

College of Engineering Handbook

"To meet the international standards as a source of excellence in engineering learning and center of research in the university"

رؤية
VISION
2030
المملكة العربية السعودية
KINGDOM OF SAUDI ARABIA


King Khalid University, Abha, Kingdom of Saudi Arabia



College of Engineering

كلية الهندسة

KKU



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A MESSAGE FROM THE RECTOR

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 continues 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
Rector 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 an unconventional learning environment where knowledge is sought, shared, and developed and where initiative is encouraged and valued among staff and students alike. Students, upon engaging in any learning process, are encouraged to be inquisitive when attending workshops, having access to laboratories, and using electronic resources. The major principle that all faculty members adhere to is: who benefits most from knowledge is he who shares it with others; and, as knowledge management specialists say: mastering knowledge results from teaching it. In our quest for satisfying our curiosity, we have done away with the compartmentalization of knowledge imposed by each department's specialism, but we have observed the organizational structure of the Faculty in our administrative dealings. Indeed, the Faculty of Engineering gives all its students, irrespective of the department 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 faculty training programme 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. For this reasons, we have been engaged, within the confines of the university rules and regulations, in keeping abreast with the latest developments by introducing small, but when necessary significant, amendments to our curricula. We

have also made sure that these amendments in the curricula are operationally effective through field visits and fieldwork because we are convinced that such activities bring theory and practice closer together.

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. By adopting a win-win strategy, our Faculty has succeeded in signing partnership contracts with various companies and faculties, and it is determined to continue to do so. These contracts aim at identifying job opportunities for graduates, exchanging knowledge and skills, developing staff understanding of the market needs, and serving the community.

Dr. Ibrahim Idris Falqi

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 strives for a leading role with regional roots, international dimensions, knowledge and research excellence and effective community contribution through qualitative competence.

UNIVERSITY MISSION:

King Khalid University commits to providing relevant academic environments for high-quality education, conducting innovative scientific research, providing constructive community services, and maximizing the employment of knowledge techniques.



UNIVERSITY STRATEGIC GOALS

- Achieving the aspirations of the Kingdom of Saudi Arabia in the development of constructive knowledge that contributes to the support of the religious and national goals.
- Attaining a distinguished level in knowledge, research and community services.
- Achieving comprehensive quality standards and obtaining programmatic and academic accreditation in accordance with national and international standards.
- Creating a relevant academic environment for attracting distinct faculty members and to promote their cognitive and professional capabilities.
- Activating the utilization of technology in order to build a knowledge-based society.
- Balancing the prospects of the University's output and job market requirements.
- Securing an innovative and educational environment for students; and maintaining contacts with the University's graduates.
- Establishing academic connections between the University and regional and international research centers.

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.compressed.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 University complex is located at the latitude of $18^{\circ}14'59.845''\text{N}$ and longitude of $42^{\circ}33'32.799''\text{E}$. 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 until it reached 56 Colleges. Then, it has re-structuring 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. Now the number of colleges in King Khalid University College is 34.

<http://www.kku.edu.sa/en/colleges/>

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. Summing a total of 49 faculties, after which a high decree was issued to convert the King Khalid University branches in Bisha, Namas, Balgarn and Tathleeth to an independent University of Bisha, bringing the number of faculties down to 34. <http://www.kku.edu.sa/ar/kku/deanship/>

ACADEMIC PROGRAMS AT KING KHALID UNIVERSITY

Growing interest in Saudi Arabia to work hard on continuous development, and go the quality of education at all levels, and raise the level of university graduates, as one of the most important leading comprehensive development factors to achieve leadership desired at various local, regional and global levels, King Khalid University offering 106 academic program covers the different sectors of education (humanities, basic science, health science and engineering) and the degrees, both intermediate diploma and bachelor's in addition to three degrees for Graduate Studies (Higher Diploma, Master's and PhD).

Number of Academic programs according to the degrees

Name of Degree	Number of academic program
Medium Diploma	6
Bachelor	43
High Diploma	13
Master	22
Parallel Master	18
PhD	7

COLLEGE OF ENGINEERING

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

About 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.

Aware of the university to keep up with the prospects of scientific and technical development and the contribution of the university in filling manpower needs in the fields of engineering with highly qualified engineering staff. Aligning with the development plans of the Kingdom. It has been approved in 08/05/1426 H to create the departments of Electrical Engineering, Chemical Engineering, Civil Engineering departments as well as the department of Architecture and Planning.

