziz.

Prof. Falleh R. M. Al-Solamy President of the University

A MESSAGE FROM THE DEAN

It is gratifying that the staff of the College of Engineering approach their institution's vision and goals from their respective fields of specialization. We, teaching staff, technicians, and administrators, work in unison to produce highly qualified graduates who are committed to the ethics of their profession and whose capacity and skill will represent an added value to their prospective institutions. To achieve its goals, the faculty has been adopting the following three major guiding principles and strategies.



First and foremost, the College of Engineering has succeeded in creating a conducive learning environment where knowledge is sought, shared, and developed and where initiative is encouraged and valued among staff and students alike. Indeed, the Faculty of Engineering gives all its students, irrespective of the programs they are enrolled in, the opportunity to develop their professional skills further through various training activities that aim at enhancing their competencies in taking part in job interviews, writing their resumes, and participating in the training programs which seek to broaden their cognitive capacities and refine their specialized and professional competencies.

Second, the Faculty has been engaged in a cyclic review of its teaching curricula because it holds the firm belief that engineering is a fast-changing science and that the work market for engineers requires that they be up-to-date with changes and progress.

Third, the Faculty has been engaged in reinforcing its openness to the outside world. We believe that every judicious interaction the College of Engineering undertakes with other institutions yields mutual benefits for both parties.

Dr. Mohammed Khaloofah Mola Al Mesfer

Dean, College of Engineering

INTRODUCTION

King Khalid University (KKU) is considered one of the best educational institutions in the Kingdom of Saudi Arabia. Since its establishment in 1998 AD (1419 H), it is offering the best higher education programs and many of the finest leads in Saudi Arabia had been graduated from KKU, and they have contributed in the development of the country.

UNIVERSITY VISION:

King Khalid University in the top 200 universities worldwide by 2030.

UNIVERSITY MISSION:

To provide an academic environment conducive to teaching, learning, scientific research and social contribution through optimal utilization of our resources.

UNIVERSITY GOALS

- To enhance teaching and learning quality.
- To provide a facilitative academic environment.
- To promote effective partnership with the community.
- To support and promote scientific research.
- To improve graduate studies.
- To develop institutional performance.
- To increase financial resources.

UNIVERSITY VALUES

- Honesty
- Commitment
- Respect
- Excellence
- Innovation
- Transparency

CODE OF ETHICS

King Khalid University (KKU) is committed, in all its policies, decisions and dealings with ethical framework. It is also governed by a set of values derived from the teachings of our Islamic religion which have been approached by this country's leaders. Moreover, these values are consistent with the Ministry of Education's policies and are in harmony with the pursuit of King Khalid University into a unique excellent university. So, the university's concerns are not confined only to the educational, research and community service activities, but it ensures that it is an academic institution which offers these three functions under a framework of ethical values. There is no doubt that the multifunctionality of the university and the increasing and complexity of the undertaken tasks, as well as the increase in internal and external relationships, have imposed the need for an ethical framework that instructs and directs the behavior of its employees, especially at varying points of view about a particular behavior pattern. Here ethical framework comes to set a number of specific ethical trends, standards, responsibilities, controls and caveats, that are agreed upon and which govern the practices within the university community. However, the ethical framework is so different from the terms, rules or regulations, in that it is a declared agreement among a group of sides on framework of ethical values and specific set of behavior rules in various situations. For that, it represents a compelling ethical value for all.

Student Guidebook:

http://dar.kku.edu.sa/sites/dar.kku.edu.sa/files/general_files/files/Daleel_Altaleb.compres_sed.pdf

ABOUT THE UNIVERSITY

The Custodian of the Two Holy Mosques King Abdullah bin Abdul Aziz God's mercy be upon him had announced (When he was the crown prince) on Tuesday, 01/09/1419 H, the establishment of King Khalid University by integrating the branches of University of Imam Muhammad bin Saud Islamic University and King Saud University in Abha. Then he issued Royal Decree No. 7/78/M on 11/3/1419 H to complete the necessary legal procedures. Accordingly, the first budget of the University issued on 14/9/1419 H within the general budget of the kingdom to include King Khalid University within the Saudi universities system.

LOCATION AND CLIMATE

The University is located in Aseer province in the south-western part of the Kingdom of Saudi Arabia. Aseer province an area of about 81,000 sq. km, live by more than 2.881 million people deployed in seventy-eight governorate and center. The area is subject to rain, sometimes heavy; some of its neighboring villages and rural areas are sometimes the witnesses of flash-floods during the winter. The topography of the area is undulating and the elevation from the mean sea level is 2130 m. The average annual rainfall is 355 mm. The precipitation is mainly occurring between June and October every year. Average minimum and maximum temperatures are of 19.3° and 29.70 °C, respectively. Jabal Al-Sooda, one of the most famous mountains in the area, located in the north-western part of the university, 2982 m high, and has also a rich flora.

Academic Colleges and Programs

King Khalid University began after its inception in 1419H by four colleges in Abha, a College of Sharia and Fundamentals of Religion, College of Arabic Language and Social and Administrative Sciences, College of Medicine, and College of Education. Then the university has seen a significant expansion of colleges to include all the provinces of Aseer province. Then, it has restructuring of existing colleges and the established a number of new colleges including women's colleges in Aseer province, in attrition to the colleges of teachers in Abha and Bisha as well as the colleges of health sciences. In 1435 H, the Royal Order to transfer Bisha branch to University of Bisha, which includes all colleges in the provinces of Bisha, Al-Namas, Balgarn and Tathlith. https://www.kku.edu.sa/en/

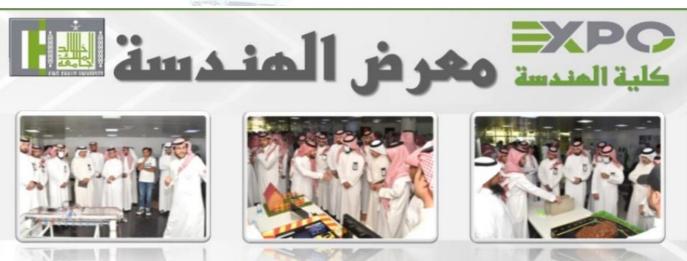
The University's Faculties

As known, the King Khalid University began with 4 faculties in Abha, then the existing faculties were restructured, new faculties were introduced and the females' faculties in Aseer, the teachers' faculties in Abha and Bisha and the faculties of Health Sciences were annexed to the University. A state-of-the-art modern campus is functional at University City in Al Fara.









COLLEGE OF ENGINEERING

http://engineering.kku.edu.sa/en/

About the College

The Royal Decree Order No. (7/B/4096) was issued on 14/03/1420 H to establish the College of Engineering. The establishment of this college was decided to keep pace with the renaissance of the Kingdom in many areas as the engineering is a profession that employs science to serve the welfare of society as well as to follow the scientific progress and technology in the twenty-first century to meet the engineering labour market needs in the southern and south-western regions of the kingdom. The college started its activities and functions on the academic year 1422/1423 H where 110 students were accepted in the first semester, they were distributed in the departments of Mechanical Engineering and Industrial Engineering.

Awareness of the university to keep up with the prospects of the scientific and technical development and the contribution of the university in filling manpower requirements in the fields of engineering with qualified engineering staff according to the development plans of the Kingdom necessitated the establishment of the departments of Electrical Engineering, Chemical Engineering, Civil Engineering departments as well as the department of Architecture and Planning.

COLLEGE VISION

To be a pioneer in engineering education, innovative research and sustainable development of the community.

COLLEGE MISSION

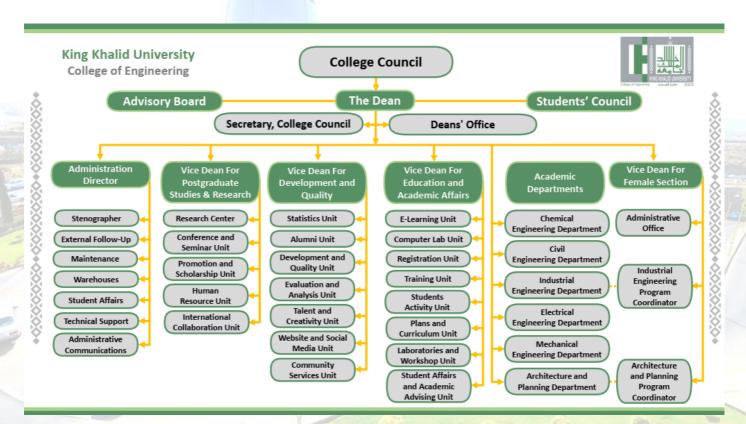
To achieve academic excellence by providing adequate teaching-learning resources, motivating scientific research, and bring forth qualified engineers to serve the community.

COLLEGE OBJECTIVES

- 1. Academic excellence through development of curriculum at par with national and international standards.
- 2. Collaboration with colleges / universities for knowledge sharing and benchmarking.
- 3. Support innovative research to contribute to achieving the vision of King Khalid University.
- 4. Interaction with industries to produce trained and skilled graduates, solve real-life problems and obtain feedback for continuous improvement.
- 5. Contribute to the sustainable development of the community by continuing education, training and consultancy services.
- 6. Improvement in financial resources.

https://engineering.kku.edu.sa/en/content/240

Administrative Flow Chart: College of Engineering



The College of Engineering Strategic Themes



https://engineering.kku.edu.sa/en/content/1048

STUDENTS ADMISSION

Students applying for admission to the program are centrally admitted by the Deanship of Admission and Registration, King Khalid University. The new applicants must common the first year before admitting to the program-specific courses from the second year onwards. The University Council decides the number of students to be admitted for each academic year according to the recommendation of the council of the College of Engineering. The deanship of admissions and registration implements all policies in liaison with the College of Engineering. Admission takes place twice a year at the beginning of 1st Semester (Fall Term) and 2nd Semester (Spring Term).

Requirements of admission in Bachelors' Programs are published on the weblink https://dar.kku.edu.sa/ar/node and summarized as follows:

- Secondary school certificate (Natural Sciences) or equivalent from inside or outside the Kingdom of Saudi Arabia.
- The score of the "Entrance Examination" is based on an aptitude test and a subject test. The test is conducted by the National Centre for Assessment in Higher Education Kingdom of Saudi Arabia (https://etec.gov.sa/en/About/Centers/Pages/qiyas.aspx). It consists of two sections. The first section is General Aptitude Test. This test measures students' analytical and deductive skills. It focuses on testing the student's capacity for learning in general regardless of any specific skill in a certain subject or topic. The other section is called "Achievement Test for Science Colleges". This section covers the general and key concepts in Physics, Chemistry, Mathematics, and English covered in the courses of the three years of general secondary school.
- Character certificate from secondary school.
- Appearance in the interviews required by the university council.

- Physical fitness certificate.
- Permission from the employer (For employed candidates).
- No record of suspension/rustication from King Khalid University (KKU) or any other university.

All the above conditions are considered for admission fulfilling by the applicants. A merit list of all applicants is prepared by the Deanship of Admission and Registration on the basis of the following weights to the three types of scores:

- Secondary school certificate score (30%).
- Aptitude test score (30%).
- Achievement test score (40%).

Applicants are offered admissions to a college and program of their preferences based on a merit list subjected to the availability of seats. Once seats are filled in a particular college/program, admission to that particular college/program is closed and the remaining students have to make their choices from other colleges.

Common First-Year Aims

- To improve the students' English language proficiency because this is the principal language of instruction in the College of Engineering.
- To ensure the students' abilities to communicate effectively.
- To strengthen the students' knowledge of mathematical and analytical techniques and calculusbased physics.
- To develop the basic computer skills of the students.

The duration of the common first year is for one academic year, divided into two semesters, as well as an optional summer semester. The common first year represents the first two semesters of all Engineering programs. The complete program comprises ten levels covering five academic years. The courses offered in the common first year include courses related to English, Maths and Basic Science, Computer Science, and Islamic Culture. An orientation session is held during the second semester of the common first year for students to familiarize themselves with engineering education.

The "Education and Examination Regulations" regulates the admission procedures, and it is available in the Arabic language on the KKU website. The URL for admission regulations is given in:

http://dar.kku.edu.sa/sites/dar.kku.edu.sa/files/general files/files/laeha.pdf

On successful completion of the 1st year program, the performance of students seeking admission to the Bachelor of Science in concern program is evaluated based on the GPA in the 1st year program. A merit list of these students is prepared and the department accepts the allocated number of students from the top of the list.

The admission procedures are regulated by the "Education and Examination Regulations" available at the following URL (Note it is a common set of regulations for all colleges):

http://dar.kku.edu.sa/sites/dar.kku.edu.sa/files/general_files/files/Lae7ah.pdf

Examination and Grading System

Students are evaluated mainly through exams, online quizzes, in-class quizzes, assignments, oral presentations, projects, etc. The courses which involve laboratory practical also include their performance in laboratory experiments, written reports, laboratory exercises, and the laboratory final examination. The assessment methods are designed to measure the student's level of achievement in course outcomes, which are related to the program educational objectives and program key performance indicators. Therefore, students' performance in the courses reflects the level of achievement of program objectives.

Success in a course is usually based on the combination of grades awarded for the semester work and the final examination.

- Each course will have a total of 100 points.
- The grade for the semester work is 60% of the total marks and the remaining 40% for the grading for the final examination.
- The pass mark in each course is 60%.
- The grading system at KKU is shown in Table 1 and Table 2 shows an example for calculating the GPA.

Table 1: The grading system in King Khalid University

Letter Grade	Grade Percent (%)	Description	Grade Points Per Credit Hr. (on scale of 4)	Grade Points Per Credit Hr. (on scale of 5)
A+	95-100	Excellent	4.00	5.00
A	90-94		3.75	4.75
B+	85-89	Very Good	3.50	4.50
В	80-84		3.00	4.00
C+	75-79	Good	2.50	3.50
C	70-74	1000	2.00	3.00
D+	65-69	Satisfied	1.50	2.50
D	60-64		1.00	2.00
F (FAIL)	<60	Failure	0.00	1.00

Table 2: Example calculation of GPA

Course	Credit Hrs. (CH)	Marks (Out of 100)	Letter Grade	Grade point per credit hours (GP)	Total Grade Points (CH) X (GP)
CE 1	3	91	A	4.75	14.25
CE 2	2	96	A+	5.00	10.00
CE 3	4	80	В	4.00	16.00
CE 4	3	87	B+	4.50	13.50
CE 5	2	71	C	3.00	6.00
CE 6	4 4 /	86	B+	4.50	18.00
CE 7	2	90	A	4.75	9.50
Total	20		- James Land		87.25
Compu	Computed GPA = Total Grade Points/ Total Credit Hours = 87.25/20 = 4.36				

CGPA Scale

Range of CGPA	Description
> 4.50	Excellent
3.75 - 4.50	Very good
2.75 - 3.75	Good
2.00 - 2.75	Pass
< 2.00	Fail

Monitoring the Progress of Students

There are three major processes to monitor students' progress across the curriculum:

- (1) Monitoring of progress and performance by the Registrar's Office
- (2) Monitoring by the academic advisor allotted to the student, and
- (3) Student self-monitoring.

The procedure for monitoring students' progress across the curriculum is carried out at the end of each academic year, the Deanship for Registration analyzes through digital Registration Application 'Academia', the GPA, cumulative percentage of credits approved, and the number of years in the program. This is done for all students at the university, including freshmen. The purpose of this specific assessment is to identify students whose performance is below minimum requirements. Once the week students are identified, the information is sent to the student. A document including a list of such students is sent to the department chair at the beginning of each semester.

There is an academic advisor within the formal departmental administrative structure. The academic advisor monitors the students' progress and handles exceptions under the direct supervision of the Department Chair, and makes sure that the administrative procedures and university regulations are followed. A student can come when desired to the academic advisor or the department head for an evaluation of his progress. In turn, the department chair meets with the academic advisor who contacts all students who need advising. The student's category is shown in different colors on the Academic Advisor's login to draw his/her attention.

Students can monitor themselves. The computer-based registration system and Academia mobile app are programmed with the curricular requirements of each academic program including built-in checks for course requisites. Currently, students access this system through the internet.

Registration Procedure and Pre-Requisite

During the time of registration process as per the university academic calendar, all students are registered automatically through the University computerized registration system, under the aegis of Deanship of Admission and Registration, following a model study plan set by the concern department. This plan includes all prerequisites and maximum and minimum acceptable number of credit hours per semester. The system allows the student to make changes and adjustments within the preset rules under the guidance of the academic supervisor. It is during the first week of classes that students are allowed to make changes, such as add and drop the course (s). Afterwards, only course withdrawals are allowed provided they are done five weeks before the final examination period, and with the approval of the department steering committee.

At the time of registration, the Academia system allows the students to be registered only in courses for which the requisites have been satisfied and which are in their course curriculum. Through the system, students can monitor their progress through the required courses for their degree. It is important to point out that there is a final check that culminates the monitoring of the students before graduation, where the deanship for Registration certifies that the graduating student has completed all the requirements.

Attendance

Believing that regular course attendance is necessary for academic success, KKU requires that students should attend at least 75% of the lectures and practical lessons. Students who have valid medical or other

valid excuses are being subjected to given excuses on dates. The received excuse is studied closely and discussed in the meeting, the decision is taken, and excuses are given to the students or rejected. Students failing to meet this requirement in any of the courses will be prohibited from appearing in the final examination of that course and will have 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 department and college council.

Academic Probation

At the beginning of each term, the Deanship of Admission and Registration provides each student with his full academic advising record showing the results of all the courses that have been studied from the study plan as well as the number of academic warnings that have been issued. All students at KKU are required to maintain a GPA 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 in 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 to those who can attain a 2.0 GPA if they study 12 credit hours.

Drop Rules

- Any student who is on probation and does not satisfy the conditions of that probation may be dropped from the College of Engineering.
- The student is considered to be a discontinuing one if he withdraws from a semester or fails to register, whether with or without a valid reason. 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 at King Khalid University. The student's enrollment will be terminated if he exceeds these limits.

- Any student who loses his status as a student at KKU due to the condition mentioned in item (1) above is entitled to appeal to be readmitted to KKU based on the following conditions:
- The student should satisfy all the admission conditions announced at readmission.
- The student should keep the same university identification number and record he had before discontinuing his study.
- The student's appeal should be approved by his college council. The Council has the right to ask the student to retake/repeat any course that he has passed.
- If the student's discontinuity exceeds four semesters, he can apply for admission as a fresh one, without looking into his previous record, provided his discontinuity was not due to misconduct.

Theory & Laboratory Session

For the theory courses, one lecture hour of 50 minutes duration per week for a semester earns one credit, whereas for laboratory, two practical hours (with duration of 100 minutes) per week earns one credit.

Students' Performance

Students' performance in the Continuous Assessment Tests (CAT), Term End Final Examinations, Assignments, Quizzes and Laboratory Activities are considered for course level outcome assessments.

Students' Work - Collection of Sample Materials

One of the key components of the program assessment tool is the students' work which shows the performance of the students in a semester. Graded examination papers, project reports, and written material (assignments) submitted by students form the sample student portfolio. They are collected each semester.

Project Work

The project work is the most important tool used for the assessment of the outcomes.

- Project work is carried out under the supervision of a faculty member in the respective specialty.
- The work in the graduation project extends over two semester (9 and 10 semester), and the student is granted a continued grade by the end of first semester after the project registration. By the end of second semester, he is granted his final grade after presenting and submitting the project report to faculty committee.
- In case the student failed in the graduation final project, given a chance for one more semester and will be eligible to present and submit the project to the faculty committee by the end of that semester.
- Students' performance in graduation project is assessed by the supervisor and the evaluation committee.

Quality Control Meeting

Quality Control Meetings bring together the members of faculty, Program Chair, coordinator to review the student work samples and obtain feedback on courses from the students and assess the student outcomes. The meeting results in making recommendations for improvement the courses, curriculum, teaching methods and interaction with the students.

Students' Feedback Survey

The student feedback is collected at the end of each semester for the courses taken as a part of the program. The data are collected and synthesized by the respective faculty and discussed in the Quality Control

Meetings. The Quality Control Meetings collectively review the input; make recommendations for improvements in curriculum, course or program. Student feedback is used as an important tool in the assessment process. The student feedback instrument uses a '5' point scale with following the categories:

5 – Strongly Agree, 4 – Agree, 3 – No Opinion, 2 – Disagree, 1 – Strongly Disagree.

Transfer Students and Transfer Courses

Transfer can be done through three different channels as follows:

Transfer from Other Universities

- A student may be accepted to transfer from outside KKU if he has studied at a recognized university or college and has not been suspended from that institution based on disciplinary or academic reasons. The transferring applicant must not have spent more than 6 terms at the university from where he is transferring, and he must study at least 60% of the required courses at KKU. The applicant is required to get approval from the Dean of the College and the Chair of the program he/she is transferring to. These requirements and process for accepting transfer students are governed by the Article #42 of the policy on regulations of study and examinations available in the Arabic language at:
 - http://dar.kku.edu.sa/sites/dar.kku.edu.sa/files/general files/files/laeha.pdf
- Credits for courses taken by the students outside the university (KKU) may be transferred provided the college council, based on the recommendations of the concerned department offering the equivalent courses, approves the transfer of credits. The equivalent courses are documented in the academic record of the student being transferred.
- The transferred student should submit an application for getting equivalency credits to the Deanship of Admission and Registration along with the original academic record and certified detailed

description of the courses taken by the student outside KKU. The Deanship of Admission and Registration refers the application to the concerned department for evaluation of equivalency of credits. This evaluation is performed by the academic advisor in coordination with the chairman of the department on a case-by-case basis. The department, after getting the approval of the college council on the equivalency evaluations, sends the recommendations to the Deanship of Admission and Registration. These requirements and processes for courses equivalency and transfer credits are governed by Article #43 of the Policy on Regulations of Study and Examinations available in: http://dar.kku.edu.sa/sites/dar.kku.edu.sa/files/general_files/files/laeha.pdf

The student should have a minimum cumulative GPA of 2.0 (out of 5.0) or equivalent from a recognized college. This is complemented by other conditions developed by the college council every year. 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's office sends all applications that satisfy the college requirements to the college's Vice Dean of academic affairs office. The Vice Dean of the academic affairs office prepares the applicants' information for the college Dean. The college Dean evaluates the presented information and makes decisions on transfer applications.
- The maximum allowable percentage of credit hours that could be transferred by students from other universities is 40% of the total credit hours in the curriculum.

Students who want to study some courses in other universities must do the following:

- Fill in a course transfer form and submit it to the Program Chair (PC).
- The PC consults the faculty who teaches the course.