COLLEGE VISION

To meet the international standards as a source of excellence in engineering learning and center of research in the university

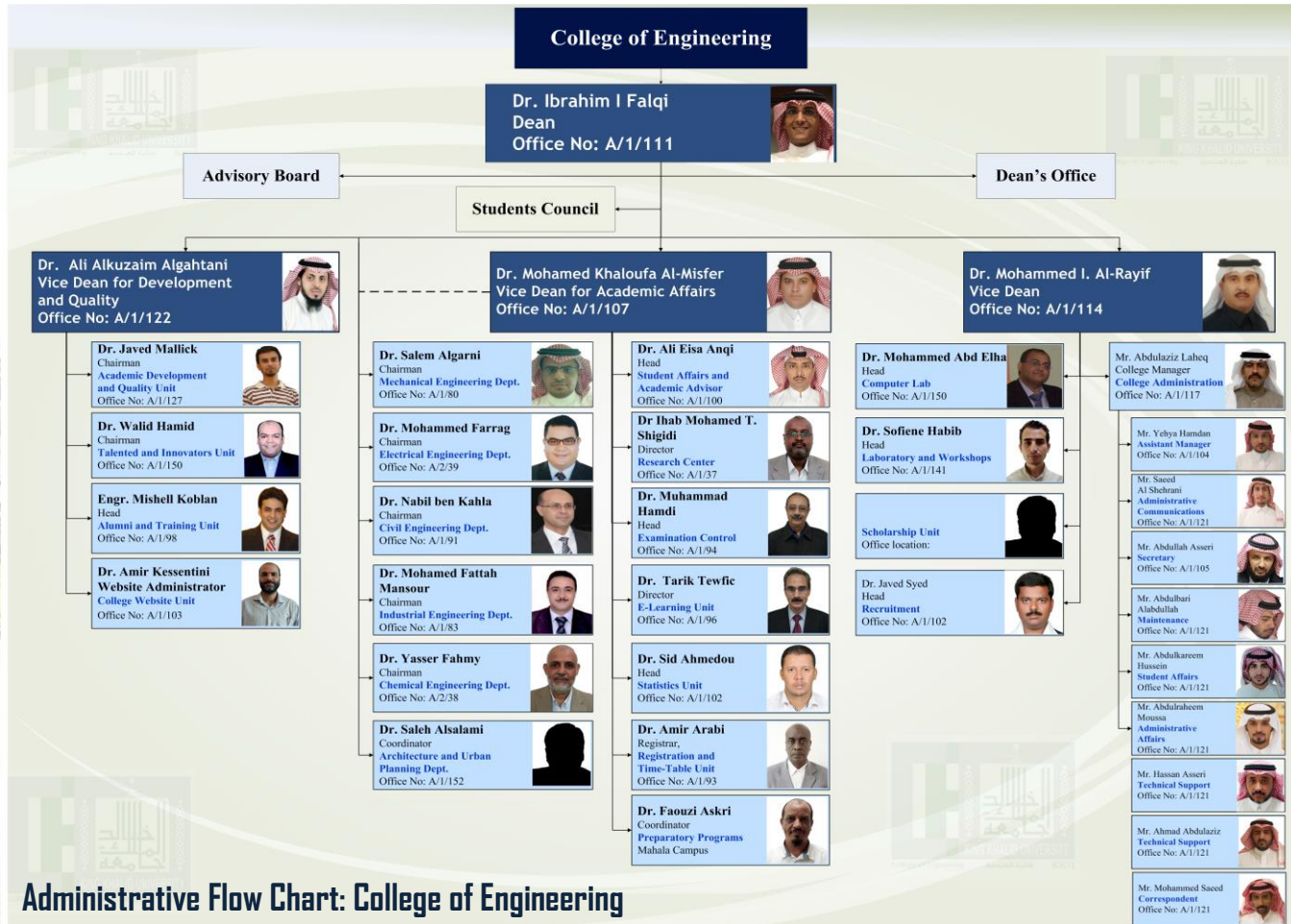
COLLEGE MISSION

To prepare a qualified engineering staff equipped with essential knowledge and skills in dealing with modern engineering technologies, in order to develop and improve our country's future plans

COLLEGE OBJECTIVES

- Development and innovation of engineering curricula studied to the changing needs in this field
- Configuration of strategic relationship with local and world-wide universities for research partnership and technology transfer
- Encourage and support professional development for staff members and students
- Support education and scientific research by academic services and effective management and technology
- Contributing into the development of the community by preparing and organizing educational programs and trainings in engineering continuously

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



Administrative Flow Chart: College of Engineering

The College of Engineering Strategic Themes

Sl. No	Strategic Theme	Description	Strategic Objectives
1	Academic Excellence.	The College of Engineering aims to provide the society with competitive engineers and developing the engineering profession in the Kingdom of Saudi Arabia.	<ul style="list-style-type: none"> • Developing students' skills. • Advanced training programs. • Increasing the proportion of PhD's teaching staff. • Increasing the College Enrollment criterion.
2	Participative cognitive and research environment.	The College of Engineering aims to develop a participative cognitive and research environment for students and teaching staff to keep up with local and international developments.	<ul style="list-style-type: none"> • Expansions in spending on scientific research. • Support of local and international scientific partnership. • Balance between intake capacity and resources. • Improving quality-level of technical facilities.
3	Effective competitive academic programs.	The continuous improvement of the academic programs to satisfy the new developments in market requirements and needs.	<ul style="list-style-type: none"> • Achievement of local and international accreditations. • Development of specialized academic programs.
4	Meeting the requirements and	Providing the local and regional community with the engineering	<ul style="list-style-type: none"> • Community partnership. • The consultation services.