- The faculty reviews the syllabus of the transfer course in the light of the departmental course syllabus checking the equivalency of the syllabus and credits.
- The PC approves the equivalency and signs the form.
- The student should then get the approval of the Vice Dean for academic affairs.
- The student hands in the form to the university registrar's office and gets an official acceptance letter to study the course at the specified university.
- After studying the course, the student should get an official completion letter and the transcript from the registrar's office of the university where the transfer course was completed.

Finally, the student should hand over the official completion letter to the KKU registrar's office.

Transfer of students within the University

Students can apply for transfer only after studying for at least one semester in the college they are registered in (summer semester is not counted). The student must satisfy the college's admission conditions, which are announced every year. The procedure for evaluating transfer applications is as follows:

- Fill in the transfer form (Inter-College Transfer Form).
- Submit the form to the college Vice Dean of academic affairs.
- Upon receiving all applications, a designated college-based committee (which consists of the Vice Dean for academic affairs and the chairs of all departments) meets and recommends transfer applications. If the number of eligible applicants is high, students with the highest cumulative GPA are tentatively accepted.
- The tentative transfer decisions are then forwarded to the Dean for final approval.

The academic committee of each department reviews transcripts of all tentatively accepted transfers of students and decides on the equivalency of credits based on an equivalency table of credits approved by the college council.

Transfer to a department within the College

The procedure for evaluating transfer applications between departments within the college is as follows:

- Fill in the inter-departmental transfer form.
- Get the recommendation of the chair of the department to be transferred.
- Submit the form to the college's Vice Dean of academic affairs.
- Upon receiving all applications, a designated college-based committee (which consists of the Vice Dean and the chair, and representatives of all departments) meets and decides tentatively on transfer applications. If the number of eligible applicants is high, students with the highest cumulative GPA are tentatively accepted.
- The tentative transfer decisions are then forwarded to the Dean for final approval.

The academic committee of each department reviews transcripts of all tentatively accepted transfer students and decides on the equivalency of credits based on equivalency tables of credits approved by the college council.

Transfer Credits

The transfer of credits will occur in three particular situations; current students wanting to take courses at other universities, for example, as part of an exchange program, summer visiting semester, or transfer students wanting to transfer credit for courses taken at their original university. A student seeking to take

courses in other institutions must obtain authorization from the department that offers the course (certifying that the course in that institution is equivalent). Then, this must be authorized by the chair of the department where the student is registered, who by doing so certifies that the desired course is in the students' required curriculum.

Program Chair

Program Chair is responsible for advising the students on program related issues. He chairs the Quality Control meetings and also guides the students in getting industrial internship, projects and assignments in industry.

Advising Students and Career Guidance

Faculty Advisor

The College of Engineering employs a mandatory advising system for each student, under the supervision of Advising Unit at the College level. All students are advised by the department staff members. The students are divided into groups and assigned to individual faculty in the department. They are called academic advisors and they advise the students every semester till the last semester of the program. The student's advisors advise the students on curricular matters as well as ensure appropriate course registration, summer training, and career goals. The student can contact the advisor through a communication request which is available on academia platform.

In addition to academic advising, each faculty member will have 10 office hours to assist the students with academic supervision and scientific assistance. The students are categorized based on their GPA and the guidance will be given by the advisor accordingly. Following features for Advising Students and Career Guidance are:

- Forming committees' for student's orientation
- Assign an academic supervisor for each student
- Announce 10 office hours for each faculty member to be part of the academic supervision and scientific help.
- Every student has mentor and buddy to assist throughout the program
- Advising students on course selection and registration
- Monitoring academic performance
- Compliance with graduation requirements
- Offering assistance to students who face academic difficulties Faculty member help and support students solving problems
- Faculty member advice students planning their career
- Guiding the students to select appropriate career direction
- Advising to prepare CV, prepare for interviews, participation if career fairs
- Giving recommendation letters
- Giving advise on the professional trainings suitable for the career of students' choosing
- The availability of full information about the department and its members, and their contact information.
- The availability of full information about study plan and the courses taught.

Students are assigned academic advisors to provide advice on matters related to curriculum, professional practice and life on campus. Students' progress is monitored on an ongoing basis to assist in course selection, projects, industry assignments, and placement. The scope of work of faculty advisor include academic guidance, monitoring student's grades and progress across the semesters, advice in personal problems, providing mentorship for career development and placement opportunities, etc.

The Various forms required to give any request or application by a student to the advisor are available on the website of the College of Engineering at the link https://engineering.kku.edu.sa/en/content/947.

Graduation Requirements

All graduation requirements are defined clearly in the student transcript to award the degree. With the use of the online registration system, the Deanship of Admissions and Registration and the respective departments are equally responsible for ensuring that graduating students have completed all graduation requirements. A student must earn the credit hours required for the award of the degree certificate. There are also particular requirements for the competencies that students must possess by the time they graduate.

The student outcomes define the competency standards that must be met by graduates.

Some of the rules concerning graduation requirements are discussed below.

- Student graduates after completing all graduation requirements according to the curriculum plan provided that the cumulative GPA is not less than 2.0.
- If the student has passed the required courses, but his/her cumulative GPA is low, the College Council, based on the recommendations of the council of the department concerned, is entitled to specify the appropriate courses that the student must complete to improve his or/her GPA.

Time limit for graduation

A student is expected to carry full time study of five years to complete the degree requirements. However, the maximum time allowed to complete the degree requirements is ten (10) years i.e. 20 terms. In rare cases, a student may be allowed to extend the time due to medical reasons.

Program Learning Outcomes (Satisfying NQF Domains)

Domain	PLO	Outcomes		
	code			
Knowled	ge and un	derstanding		
K	k1	Broad in-depth integrated body of knowledge and comprehension of the underlying theories, principles, and concepts in mechanical engineering and related discipline		
	k2	In-depth knowledge and comprehension of processes, materials, techniques, practices, conventions, and/or terminology in mechanical engineering		
	k3	A broad range of specialized knowledge and understanding informed by current developments in mechanical engineering, profession, and related discipline		
	k4	Knowledge and comprehension of research and inquiry methodologies		
Skills				
S	Skills (Co	gnitive skills)		
	S1	Apply integrated theories, principles, and concepts in various contexts, related to mechanical engineering, profession, and related discipline		
and the same of th	S2	Solve problems in various complex contexts in in mechanical engineering and related discipline		
	s3	Use critical thinking and develop creative solutions to current issues and problems, in various complex contexts, in mechanical engineering, profession, and related discipline		
	Skills (Pr	ractical and Physical skills)		
	S4	Use and adapt advanced processes, techniques, tools, instruments, and/or materials in dealing with various complex practical activities		
	s5	Carry out various complex practical tasks and procedures related to mechanical engineering, professional practice, or related discipline		
	Skills (Communication and ICT skills)			

	s6	Communicate effectively to demonstrate theoretical knowledge comprehension	
		and specialized transfer of knowledge, skills, and complex ideas to a variety of	
		audiences	
	s7	Select, use, and adapt various standard and specialized digital technological and	
	ICT tools and applications to process and analyze data and information to sup		
		and enhance research and/or projects	
		ny and Responsibility	
V	Values	s and Ethics	
	V1	Demonstrate commitment to professional and academic values, standards, and ethical codes of conduct, and represent responsible citizenship and coexistence with others	
	Auton	omy and Responsibility	
	V2	Effectively plan for and achieve academic and/or professional self-development, assess own learning and performance, and autonomously make decisions regarding self-development and/or tasks based on convincing evidences.	
	v3	Collaborate responsibly and constructively on leading diverse teams to perform a wide range of tasks while playing a major role in planning and evaluating joint work	

(NQF) NATIONAL QUALIFICATIONS FRAMEWORK

Student Outcomes (SOs) / Program Learning Outcomes (PLOs) Mapping

ABE T SO#	ABET SO Statement	Mappe d NCAA A PLO #	Mapped NCAAA PLO Statement
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	S1	Apply integrated theories, principles, and concepts in various contexts, related to a discipline, profession, or field of work
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors		Solve problems in various complex contexts in one or more disciplines or fields of work
			Use critical thinking and develop creative solutions to current issues and problems, in various complex contexts, in a discipline, profession or field of work
3	an ability to communicate effectively with a range of audiences	s6	Communicate effectively to demonstrate theoretical knowledge comprehension and specialized transfer of knowledge, skills, and complex ideas to a variety of audiences
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must	V1	Demonstrate commitment to professional and academic values, standards, and ethical codes of conduct, and represent responsible citizenship and coexistence with others

5	consider the impact of engineering solutions in global, economic, environmental, and societal contexts an ability to function effectively on a team whose members together provide leadership, create a	v2	Effectively plan for and achieve academic and/or professional self-development, assess own learning and performance, and autonomously
	collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	2	make decisions regarding self-development and/or tasks based on convincing evidences
		v3	Collaborate responsibly and constructively on leading diverse teams to perform a wide range of tasks while playing a major role in planning and evaluating joint work
appropriate ex analyze and int	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw	S4	Use and adapt advanced processes, techniques, tools, instruments, and/or materials in dealing with various complex practical activities
	conclusions	s 5	Carry out various complex practical tasks and procedures related to a discipline, professional practice, or field of work
		S 7	Select, use, and adapt various standard and specialized digital technological and ICT tools and applications to process and analyze data and information to support and enhance research and/or projects

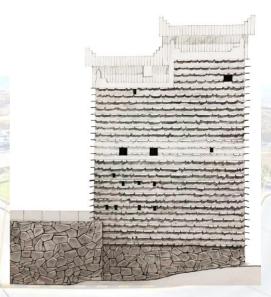
7	an ability to acquire and apply new knowledge as needed, using appropriate learning strategies		Broad in-depth integrated body of knowledge and comprehension of the underlying theories, principles, and concepts in mechanical engineering and related discipline
		k2	In-depth knowledge and comprehension of processes, materials, techniques, practices, conventions, and/or terminology in mechanical engineering
		k3	A broad range of specialized knowledge and understanding informed by current developments in mechanical engineering, profession, and related discipline
		k4	Knowledge and comprehension of research and inquiry methodologies
and and		s3	Use critical thinking and develop creative solutions to current issues and problems, in various complex contexts, in a discipline, profession or field of work

(K) Knowledge and understanding; (S) Skills; (V) Values, Autonomy and Responsibility (ABET) Accrediting Board for Engineering and Technology (NCAAA) National Commission for Academic Accreditation and Assessment



Architecture and Planning Program Description

The faculty of engineering started with six departments: Architecture and Planning, Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemical Engineering, and Industrial Engineering. The authorized body i.e. MoHE/9683 dated 05/08/1426 (private institutions and Council of Higher Education for public institutions) has approved all aforesaid programs. Architecture and planning department received the first student group in the 1st Semester of 2019 and it is predicted to be graduated in the summer of 2023. Architecture is the science and art of organization and design of spaces within the buildings to meet the materialistic and spiritual, psychological, and social needs of the human, make the best use of the space by using materials and technology available and meet all the different requirements and necessities of life. Architecture is the area where science meets art to design buildings that suit the conditions of the surrounding environment and meet the needs of the community and put them in technical and aesthetic frameworks and forms that lead to human comfort mixed with elements of beauty and creativity.



Sketch by student: Abdullah Saeed Al-Qahtani 2nd Semester 1441 Freehand drawing course – Asir architectural style

Architecture and Planning Program Vision

Leadership locally, regionally, and globally in building, educating, and developing mental and practical skills in the field of architecture and planning in particular, and urbanism in general, and preparing a pioneering and distinguished urban intellectual school with academic outputs that contribute to urban development, community service, and competition in the local market, and by adopting applications Sustainable development to achieve the rooting of the urban and cultural heritage.

Architecture and Planning Program Mission

The application and development of architectural education and professional practice to contribute to creating an efficient, quality, and effective construction that takes into account all dimensions (cultural, environmental, economic, social, political, and religious) to raise the environmental, urban, and urban level while keeping pace with contemporary technologies. In addition to the dissemination and application of knowledge in the aspects of urbanization, represented by the provision of pioneering and international research that achieves the current aspirations of society and meets the needs of future generations, and continuous preparation for the development of cadres and the opening of channels of continuing education.

Program Educational Objectives (PEOs)

The Department of Architecture and Planning seeks to achieve its vision and mission by working hard to get several goals through three main pillars:

The first pillar: education

- Providing the optimum educational environment to prepare a competent graduate who possesses knowledge and understanding, and has practical and applied skills, in keeping with contemporary technologies, meeting the needs of the labor market, and achieving the most important points in this aspect through:
- Qualifying graduates with high scientific and professional competencies that fit the needs of the
 local and regional labor market, who can provide innovative design solutions based on scientific
 theories, and benefit from the experiences of creative architects, experienced practitioners, and
 scientific research and specialized programs.
- Enhancing the creative and logical sense and its reflection on the design outputs of the designed projects.
- Good understanding of the concepts of preserving culture, heritage, and urban identity.
- Absorbing and keeping pace with the latest developments in the field of architecture and planning, and using the latest technologies.
- Achieving leadership in teaching various axes in the field of architectural design, urban planning, sustainability, project management, and real estate development.
- Building the student's thinking and researcher personality, and emphasizing the deepening of the methodology of creative, innovative, and scientific thinking.
- Keeping pace with academic development, through periodic evaluation of the study plan, and updating it in line with global changes, issues, and trends in architecture and planning.

The second axis: research

• Providing support and supervision of relevant scientific research to develop the field of urbanization and effectively serve the built environment.

- Supporting and developing relevant fields of science locally and globally, by supporting faculty members and researchers to publish their scientific productions through publishing houses and specialized international conferences.
- Strengthening cooperation links with similar colleges in other universities and local and international research centers to develop scientific disciplines related to the college, and support and support scientific, research, and academic agreements
- Providing scientific, research, and advisory support to all sectors and public and private stakeholders to develop the environment and society and preserve the heritage and identity of the Asir region, the Kingdom, and the Islamic nation.

The third axis: the community

- Community contribution in providing consulting services in the field of architecture and planning, through (House of Expertise).
- Integrating the concept of the cultural heritage of the environment and society into the educational process to benefit from the place and activate the accumulated experiences of previous generations, and benefit from this in the design process.
- Participation and taking responsibility for raising awareness and educating the community, through holding and sponsoring lectures, seminars, conferences, exhibitions, and specialized courses, in addition to activating individual and collective initiatives and volunteer work for the community.
- Integrating the educational process with society to achieve the role of relevant sciences in the construction and development of the surrounding environment to advance development at all local and global levels.



Designed by student: Mohammad Al-Shahrany 2nd Semester 1443 Design Studio 6 – Urban planning district in Abha – King Fahd road

Architecture & Planning Department

Level 1			
Course Code	Course Title	Credit Hours	Pre-requisites
011-ENG-6	Intensive English Program -1	6	
201-ARAB-2	Language Skills	2	
110-ARC-6	Visual Communication-1	6	
	Total credit hours	14	

Level 3			
Course Code	Course Title	Credit Hours	Pre-requisites
111-ICL-2	The Entrance to the Islamic culture	2	
202-ARAB-2	Islamic culture -2	2	
118-PHYS-4	Physics for Architecture	4	**
120-ARC-6	Visual Communication-2	6	110-ARC-6
	Total credit hours	14	

Level 5			
Course Code	Course Title	Credit Hours	Pre-requisites
212-CE-4	Introduction to Geo-Sciences	4	
213-ARC-5	Principles of Architectural Design	5	
221-ARC-4	Islamic Architecture	4	
228-CE-5	Structural Design -1	5	
	Total credit hours	18	

Level 7			
Course Code	Course Title	Credit Hours	Pre-requisites
114-ICL-2	Islamic culture -4	2	
312-ARC-3	Computer Applications in Architecture -2	3	222-ARC-3
311-ARC-5	Regional and Urban Planning	5	7.77
310-ARC-7	Architectural Design - 3	7	220-ARC-7
	Total credit hours	17	

Level 9			
Course Code	Course Title	Credit Hours	Pre-requisites
323-ARC-3	Construction Technology	3	
322-GE-3	Design Thinking	3	
313-ARC-3	Building Codes and Specifications	3	144
320-ARC-7	Architectural Design - 4	7	310-ARC-7
	Total credit hours	16	

Level 11			
Course Code	Course Title	Credit Hours	Pre-requisites
413-ARC-3	National Architectural Heritage -Asir Region	3	
415-ARC-5	Interior Design	5	**
412-ARC-4	Construction Drawings - 1	4	**
428-ARC-5	Building Systems and Technologies	5	310-ARC-7
	Total credit hours	17	

Level 13			
Course Code	Course Title	Credit Hours	Pre-requisites
511-GE-3	Entrepreneurship and Venture Engineering	3	
510-ARC-7	Architectural Design - 7	7	420-ARC-7
	Total credit hours	10	

Level 15			
Course Code	Course Title	Credit Hours	Pre-requisites
520-ARC-7	Architectural Design - 8 (Graduation Project)	7	511-ARC-5, 510-ARC- 7
	Total credit hours	7	

Level 2			
Course Code	Course Title	Credit Hours	Pre-requisites
012-ENG-6	Intensive English Program -2	6	011-ENG-6
118-MATH-4	Math for Architecture	3	
121-ARC-3	Design Sketching	3	
122-ARC-3	Freehand Drawing	3	2
	Total credit hours	15	

Level 4			
Course Code	Course Title	Credit Hours	Pre-requisite
112-ICL-2	Islamic culture -2	2	
221-GE-3	Creativity and Innovation	3	
211-ARC-5	History of Architecture	5	
210-ARC-7	Architectural Design - 1	7	120-ARC-6
	Total credit hours	17	

Level 6			
Course Code	Course Title	Credit Hours	Pre-requisite
113-ICL-2	Islamic culture -3	2	
223-ARC-4	Building Materials & Construction Principles	4	
222-ARC-3	Computer Applications in Architecture -1	3	
220-ARC-7	Architectural Design - 2	7	210-ARC-7
	Total credit hours	16	

Level 8			
Course Code	Course Title	Credit Hours	Pre-requisites
324-ARC-4	Environmental Control System	4	
322-ARC-5	Landscape Design	5	-
321-ARC-3	Architectural Theories	3	-
318-CE-5	Structural Design -2	5	228-CE-5
	Total credit hours	17	

Level 10			
Course Code	Course Title	Credit Hours	Pre-requisites
421-ARC-3	Acoustics & Lighting	3	
423-ARC-3	Housing	3	
410-ARC-7	Architectural Design - 5	7	320-ARC-7
	Total credit hours	13	

Course Code	Course Title	Credit Hours	Pre-requisites
411-GE-3	Professional Ethics and Practice	3	-
422-ARC-4	Construction Drawings - 2	4	412-ARC-4
420-ARC-7	Architectural Design - 6	7	410-ARC-7
431-ARC-0	Field Training	0	
	Total credit hours	14	

Level 14			
Course Code	Course Title	Credit Hours	Pre-requisites
511-ARC-5	Graduation Project Thesis	5	510-ARC-7
518-ARC-3	Project Management	3	
521-ARC-3	Professional Practice	3	
	Total credit hours	11	



Designed by student: Mohammad Al-Shahrany
1st Semester 1443 Design Studio 5 – Administrative & Commercial tower in Abha –
King Fahd road

The architecture department at King Khalid University has the values of curious, independent, and adaptable thinkers—students who engage with the diverse aspects of architectural practice while challenging its boundaries. We are here to prepare people to be leaders in a rapidly changing world. The education we provide in our degree programs extends from introductory to advanced, and from the mastery of the core discipline to advancing knowledge in emerging areas of architectural research and practice. The architecture department of the faculty of Engineering of KKU is professional and pre-professional program in architecture are invested in design excellence grounded in research, critical thinking, and social engagement.

At the heart of architecture, education is the design studio. Within our vibrant and supportive studio culture, students learn ways of working that are essential to architectural practice: they develop processes for critical inquiry and conceptual thought, they become experts at thinking through physical and digital media, and they learn to integrate cutting-edge technology and research into design processes. This empowers our students to work independently and collaboratively, to experiment and take risks, and to begin seeing themselves as curious, creative, and critical thinkers.

Our graduates are prepared to approach a variety of design questions across a range of scales, from objects to buildings to the urban landscape. Our students become part of a collaborative community of highly regarded architecture faculty, expert guest critics and visiting faculty, and other dedicated architecture students, all of whom collectively advance individual student learning. This culture of design learning is further enriched by relationships throughout

Architecture department, and through intersections with our upcoming MS degree programs in research practices, sustainability, and heritage preservation.

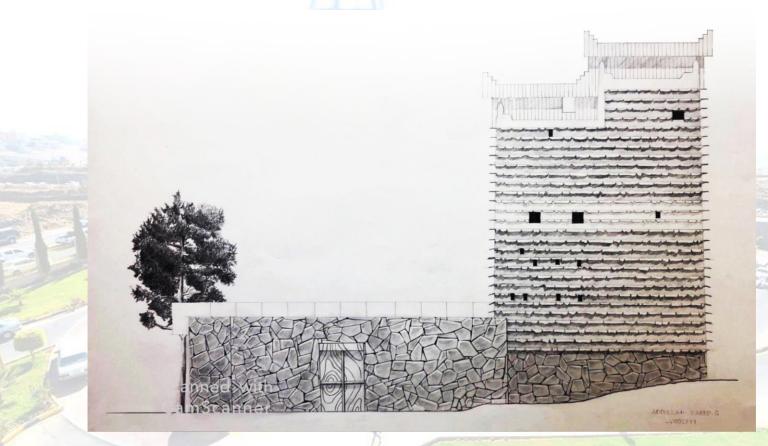


Workshop-based learning

Architecture education in the department of Architecture & Planning program at KKU revolves around an exciting and wide range of self-selected design workshops that change from year-to-year. Collectively, these fifteen-week workshops per semester expose you to the processes, conditions, and principles of architectural design & Planning as it relates to both emerging and traditional practices. You'll immerse yourself in the design process through projects that link architecture with explorations in visual media and actual city challenges such as ethical, social, and cultural concerns. In addition, we concern with preservation, disaster relief, and neighborhood needs; building concerns daylight, facade, material,

modeling studies; and/or allied disciplines (set design, landscape architecture, and urban studies). As an Architecture and Planning student, you further customize your learning by choosing multiple elective courses in architecture, as well as mandatory courses of our program.





Sketch by student: Abdullah Saeed Al-Qahtani 2nd Semester 1441 Freehand drawing course – Asir architectural style





Designed by student: Talal Yahya 2nd Semester 1442 Landscape course – Abha Dam landscape





Designed by student: Ahmed Turk Abbas 2nd Semester 1443 Landscape course – Abha Lake landscape







Designed by student: Ahmed Turk Abbas 2nd Semester 1443 Landscape course – Abha Lake landscape











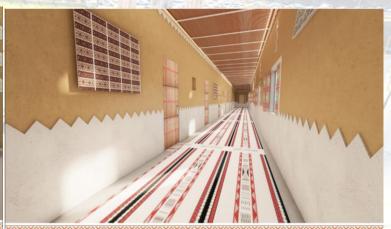
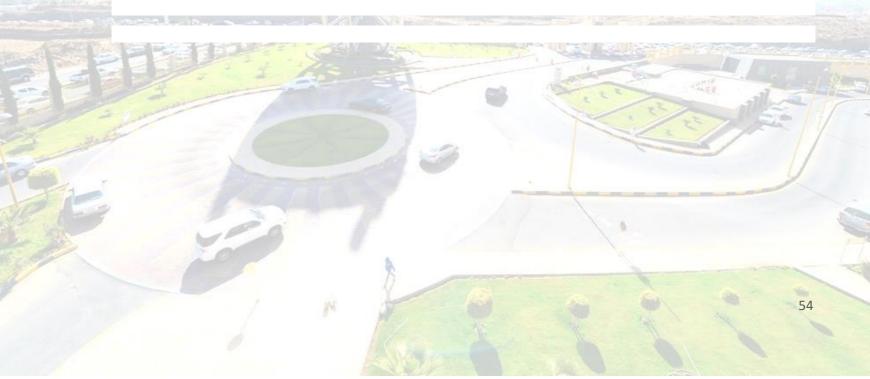
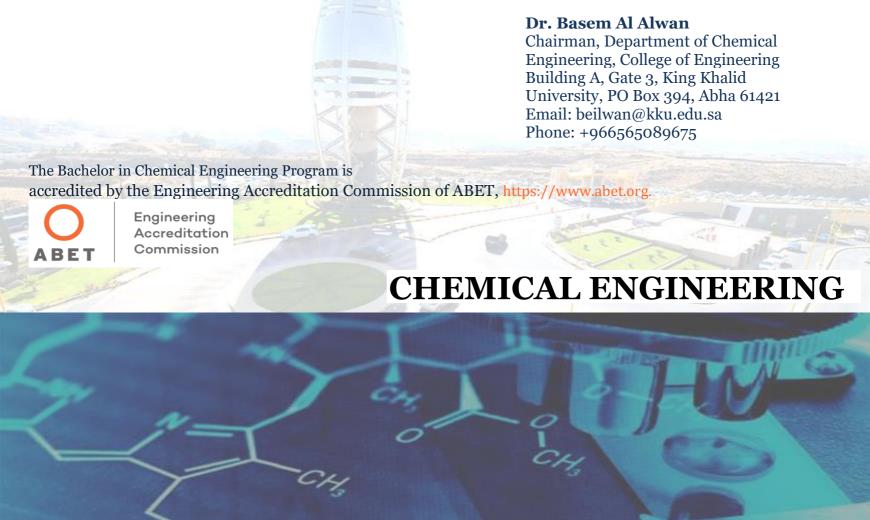


Table: Faculty Details

Faculty Name	Designation	Academic Position	Email	Official Website	ResearchGate link
Dr. Ahmed Shohan	Chairman	Assistant Professor	ashohan@kku.edu .sa	N/A	https://www.researchg ate.net/profile/Ahmed _Shohan
Dr. Wael Aboneama	Coordinator of Quality Committee	Associate Professor	waboneama@kku. edu.sa	https://www. wael- aboneama.co m/	https://www.researchg ate.net/profile/Wael- Aboneama
Dr. Saleh Al-Sulamy	Coordinator of Curriculum Committee	Assistant Professor	s.alsulamy@kku.e du.sa	N/A	https://www.researchg ate.net/profile/Saleh A lsulamy
Dr. Ahmed Bindajam	-	Associate Professor	abindajam@kku.e du.sa	N/A	https://www.researchgat e.net/profile/Ahmed Bi ndajam
Dr. Mohammad Al- Shayeb	Coordinator of Student Advisor Committee	Assistant Professor	malshayeb@kku.e du.sa	N/A	https://www.researchg ate.net/profile/Mohm med Alshayeb
Eng. Ahmed Al- Zoabi	500	Lecturer	aal- zoabi@kku.edu.sa	N/A	https://www.researchg ate.net/profile/Ahmed _Al-Zoabi

Faculty Name	Designation	Academic Position	Email	Official Website	ResearchGate link
Eng. Faraht Ali		Lecturer	faalali@kku.edu.sa	N/A	https://www.researchg ate.net/profile/Farhat Ali8
Er Ghassan Alserayhi		Teaching Assistant	gmalserayhi@kku. edu.sa	N/A	https://www.researchg ate.net/profile/Ghassa n-Alserayhi
Er Abdulmalik-Saleh		Teaching Assistant	absalih@kku.edu.s a	N/A	https://www.researchg ate.net/profile/Abdulm alik-Saleh





Chemical Engineering Program Description

The Kingdom of Saudi Arabia has been blessed by vast natural resources that have been utilized for the development of the Country and its people. Due to this enormous expansion of development and engineering projects, emerged the need for the existence of the Chemical Engineering Department at King Khalid University. The Chemical Engineering Department is committed to provide highly qualified chemical engineers, who could conduct innovative research and provide services to the profession and the society through technical knowledge. The Department was established in 2007 with the mission of graduating national expertise. The Chemical Engineering Department at King Khalid University consists of 20 academic staff and around 300 in undergraduate students among its five years program.

Chemical Engineering Program Vision

To achieve excellence, recognition and leadership in education, research, training and consultancy in Chemical Engineering for fostering the development of the society.

Chemical Engineering Program Mission

To bring out highly qualified, innovative, research capable and health, safety and environment conscious chemical engineers as well as to furnish an excellent academic and research environment for its staff to engaged in research, innovations, consulting and community services.

Program Educational Objectives (PEOs)

The PEOs of the Chemical Engineering Undergraduate Program, which are to be professionally accomplished so that our graduates are prepared to:

Domains	Program educational Objectives (PEOs)
Engineering	1. Utilize knowledge of Chemical Engineering to successfully work
Knowledge:	in the diversified sector of Chemical Engineering.
Innovations and	2. Make use of technical expertise, design and innovative skills to
Creativity:	accomplish advanced studies and follow research work
	proficiently.
Attributes:	3. Take advantage of various attributes achieved through the
	program to effectively work in the private, corporate or
	government sector or as an entrepreneur.
Values:	4. Associate with profession and society and work with safety, ethical and environmental responsibilities.

Program Delivery Mode

The Bachelor of Science in Chemical Engineering (B.Sc. CHE) is offered to the program students in conventional day classes from 8:00 AM to 8:00 PM and is delivered using a combination of traditional inclass lecture/laboratory and web-based. Full-time students can complete the Bachelor program in four years by adopting 15-17 credits per semester. Most of the theory courses of Chemical Engineering program are coupled with laboratory/tutorial classes to prepare to qualified engineers both scientific and professional.

Blended program delivery mode is also used in certain courses and up-to 20% of the course content can be delivered by using e-learning system. In case of inevitable situation to provide highest level of expertise in a particular course, department invites expert to conduct virtual classes (web based).

Program Location

The Chemical Engineering Department offering Bachelor of Science in Chemical Engineering, an undergraduate degree program, is located at the main campus of King Khalid University (KKU) at Guraiger, Abha, and Kingdom of Saudi Arabia. There are no other locations where classes are supported for the Bachelor's degree program in Chemical Engineering at the King Khalid University.



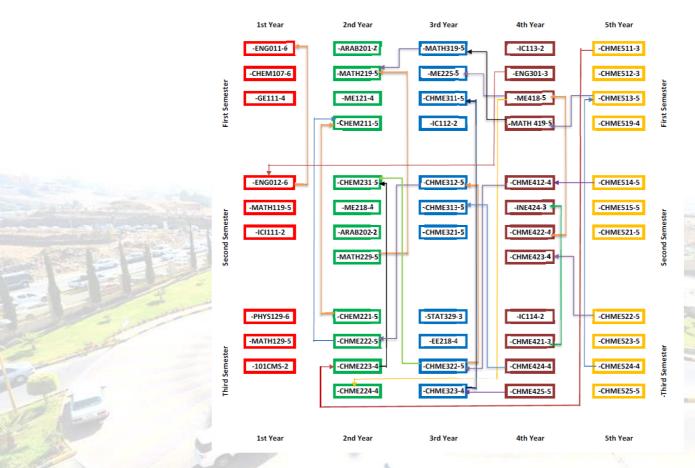
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- GE111-4	Engineering Drawing -1	_	4	4	8		} ⊢	-ICI111-2	Islamic Culture -1	2	-	2	2		-101CMS-2	Computer Science	- 1	1	2	3	
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MATERIO	5 Differentiation and Integration - 2	5						-ME218-4	Static & Dynamic						-CHMI222-5	Fundamentals of Chemical Engineering - 1					-CHEM211-5
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-ME121-4	Production Technology and Workshops	1	3	4	7			-ARAB202-2	Arabic Writing	2		2	2		-CHMI223-4	Materials Engineering	3	1	4	5	-CHEM231-5
CHEM211	5 Organic Chemistry - 1	4	1	5	6		T T	-MATH229-5	Differentiation and Integration - 3	5		5	5	-MATH219-5	-CHME224-4	Advanced Engineering Drawing	2	2	4	6	
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MATH319	5 Differential Equations	5		5	5	-MATH219-5		-CHME312-5	Fundamentals of Chemical Engineering - 2	4	1	5	6	-CHME222-5	-STAT329-3	Fundamentals of Statistics and Probability	3		3	3	
-ME225-5		4	1	5	6		i i	-CHME313-5	Mass Transfer	4	1	5	6		-EE218-4	Electric Engineering	3	1	4	5	
CHME311	Chemical lingineering Thermodynamics -	4		4			i i			4									4		
CHMIGH	*	4	1	5	6		} ⊢	-CHME321-5	Momentum Transfer	4	1	5	6		-CHME322-5	Chemical Reactions Engineering	4	1	5	6	-CEME312-5
-IC112-2	Islamic Culture - 2	2													-CHME323-4	Thermodynamics in Chemical Engineering -			4		-CHME311-5
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-JC113-2	Islamic Culture - 3	2		2	2		t t	-CHME412-4	Chemical Industries Engineering	3	1	4	5	-CHME322-5	IC114-2	Islamic Culture 4	2		2	2	
-EN0301-		3		3	3	-EN0012-6	t t	-D\B424-3	Engineering Economic	3		3	3								
-ME418-5		3	2	- 5	7	-CHME224-4	-MI(225-5	-CHME422-4	Advanced Engineering Design	3	1	4	5	-MB418-5	-CHME421-3	Plants and Chemical Process Design	3		3	3	-INE424-3
	-5Numerical Methods	5	_	5	5	-MATHD19-5	-maa	-CHMB423-4	Catalysis & Catalytic Processes	3	1	4	5	Santos	-CHME424-4	Senaration Processes	3	1	4	4	-CHME313-5
100 111 111	Principal Principal	-	-		-	SMALLDIPS	ł ŀ	CHIMINADA	Case y no to Case y se 2 to Case s	-	<u> </u>	,	-		-CHME425-5	Host Transfer	4	1	5	6	-CHME323-4
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Course Co		3	4	3	3	-CHME223-4		-CHME514-5	Engineering	3	2	5	7	-CHM8412-4	-CHMES22-5	Chemical Reactor Design	4	1	5	6	-CHME423-4
	3 Extractive Metallurgy	3					t														
	3 Extractive Metallargy	3							Bullianian Barrianian												
-CHME511	3 Extractive Metallurgy 3 Industrial Safety and Occupational Health	3		3	3			-CHME515-5	Polymers Engineering	4	1	5	6		-CHMES23-5	Corrosion & Electrochemical Engineering	4	1	5	6	
-CHMES11			1	3 5	3	-MATH 419-5		-CHME515-5 -CHME521-5	Polymers Engineering Petroleum Refining & Petrochemicals	4	1	5	6		-CIBMES23-5 -CIBMES24-4	Corrosion & Electrochemical Engineering Control of Processes	4	1	5	6	-CIBMES13-5
CHMES11	3 Industrial Safety and Occupational Health	3	1	3 5	3 6	-MATH 419-5 Successfully pass				4	1	5	6				-	1	-	6 5 5	-CHMES13-5
-CHMES12	3 Industrial Safety and Occupational Health 5 Modelling & Simulation	3 4	1		_					4	1	5	6		-CHMES24-4	Control of Processes	3	1	4	_	-CHMES13-5

Bachelor in Chemical Engineering

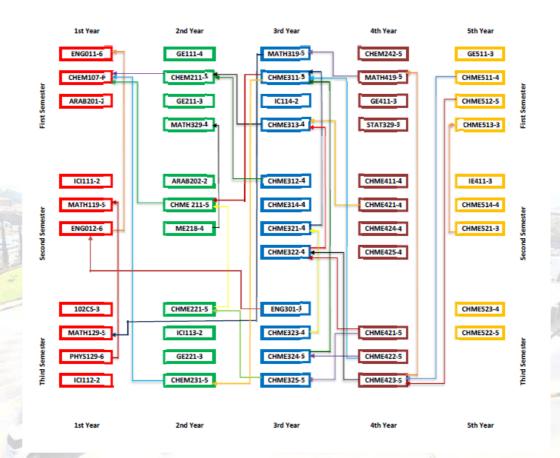
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ENG011-6	Intensive English Program - 1	Lectures	Lab/ Tutorial	Total 6	Contact 12			-ICH111-2	Islamic Culture 1	Lectures 2	Lab/ Tutorial	Total 2	Contact 2		-102CS-3	Computer Science	Lectures 2	Lab/ Tutorial	Total 3	Contact 4	
	6 General Chemistry	5		6	7			-MATHH19-5		5		5	5			Differentiation and Integration -2	5		5	•	-
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IKAHUNT-2	Sells of Artic Language	2		2	,			-1200012-6	intensive ragion Program - 2		ь		12	-61340/011-0		Hamic Culture 2	2		2	2	-MAII
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	5 Organic Chemistry - 1	4	1	5	6	-CHEM107-6		-CHME 211-5		4	1	5	6	-CHEM107-6		Islamic Culture 3	2		2	2	
-CE211-3		3		3	3			-ME218-4	Static & Dynamic	3	1	4	5	-MATID29-4		Creative and Innovation	3		3	3	
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MATID19-	5 Differential Equations	5		5	5	-MATRI219-5		-CHME312-4	Fluid Mechanics	3	1	4	5	-CHME221-5	-1200301-3	Technical Report Writing	3		3	3	-ENG
	Charlest Francisco Demokratica																3				-CHM
	5 Chemical Engineering Thermodynamic - 1	4	- 1	5	6	-CHEM231-5	-CHME221-5		Chemical Process Technology	_		4	4			Particle Technology	_	1	4	5	_
40114-2		2	l I	2	2			-CHME321-4	Chemical Engineering Thermodynamic - 2	3	1	4	5	-CHMI311-5	-CHM1324-5	Chemical Reactions Engineering	4	1	5	6	-CHI
CHME313-	4 Mass Transfer -1	3	1	4	5	-CHME 211-5		-CHME322-4	Mass Transfer -2	3	1	4	5	-CHMI313-4	-CIME325-5	Heat Transfer	4	- 1	5	6	-CHI
CHME313-			1			-CHME 211-5		-C10ME322-4						-CRMI313-4	-CIBMED25-5						-CHM
CIMENTA-	4 Mass Transfer -1 Total Credit Hours	3	2	16	5	-CIBME 211-5		-CHME322-4	Mass Transfer -2 Total Cradit Hours	13	3	16	19	-CHME313-4		Total Credit Hours	14	3	17	20	
CIME313-			2			-CIBME 211-5		-CIBME322-4						-CHMD13-4	-CIMENES-S						-CHM Stock page
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Level 10 Course Code	Total Crudit Hours Course Tide	14	Credi	16 t Hour	18			Level 11 Course Code	Total Credit Hours	13	3 Credi	16 t Hour	19		-CIDAE400-0 Level 12 Course Code	Total Cradit Hours Specialized Training	14	3 Credi	17	20	Succe par cred
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Undergraduate Trimester New Plan

List of Elec	etive Subjects for Undergraduate New Plan Trimester
-CHME514-4	Elective Subjects in Energy and Environment
7	Renewable Energy
	Environmental Pollution Control
20.00	Introduction to Environmental Impact Assessment
-CHME522-5	Elective Subjects in Chemical and Petrochemical Industries
3	Petroleum Refining
	Catalyst and Catalytic Processes
- 1	Pharmaceutical Industry
-CHME523-4	Elective Subjects in Bio Engineering
	Biochemical Engineering
	Bioprocess Engineering
	Bioreactor Engineering



Prerequisite Chart of Undergraduate Trimester Old Plan



Graduate Course Two Semester Plan

Year	Level	Course Code	Course Title	Require or Elective	* Pre- Requisite Courses	Credit Hours
		CHME 712	Advanced Thermodynamics	R		3
	Level 1	CHME 714	Applied Mathematics in Chemical Engineering	R		3
¥	3 3	CHME 715	Process Modeling and Control	R		3
1st YEAR		CHME 711	Advanced Transport Phenomena	R	The state of the s	3,1
	Level 2	CHME 721	Advanced Reaction Engineering	R	-	3
	2	CHME	Elective 1 (Choose from Group A)	E	-	3
2nd YEAR	Level	CHME	Elective 2 (Choose from Group B)	E		4
Znd \	3	CHME	Elective 3 (Choose from Group B)	E		4

	CHME 761	Research Thesis - Project	R	 3
Level 4	CHME 761	Continuing Research Thesis	R	 4

Elective Courses for Graduate Course Two Semester Plan

		Elective Courses
Elective	Code	Title
1 1	CHME742	Industrial Safety & Risk Assessment
Group A	CHME732	Polymer Science and Engineering
	CHME725	Particle Engineering
	CHME722	Heterogeneous catalysis
	CHME726	Petrochemical Processing Engineering
	CHME751	Project Management
	CHME752	Technology Management
Group B	CHME744	Energy System and Sustainability
	CHME743	Advanced Wastewater Treatment
		Technologies

CHME733	Corrosion and its Control
CHME724	Advanced Oil Refining Engineering
CHME723	Biochemical Engineering
CHME734	Nanotechnology
CHME735	Minerals Processing

Graduate Course Trimester Plan

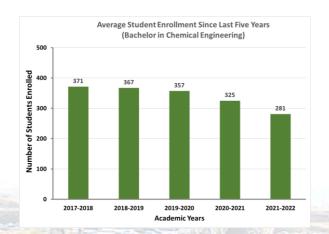
Year	Level	Course Code	Course Title	Require or Elective	* Pre- Requisite Courses	Credit Hours
		CHME 7101	Transport Phenomena - 1	R		3
	Level 1	CHME 7102	Thermodynamics	R	3 3	4
EAR		CHME 7104	Applied Mathematics in Chemical Engineering	R		4
1st YEAR	Level	CHME 7105	Modeling and Process Control	R		4
	2	CHME 7106	Transport Phenomena - 2	R		3
	Level	CHME	Interfacial Engineering	R	1	4

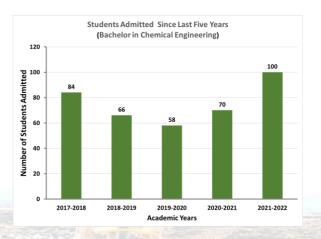
	3	7201	1 1/		
		CHME	Elective A	E	 4
		CHME	Elective B	E	 4
	Level	CHME	Elective B	E	 4
	4	CHME -	Research Thesis - Project	R	 3
AR		7601	2	ı	 J
2nd YEAR	Lovel	CHME	Elective A	E	 4
Zni	Level 5	CHME	Continuing Research	R	 3
	transu	7601		See Street	
	Level	CHME	Continuing Research	R	3
	6	7601	Maria Carlos		1000

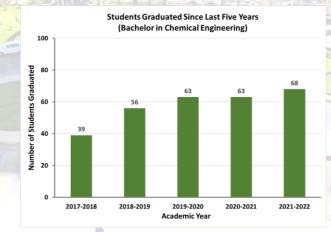
Elective Courses for Graduate Course Plan

		Elective Courses
Course	Code	Title
	CHME7402	Industrial Safety & Risk Assessment
	CHME7302	Polymer Science and Engineering
Elective A	CHME7205	Particle Engineering
-	CHME7202	Heterogeneous catalysis
	CHME7206	Petrochemical Processing Engineering
	CHME7501	Selection Process and Equipment Design

CHME7502 Technology Management CHME7404 Energy Systems and Sustainability CHME7403 Advanced Wastewater Treatment Technologies CHME7306 Project Management CHME7204 Advanced oil Refining Engineering CHME7203 Biochemical Engineering CHME7305 Manotechnology CHME7305 Mineral Processing CHME7207 Gas processing Engineering	CHME7502 Technology Management CHME7404 Energy Systems and Sustainability CHME7403 Advanced Wastewater Treatment Technologies CHME7306 Project Management CHME7204 Advanced oil Refining Engineering CHME7203 Biochemical Engineering CHME7304 Nanotechnology CHME7305 Mineral Processing		CHME7303	Corrosion and its Control
Elective B CHME7404 Energy Systems and Sustainability Advanced Wastewater Treatment Technologies CHME7306 Project Management CHME7204 Advanced oil Refining Engineering CHME7203 Biochemical Engineering CHME7304 Nanotechnology CHME7305 Mineral Processing	CHME7404 Energy Systems and Sustainability CHME7403 Advanced Wastewater Treatment Technologies CHME7306 Project Management CHME7204 Advanced oil Refining Engineering CHME7203 Biochemical Engineering CHME7304 Nanotechnology CHME7305 Mineral Processing			
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CHME7204 Advanced oil Refining Engineering CHME7203 Biochemical Engineering CHME7304 Nanotechnology CHME7305 Mineral Processing	CHME7204 Advanced oil Refining Engineering CHME7203 Biochemical Engineering CHME7304 Nanotechnology CHME7305 Mineral Processing	F1 P1	CHME7306	
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CHME7305 Mineral Processing	CHME7305 Mineral Processing		CHME7203	
			CHME7304	Nanotechnology
CHME72D7 Gas processing Engineering	CHME7207 Gas processing Engineering		CHME7305	Mineral Processing
			CHME7707	
			GIIML/ZU/	bas processing Engineering









- Separation and Chemical Industries Processes Laboratory
- Mass Transfer Operations and Reaction Engineering Laboratory
- Chemical Thermodynamics and Corrosion Laboratory
- Chemical Processes Control Laboratory
- Petroleum, Petrochemical and Polymer Engineering Laboratory

More information related to the laboratories:

http://chemical.engineering.kku.edu.sa/en/content/567

Faculty

The faculty of the department Chemical Engineering (CHE) is well qualified and professionally committed to work for the department's vision and mission. The members of Faculty include doctorate and post-graduate degree holders, and a teaching assistant with bachelor's degree. The qualification, specialization and experience of the faculty members include various fields of Chemical Engineering, Environmental Engineering, Polymer Engineering, Metallurgy and Process Control Engineering to cover all courses of the curriculum. Their education and experience allow faculty to provide real time examples to the engineers. The faculty members have educations from prestigious Institutions from various nationalities other than the home country (KSA), including India, Sudan, Tunisia and Egypt.