Sl. No	Strategic Theme	Description	Strategic Objectives
	needs of the labor market.	services as research and consulting.	<ul style="list-style-type: none"> • Meeting the requirements of the skilled manpower.
5	Diversification of sources of income and the optimal resource utilization.	Diversification of sources of income and the optimal resource utilization.	<ul style="list-style-type: none"> • Activation of the consultation services. • The College Awkaf. • Improving the cost effectiveness.
6	Institutional development.	Improving the institutional procedures, processes, and policies.	<ul style="list-style-type: none"> • Improving management performance. • Professional accreditation.

STRATEGIC ISSUES OF THE COLLEGE OF ENGINEERING

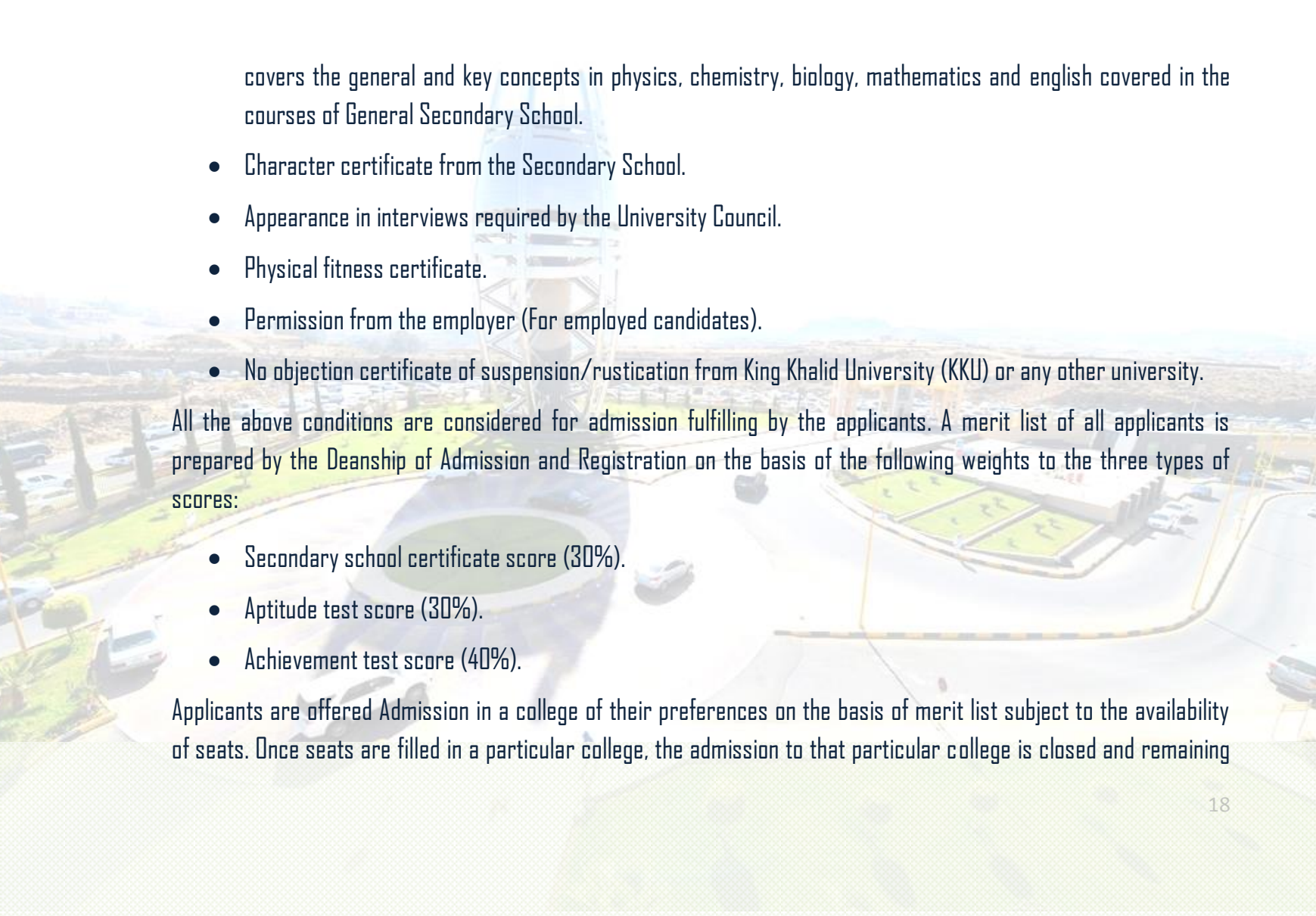
http://engineering.kku.edu.sa/sites/engineering.kku.edu.sa/files/general_files/files/Strategic%20issues%20of%20the%20College%20of%20Engineering.pdf

A. STUDENT ADMISSION

Students are centrally admitted by the Deanship of Admission and Registration, King Khalid University. The new applicants are accepted directly to the Bachelor of Science Engineering program but they must complete one year in the 1st Preparatory Year Program (PYP). University Council decides the number of students to be admitted for each academic year according to the recommendation of college council. The deanship of admission and registration implements all policies in line with the college of engineering. Admission takes place only once each year in the beginning of the academic year (1st Semester).