The curriculum of Bachelor program in Chemical Engineering emphasizes on the following areas:

- Heat, Mass and Momentum transfer
- Process Control and Instrumentation
- Reaction Engineering and Catalysis
- Polymer and Petroleum
- Environmental Engineering and Safety

Each Chemical Engineering faculty member is part of one or more groups according to their specialization. All theory lectures of the courses are taken by the doctorates according to their expertise and the Master's Degree holders engage the laboratory courses. The faculty members are engaged in research and are in the process of research publications in high impact factor journals. Faculty members are also actively engaged in collaborative research with other universities, such as KAUST, with in Saudi Arabia.

Faculty Workload

Department of Chemical Engineering faculty team consists of eleven (14) doctorates and five (4) masters and one (1) graduate with basic chemical engineering degree. The courses are divided into different

knowledge areas. Before allotting a course, the willingness and interests of each faculty member is sought, then the courses are allotted based on his area of specialization and his experience in teaching of that particular course. Faculty specialization spans all fields required to teach the complete courses offered in the curriculum.

The doctorates are specialized in the areas of their interests with the basic qualification of Chemical Engineering they are flexible to teach any core chemical engineering course. This flexibility helps in assigning the courses to the faculty members. To ensure the smooth conduction of the courses with high quality, only two courses are assigned to each doctorate, in special case it can be up to three. Apart from the teaching, all faculty members are also required to work for one or more committees. There are several committees at departmental level, college level and at university level. Each faculty member is also a student advisor. While allotting the teaching work, his involvement in other committees is also considered.

The eleven (11) Doctorates in the department of chemical engineering are teaching the core chemical engineering courses from level third onwards (up to level third, the courses are taught by the faculty of other departments). Apart from chemical engineering department, there are faculty members from other departments and colleges to teach courses such as mathematics, basic sciences, languages and general engineering courses.

The Department of Chemical Engineering is putting their best efforts to bring excellent teachers from all over the world. With a greater number of teachers, the workload of the present faculty members will gradually be reduced, which in turn will help the faculty members to focus on research as well as other academic development activities.

The department of Chemical Engineering has planned to recruit more doctoral degree faculty members in various specializations in Chemical Engineering within two years and it has stated the procedures to adopt quality professionals into the department. The vacant positions for new faculty members are advertised at

website <u>"http://www.kku.edu.sa/en/node/2591/".</u> There are other various recruitment and employment procedures followed by the university, college and department level administration in order to attract qualified teachers from all over the world.

By publishing the job vacancy in local as well as international newspapers

- Assessing the qualified faculty members by inviting the CVs from the recruitment agencies of different countries. Shortlisting the candidates by their academic excellence, contribution towards research and conducting interviews for final selection.
- Conducting online interviews via Skype for geographically distant located aspirant faculty members
- The department was successful in attracting qualified faculty members by following the abovementioned procedures.

The department is expecting few more faculty members with doctorate degree from prestigious universities from different countries and recruitment is in progress.

As the department gets more qualified faculty members, the distribution of workload will be done accordingly and extra time will be spent for research activities.

Faculty Size

The Chemical Engineering department, currently, has 20 Faculties comprising of two Professors, one Associate Professor, eight Assistant Professors, five Lecturers and one Teaching Assistant to teach the Chemical Engineering Program and designations wise distribution of the faculty is as follows:

•	Professor	3
•	Associate Professor	1
•	Assistant Professor	10
•	Lecturer	6

In addition to the above faculty, the teaching assistants are also appointed and some of them sent abroad for higher studies. The faculties of Chemical department hail from diverse background and nationalities i.e. Saudi Arabia, Egypt, Tunisia, Pakistan, UK, India and Sudan.

Professional Development

Faculty members are committed and very active in all professional activities. Many faculty members are in the process of publishing research papers. During the university research day the chemical engineering department has contributed immensely in the various fields of faculty members' specialization. The University encourages staff to attend technically renowned conferences and publish research papers. The faculty research areas include core Chemical Engineering areas, Environmental Engineering, Polymer and Petroleum Engineering, Catalysis etc.

Departmental Committee

There are various committees within the Chemical Engineering Department to carry out the smooth functioning of the academics. The duties and responsibilities of each committee and its members are given below;

List of Committee

Departmental Committee of schedules and exams	Committee of Academic Advising and Student Affairs	Committee of Plans and Curriculum			
Dr. Haithem M. Osman Eng. Mamoon Rashid Eng. Abu Bakr Mustafa	Dr. Atef El Jery Dr. Moutaz M. Eldirderi Eng. Abu Bakr Mustafa	Dr. Hamed Nasser Dr. Basem Al Alwan Dr. Mohamed K. Almesfer Dr. Yasser Mohamed Dr. Ihab Mohamed			
Committee of graduate Studies and Scientific Research	Committee of Education Services	Committee of Development and Quality			
Dr. Basem Al Alwan Dr. Mohamed K. Almesfer Dr. Yasser Mohamed Dr. Mohamed Ilyas Khan Dr. Hamed Nasser	Dr. Mohamed Ilyas Khan Dr. Abdelfattah Amari Dr. Varagunapandiyan Dr. Muhammad Arshad Eng. Mohd Kafeel	Dr. Basem Al Alwan Dr. Mudassir Hassan Dr. Varagunapandiyan Eng. Mamoon Rashid Eng. Mohd Kafeel			

Table: Faculty Details

e: Faculty Details							
Faculty Name	Designation	Academic Position	Email	Extn	Office number		
Basem Al Alwan	Chairman	AST	beilwan@kku.edu.sa	9750	A/38/2		
Mohamed K. Almesfer	Dean	P	almesfer@kku.edu.sa	7077, 9499	A/111/1		
Hamed Nasser Ben Harharah	Plans and Curriculum	P	hhharharah@kku.edu.sa	7230	A/99/1		
Yasser Mohamed Fahmy	Graduate Studies and Scientific	P	yamahmoud@kku.edu.sa	8390	A/140/1		
Ihab M. T. A. Shigidi	Ph.D.,	AST	etaha@kku.edu.sa	9875	A/139/1		
Atef El Jery	Academic Advising and Student	AST	ajery@kku.edu.sa	7230	A/101/1		
Abdelfattah Amari	Ph.D.,	AST	aamary@kku.edu.sa	7230	A/101/1		
Moutaz M. Eldirderi	Ph.D.,	AST	maldrdery@kku.edu.sa	8390	A/140/1		
Haithem M. Osman	Schedules and Exams	AST	haman@kku.edu.sa	7400	A/140/1		
Mohamed Ilyas Khan	Education Services	AST	mkaan@kku.edu.sa	9875, 7401	A/139/1		

Faculty Name	Designation	Academic Position	Email	Extn	Office number
Arshad Khan	Ph.D.,	AST	moakhan@kku.edu.sa	7401	A/139/1
Mohamed Ismail	Head of Student	AST	moadismail@kku.edu.sa	8851	A/100/1
Mudassir Hasan	Quality and Development coordinator	AST	m-hasan@kku.edu.sa	7230	A/101/1
Varagunapandiyan Natarajan	PhD,	ASC	vnatarajan@kku.edu.sa	7230, 9156	A/99/1
Mohd Danish	M.Tech.,	Eng.	mdansh@kku.edu.sa	9156	A/99/1
Mohd Kafeel	M.Tech.,	Eng.	mokafeel@kku.edu.sa	9843	L4101
Mamoon Rashid	M.Tech.,	Eng.	mrashid@kku.edu.sa	9867	L4201
Abu Bakr Mustafa	M.Sc. Tech.,	Eng.	amelkhalee@kku.edu.sa	9716	L4206
Ahamd Muthali	M.Sc.	Eng	aahasn1@kku.edu.sa,		
Hussain Sawan	M.Sc.	Eng	hsawan@kku.edu.sa		

Students Guidance

The College of Engineering has a mandatory advising system for the students. In the beginning of each semester, the unit of advising system arranges meeting with new students to introduce them to college/departments knowledge study plan, and components of courses, and understand the regulations. Chemical Engineering students are divided in groups of about 20 students and assigned to individual Professors and Lecturers of the department. Chemical Engineering Department Staff members, called as Academic Advisors, Advice students. They advise their students every semester until the last semester of the program.

Student academic advising unit has been constituted in the Chemical Engineering department for facilitating academic counselling and personal advice to guide the students on the right career path. The student counseling and personal meeting with the faculty members help to identify the student's difficulties in academic activities and support to overcome the same. The Academic Advisor deals with the student's personal, family, psychological issues, which are voluntarily presented, to the academic advisor.

Students are highly encouraged to improve the attending conference, seminars and workshop.

Graduation Projects

Either graduation projects can be research oriented or application oriented. Research oriented projects often focus on evaluating a hypothesis, developing a novel solution to an engineering problem, or evaluating and comparing a new technology. The graduation project area covers wide range of chemical industry such as Petroleum, Energy Generation, Polymer, Pollution, Pharmacy, Food, Fossil fuel, Plastic, Paint, Additive, Effluent treatment. Students taking on these projects will gain important research skills and will learn new

concepts. Application oriented projects apply existing technique or a combination of techniques towards a specific application. In either case, the project can involve synthesis, design & development, simulation and modeling, prototyping or a combination of these. The CHE department strongly recommends that supervisors and students seek real engineering problems for the graduation projects. This makes the project a more realistic experience, which in turn enables students to acquire necessary skills, as outlined by the course objectives. However, in both cases the developed process and technology should have practical application and solve industrial or social problems.

Forms and Regulations

Academic guidance, rules, regulations, and forms are available for both students and faculty in the university website https://engineering.kku.edu.sa/en/content/947

Faculty Contribution

Faculty staff are contributing to the department two ways such as academic and non-academic. Course handling, Carrier Guidance, student development programs, Advising and Mentoring are important contribution to academic. Other than academics, faculty staffs are involved in various committee to assist the departmental administrative task. Faculty staffs are concerned to the upliftment of the society by providing community services time to time. Faculty development program is carried out to development of skills and knowledge. Moreover, faculty are intensively involved in carrying out research and contribute to the department in terms of publications and patents.







Civil Engineering Program Description

The College of Engineering includes six departments: Civil Engineering, Mechanical Engineering, Electrical Engineering, Chemical Engineering, Industrial Engineering and Architecture. The authorized body i.e. MoHE (private institutions and Council of Higher Education for public institutions) has approved the all aforesaid programs via. MoHE/9683 dated 05/08/1426. Until the 1st Semester of 2007 the Bachelor of Science in Civil Engineering program resides in the Department of Civil Engineering. The first batch of students in Civil Engineering graduated in 2012. The needs of the industry and the university's ability to respond to the needs have helped shape the growth of the programs offered by the department. The faculty/staff of the Civil Engineering (CE) Department has implemented many modifications to the CE curricula.

Civil Engineering Program Vision

Providing excellence in Civil Engineering at par the international standards.

Civil Engineering Program Mission

Providing a distinguished education and professional skills in Civil Engineering that enable to use modern technology for societal improvement through professional and ethical practices, innovative research and community services.

Program Educational Objectives (PEOs)

The Program Educational Objectives of the CE Program describe what graduates are expected to attain in the years after graduation. They could:

- **PEO 1**: Successfully enter the civil engineering profession as practicing engineers and consultants with prominent companies and organizations.
- **PEO 2:** Incorporate economic, environmental, social, safety and global considerations when designing and investigating different systems.
- PEO 3: Pursue professional licensure and engage in continued learning through professional development.
- **PEO 4**: Pursue graduate education and research at major research universities in civil engineering.
- **PEO 5**: Demonstrate leadership and service within their profession and in their communities through participation in professional societies and community services.

OLD Curriculum Trimester Plan (1/3)

Department of Civil Engineering

		Y ear 1					
ı	TR	UMESTER 1					
	Course N° and Code Course Title		Credit Hours	Contact Hours	Pre- requisite		
	011-ENG-9	Intensive English Program 1	9	18			
	107-CHEM-6	General Chemistry	6	7			
	111-GE-4	Engineering Drawing	4	8			
	T otal No. O	of Credits/Contact Hrs	19	33			

Year 2				
TR	IME STER 4			
Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre-requisi
112-ICI-3	Islamic Culture-2	3	3	
218-EE-4	Electric Engineering -	4	5	129-PHYS-0 119-MATH
219-MATH- 5	Differentiation and Integration-2	5	5	119-MAT
201-ARAB-3	Language Skills	3	3	
Total No. Of	Credits/Contact Hrs	15	16	

TF	RIMESTER 2			
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
012-ENG-9	Intensive English Program 2	9	18	011-ENG-9
119-MATH-5	Differentiation and Integration -1	5	5	
111-ICI-3	The Entrance to the Islamic Culture	3	3	
T otal No. Of Credits/Contact Hrs		17	26	

TR	IME STER 5]		
Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
121-ME-4	Production Technology and Workshop	4	7	111-GE-4
211-CE-5	Statics	5	7	129-PHY8-6
225-CE-3	Introduction to Geotechnical Engineering	3	3	
229-MATH- 5	Differentiation and Integration-3	5	5	219-MATH-5
Total No. Of	Credits/Contact Hrs	17	22	

TRIMESTER 3				
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
129-PHYS-6	Physics -1	6	7	
129-MATH-5	Algebra and Geometry	5	5	119-MATH-5
101 CMS-5	Computer Science	5	6	
T otal No. O	f Credits/Contact Hrs	16	18	

TR	IME STER 6			
Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
224-CE-5	Surveying	5	7	119-MATH-5
223-CE-5	Mechanics of Materials	5	6	211-CE-5
221-GE-3	Computer for Engineers	3	5	101 CMS-5
113-ICI-3 Islamic Culture-3		3	3	
Total No. Of Credits/Contact Hrs		16	21	

OLD Curriculum Trimester Plan (2/3)

	Y ear 3					
TF	IIME STER 7					
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite		
202-ARAB-3	Arabic Writing	3	3			
312-CE-5	Properties and Testin of Materials	5	6	223-CE-5		
311-CE-5	Fluid Mechanics	5	7	211-CE-5		
319-MATH- 5	Differential Equations	5	5	219-MATH-5		
TotalNo. C	f Credits/Contact Hrs	18	21			

Year 4					
TRI	MESTER 10				
Course Nº and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite	
412-CE-5	Structural Analysis - 2	5	6	321-CE-5	
414-CE-6	Soil Mechanics	6	8	223-CE-5	
411-CE-6	Transportation Engineering	6	7	224-CE-5	
Total No. Of Credits/Contact Hrs		17	21		

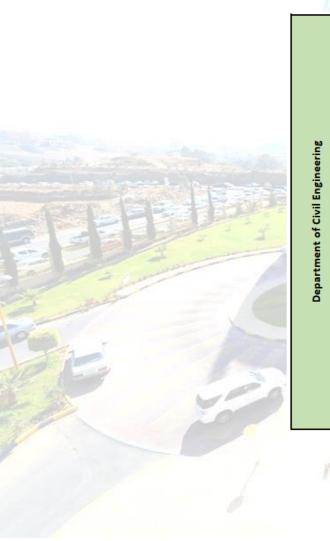
TR	IMESTER 8			
ourse N° course Title		Credit Hours	Contact Hours	Pre-requisite
114-ICI-2	Islamic Culture-4	3	3	
321-CE-5	Structural Analysis - 1	5	6	223-CE-5
314-CE-3	Dynamics	3	3	211-CE-5
23-CE-3	Eng. Properties of Soil and their Measurement		3	312-CE-5
13-CE-3	Properties and Testing of Concrete	3	4	223-CE-5
TotalNo. O	f Credits/Contact Hrs	17	19	

TRI	TRIMESTER 11			
Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
413-CE-5	- Reinforced Concret	5	6	321-CE-5
421-CE-6	Environmental Engineering	6	8	322-CE-5
425-CE-6	Highway Engineering	6	7	311-CE-5
Total No. Of	f Credits/Contact Hrs	17	21	

TH	RIMESTER 9			
Course N° and Code	Course T it le	Credit Hours	Contact Hours	Pre-requisite
301-ENG-3	Technical Reports Writing	3	3	012-ENG-9
322-CE-5	Hydraulies	5	6	311-CE-5
324-CE-6	Geographic Information Systems	6	7	
329-8 TAT-3	Principles of Statistic and Probability	3	3	
400-CE-0	Summer Training	0	0	After completing 150 Cre.Hrs.
TotalNo. C	of Credits/Contact Hrs	17	19	

	MESTER 12			
Course N° and Code	Course Title	Credit Hours	Contact Hour	Pre-requizite
422-CE-3	Water Chemistry	3	3	322-CE-5
423-CE-5	Design of Steel Structures	5	6	413-CE-5
419-MATH-5	Numerical Analysis	5	5	319-MATH-5
424-CE-5	Foundation Engineering - 1	5	6	414-CE-6 413-CE-5
Total No. Of Credits/Contact Hrs		18	20	

OLD Curriculum Trimester Plan (3/3)



	Y ear 5				
TI	RIMESTER 13				
Course N° and Code	Course T itle	Credit Hours	Contact Hours		
519-CE-0	Graduation Project*	4	4	Passing 188 credit hours	
511-CE-3	Pavement design and Materials 1	3	3	411-CE-6 321-CE-5	
515-CE-4	Advanced Reinforced Concrete Design	4	5	423-CE-5	
516-CE-3	Construction Management	3	3		
Total No. (Of Credits/Contact Hrs	14	15		

TR	TRIMESTER 14			
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
523-CE-5	Design of Steel Structures	5	6	412-CE-5
526-CE-4	-Foundation Engineering II	4	4	424-CE-5
512-CE-5	Hydrology	5	6	311-CE-5
Total No. Of Credits/Contact Hrs		14	16	

TR	IMESTER 15			
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
561-CE-3	Industry and the Environment	3	3	
582-CE-3	Construction Engineering	3	3	
311-IE-3	Engineering Economy	3	3	
527-CE-4	Soil Stabilization	4	4	414-CE-6
Total No. C	Of Credits/Contact Hrs	13	13	

New Curriculum Trimester Plan (1/3)

Department of Civil Engineering

Y ear 1					
TR	MESTER 1				
Course Nº and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite	
011-ENG-6	Intensive English Program 1	6	12		
107-CHEM-6	General Chemistry	6	7		
201-ARAB-2	Language Skills	2	2		
Total No. O	of Credits/Contact Hrs	14	21		

Y ear 2				
TR	IME STER 4			
Course Nº and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
111-GE-4	Engineering Drawing	4	8	
218-EE-4	Electric Engineering -	4	5	129-PHYS-6 219-MATH-5
229-MATH- 5	Differentiation and Integration-3	5	5	219-MATH-5
211-GE-3	Leaming Skills	3	3	
Total No. Of	Credits/Contact Hrs	16	21	

TR	IIMESTER 2			
Course № and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
012-ENG-6	Intensive English Program 2	6	12	011-ENG-6
119-MATH-5	Differentiation and Integration -1	5	5	
111-ICI-2	The Entrance to the Islamic Culture	2	2	
Total No. O	of Credits/Contact Hrs	13	19	

TR	IME STER 5			
Course № and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
221-ME-4	Production Technology and Workshop	4	7	111-GE-4
211-CE-5	Statics	5	7	129-PHY8-6
219-PHYS-6	Physics-2	6	7	129-PHYS-6
113-ICI-2	Islamic Culture-3	2	2	
Total No. Of	Credits/Contact Hrs	17	23	

TF	TRIMESTER 3			
Course N° and Code	Course Title	Credit Hours	Contact Hours	Pre-requisite
112-ICI-2	Islamic Culture -2	2	2	
219-MATH-5	Differentiation and Integration -2	5	5	119-MATH-5
129-PHY8-6	Physics -1	6	7	
104 CMS-3	Computer Science	3	5	
Total No. C	of Credits/Contact Hrs	16	19	

T RIME STER 6				
Course Nº and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
224-CE-5	Surveying	5	7	119-MATH-5
223-CE-5	Mechanics of Materials	5	6	211-CE-5
221-GE-3	Creativity and Innovation	3	3	
319-MATH- 5	Differential Equations	5	5	219-MATH-5
Total No. Of	Credits/Contact Hrs	18	21	

New Curriculum Trimester Plan (2/3)

	Y	ear 3		
TF	RIMESTER 7			
Course N° and Code		Credit Hours	Contact Hours	Pre- requisite
202-AR.AB - 2	Arabic Writing	2	2	
312-CE-5	Construction Materials	5	6	223-CE-5
314-CE-3	Dynamics	3	3	211-CE-5
329-MATH-4 Linear Algebra		4	4	
Total No. C	of Credits/Contact Hrs	14	15	

	Y ear 4				
TRI	ME STE R 10				
Course Nº and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite	
412-CE-5	Structural Analysis - 2	5	6	321-CE-5	
414-CE-6	Soil Mechanics	6	8	223-CE-5	
419-MATH-5	Numerical Methods	5	5	319-MATH- 5	
Total No. O	Credits/Contact Hrs	16	19		

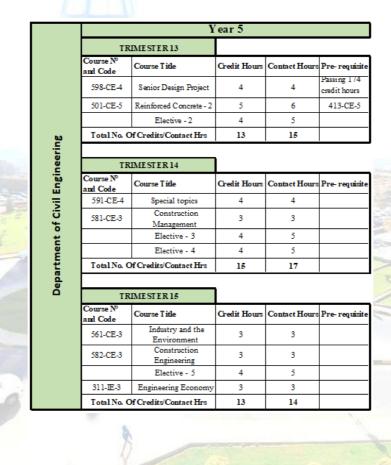
ı	TRIME STER 8				
•	Course N° and Code Course Title		Credit Hours	Contact Hours	Pre- requisite
ı	114-ICI-2	Islamic Culture-4	2	2	
ı	321-CE-5	Structural Analysis - 1	5	6	223-CE-5
ı	311-CE-5	Fluid Mechanics	5	7	211-CE-5
ı		Elective 1 (Soft Skills)	3	3	
ı	Total No. Of Credits/Contact Hrs		15	18	

TRIME STER 11				
Course Nº and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
413-CE-5	- Reinforced Concrete	5	6	321-CE-5
422-CE-4	Civil Engineering Drawing	4	6	111-GE-4
423-CE-5	Hydrology	5	6	311-CE-5
411-GE-3	Professional Ethics and Practice	3	3	
T otal No. O	Credits/Contact Hrs	17	21	

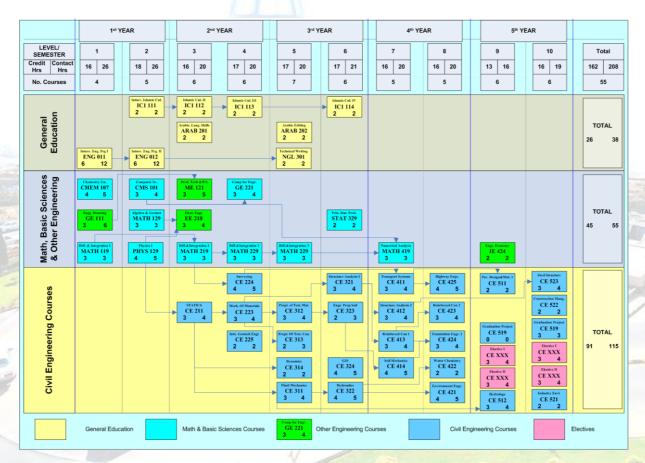
TRIMESTER 9				
Course Nº and Code	Course Title	Credit Hours	Contact Hours	Pre- requisite
301-ENG-3	Technical Reports Writing	3	3	012-ENG-6
322-CE-5	Hydraulies	5	6	311-CE-5
324-CE-6	Geographic Information Systems	6	7	
329-8 TAT-3	Principles of Statistics and Probability	3	3	
400-CE-0	Summer Training	0	0	Atter completing 130 Cre.Hrs.
Total No. C	of Credits/Contact Hrs	17	19	

TRIME STER 12				
Course № and Code	Course Title	Credit Hours	Contact Hour	Pre- requisite
421-CE-6	Transportation Engineering	6	7	224-CE-5
425-CE-5	Design of Steel Structures	5	6	412-CE-5
424-CE-5	Foundation Engineering - 1	5	6	414-CE-6 413-CE-5
Total No. Of Credits/Contact Hrs		16	19	

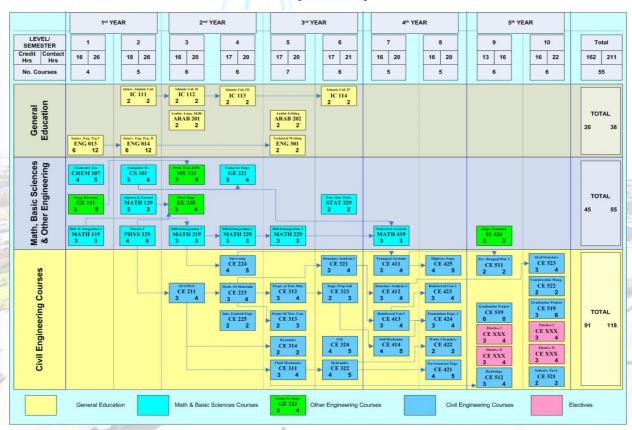
New Curriculum Trimester Plan (3/3)



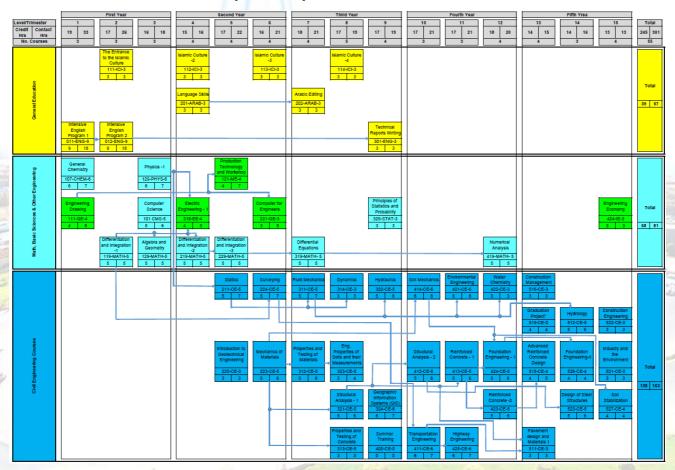
FLOWCHART FOR OLD CURRICULAM (Semester)



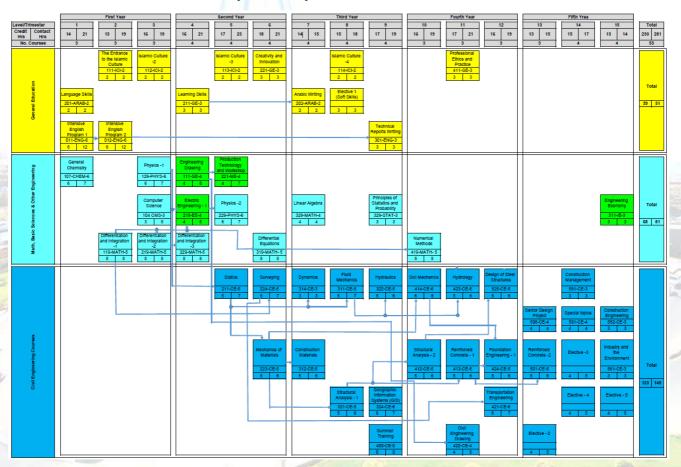
FLOWCHART FOR NEW CURRICULAM (Semester)



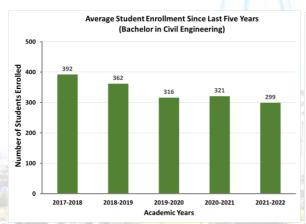
FLOWCHART FOR OLD CURRICULAM (Trimester)

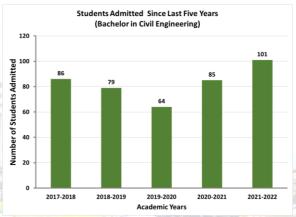


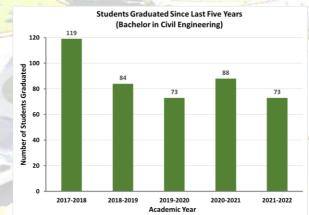
FLOWCHART FOR NEW CURRICULAM (Trimester)



Students Enrollment and Graduation statistics







Master Program - Construction Project Management (CPM)

1. Study Plan Structure

Program Structure		No. of Courses	Credit	Percentage
Course	Required	6	18	60
	Elective	2	6	20
Graduation Project (if any)				
Thesis (if any)	15	1	6	20
Field Experience (if an	ıy)			
Others ()			3	51
Total		9	30	100

2. Program Courses

	Course	Course Title	Required	Pre-Requisite	Credit
Level	CE781	Construction Planning and Control	Required	NA	3
1	CE782 Quality Project Management		Required	NA	3
	CE783	Research Methodology	Required	NA	3
Level	CE784	Construction Contracts and Procurement	Required	NA	3
2	CE785	Risk management in construction	Required	NA	3
	CE786	Project Financial Management	Required	NA	3
Level	CE799	Master's thesis	Required	NA	3
3	CEXXX	Elective 1	Elective	NA	3
	CEXXX	Elective 2	Elective	NA	3
Level	CE799	Master's thesis	Required	NA	3

Civil Engineering Laboratories

- Soil Mechanics and Foundation Laboratory
- Surveying Laboratory
- Fluid Mechanics and Hydraulics Laboratory
- GIS Laboratory
- Concrete and Structural Laboratory
- Highway and Building Materials Laboratory
- Environmental Engineering Laboratory

More Information related to the laboratories:

http://civil.engineering.kku.edu.sa/en/content/473

Graduation projects (First semester 2021-2022)

Title	Supervisor
Traffic Impact Study	Dr. Saeed Alqadhi
Study and design of a drinking water distribution network in the city of Abha	Dr. Hamdi Ayed
Hydrological and hydraulic study for the design of a reinforced concrete beam bridge	Dr. Hamdi Ayed
Design of a multistorey steel building with lightweight voided concrete slabs (cobiax system)	Dr. Mohamed Hecmi El Ouni
Rockfall Investigation in Sulbat Road using Remote Sensing and GIS and Design Smart Retain Wall	Dr. Khaled Khedher
Water Quality and sustainability assessment of Rural water systems in Assir area	Dr. Ahmed Babaker
Mineralogical characterization of Aseer Region Sabkha Soil	Dr. Mohd Ahmed
Experimental Analyis and design of Plastic Shrinkage cracking in concrete	Dr. Siva Kumar

/ / / /	
Title	Supervisor
Design of a Waste Water Treatment Plant for Abha City	Dr. Mohammad Abul
Groundwater potential modelling in Bisha Watershed	Dr. Javed Mallick
Soil erosion and sedimentaion modelling in Bisha Watershed	Dr. Javed Mallick
Structural analysis and design of steel hotel building	Dr. Yasser Alashker
Structural analysis and design of hall structures	Dr. Yasser Alashker
Design of Reinforced Concrete Structures	Dr. Khalid Al Hadi
Repair and Strengthening of Reinforced Concrete Structures	Dr. Khalid Al Hadi

Faculty

The Civil Engineering department has a mechanism for hiring the excellent faculty, for continuous professional development and for facilitating the research work of faculty. The Civil Engineering department comprises of faculty with high academic achievements and a rich experience of teaching in various countries of the globe. In addition to academic experience, many faculty have experience in industry, consultancy, and professional organizations. The Civil Engineering faculties have also administrative experience at the college and the university levels. One of the Civil Engineering faculty has been appointed recently as a Dean of the college. The department head of the academic program is responsible for all aspects of management of the program, including curriculum development, instructional delivery, student assessment, schedule of classes and accreditation matters coordination. The department head discharges its duties through the various academic committees formed of specialized faculties for different aspects of management of the program. The department head is not responsible for personnel matters. The department head reports to the Dean of the college. The Dean is the administrative position responsible for all aspects of the academic process in the college.

Faculty Workload

The assigned workload of the faculty is as per the university current regulations and it is according to the academic rank of the faculty. Based on the rank and regulation, the teaching load assigned to the faculty without any extra remunerations are as given below.

Professor:
 Associate Professor:
 Assistant Professor:
 Lecturer:
 credit hours
 credit hours
 credit hours
 credit hours

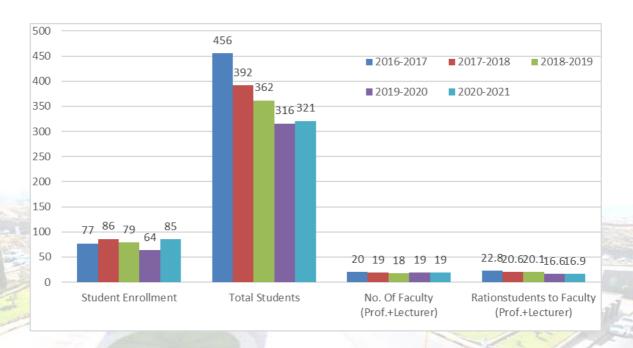
The faculty have the administrative responsibilities, in addition to academic, assigned lesser teaching load. The teaching load assigned is in line to support the faculty professional development, educational quality improvement activities and for facilitating their research work. The working hours assigned for Saudi faculty are 35 hours per week and for faculty on yearly contract, the working hours are 40 hours per week. The working hours are meant for teaching, research, academic advising, laboratory supervision, and any other tasks assigned to them.

Faculty Size

There are currently 17 PhD academics (2 full professor, 6 associate professors, and 9 assistant professors) and 2 M.Sc. teachers and 1 teaching assistant at the Department of Civil Engineering. In the Civil Engineering degree, there are approximately 321 students enrolled (Spring 2021).

Figure 6-1 shows the number of teachers and staff members, as well as their distribution, for the years 2017 to 2021, as well as the number of students enrolled in the Civil Engineering program. The current faculty-to-student ratio for professors and lecturers is 16.9. (one faculty member for every 17 students). In 2012-2013, student enrollment was at an all-time high as a result of government initiatives encouraging working professionals to enroll in order to upgrade their abilities.

The current faculty and student-to-faculty ratios are more than adequate to meet the needs of students, including teaching (introducing sections based on class size) with a reasonable number of students in each, reserving reasonable office hours for students, advising, and other tasks and duties, as well as allowing faculty members to perform other administrative, research, committee participation, professional development, and other tasks and duties. Teaching assistants are hired in addition to the above professors, with some of them being sent abroad for further education at the university's expense. Faculty members in the civil department come from different countries Egypt, Tunisia, India, and Sudan.



Graphical representation of faculty and students' size during the different years

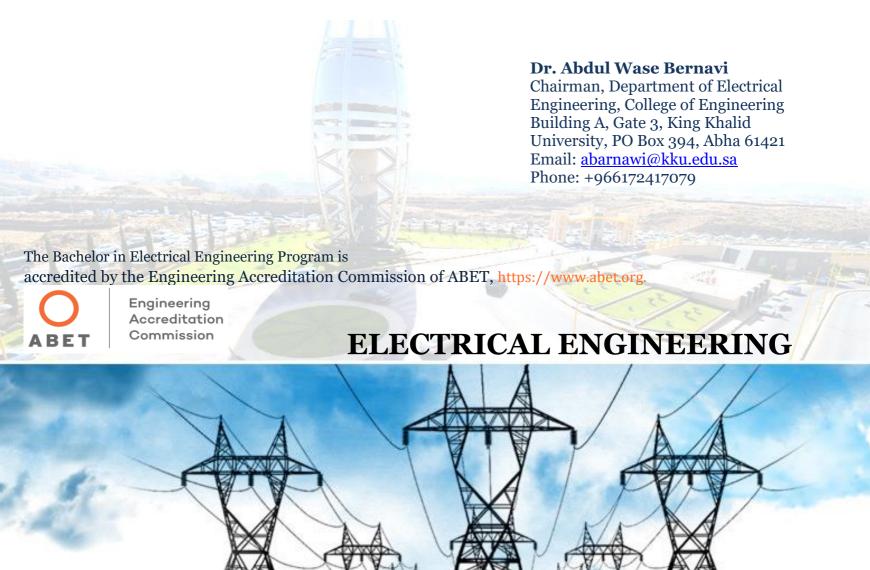
Table: Faculty Details

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Ibrahim Idrees A. Falqi		Associate Professor	ifalqi@kku.edu. sa	https://www.re searchgate.net/ profile/Ibrahi m Falqi
Dr. Mohammed Abdullah Dahim	Vice President	Associate Professor	madahim@kku. edu.sa	-
Dr. Majed Al Subih	Vice Dean of Academic Affairs	Assistant Professor	malsubih@kku. edu.sa	https://www.re searchgate.net/ profile/Majed- Alsubih
Dr. Saed Dhafer M. Alqadhi	Vice Dean of Higher Studies and research	Assistant Professor	sdalqadi@kku.e du.sa	https://www.re searchgate.net/ profile/Saeed- Alqadhi
Dr. Nabil Ben Kahla	Chairman	Associate Professor	nbohlal@kku.ed u.sa	https://www.re searchgate.net/ profile/Nabil B en Kahla
Dr. Siva Kumar Anandan	Coordinator of Laboratory and Equipment's Committee	Professor	ksiva@kku.edu. sa	https://www.re searchgate.net/ profile/Sivakum ar Anandan

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Mohammed Jameel		Professor	jamoali@kku.ed u.sa	https://www.re searchgate.net/ profile/Moham med-Jameel-3
Dr. Javed Mallick		Associate Professor	jmallick@kku.e du.sa	https://www.re searchgate.net/ profile/Javed Mallick
Dr. Khalid Al Hadi	Coordinator, Community Service Committee	Assistant Professor	kalhdi@kku.edu .sa	https://www.re searchgate.net/ profile/Khalid Alhadi
Dr. Mishal Qablan		Assistant Professor	<u>ac11439@kku.e</u> <u>du.sa</u>	
Dr. Mohamed Elouni	Coordinator, Plan and Curricula committee	Assistant Professor	melouni@kku.e du.sa	https://www.re searchgate.net/r esearcher/2049 974602 M H El Ouni
Dr. Mohd Abul Hasan		Associate Professor	mahasan@kku. edu.sa	https://www.re searchgate.net/ profile/Mohd Hasan6

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Mohd. Ahmed		Associate Professor	moahmed@kku .edu.sa	https://www.re searchgate.net/ profile/Mohd Mohd3
Dr. Yasser Alashker	Coordinator, Safety and Security Committee	Assistant Professor	yalashgr@kku.e du.sa	https://www.re searchgate.net/r esearcher/2050 378350 Yasser Alashker
Dr. Ahmad Babakar		Assistant Professor	abalhaj@kku.ed u.sa	https://www.re searchgate.net/ profile/Ahmed Elhag/contribut ions
Dr. Khaled Mohamed Khedher		Assistant Professor	kkhedher@kku. edu.sa	https://www.re searchgate.net/ profile/Khaled- Khedher
Dr. Hamdi Alhadi Ayed		Assistant Professor	hayed@kku.edu .sa	https://www.re searchgate.net/ profile/Ayed- Hamdi-2
Engr. Saiful Islam	=	Lecturer	sfakrul@kku.ed u.sa	https://www.re searchgate.net/ profile/Saiful I slam6

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Engr. Roohul Abad	_	Lecturer	rakhan@kku.ed u.sa	https://www.re searchgate.net/ profile/Roohul Khan
Engg. Abdul Aziz Mohammad Al agmi		Teaching Assistant	<u>aalagmi@kku.e</u> <u>du.sa</u>	
Engg. Mohannad Riyadh	-	Teaching Assistant	mraasiri@kku.e du.sa	
Engg. Abdullah Asiri		Teaching Assistant	anmasiri@kku.e du.sa	
Mohammad Mahdy Almasabi		Lecturer	mmahmad1@kk u.edu.sa	
Abdullah Fayez Al Asmari		Lecturer		-1/20
Amer Tarahib Ayedh Alkhammash	-	Teaching Assistant	aalkhamash@k ku.edu.sa	
Engg. Dhafar Alqahtani		Lecturer	dhafar@kku.ed u.sa	1/
Salman Fahad Khedher		Teaching Assistant		-



Electrical Engineering Program Description

The Electrical Engineering Department offers a single major track program "Bachelor of Science in Electrical Engineering". The program approved by the authorized body (by MoE) via. MoHE/9683 on 05/08/1426. The program duration is five years divided into ten levels (semesters). The first and second levels are considered as 1st year program prior to core academics in the department.

The program was established to satisfy several significant targets like; servicing the industrial community on a scientific basic, transfer electrical engineering knowledge for local population, qualifying students for research in electrical engineering area, and qualifying electrical engineers in Electrical Power and Machines, Communications, Computer and Control areas.

Electrical Engineering Program Vision

Achieve leadership in the field of Electrical Engineering with a high-quality education, instill professional skills and contribute through scientific research for the sustainable development of the community.

Electrical Engineering Program Mission

To endow high quality education and prepare electrical engineers who are competent to use modern technology effectively for carrying out innovative research and engage in community services.

Program Educational Objectives (PEOs)

The PEOs of the Electrical Engineering Undergraduate Program which are to be professionally accomplished so that our graduates will be able to:

- Prepare graduates to apply their understanding of science and technology for solving the problems arising in their career path, especially in the field of electrical engineering or related areas and make them capable of functioning effectively in an interdisciplinary environment.
- Prepare graduates to pursue advanced studies, conduct scientific research and engage in lifelong learning in electrical engineering and allied fields.
- Make the graduates to practice technical standards and communicate their ideas clearly and precisely, both orally and in writing.
- Prepare graduates to contribute for the sustainable development of the community through their technical expertise and skills while maintaining professional ethical conduct.