Requirements of admission to the Bachelor of Science program:

- Secondary School Certificate (Natural Sciences) or its equivalent from inside or outside the Kingdom of Saudi Arabia.
- Score of "Entrance Examination" which resides of an aptitude test, and a subject test. The test is conducted by the National Center for Assessment in Higher Education, Kingdom of Saudi Arabia. It has two sections. The first section is General Aptitude Test (QIYAS). This test measures a student's 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 (TEHSILI)". This section



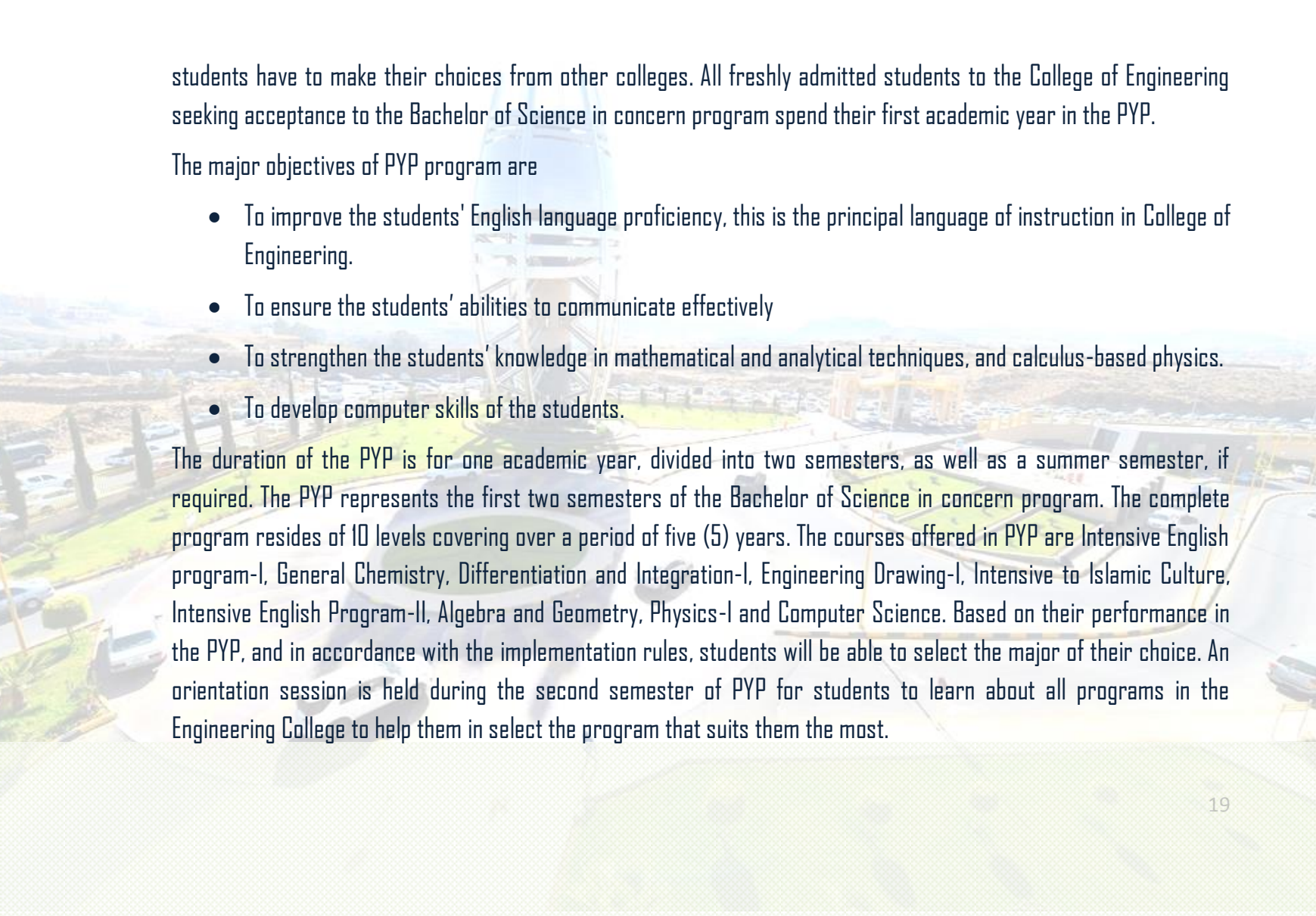
covers the general and key concepts in physics, chemistry, biology, mathematics and english covered in the courses of General Secondary School.

- Character certificate from the Secondary School.
- Appearance in interviews required by the University Council.
- Physical fitness certificate.
- Permission from the employer (For employed candidates).
- No objection certificate 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 Admission in a college of their preferences on the basis of merit list subject to the availability of seats. Once seats are filled in a particular college, the admission to that particular college is closed and remaining



students have to make their choices from other colleges. All freshly admitted students to the College of Engineering seeking acceptance to the Bachelor of Science in concern program spend their first academic year in the PYP.

The major objectives of PYP program are

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

The duration of the PYP is for one academic year, divided into two semesters, as well as a summer semester, if required. The PYP represents the first two semesters of the Bachelor of Science in concern program. The complete program resides of 10 levels covering over a period of five (5) years. The courses offered in PYP are Intensive English program-I, General Chemistry, Differentiation and Integration-I, Engineering Drawing-I, Intensive to Islamic Culture, Intensive English Program-II, Algebra and Geometry, Physics-I and Computer Science. Based on their performance in the PYP, and in accordance with the implementation rules, students will be able to select the major of their choice. An orientation session is held during the second semester of PYP for students to learn about all programs in the Engineering College to help them in select the program that suits them the most.

On successful completion of the PYP, the performance of students seeking admission to the Bachelor of Science in concern program is evaluated based on the GPA in the PYP. 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

B. Evaluating Student Performance

A Faculty acts as an academic advisor for the student of BSc. Program. The academic advisor helps the student in selecting courses for registration in each semester according to the study course plan of the program. The study plan available for the students and the academic advisors online at the URL: www.kku.edu.sa and is also available with the chairman and the coordinator of the department. Based on study course plan, a student can register online. The maximum of 20 credit hours course load is allowed to a student. The coordinator of students registration for the college can allow the exceptions based upon the performance of the student during the last few semesters.

The course coordinator evaluates the students’ performance for each course. The course coordinator designs the assessments for finding out the achievement of the course learning outcomes specified by the Curriculum Committee. The assignments, quizzes, continuous assessment examinations, and final examination can be used by the course coordinator to evaluate students’ performance, while for the courses involving laboratory classes, laboratory written

reports (for the lab work throughout the semester) and the laboratory final examination, are used to assess the achievement of the learning outcomes. The program has formulated a grading policy Based on the Policy and implementation rules of examinations and grades, which was approved by the Department Council.

B.1. Examination and Grading System

As part of the assessment and evaluation of students' skills and competencies, the following mechanisms are used:

- a) Continuous Assessment Test (CAT) - 50 %
- b) Term End Final Examination (TEFE) - 50 %
- a) The Continuous Assessment Test (CAT) have three components, namely CAT-I, CAT -2 and assignments, mini projects, seminars, quizzes and class participation. The breakdown of marks is given in the table 1.
- b) The term-end final examination carries 50% weight and is a compulsory aspect of the assessment process.

Table 1 Breakdown of marks

S. No.	EXAM Particulars	Marks
1.	CAT - I	15
2.	CAT- II	15
3.	Assignments/ Projects/ Lab Reports/ Quizzes/ Faculty Observation	20
4.	Term-end final examination	50
	Total	100

The grading systems of King Khalid University are shown in table 1. The course coordinator awards the grade as per marks out of 100. The marks are converted to a letter grade and grade points as depicted in table 2. Table 3 shows an example of student's grade report for the subjects in a semester.