Pre-requisites for Tri-Semester Courses –New Plan

Bachelor in Electrical Engineering

First Year - First			
znat rem - znat			
Course Code	Crouse Title	Credit Hours	Pre- Requisites/Co- Requisites
013ENG-9	Intensive English Program-1	9	
107CHEM-6	General Chemistry	6	
111GE-4	Engineering Drawing -1	4	
	Number of Hours	19	
First Year -			
119MATH-5	Differentiation And Integration - 1 The Entrance to the Islamic	5	
111IC1-3	The Entrance to the Islamic Culture	3	
014ENG-9	Intensive English Program 2	9	013ENG-9
	Number of Hours	17	
First Year -			
129MATH-5	Algebra and Geometry	5	
129PHYS-6	Physics -1	6	
101CS-5	Computer Science	5	
Total	Number of Hours	16	
Second Year -			
211ME-6	Engineering Mechanics	6	
	Differentiation And Integration -		
219MATH-5	2	5	119MATH-5
219PHYS-5	Physics -2	5	129PHYS-6
Second Year –	Number of Hours	16	
	Production Technology and		
121ME-4	Workshop	4	111GE-4 119MATH-5.
211EE-5	Electric Circuits -1	5	129MATS-5, 129PHYS-6
112IC1-3	Islamic Culture -2	3	
229MATH-5	Differentiation And Integration -	5	219MATH-5
Total	Number of Hours	17	
Second Year -			•
228ME-5	Thermal Dynamics and	5	219MATH-5, 129PHYS-6
221EE-4	Hydraulics Electric Circuits -2	4	211EE-5
222EE-4	Electric Measurements	4	211EE-5
223EE-4	Electronic Engineering	4	211EE -5 219MATHS-5
Tota	Number of Hours	17	219MATHS-5
Third Year-			
311EE-4	Electromagnetic Fields	4	211EE-5 , 219MATHS-5
	_	3	219MATHS-5
113IC1-3 319MATH-5	Islamic Culture -3 Differential Equations	5	219MATH-5
313EE-4	Energy Conversion	4	221EE-4
	Number of Hours	16	
Third Year-			
312EE-4	Logic Circuits	4	211EE-5
314EE-1	Electric Testing -1	1	221EE-4 , 223EE-4
301NGL-3	Technical Reports Writing	3	014ENG-9
329MATH-3	Principles of Complex Variables and Special Functions	3	319MATH-5
329STAT-3	Principles of Statistics and Probabilities	3	
Trustee	Number of Hours	14	

Third Year -Ninth Lev	/el		
Course Code	Crouse Title	Credit Hours	Pre- Requisites/Co- Requisites
322EE-4	Signal Processing	4	219MATH-5, 319MATH-5
321EE-1	Electric Testing -2	1	312EE-4,313EE-4
323EE-4	Electronic Circuits -1	4	223EE-4
324EE-4	Computerized Methods for Engineering	4	101CS-5, 319MATH-5
Tota	al Number of Hours	13	
Summer Internship			
400EE -0	Summer Internship		Completion of 13 credit hours
Fourth Year-Tenth Le	evel		
201ARAB-3	Arabic Language Skills	3	
412EE-4	Automatic Control	4	221EE-4, 319MATH-5
111EE-4	Principles of Electric Machines	4	313EE-4
424IE-3	Engineering Economy	3	
Total	al Number of Hours	14	
Fourth Year –Eleventh			
413EE-4	Communication Systems	4	322EE-4 , 329MATH-3
114IC1-3	Islamic Culture -4	3	329MATH-3
414EE-4	Computer Organization -1	4	312EE-4 ,
422EE-4	Electronic Circuits -2	4	329MATH-3 329MATH-3
Tota	al Number of Hours	15	
Fourth Year -Twelfth	Level		
421EE-4	High Voltage Engineering	4	221EE-4
422IE-3	Environment Engineering	3	
423EE-1	Electric Testing -3	1	412EE-4 , 411EE
424EE-4	Computer Organization -2	4	414EE-4
425EE-4	Electric Power Systems	4	313EE-4
Tota	al Number of Hours	16	
Fifth Year-Thirteenth	Level		
202ARAB-3	Arabic Editing	3	
511EE-1	Electric Testing -4	1	413EE-4, 424EE
512EE-4	Integrated Circuits	4	422EE-4
513EE-4	Microprocessor Based Systems	4	414EE-4
591EE-4	Graduation Project	4	Complete 180 Cr Hrs.
Tota	al Number of Hours	16	
Fifth Year–Fourteenth Level			
514EE-4	Power Electronics	4	221EE-4, 223EE
515EE-1	Electric Testing- 5	1	421EE-4, 425EE
521EE-4	Operating Systems	4	424EE-4
522EE-4	Electric Power System Analysis	4 13	425EE-4
Total Number of Hours			
Fifth Year-Fifteenth L 523FF-4	Advanced Communication	4	413EE-4
	Systems		
524EE-4	Software Engineering	4	414EE-4 422EE-4, 424EE
525EE-1	Electric Testing (6)	1	422EE-4, 424EE
514IE-3	Industrial Project Management	3	
Total	al Number of Hours	12	

Pre-requisites for Tri-Semester Courses –New Plan

Bachelor in Electrical Engineering

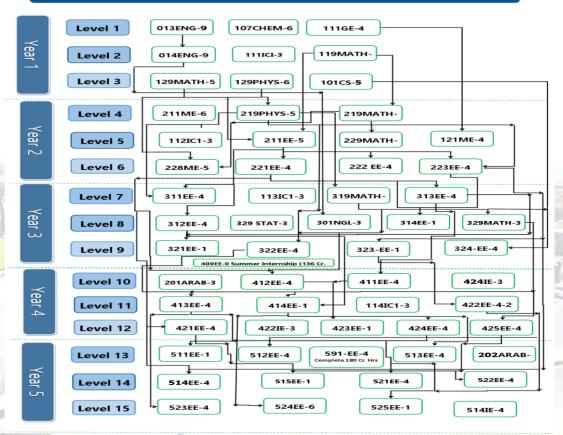
First Year - First Level			
Course Code	Crouse Title	Credit Hours	Pre- Requisites/Co- Requisites
011-ENG-9	Intensive English Program-1	9	
107-CHEM- 6	General Chemistry	6	
201-ARAB-3	Language Skills	3	
	Total Number of Hours	18	
First Year – Second Level			•
012-ENG-9	Intensive English Program-2	9	011-ENG-9
119-MATH-5	Differentiation and Integration-1	5	_
111-ICI-3	The Entrance to the Islamic Culture	3	-
	Total Number of Hours	17	
First Year – Third Level			
219-MATH-5	Differentiation and Integration-2	5	119-MATH-5
129-PHYS-6	Physics-1	6	
112-IC1-3	Islamic Culture-2	3	
104-CMS-3	Computer Science	3	-
Second Year - Fourth	Total Number of Hours	17	
Level			
111-GE-4	Engineering Drawing	4	
219-PHYS-6 329-MATH- 4	Physics-2 Linear Algebra	6	129-PHYS-6
329=WIATH= 4	Total Number of Hours	14	
Second Year - Fifth Level			
221-ME-4	Production Technology and Workshop	4	111-GE-4
211-EE-5	Electric Circuits 1	5	219MATH-5
319-PHYS-5	Physics-3	5	129PHYS-6 219-PHYS-6
211-GE-3	Learning skills	3	-
	Total Number of Hours	17	
Second Year - Sixth Leve			
221-EE-4	Electric Circuits 2	4	211-EE-5
222-EE-1	Electric Circuits Lab	1	
319-MATH- 5	Differential Equations	5	-
221-GE-3	Creativity and Innovation	3	219-MATH-5
202-ARAB-3	Arabic Writing	3	-
	Total Number of Hours	16	
Third Year-Seventh Leve			
212-ME-3	Engineering Mechanics (statics)	3	
229-MATH- 5	Differentiation and Integration-3	5	219-MATH-5
301-NGL-3	Technical Reports Writing	3	012-ENG-9
311-EE-4	Electrical Measurements	4	211-EE-5
312-EE-1	Electrical Measurements Lab	1	311-EE-4
	Total Number of Hours	16	
Third Year– Eighth Level			
321-EE-4	Computer Programming	4	104-CMS-3
329-STAT-3	Principles of Statistics and Probability	3	
313-EE-4	Logic Design	4	211-EE-5
314-EE-1	Logic Design Lab	1	313-EE-4
113-IC1-3	Islamic Culture-3	3 15	-
Total Number of Hours			

		Credit	Pre-
Course Code	Crouse Title	Hours	Requisites/Co- Requisites
322-EE-4	Signals and Systems	4	229-MATH-5
324-EE-4	Introduction to Microprocessors and Microcontrollers	4	313-EE-4
325-EE-1	Microprocessors and Microcontrollers Lab	1	324-EE-4
323-EE-4	Electromagnetics	4	319-MATH-5, 129-PHY-6
114-IC1-3	Islamic Culture-4	3	
Tot	al Number of Hours	16	
ummer Internship			
Summer Training	400-EE-0	0	Completion of 136 credit hours
ourth Year-Tenth Level			
421-EE-4	Electromechanical Energy Conversion - 1	4	221-EE-4
413-EE-4	Basics of Electronic Devices	4	221-EE-4
414-EE-1	Electronic Devices Lab	1	413-EE-4
311-ME-3	Engineering Mechanics (dynamic)	3	
411-GE-3	Professional Ethics and practice	3	
Total Number of Hours		15	
ourth Year -Fleventh Level			
411-EE-4	Automatic Control	4	322-EE-4
412-EE-1	Automatic Control Lab	1	411-EE-4
564-IE-3	Safety and Environment Engineering	3	
424-EE-4	Special Topics in Electrical Engineering	4	
Total Number of Hours		12	
ourth Year – Twelfth Level			
423-EE-4	Analog Communications	4	322-EE-4
422-EE-4	Numerical Methods	4	319-MATH-5
411-IE-3	Engineering Management	3	
	Elective -1	3	Refer to elective course lists
Total Number of Hours		14	
ifth Year–Thirteenth Level			
512-EE-4	Digital Signal Processing	4	322-EE-3
513-EE-1	Digital Signal Processing Lab	1	512-EE-4
571-EE-4	Senior Design Project	4	Complete 175 Cr Hrs.
514-EE-4	Electric Power System	4	221-EE-4
515-EE-1	Electric Power System Lab	1	514-EE-4
Total Number of Hours		14	
ifth Year-Fourteenth Level			
521-EE-4	Analog and Digital Electronic Circuits	4	413-EE-4
522-EE-1	Analog and Digital Electronic Circuits Lab.	1	521-EE-4
523-EE-4	Digital Control Systems		411-EE-4
	Elective-2	4	Refer to elective course lists
Tot	al Number of Hours	13	
ifth Year-Fifteenth Level			•
511-GE-3	Entrepreneurship and Venture Engineering	3	
	Elective -3	4	Refer to elective
			Course lists Refer to elective
Elective -4		4	course lists

Total Number of Hours

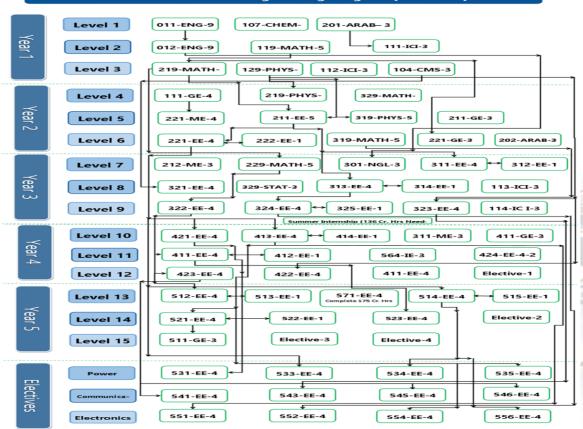
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BSc Plan Of Electrical Engineering Program (Trimester)

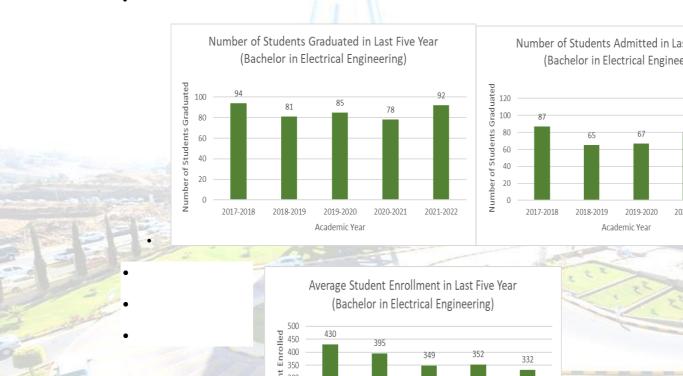


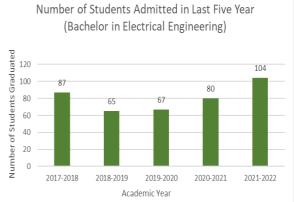
Pre-requisites chart for Tri-Semester courses-Old plan

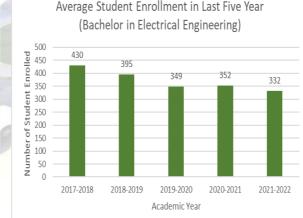
BSc Plan Of Electrical Engineering Program (Trimester)



Pre-requisites chart for Tri-Semester courses-New plan







Master of Science (MSc) in Electrical Engineering Program Description

The Department of Electrical Engineering is offering a post-graduate program leading to the degree of Master of Science (MSc) in Electrical Engineering from the academic year 1441. The M.Sc. program has been designed to cope with the modern trends and development in Electrical Engineering. The program will enrich the student's knowledge and understanding of advanced concepts in Electrical Engineering; increase their expertise in their specific fields of interest. The program will offer students two specialization tracks, i.e. a) Electronics and Communications Engineering and b) Electrical Machines and Power Systems Engineering.

Program Structure		No. of Courses	Credit Hours	Percentage
Cour	Required	9	4*9 = 36	80%
se	Elective	0	0	0%
Gradu	ation Project (if any)	N/A	N/A	N/A
Thesis	(if any)	10	9	20%
Field I	Experience(if any)	N/A	N/A	N/A
Others	s ()	N/A	N/A	N/A
Total		10	45	100

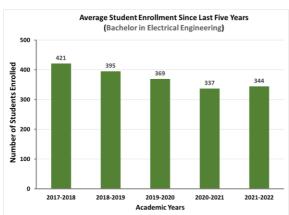
MSc Electrical Engineering Curriculum

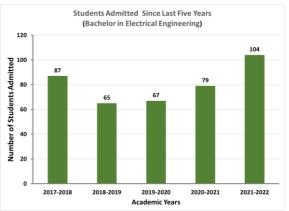
Program Courses: Un-Paid

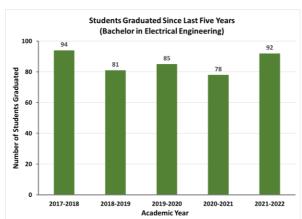
	Course		Required	-Pre *	Credit	/Colleg
Level	Code	Course Title	or	Requisite	Hours	Departi
Level	Code	Course Title	Oi	Courses	Hours	Departi
Trimester	ELE-4-7001	.Simulation of Engineering Systems	R	Courses	4	D
11111estei 1	ELE-4-7001	Advanced Mathematics	R	_	4	D
1	LLL-4-7002	Advanced Mathematics	N.		4	D
		Track: Electronics and Communications Engi	neering			
Trimester 2	ELE-4-7003	Modeling of Stochastic Engineering	R	-	4	D
······este·· =	ELE-4-7101	Advanced Digital Circuit Design	R	-	4	D
Trimester 3	ELE-4-7102	Advanced Communication System	R	-	4	D
Timicater 5	ELE-4-7103	VLSI Fabrication Technology	R	-	4	D
Trimester	ELE-4-7104	Advanced Digital Signal Processing	R	-	4	D
4	ELE-9-7006	Thesis	R	-	9	D
Trimester	ELE-4-7105	Special Topics in Electronics Engineering	R	-	4	D
5	ELE-9-7006	Thesis	R	-	-	D
Trimester	ELE-4-7106	Special Topics in Communications	R	-	4	D
6	ELE-9-7006	Thesis	R	-	-	D
	_					
	Tra	ack: Electrical Machines and Power Systems E	ingineering	3		
	ELE-4-7003	Modeling of Stochastic Engineering	R		4	D
Trimester	LLL 4 7003	.Systems	IX.			
2	ELE-4-7201	Generalized theory of electrical machines	R	-	4	D
Trimester	ELE-4-7202	Power System Operations	R	-	4	D
3	ELE-4-7203	Power Electronics Application	R	-	4	D
Trimester	ELE-4-7204	Renewable Energy Systems	R	-	4	D
4	ELE-9-7006	Thesis	R	-	9	D
Trimester	ELE-4-7205	Special Topics in Electrical Machines	R	-	4	D
5	ELE-9-7006	Thesis	R	-	-	D
Trimester	ELE-9-7006	Thesis	R	-	-	D
6	ELE-4-7206	Special Topics in Electrical Power Systems	R	_	4	

Program Courses Type: Paid

O	J 1					
	Course		Required	-Pre *	Credit	/College
Level	Code	Course Title	or Elective	Requisite	Hours	Departn ent
				Courses		
Trimester	ELE-4-7001	.Simulation of Engineering Systems	R	-	4	D
1	ELE-4-7002	Advanced Mathematics	R	-	4	D
		Track: Electronics and Communications Engine	ering			
Trimester 2	ELE-4-7003	.Modeling of Stochastic Engineering Systems	R	-	4	D
irimester 2	ELE-4-7004	Programming for Engineers	R	-	4	D
Trimester 3	ELE-4-7101	Advanced Digital Circuit Design	R	-	4	D
minester 5	ELE-4-7102	Advanced Communication System	R	-	4	D
Trimester	ELE-4-7103	VLSI Fabrication Technology	R	_	4	D
4	ELE-4-7104	Advanced Digital Signal Processing	R	_	4	D
Trimester	ELE-4-7105	Special Topics in Electronics Engineering	R	_	4	D
5	ELE-5-7005	Graduation Project	R	-	5	D
Trimester	ELE-4-7106	Special Topics in Communications Engineering	R	-	4	D
6	ELE-5-7005	Graduation Project	R	_	1	D
	ELE-4-7003	Track: Electrical Machines and Power Systems Eng	gineering	-	4	D
Trimester		0 0,				
2	ELE-4-7004	Programming for Engineers	R	-	4	D
Trimester	ELE-4-7201	Generalized theory of electrical machines	R	-	4	D
3	ELE-4-7202	Power System Operation	R	-	4	D
Trimester	ELE-4-7203	Power Electronics Application	R	-	4	D
4	ELE-4-7204	Renewable Energy Systems	R	-	4	D
Trimester	ELE-4-7205	Special Topics in Electrical Machines	R	-	4	D
5	ELE-5-7005	Graduation Project	R	-	5	D
Trimester	ELE-4-7206	Special Topics in Electrical Power Systems	R	-	4	D
6	ELE-5-7005	Graduation Project	R	-	-	D







Electrical Engineering Laboratories

- Electronics Circuits Laboratory
- Logic Circuits Laboratory
- High Voltage Engineering Laboratory
- Electromechanical Devices Laboratory
- Electrical Machines Laboratory
- Measurements Laboratory
- Communication Laboratory
- Electrical Engineering Laboratory

More information related to the laboratories:

http://electrical.engineering.kku.edu.sa/en/content/731

Faculty

The Department of Electrical Engineering has excellent hiring process for faculties in order to have continuous professional development and facilitating the research work of faculty. The Electrical Engineering department comprises of faculty with high academic achievements and a rich experience of teaching in various countries of the globe. In addition to academic experience, few faculties have experience in industry, consultancy and professional organizations. The Electrical Engineering faculties have also administrative experience at the college and the university levels. One of the Electrical Engineering faculties has been appoint recently as vice Dean of the college. The department head of the academic program is responsible for all aspects of management of the program, including curriculum development, instructional delivery, student assessment, schedule of classes and accreditation matters coordination. The department head discharges his duties through the various academic committees formed of specialized faculties for different aspects of management of the program. The department head is not responsible for personnel matters. The department head reports to the Dean of the college. The Dean is the administrative position responsible for all aspects of the academic process in the college.

Faculty Workload

The assigned workload of the faculty in as per the University current regulations and it is according to the academic rank of the faculty. Based on the rank and regulation, the teaching load assigned to the faculty without any extra remunerations are as given below.

1. Professor:	10 credit hours
2. Associate Professor:	12 credit hours
3. Assistant Professor:	14 credit hours
4. Lecturer:	16 credit hours

The faculty having the administrative responsibilities, in addition to academic, assigned lesser teaching load. The teaching load assigned is in line to support the faculty professional development, educational quality improvement activities and for facilitating their research work. The working hours are 40 hours per week. The working hours meant for teaching, research, academic advising, laboratory supervision, and any other tasks assigned to them.

Faculty Size

The program maintains 1:15 faculty to student ratio to comply the workload stipulation of the university guidelines. The program has 20 core faculties and designations wise distribution of the faculty is as follows:

a.	Associate Professor	8
b.	Assistant Professor	12
C.	Lecturer	9

In addition to the above faculty, the teaching assistants are also appointed and some of them sent abroad for higher studies at the expenses of the university. The faculties of Electrical department hail from diverse background and nationalities i.e. Saudi Arabia, Egypt, Tunisia, India and Sudan.

Professional Development

Professional development has given prime importance to develop string program in the department. The university supports the faculty's professional development activities. At department level, it starts with new joining faculty for his professional development. The Head of the Department starts off with a short session with each new faculty member explaining what is required for the tenure process, and giving information about sources and infrastructure as well as their other proposed activities. The Head also assigns department coordinators to new faculty on their arrival for mentoring purpose.

The department faculty is encouraged to undertake research, attend conferences, workshops, and professional development programs, organize national and international conferences and seminars, and collaborate with experts in industry and academia, for consulting and professional practice, and where appropriate pursues higher studies. Faculties are also offered incentive to formulate research proposal in collaboration with other faculties to develop a research culture in the department. The Department Head collect yearly performance profile of all the faculties and discussed with the Dean of the College to review and evaluation. The faculties are being awarded in recognition of their efforts in professional development and to develop interests, abilities and achievements as a both teacher and learners.

Table: Faculty Details

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Abdulwasa Bakr Barnawi	Assistant Professor	Department chairman	abarnawi@kku.edu. sa	
Dr. Saad Fahad Alqahtani	Assistant Professor	Vice Dean Quality	saljabr@kku.edu.sa	
Dr. Mohamed Abbas	Associate Professor	Coordinator Quality and Development Committee	mabas@kku.edu.sa	https://www.resear chgate.net/profile/ Mohamed_Abbas6
Dr. Mohammed Zubair	Associate Professor	Coordinator Educational Services	mzmohammed@kk u.edu.sa	https://www.resear chgate.net/profile/ Mohammed- Zubair-Shamim
Dr. Hany S. Hussein	Associate Professor	Coordinator Higher Studies for Masters and Research	hahussein@kku.edu .sa	https://www.resear chgate.net/profile/ Hany-Hussein

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Javed Khan Bhutto	Associate Professor		jbhutto@kku.edu.sa	https://www.resear chgate.net/profile/ Dr_Bhutto
Dr. RamKumar Raja Manoharan	Associate Professor		rmanoharan@kku.e du.sa	https://www.resear chgate.net/profile/ Ramkumar-Raja-2
Dr. Neeraj Kumar Shukla	Associate Professor	THE REAL PROPERTY.	nshukla@kku.edu.s a	https://www.resear chgate.net/profile/ Neeraj-Shukla-6
Dr. Rajesh Verma	Associate Professor	8	rkishore@kku.edu.s a	https://www.resear chgate.net/profile/ Rajesh_verms15
Dr.Zakaria M. Elbarbary	Assistant Professor		albrbry@kku.edu.sa	https://www.resear chgate.net/profile/ Zakaria-El-Barbary
		1	1	

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Fakher Eldin Mohamed Suliman	Assistant Professor		fmsuliman@kku.ed u.sa	https://www.resear chgate.net/profile/ Fakher_Eldin_Suli man
Dr. Mohammed Usman	Assistant Professor		omfarooq@kku.edu .sa	https://www.resear chgate.net/profile/ Mohammed- Usman-7
Dr. Abdelaziz Salah Saidi	Assistant Professor	Coordinator Academic Guidance and Student Affairs	asaidi@kku.edu.sa	https://www.resear chgate.net/profile/ Saidi_Abdelaziz
Dr. Monji Zaidi	Assistant Professor	3	amzaydi@kku.edu.s a	https://www.resear chgate.net/profile/ Monji_Zaidi
Dr. Thafasal Ijyas	Assistant Professor	Coordinator Timetable and Examination Committee	ithafasal@kku.edu.s a	https://www.resear chgate.net/profile/ V-Ijyas

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Mohammed Farrag	Assistant Professor	Coordinator Curriculum and Courses	mfarrag@kku.edu.s a	
Dr. Muneer P.	Assistant Professor		mparayangat@kku. edu.sa	https://www.resear chgate.net/profile/ Muneer_Parayanga t2
Dr. Hassen Loukil	Assistant Professor	1112.1	hloukil@kku.edu.sa	https://www.resear chgate.net/profile/ Hassen_Loukil2
Dr. Elfatih Elsheikh	Assistant Professor	-	eelsheikh@kku.edu. sa	https://www.resear chgate.net/profile/ Elfatih-Elsheikh
Dr. Abdulilah Mayet	Assistant Professor		amayet@kku.edu.sa	
Er. Zeeshan Ahmad	Lecturer		zayshan@kku.edu.s a	https://www.resear chgate.net/profile/ Zeeshan-Ahmad-19

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Er. Abdelrahim A. Sourab	Lecturer		asorab@kku.edu.sa	https://www.resear chgate.net/profile/ Abdelrahim_Soura b
Er. Abdul Wasay Mohammed	Lecturer		abdulwase@kku.ed u.sa	https://www.resear chgate.net/profile/ Abdul-Wase
Er. Shaik Mohammed Irshad	Lecturer	11111111	sirshad@kku.edu.sa	https://www.resear chgate.net/profile/ Shaik_Mohammad _Irshad2
Er. Mohammed Sayeeduddin Habeeb	Lecturer	3	mshabeeb@kku.edu .sa	https://www.resear chgate.net/profile/ Mohammed_Habe eb
Er. Mahammad Majahar Hussain	Lecturer		mhmohamad@kku. edu.sa	https://www.resear chgate.net/profile/ Mahammad- Majahar-Hussain

Faculty Name	Designation	Academic Position	Email	ResearchGate link	
Er. Saud Mohammed Ali	Lecturer		smalmsaeed@kku.e du.sa		
Er. Mohammed Abdul Muqeet	Lecturer		mabdulmuqeet@kk u.edu.sa	https://www.resear chgate.net/profile/ Mohammed_Abdul _Muqeet2	
Er. Salman Arafath Mohammed	Lecturer	11414 315	salman@kku.edu.sa	https://www.resear chgate.net/profile/ Salman_Mohamme d7	



The Bachelor in Industrial Engineering Program is accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org.



Engineering Accreditation Commission

INDUSTRIAL ENGINEERING



Industrial Engineering Program Description

Kingdom of Saudi Arabia has been blessed by vast natural resources and these resources have been utilized for the progress of the country and welfare of its people. The proper utilization of these natural resources led to the opening of Industrial Engineering Department under College of Engineering (COE) at King Khalid University (KKU). The authorized body i.e. MoHE (private institutions and Council of Higher Education for public institutions) has approved the program. The Industrial Engineering Department was established in year 2007 at the Gregar main campus of King Khalid University with the objective of graduating students having expertise in all the aspects of Industrial Engineering.

(http://industrial.engineering.kku.edu.sa/en/content/275).

Industrial Engineering Program Vision

Achieving leadership in the field of Industrial Engineering in fields of education, scientific research and rendering community services in the Kingdom of Saudi Arabia.

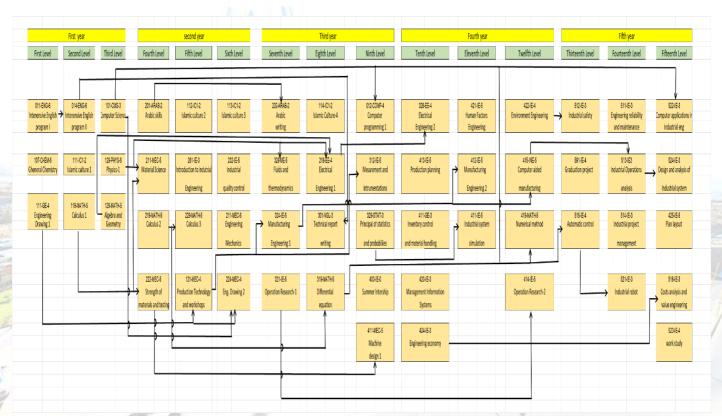
Industrial Engineering Program Mission

Build within students a solid foundation in industrial engineering, expands the reasoning, communication and problem-solving abilities of students, and prepare graduates who have the motivation and ability for lifelong growth in their professional careers and addresses the evolving needs of industry and society.

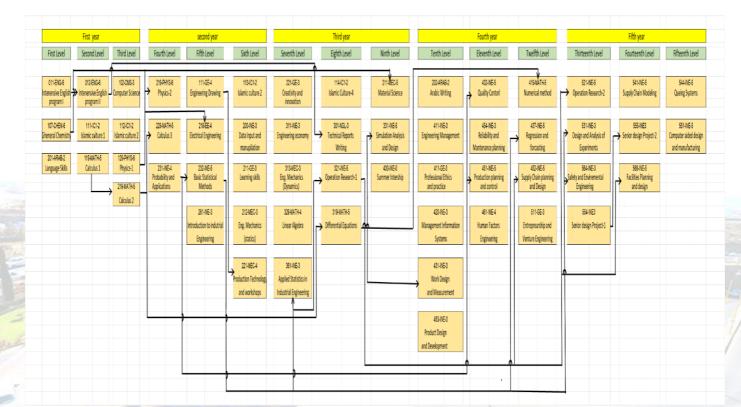
Program Educational Objectives (PEOs)

• PEO1:	To be able to analyze problems and create innovative industrial engineering designs
	considering functionality, cost-effectiveness, sustainability, safety, aesthetics, and
	satisfaction.

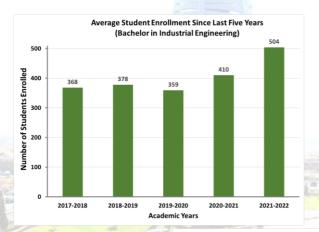
- **PEO2:** To use modern technology and design tools, work individually and in a team effectively, and communicate ideas in written, oral, and graphical form clearly.
- **PEO3:** To increase their personal knowledge and skills professionally and academically.
- PEO4: To serve ethically as a team member or as a team leader to improve their communities.

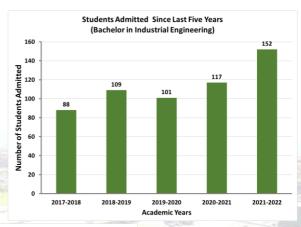


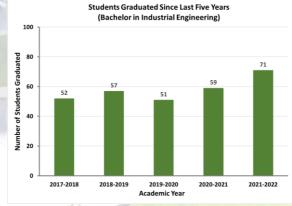
Old Plan Industrial Engineering undergraduate program flowchart -Trimester



New Plan Industrial Engineering undergraduate program flowchart Trimester









- Human Factors Laboratory
- Work Study Laboratory
- Metrology Laboratory
- Statistics Laboratory
- Simulation Laboratory
- Operations Research Laboratory
- CIM Laboratory

More information related to the laboratories: http://industrial.engineering.kku.edu.sa/en/content/516

Graduation projects (Second semester 2021-2022)

Title	Supervisor
Improving the Productivity in a Local Factory by Implementing 6S Method	Dr. Naif Almakayeel
Service Quality Assessment of Pharmacy using SERVQUAL	Dr Saleh Al Ghamdi
Enhancing waiting time issues in a healthcare centre using Six Sigma methodology	Dr. Shaik Dawood Abdul Khadar
Efficient Dispatch of a Combined Transportation and Energy Supply Units Using MILP Algorithm: A Case Study at Al-Fara'a Region	Dr. Mohammed Mousa
Optimizing Fire Detection Coverage and Layout using Genetic Algorithms	Dr. Mohamed A.A. Mansour
Intermittent demand forecasting: for AORS gas contracting company	Dr Rahmath Ulla Baig
Enhancing Productivity Through the Implementation of A Work Measurement Technique: A Case Study at Local Company	Dr.Mohammed Abdullah Al Awadh
Improving operations problem by using JIT implementation and hybrid method	Dr. Ali Almuflih

Faculty

The IE department has a process for hiring the excellent faculty, for continuous professional development and for facilitating the research work of faculty. The IE department comprises of faculty with high academic achievements and a rich experience of teaching in various countries of the globe. In addition to academic experience, the many faculties have experience in industry, consultancy and professional organizations. The IE faculty have also administrative experience at the college and the university levels. The department chair discharges his duties through the various academic committees formed of specialized faculties for different aspects of management of the program. The department chair reports to the Dean of the college. The Dean is the administrative position responsible for all aspects of the academic process in the college.

Faculty Workload

The assigned workload of the faculty is as per the university current regulations and it is according to the academic rank of the faculty. Based on the rank and regulation, the teaching load assigned to the faculty without any extra remunerations are as given below.

Professor: 10 credit hours

Associate Professor: 12 credit hours

Assistant Professor: 14 credit hours

Lecturer: 16 credit hours

The faculty having the administrative responsibilities, in addition to academic, assigned lesser teaching load. The teaching load assigned is in line to support the faculty professional development, educational

quality improvement activities and for facilitating their research work. The working hours assigned for Saudi faculty are 35 hours per week and for faculty on yearly contract, the working hours are 40 hours per week. The working hours meant for teaching, research, academic advising, laboratory supervision and any other tasks assigned to them.

Faculty Size

Discuss the adequacy of the size of the faculty and describe the extent and quality of faculty involvement in interactions with students, student advising and counseling, university service activities, professional development, and interactions with industrial and professional practitioners including employers of students.

Currently, the department of IE has 04 Asst. Professors, 01 Associate Professor, 5 lecturers with M.Sc. degree and 2 with B.Sc. degree Teaching Assistants.

In addition to the above faculty, the teaching assistants are also appointed and some of them sent abroad for higher studies. The faculties of Industrial Engineering department possess from diverse background and nationalities i.e. Saudi Arabia, Egypt and India.

Professional Development

Professional development has given prime importance to develop strong program in the department. The university budgetary provision supports the faculty's professional development activities. At department level, it starts with new joining faculty for his professional development. The head of the department starts with a short session with each new faculty member explaining what is required for the tenure process and giving information about sources and infrastructure as well as their other proposed activities. The head also assigns department coordinators to new faculty on their arrival for mentoring purpose.

The department faculty is encouraged to undertake research, attend conferences, workshops and professional development programs, organize national and international conferences and seminars, collaborate with experts in industry and academia, for consulting and professional practice, and where appropriate pursues higher studies. Faculty are also offered incentives to formulate research proposal in collaboration with other faculties to develop a research culture in the department. The department head collect yearly performance profiles of all faculties and discussed with the Dean of the College to review and evaluation. The faculty are being awarded in recognition of their efforts in professional development and to develop interests, abilities, and achievements as a both teachers and learners.



Table: Faculty Details

Table:	Faculty Details				
Faculty Name	Designati	ion Acader	nic Position	Email	ResearchGate Link
Dr. Saleh Y A Ghamdi	Al Assistant Pro	ofessor Departm	nent chairman	syalghamdi@kku.edu.s a	https://www.research gate.net/profile/Saleh _Alghamdi15
Dr. Mohame A.A. Mansou	ır Associate Pro	ofessor		momansor@kku.edu.sa	https://www.research gate.net/profile/Moh amed Mansour
Dr. Mohame Rafik Noor Mohamed Qureshi	Associate Pro	ofessor Coordin Timetal Examin	ole and	m <mark>rnoor@kku.ed</mark> u.sa	https://www.research gate.net/profile/M_N _Qureshi
Dr. Shaik Dawood Abo Khadar	lul Assistant Pro	ofessor Quality Develop coordinate	ment	shdaw <mark>ood@kku.edu.sa</mark>	https://www.research gate.net/profile/Shaik _Dawood_Abdul_Kh
Dr Huraish Almakaeel	Assistant Pro	Academ	ator ic Guidance dent Affairs	halmakaeel@kku.edu.s a	https://www.research gate.net/profile/Naif-
Dr Rahmath Ulla Baig	Assistant Pro	ofessor		rbahmed@kku.edu.sa	https://www.research gate.net/profile/Rah math-Baig

Faculty Name	Designation	Academic Position	Email	ResearchGate Link
Dr. Mohammed Alqahtani	Assistant Professor		m.alqahtani@kku.edu. sa	https://www.research gate.net/profile/Moh ammed-Alqahtani- 40?ev=hdr_xprf
Dr. Mohammed Al Awadh	Assistant Professor		mohalawadh@kku.edu. sa	https://www.research gate.net/profile/Moh ammed-Al-Awadh
Dr Ali Miuflih	Assistant Professor		asalmuflih@kku.edu.sa	https://www.research gate.net/profile/Ali- Almuflih
Dr Sandos Al- Qarni	Assistant Professor	A PRINCE	soqarni@kku.edu.sa	
Dr Sahar Ahmed Idris	Assistant Professor	9	smohammedali@kk u.edu.sa	http://reposi tory.susth. edu/handle/
Dr Imen Rashid Bouazzi	Assistant Professor		izaidy@kku.edu.sa	https://www.research gate.net/profile/Imen -Bouazzi
Dr. Abir Mouldi	Assistant Professor	1	amouldi@kku.edu.sa	https://www.research gate.net/profile/Abir- Mouldi-2

MSc in Safety and Fire Protection Engineering Program Goal

The overall program goal is to provide the highest quality of academically well-trained competent safety practitioners for business and industries as well as government and municipalities in Saudi Arabia and globally and Industries in the field of Safety and Fire Protection Engineering and its relevant applications

Program objectives:

- To meet the needs of the Kingdom of qualified national professionals in the field of Safety and Fire Protection Engineering.
- To meet the needs of scientific researches in the field of Safety and Fire Protection Engineering and its relevant applications.
- To provide engineering and scientific professionals in the government

Program Structure		No. of Course	Credit Hours	Percentage
		S		
Course	Required	7	21	50%
Elective		6	18	43%
Graduation Project (if any)	NA	0	00%
Thesis(if any)		1	3	7%
Field Experience(if any)		NA	0	00%
Total		14	42	100%

MSc in Safety and Fire Protection Engineering Curriculum:

_	Course		Des	Credit hours				<u></u>	Course	Course
Level	Code	Course Title	Pre- requisite(s)	Theory	Lab	Tutorial	Total	Level	Code	Title
	751INE-3	Industrial safety laws	None	3	0	0	3	3	Department	Compulsory
Ξ	721INE-2	Advanced Engineering Statistics	None	2	0	0	2	2	Department	Compulsory
Level (I)	752INE-1	Research Methods in Safety and Fire Protection Engineering	None	1	0	0	1	1	Department	Compulsory
	7** INE-3	Elective (I)	None	3	0	0	3	3	Department	Elective
_	781INE-3	Fundamental Thermal Science	None	3	0	0	3	3	Department	Compulsory
Level (II)	771INE-3	Safety Methods	None	3	0	0	3	3	Department	Compulsory
eve	782INE-3	Advanced Fire Dynamics	None	3	0	0	3	3	Department	Compulsory
	7**INE-3	Elective (II)	None	3	0	0	3	3	Department	Elective
	783INE-3	Fire Modeling	None	3	0	0	3	3	Department	Compulsory
(III)	722INE-3	Hazardous Waste Operations and Emergency Response	None	3	0	0	3	3	Department	Compulsory
Level	7**INE-3	Elective (III)	None	3	0	0	3	3	Department	Elective
ت	7**INE-3	Elective (IV)	None	3	0	0	3	3	Department	Elective
	799INE-0	Research Project	None	0	0	0	0	0	Department	Compulsory
_	7**INE-3	Elective (V)	None	3	0	0	3	3	Department	Elective
Level	7**INE-3	Elective (VI)	None	3	0	0	3	3	Department	Elective
L,	799INE-3	Research Project	799INE-0	3	0	0	3	3	Department	Compulsory

Electives

761INE-3 Work Equipment Hazards and Risk Control None 3 0 0 3 3 Department											
Total	e l	761INE-3	-3 Work Equipment Hazards and Risk Control	None	3	0	0	3	3	Department	Elective
Total	(1)	762INE-3	-3 Human Behavior in Fire	None	3	0	0	3	3	Department	Elective
Tokicology for Engineers None 3 0 0 3 3 Department	₩	763INE-3	-3 Workplace Hazards and Risk Control	None	3	0	0	3	3	Department	Elective
773 10 10 10 10 10 10 10 1	e/	764INE-3	-3 Quantitative Environmental Risk Assessment	None	3	0	0	3	3	Department	Elective
773INE-3	(2)	765INE-3	-3 Toxicology for Engineers	None	3	0	0	3	3	Department	Elective
782INE-3	ѿ	773INE-3	-3 Product Liability Control	None	3	0	0	3	3	Department	Elective
TABLE-3 Electrical Safety None 3 0 0 3 3 Department		784INE-3	Fire Protection Structure and Protection	782INE-3	3	0	0	3	3	Department	Elective
Tell	(3)	785INE-3	Fire Protection Engineering	771INE-3	3	0	0	3	3	Department	Elective
Table Tabl	tive	774INE-3	E-3 Electrical Safety	None	3	0	0	3	3	Department	Elective
Tell	Elec	786INE-3	-3 Fire Safety	None	3	0	0	3	3	Department	Elective
775INE-3 Fire Investigation Analysis None 3 0 0 3 3 Department		787INE-3	Smoke Management and Special Hazards	782INE-3	3	0	0	3	3	Department	Elective
776INE-3 Industrial Safety None 3 0 0 3 3 Department	(4)	788INE-3	-3 Advanced Fire Behavior	781INE-3	3	0	0	3	3	Department	Elective
776INE-3 Industrial Safety None 3 0 0 3 3 Department	ctive (775INE-3	Fire Investigation Analysis	None	3	0	0	3	3	Department	Elective
766INE-3 Safety in Facility and Product Design None 3 0 0 3 3 Department	Ele	789INE-3	Fire Engineering	762INE-3	3	0	0	3	3	Department	Elective
767INE-3 Physical and Psychological Safety None 3 0 0 3 3 Department		776INE-3	-3 Industrial Safety	None	3	0	0	3	3	Department	Elective
767INE-3 Physical and Psychological Safety None 3 0 0 3 3 Department	ve (5)	766INE-3	-3 Safety in Facility and Product Design	None	3	0	0	3	3	Department	Elective
767INE-3 Physical and Psychological Safety None 3 0 0 3 3 Department	Electiv	777INE-3	-3 Safety and Security	None	3	0	0	3	3	Department	Elective
778INE-3 Chemical and Biological Hazards Control None 3 0 0 3 3 Department		767INE-3	Physical and Psychological Safety	None	3	0	0	3	3	Department	Elective
	e (6)	778INE-3	:-3 Chemical and Biological Hazards Control	None	3	0	0	3	3	Department	Elective
778INE-3 Chemical and Biological Hazards Control None 3 0 0 3 3 Department 768INE-3 Transport Hazards and Risk Control None 3 0 0 3 3 Department	Electiv	768INE-3	-3 Transport Hazards and Risk Control	None	3	0	0	3	3	Department	Elective

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The Bachelor in Mechanical Engineering Program is accredited by the Engineering Accreditation Commission of ABET, https://www.abet.org.



Engineering Accreditation Commission

DEPARTMENT OF MECHANICAL ENGINEERING





Mechanical Engineering Program Description

The Mechanical Engineering Department is one of the dynamic departments in the College of Engineering. The department offers a single major track program "Bachelor in Mechanical Engineering". The program duration is five years, divided into ten levels (semesters). First and second levels are considered as 1st year program prior to core academics in the department. The program has been ABET accredited and following NCAAA standards for continuous improvement. Currently, there are no alternative tracks offered by the department. However, there are two main fields in the program where the students can specialize in. The first one is the field of production engineering which includes materials science, design, manufacturing etc. and the second one is the field of power which includes thermodynamics, heat transfer and fluids. However, the students are awarded with a degree "Bachelor of Mechanical Engineering" after their successful completion of graduation requirements.

Mechanical Engineering Program Vision

Achieving academic and technological leadership in the field of Mechanical Engineering, contributing through academics and applied research, and participating in the development of the society.

Mechanical Engineering Program Mission

To prepare qualified mechanical engineers who are able to develop, innovate and compete in their professions, besides involving in scientific research and community services.

Program Educational Objectives (PEOs)

- 1. To prepare graduates with high quality education to be creative, distinctive, and capable of running the industrial establishments.
- 2. To prepare graduates to pursue their personal skills and professional developments through continuous learning.
- 3. To prepare graduates to apply their academics and conduct research in the field of Mechanical Engineering.
- 4. To prepare graduates to effectively participate in the sustainable development of the community.