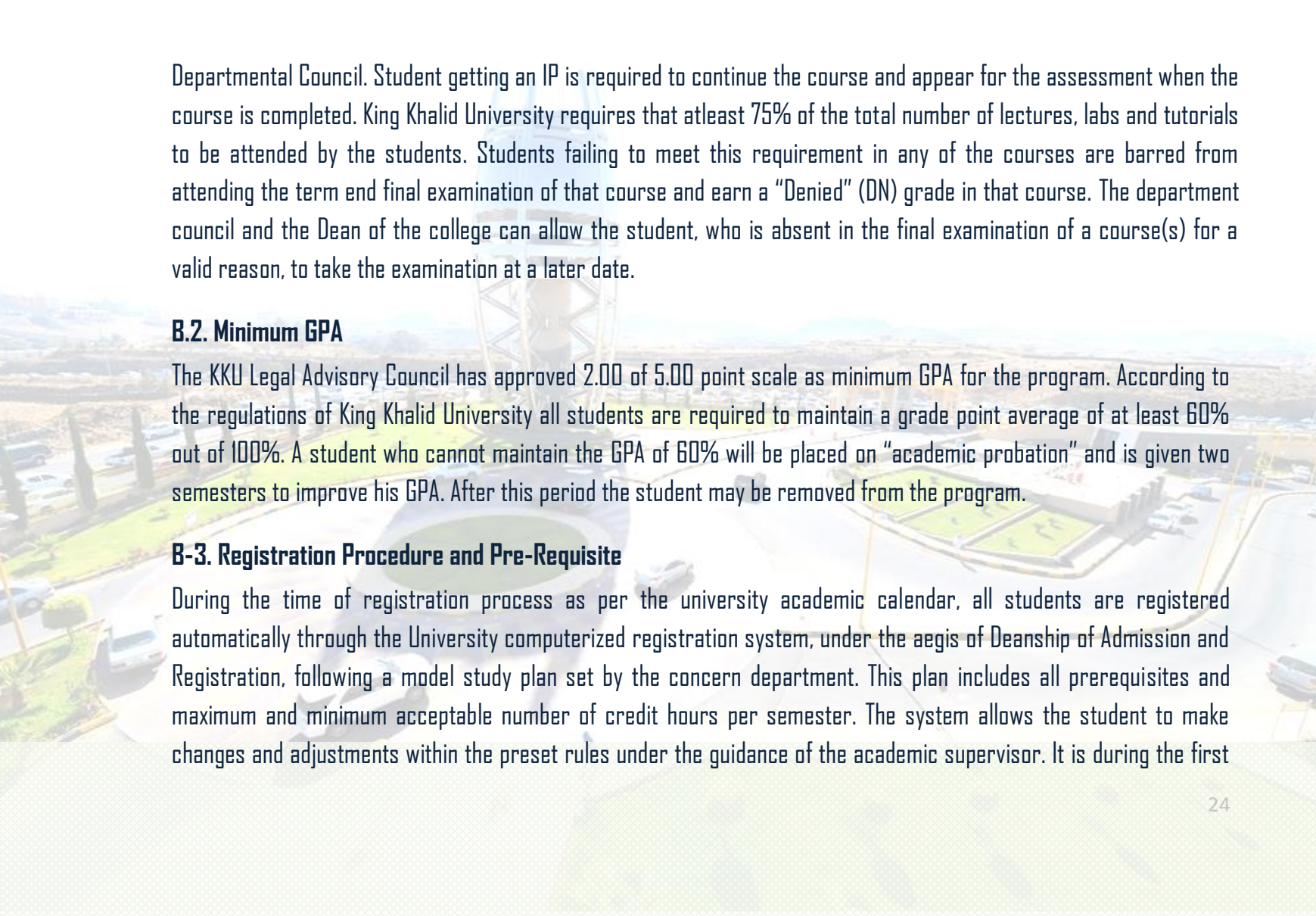
Table 2: The grading systems of King Khalid University

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
B	80-84		3.00	4.00
C+	75-79	Good	2.50	3.50
C	70-74		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 3: 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	B	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	86	B+	4.50	18.00
CE 7	2	90	A	4.75	9.50
Total	20				87.25
Computed GPA = Total Grade Points/ Total Credit Hours = 87.25/20 = 4.36					

If the course requirements are not completed by the student, Grade of "Incomplete" (IC) is given to the student. This is usually permitted in courses that require a course to be completed by the students on the recommendation of the course coordinator and approval of the Department Council. If the student doesn't complete the requirements during the next semester the IC automatically changes to "F". The student gets "In Progress" (IP) grade, if the course requires more than one term to be completed particularly the Graduation Project. It does not require the approval of the