Bachelor in Mechanical Engineering

	First Year - First Level								
Course Code	Course Title		Weekly Credit /						
course code		Theory	Lab	Credit Hours	Contact Hours	Prerequisites			
011ENG-6	Intensive English Program-1		6	6	12	-			
107CHEM-6	General Chemistry	5	1	6	7	-			
201ARAB-2	Arabic Language Skills	2	i	2	2	-			
	Total Number of Hours	7	7	14	21				

	First Year -	Second Leve	el			
Course Code	Course Title			Distributio Contact Ho		
Course Code		Theory	Lab	Credit Hours	Contact Hours	Prerequisites
012ENG-6	Intensive English Program-2		6	6	12	011-ENG-6
111ICI-2	The Entrance to the Islamic Culture	2		2	2	
119MATH-5	Differentiation and Integration-1	5	-	5	5	
Total Number of Hours		7	6	13	19	

	First Yea	ır – Third Level					
Course Code	Course Title		Weekly Distribution of Credit /Contact Hours				
		Theory	Lab	Credit Hours	Contact Hours	Prerequisites	
102CMS-3	Computer Science	2	1	3	4	-	
112IC1-2	Islamic Culture-2	2		2	2	-	
129PHYS-6	Physics-1	5	1	6	7	-	
219MATH-5	Differentiation and Integration-2	5	1	5	5	119MATH-5	
	Total Number of Hours	14	2	16	18		

	Second Year - Fourth Level							
Course Code	Weekly Distribution of Credit /Contact Hours							
Course Code	Course little	Theory	Lab	Credit Hours	Contact Hours	Prerequisites		
111GE-4	Engineering Drawing	1	4	4	8	-		
219PHYS-6	Physics-2	5	1	6	7	129PHYS-6		
221GE-3	Creativity and Innovation	3	-	3	3	-		
229MATH- 5	Differentiation and Integration-3	5		5	5	219MATH-5		
	Total Number of Hours	13	5	18	23			

	Second Year	- Fifth Lev	el			
	Course Title	Weekly Distribution of Credit /Contact Hours				
Course Code	Course Title	Theory	Lab	Credit Hours	Contact Hours	Prerequisites
202ARAB- 2	Arabic Writing	2	-	2	2	-
211GE-3	Learning skills	3		3	3	-
211ME-5	Material Science	4	1	5	6	129PHYS-6 107CHEM- 6
212ME-3	Engineering Mechanics (Statics)	3	-	3	3	-
221ME-4	Production Technology and Workshop	1	3	4	7	111GE-4
	Total Number of Hours	13	4	17	21	

	Second Year -	- Sixth Lev	el			
Course Code	Course Title	Weekly Distribution of Credit /Contact Hours				
Course Cour		Theory	Lab	Credit Hours	Contact Hours	Prerequisites
222GE-3	Engineering Programming	1	2	3	5	102CMS-3
222ME-5	Thermodynamics-1	4	1	5	6	129PHYS-6 119MATH-5
223ME-5	Strength of Materials & Testing	4	1	5	6	211ME-3
319MATH- 5	Differential Equations	5		5	5	219MATH-5
	Total Number of Hours	14	4	18	22	

	Third Year – S	eventh Lev	el			
Course Code	Course Title		Weekly Credit /			
Course Code	course rice	Theory	Lab	Credit Hours	Contact Hours	Prerequisites
113IC1-2	Islamic Culture-3	2		2	2	-
301NGL-3	Technical Reports Writing	3	,	3	3	012ENG-6
312-ME-4	Mechanical Engineering Drawing	1	3	4	7	111GE-4
313ME-3	Engineering Mechanics (Dynamics)	3		3	3	-
329MATH- 4	Linear Algebra	4		4	4	-
	Total Number of Hours	13	3	16	19	

	Thir	rd Year – Eighth Lev	el				
Course Code	Course Title	0	Weekly Distribution of Credit /Contact Hours				
Course Code	Course ricie	Theory	Lab	Credit Hours	Contact Hours	Prerequisites	
114IC1-2	Islamic Culture-4	2		2	2	-	
218EE-4	Electric Engineering-1	3	1	4	5	129PHYS-6 119MATH-5	
321ME-5	Theory of Machines	4	1	5	6	212ME-3 313ME-3	
419MATH-5	Numerical Methods	5	-	5	5	319MATH-	
	Total Number of Hours	14	2	16	18		

Course Code	Course Title	0		Distribution / Contact H		
Course Code		Theory	Lab	Credit Hours	Contact Hours	Prerequisites
311ME-4	Metal Cutting Processes	3	1	4	5	211ME-5 221ME-4
322ME-5	Fluid Mechanics	4	1	5	6	222ME-5
328EE-4	Electric Engineering-2	3	1	4	5	218EE-4
329STAT-3	Principles of Statistics and Probability	3	-	3	3	
400ME-0	Summer Internship	0	0	0	0	Completion of 148 credits
	Total Number of Hours	13	3	16	19	

	Fourth Year -	Tenth Lev	el			
Course Code	Course Title		Weekly Distribution of Credit /Contact Hours			
Course Code	Course little	Theory	Lab	Credit Hours	Contact Hours	Prerequisites
311INE-3	Engineering Economy	3		3	3	-
413ME-5	Heat Transfer	4	1	5	6	322ME-5
414ME-3	Measuring Devices	2	1	3	4	321ME-5
422ME-5	Thermodynamics-2	4	1	5	6	222ME-5
	Total Number of Hours	13	3	16	19	

Bachelor in Mechanical Engineering

	Fourth Year – E	leventh Le	vel			
Course Code	Course Title		Weekly Credit /			
Course Cour		Theory	Lab	Credit Hours	Contact Hours	Prerequisites
411GE-3	Professional Ethics and Practice	3		3	3	-
411ME-5	Machine Elements Design-1	4	1	5	6	223ME-5 312ME-4
412ME-4	Metal Forming Processes	3	1	4	5	211ME-5 221ME-4
423ME-5	Hydraulic Machines & Fluid Power Systems	4	1	5	6	322ME-5
	Total Number of Hours	14	3	17	20	

Fourth Yes	r-Twelfth Le	vel			
Course Title	0				
	Theory	Lab	Credit Hours	Contact Hours	Prerequisites
Machine Design	3	1	4	5	411ME-5
System Dynamics & Mechanical Vibrations	4	1	5	6	321ME-5 319MATH- 5
Free Course- 1	3	-	3	3	-
Elective-1 (From List A)	4	-	4	4	
Total Number of Hours	14	2	16	18	
	Course Title Machine Design System Opnamics & Mechanical Vibrations. Free Course-1 Elective-1 (From List A)	Course Title Theory Machine Design 3 System Oynamics & Mechanical Vibrations 4 Free Course-1 3 Elective-1 (From List A) 4	Course Title of Credit Machine Design 3 1 System Dynamics & Mechanical 4 1 Free Course 1 3 - Elective 1 (From List A) 4 -	Course Title	Weekly Distribution Order Contact House Contact House

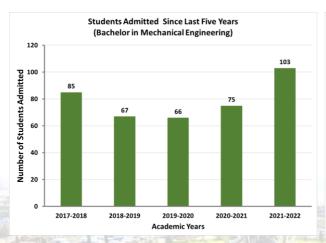
	Fifth Y	ear – Thirteenth Le	vel			
Course Code	Course Title	0	Weekly Distribution of Credit /Contact Hours			
Course Code	Course little	Theory	Lab	Credit Hours	Contact Hours	Prerequisites
512ME-3	Senior Design Project-1	3	1	3	3	Completion of 177 credits
9 7	Elective -2 (From List B)	4		4	4	
	Elective -3 (From List B)	4	-	4	4	
	AND THE PERSON NAMED IN				-	
	Total Number of Hours	11	0	11	11	

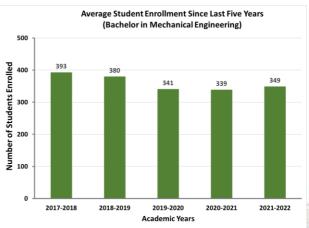
	Fifth Year	- Fourteenth Le	evel			
Course Code		Weekly Distribution of Credit /Contact Hours				
Course Code	Course Title	Theory	Lab	Credit Hours	Contact Hours	Prerequisites
511GE-3	Engineering Entrepreneurship	3	-	3	3	-
511ME-5	Control Systems	4	1	5	6	424-ME-5
521ME-3	Senior Design Project-2	3	-	3	3	512-ME-4
	Total Number of Hours	10	1	11	12	

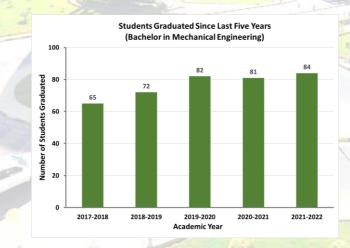
	Fifth Year – Fifteenth Level						
Course Code Course Title			Weekly Distribution of Credit /Contact Hours				
Course Code	Course Title	Theory	Lab	Credit Hours	Contact Hours	Prerequisites	
411INE-3	Engineering Management	3		3	3		
1	Elective-4	4	-	4	4		
97	Elective-5	4		4	4		
	Free Course-2	3	-	3	3		
	Total Number of Hours			14	14		

Elective-1							
Course Code	Course Title	o	Weekly Distribution of Credit /Contact Hours				
Course Code	Course Inte	Theory	Lab	Credit Hours	Contact Hours	Prerequisites	
321GE-3	Knowledge Management	3		3	3		
322GE-3	Design Thinking	3		3	3	30	
323GE-3	System Dynamics	3		3	3		

		Elective- 2, 3, 4, 5 (a	ccording to	the trac	:k)		
rrack	Course	Course Title	Weekly Distribution of Credit /Contact Hours				
Tra	Code	Course rice	Theory	Lab	Credit Hours	Contact Hours	Prerequisites
	Po we	Internal Combustion Engines	4		4	4	413ME-5
gui	532ME-4	Energy Conversion	4		4	4	422ME-5
Engineering	533ME-4	Power Plants	4		4	4	413ME-5
er Eng	541ME-4	Energy Efficient Buildings.	4		4	4	413ME-5
Power	542ME-4	Desalination	4		4	4	422ME-5
	543ME-4	Refrigeration and Air Conditioning	4		4	4	413ME-5
ring	534ME-4	Computer Aided Manufacturing	4	-	4	4	311ME-4
ginee	535ME-4	Mechanical Behavior of Materials	4	-	4	4	211ME-5
Production Engineering	536ME-4	Composite Material	4	-	4	4	211ME-5
ducti	544ME-4	Fundamentals of Heat Treatment	4	-	4	4	211ME-5
eX.	545ME-4	Finite Element Analysis in Mechanical Design	4		4	4	421ME-4 419MATH-5
Design	546ME-4	Nano technology	4		4	4	211ME-5







MSc in Renewable Energy and Environment

The post graduate program aims to meet standards best International and Saudi Universities. This program is designed in accordance with Saudi vision 2030, to prepare engineers and researchers in advanced fields of technology. The program aims to provide students with an advanced level of knowledge and ability to analyze, design, and implement power systems. In particular, the program focuses on renewable energy systems. Moreover, this program is designed to prepare researchers and practitioners of environmental policies and is trained in the fields of renewable energy technology to satisfy local and regional market needs, taking into account the national framework of qualifications and requirements of the national accreditation and quality NCAAA. The program also encourages scientific research in the fields of renewable energy and environment.

Program Mission

Graduation of engineers of a high level of competence and skill to conduct engineering research, applied studies, scientific and contribution in the service of the community and industrial institutions in the Kingdom and the Arab region.

Program Objectives

- 1. The graduates will excel as professionals in the various fields of energy engineering.
- 2. The graduates will be known for their commitment to lifelong learning, social responsibility, and professional and ethical responsibilities in implementing sustainable engineering solutions.
- 3. The graduates will excel in critical thinking, problem solving and effective communication.
- 4. Prepare the students with abilities to assess the relative merits and potential impacts of different energy sources within the framework of sustainability

- 5. .The graduate students with a strong foundation in business and management aspects of renewable energy projects.
- 6. The graduate students who are knowledgeable citizens prepared for the green jobs of the future.
- 7. Support and educate business and community partners through projects, seminars and workshops

Study Plan Structure:

	Program Structure		No. of Courses	Credit	Percentage
919	Course	Required	6	24	53.3%
		Elective	3	12	26. 7%
	Graduation	Project (if any)	NA	0	00%
	Thesis(if a	ny)	1	9	20%
-	Field Expe	rience (if any)	NA	0	00%
	Others ()	NA	0	00%
	Total		10	45	100%

Program Courses:					
Level	Course Code	Course Title	Required or Elective	Pre- Requisite Courses	Credit Hours
	7161-ME-4	Renewable Energy Systems	Required	NA	4
Level 1	7162-ME-4	Environment And Sustainability	Required	NA	4
	7163-ME-4	Advanced Heat Transfer	Required	NA	4
Level 2	7164-ME-4	Solar Energy	Required	NA	4
Level	7165-ME-4	Energy Efficiency	Required	NA	4
3	7166-ME-4	Numerical Methods	Required	NA	4
Level	7167ME-9	Thesis	Required	NA	3
4	71XX-ME-4	ME Elective 1 (From List 1)	Elective	NA	4
	71XX-ME-4	ME Elective 2 (from list 2)	Elective	NA	4
Level	7167-ME-9	Thesis (Continued)	Required	NA	3
5	71XX-ME-4	ME Elective 3 (From List 3)	Elective	NA	4
Level 6	7167-ME-9	Thesis (Continued)	Required	NA	3

Elective Courses:

	Elective courses.			
		Course	Course Title	
		7168-ME-4	Photovoltaic Energy Systems	
	List 7169-ME-4 Geothermal Energy		Geothermal Energy	
	1	7170-ME-4	Advanced Fluid Mechanics	
		7171-ME-4	Wind Energy	
		7172-ME-4	Finite Elements Method	
	List	7173-ME-4	Energy Conversion	
	2	7174-ME-4	Energy Storage Systems	
ě		7175-ME-4	Electrical Systems Related to Renewable Energy	
8		7176-ME-4	Energy Policy, Planning and Sustainable Development	
7.0		7177-ME-4	Computational Fluid Dynamics	
	List	7178-ME-4	Optimization Of Energy Systems	
ļ	3	7179-ME-4	Advanced Mathematics	
		7180-ME-4	Economic Aspects of Renewable Energy	
-		7181-ME-4	Energy Comfort in Buildings	
		7182-ME-4	Environmental Pollution	
×		7183-ME-4	Energy Management	
		7184-ME-4	Desalination	

Exit Point: Higher Diploma

The student would be eligible to be awarded a higher diploma "Renewable Energy and Environment" in case he has successfully completed 36 credit hours through the prescribed core and elective courses but do not wish to take a thesis and complete 45 credit hours.

Mechanical Engineering Workshops and Laboratories

The computer laboratories are all located in the Ground floor of building A, in rooms 21, 23, 29, 30, and 35. Other various specialized laboratories beside the technical workshops are listed in the following Tables.

Table 1: ME Workshops of Mechanical Engineering Program

Work	shops of Mechanical Engineering	Room No.	Area (Sq Mtr)
1	Non-Conventional Machining Workshop	A/ME/1	130.66
2	Metals Platting & Coating Workshop	A/ME/2	143.4
3	Conventional Machining Workshop	A/ME/3	219.78
4	Welding Workshop	A/ME/4	151.2
5	Sheet Metal Working Workshop	A/ME/4	
6	Foundry Workshop	A/ME/5	130.66
7	Forging Workshop	A/ME/5	
8	Carpentry Workshop	B1/ME/3	119.56
9	Metals Forming Workshop	B1/ME/9	134.3
10	Polymers Forming Workshop	B1/ME/9	
11	Electricity Workshop	B2/ME/10	69.72
12	Automobiles Workshop	C/ME/6	74.87

Table 2: ME Laboratories of Mechanical Engineering Program

Laborat	ories of Mechanical Engineering	Room No.	Area (Sq. Mtr)
1	Machining Lab	A/ME/3	Included in Conventional Machining
2	Sand Testing Lab	A/ME/5	Included in Foundry and Forging
3	CNC Lab	B1/ME/1	91.8
4	Strength of Materials Lab	B1/ME/2	112
5	Theory of Machines Lab	B1/ME/4	108.73
6	Mechanical Design Lab	B1/ME/5	47.73
7	Systems Dynamic & Vibrations Lab	B1/ME/6	78.07
8	Automatic Control Lab	B1/ME/7	78.07
9	Materials Science Lab	B1/ME/8	162.54
10	Thermodynamic Lab	C/ME/1	109.83
11	Refrigeration & Air Conditioning Lab	C/ME/2	93.59
12	Hydraulic and Fluid Mechanics Lab	C/ME/3	199.04
13	Heat Transfer Lab	C/ME/4	100.83
14	Analysis of Materials Lab	C/ME/5	74.87
15	Combustion Lab	C/ME/6	74.87

Table 3: ME Laboratories used by Mechanical Engineering Department

Com	puter lab of Mechanical Engineering	Room No.	Area (Sq. Mt.)
1	AutoCAD Lab	29/A/1	96
2	AutoCAD Lab	30/A/1	96
3	Computer Lab for Engineers	35/A/1	96
4	AutoCAD Lab	38/A/1	96

More information related to the laboratories and workshops:

http://mechanical.engineering.kku.edu.sa/en/content/327

http://mechanical.engineering.kku.edu.sa/en/content/914

Graduation Projects (Second semester 2020-2021)

Title	Supervisor
Plasma Electrolyte Oxidation: Design & Fabrication	Dr. Ali Al-Kuzaim
Prediction of the Performance Parameters of a metal hybrid pump	Dr. Talal Alqahtani
Study of Indoor Air Quality and Energy Performance of Buildings.	Dr. Salem Ahmed M
Design and build a water pump powered by a non-conventional source of energy.	Dr. Sultan Alqahtani
Blood flow analysis in 3-dimensional model of an actual patient specific aorta.	Dr. Sarfaraz Kamangar
Analysis of Horizontal axis Wind turbine.	Dr. Irfan Anjum
Design and Performance Analysis of a Flat Plate Solar Air Heater.	Dr. Ahmed Saleel
Polymer Additive Manufacturing (3D-Priniting)	Dr. Ali Rajhi
Reverse Engineering of Micro Aerial Vehicles	Dr. Abhilash Edacherian
Design and Fabrication of Hot Air Drying for Fruits.	Dr. Ahmed Saleel

Graduation Projects (Second semester 2021-2022)

Title	Supervisor
Designing and building a solar chimney.	Dr. Sultan Al-Maleh
Modification of a small Savonius wind turbine design to increase its efficiency.	Dr. Sultan Alshehry
Improvement of engine performance by generating swirl using 3d-printed	Dr. Mohammad Yunus
Design of ANN model to study effect of coolant on surface roughness in machining.	Dr. Javed Sayed
Effect of Alcoholic and Nano-particles additives on Engine Performance.	Dr. Sarfaraz Kamangar
Large Scale Production of Graphene Nanoparticles and Investigating their Effect on Different Applications.	Dr. Youssef Jazaa
Design and Investigation of a System To Recover Exhaust Gas Energy for Desalination.	Dr. IrfanAnjum
Study and Modeling of Electromechanical System	Dr. Said Al-Thameur

Faculty

The Mechanical Engineering department has a process for hiring excellent faculty and staff members, for continuous professional development and for facilitating the research work. The Mechanical Engineering department comprises of faculty with high academic achievements and a rich experience of teaching in various countries. In addition to the academic experience, many faculty members have experience in industries, consultancy works, and professional organizations. Faculty members are keen to do research and provide various trainings to the students to enhance their capabilities beyond the syllabus. The Mechanical Engineering faculty members also possess administrative experience at the college and the university levels. Some of the faculty members hold the administrative positions such as Vice Dean of the college, Vice Dean of Research at University Level etc. The department head of the academic program is responsible for all aspects of management of the program, including curriculum development, student assessment, schedule of classes and accreditation matters. The department head discharges his duties through the various academic committees formed of specialized faculty members for different aspects of management of the program. The department head reports to the Dean of the college. The Dean is the administrative position responsible for all aspects of the academic process in the college of engineering.

Faculty Workload

The assigned workload of the faculty is as per the academic rank in accordance with the university regulations. The teaching load assigned to the faculty without any extra remunerations are as given below.

• Professor: 10 credit hours

Associate Professor: 12 credit hours

Assistant Professor: 14 credit hours

• Lecturer: 16 credit hours

The faculty having the administrative responsibilities, in addition to the academic, is assigned lesser teaching load. The teaching load assigned is in line to support the faculty professional development, educational quality improvement activities and for facilitating their research work. The working hours are meant for teaching, research, academic advising, laboratory supervision, invigilation and any other tasks assigned to them.

Faculty Size

Currently, the Department of Mechanical Engineering has about forty-nine core faculty members which include Professors, Associate Professors, Assistant Professors, Lecturers and Teaching Assistants.

The current number of faculty and the ratio of students to faculty are significantly adequate to accommodate various needs of students including teaching (by introducing different sections as per the class size), reserving reasonable office hours for students, academic advising, etc. and to allow faculty members to perform other important tasks and duties related to administration, research, committees, professional development, etc.

In addition to the regular faculty, the teaching assistants are also appointed and some of them are sponsored by the University for their Higher Studies in abroad. The faculty members of Mechanical Engineering Department hail from diverse background and nationalities i.e. Saudi Arabia, Egypt, Tunisia, India, and Sudan. The list of faculty members is as given below.

• Professor: 01

• Associate Professor: 06

• Assistant Professor: 19

• Lecturer: 11

• Teaching Assistants 05

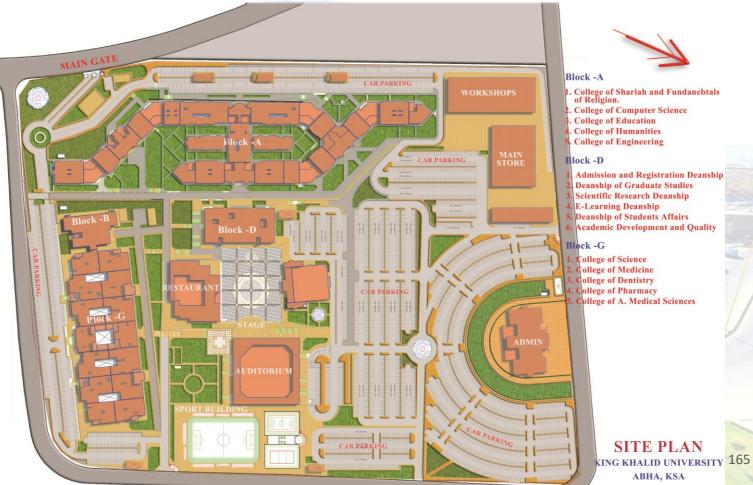
Table: Faculty Details

S.No	Faculty Name	Academic Position	Email
1	Dr. Irfan Anjum B Magami	Professor	Irfan@kku.edu.sa
2	Dr. Ali Muhammad A Algahtani	Associate Professor	alialgahtani@kku.edu.sa
3	Dr. Salem Ahmed M Algarni	Associate Professor	saalgarni@kku.edu.sa
4	Dr. Ali Essa Mohammed Anqi	Associate Professor	aenigi@kku.edu.sa
5	Dr. Amir Ibrahim Ali Arabi	Associate Professor	aarabi@kku.edu.sa
6	Dr. Vineet Tirth	Associate Professor	vtirth@kku.edu.sa
7	Dr. Fehmi Elbechir Ali Gamaoun	Associate Professor	fgamaoun@kku.edu.sa
8	Dr. Sultan Dahman M.Alshehry	Assistant Professor	salshehery@kku.edu.sa
9	Dr. Sagr Mubarak Sagr Alamri	Assistant Professor	salamri@kku.edu.sa
10	Dr. Ali Ahmad Yahya Rajhi	Assistant Professor	Arajhi@kku.edu.sa
11	Dr. Sultan Saad H.Alqahtani	Assistant Professor	ssqahtani@kku.edu.sa
12	Dr. Sayeed Thamer Mohammed al thamer	Assistant Professor	sthamer@kku.edu.sa
13	Dr. Ahmed Said Abd El Hafez Zedan	Assistant Professor	ahafedh@kku.edu.sa
14	Dr. Talal Saeed H Alqahtani	Assistant Professor	talqahtani@kku.edu.sa

S.No	Faculty Name	Academic Position	Email
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16	Dr. Saad Ayed S.Al.Shahrani	Assistant Professor	saadayed@kku.edu.sa
17	Dr. Mostafa Abdelmohimen Hussien	Assistant Professor	mmhussien@kku.edu.sa
18	Dr. Mohamed Abdelghany Elkotb	Assistant Professor	melkotb@kku.edu.sa
19	Dr. Abhilash Edacherian	Assistant Professor	edalheriad@kku.edu.sa
20	Dr. Ibrahim Elsayed awwad Elseesy	Assistant Professor	ieelseesy@kku.edu.sa
21	Dr. Ahamed Saleel Chandu Veetil	Assistant Professor	aveetil@kku.edu.sa
22	Dr.Mohamed Abdelbasset YOUSFI	Assistant Professor	moyousfi@kku.edu.sa
23	Dr. Sarfaraz Kamangar Abdul Gani Saheb	Assistant Professor	ssaheb@kku.edu.sa
24	Dr.Mohammad Yunus Khan Tatagar	Assistant Professor	mtatagar@kku.edu.sa
25	Dr. Javed Syed Ali Jaffer	Assistant Professor	jjaffer@kku.edu.sa
26	Dr. Yosef Abdulaziz Saeed Jazaa	Assistant Professor	yjazaa@kku.edu.sa
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28	Engr. Afroz Ahmed Khan Saudagar	Lecturer	aaksaudagar@kku.edu.sa
29	Engr. Mohammed Shafiuddin	Lecturer	maldeen@kku.edu.sa

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42	Engr. Walid Saeed Mohammed	Teaching Assistant	wmhgre@kku.edu.sa





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