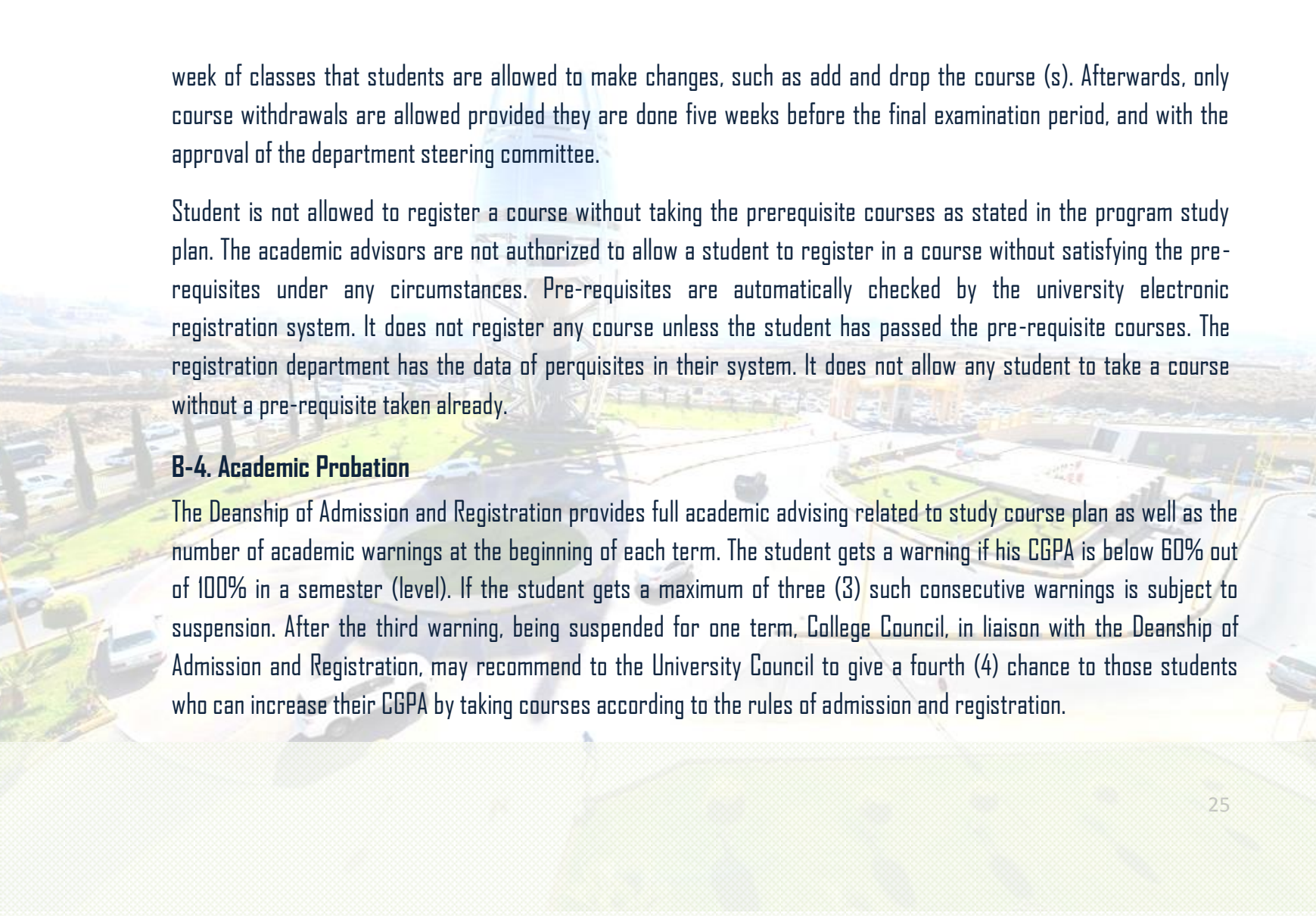
Departmental Council. Student getting an IP is required to continue the course and appear for the assessment when the course is completed. King Khalid University requires that atleast 75% of the total number of lectures, labs and tutorials to be attended by the students. Students failing to meet this requirement in any of the courses are barred from attending the term end final examination of that course and earn a “Denied” (DN) grade in that course. The department council and the Dean of the college can allow the student, who is absent in the final examination of a course(s) for a valid reason, to take the examination at a later date.

B.2. Minimum GPA

The KKU Legal Advisory Council has approved 2.00 of 5.00 point scale as minimum GPA for the program. According to the regulations of King Khalid University all students are required to maintain a grade point average of at least 60% out of 100%. A student who cannot maintain the GPA of 60% will be placed on “academic probation” and is given two semesters to improve his GPA. After this period the student may be removed from the program.

B-3. 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.

Student is not allowed to register a course without taking the prerequisite courses as stated in the program study plan. The academic advisors are not authorized to allow a student to register in a course without satisfying the pre-requisites under any circumstances. Pre-requisites are automatically checked by the university electronic registration system. It does not register any course unless the student has passed the pre-requisite courses. The registration department has the data of prequisites in their system. It does not allow any student to take a course without a pre-requisite taken already.

B-4. Academic Probation

The Deanship of Admission and Registration provides full academic advising related to study course plan as well as the number of academic warnings at the beginning of each term. The student gets a warning if his CGPA is below 60% out of 100% in a semester (level). If the student gets a maximum of three (3) such consecutive warnings is subject to suspension. After the third warning, being suspended for one term, College Council, in liaison with the Deanship of Admission and Registration, may recommend to the University Council to give a fourth (4) chance to those students who can increase their CGPA by taking courses according to the rules of admission and registration.

B.5. 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 120 minutes) per week earns one credit.

B.6. 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.

B.7. 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.

B.8. Project Work

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

- Project or thesis requirements in the Bachelor of Science program: As per the prerequisite for registration, the number of hours remaining from graduation should not exceed 36 hours (Sum of semester 9 and 10 and addition 7 hours: $16+13+07=36$)

- Project work is carried out under the supervision of a faculty member in the respective specialty.
- A candidate may, however, be permitted to work on the project (under the supervision of a faculty member) in an Industry/Organization on the recommendation and approval of the Dean, faculty of Engineering.
- 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.

B.9. 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.

B.10. 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.

C. Transfer Students and Transfer Courses

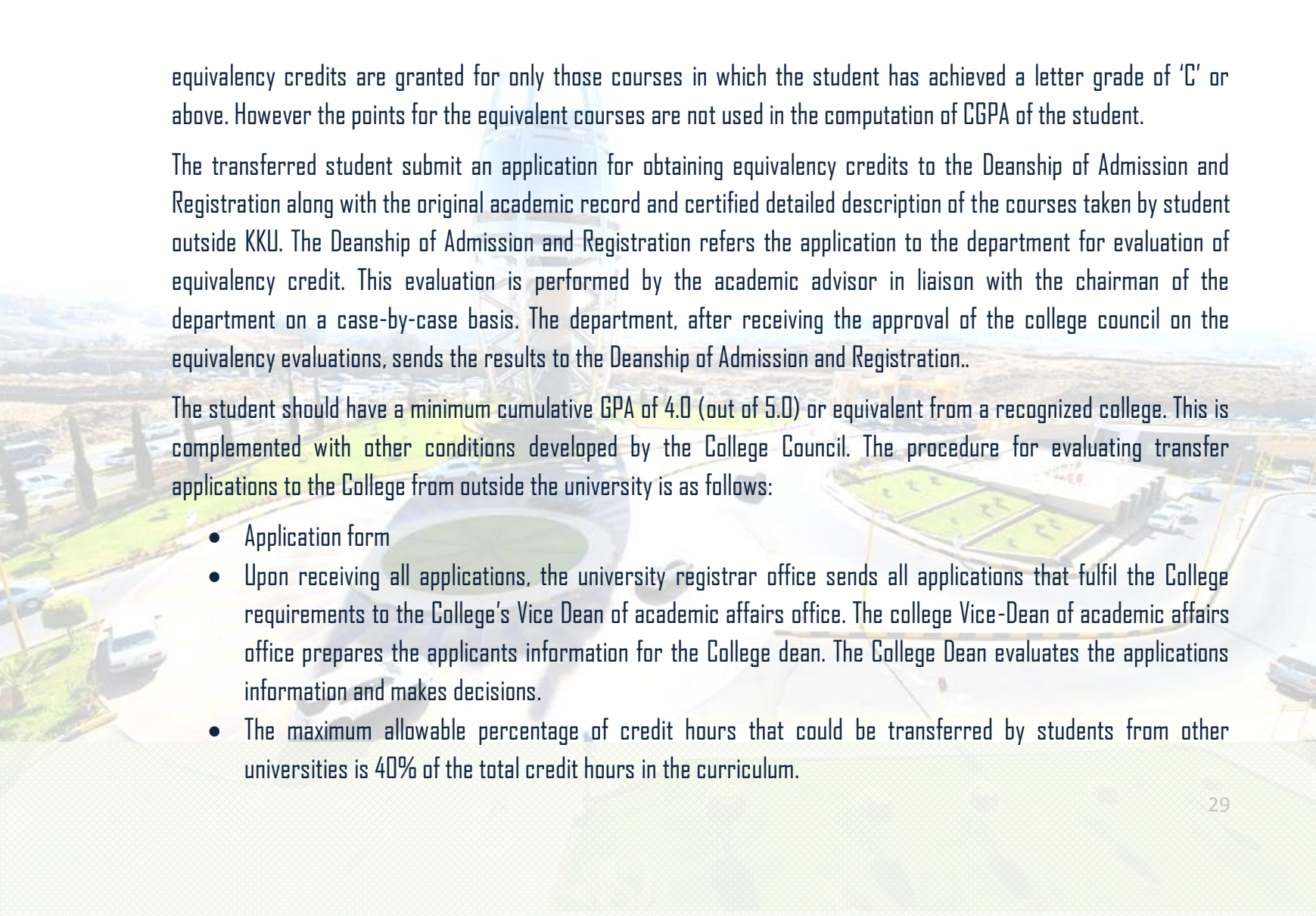
Transfer can be done through three different channels as follows:

C-1 Transfer from Other Universities

A student transfer from the other university may be accepted if he has studied at a recognized university or college and has not been suspended from that institution based on disciplinary or academic grounds.

The transferring applicant must study at least 60% of the required courses at KKU and must not have spent more than 6 terms at the university he is transferring from. The applicant is required to acquire an approval from the Dean of College and head of the department, KKU. These requirements and process for accepting transfer students are governed by the Policy on Regulations of Study and Examinations available in university website.

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 applicant being transferred. The



equivalency credits are granted for only those courses in which the student has achieved a letter grade of 'C' or above. However the points for the equivalent courses are not used in the computation of CGPA of the student.

The transferred student submit an application for obtaining equivalency credits to the Deanship of Admission and Registration along with the original academic record and certified detailed description of the courses taken by student outside KKU. The Deanship of Admission and Registration refers the application to the department for evaluation of equivalency credit. This evaluation is performed by the academic advisor in liaison with the chairman of the department on a case-by-case basis. The department, after receiving the approval of the college council on the equivalency evaluations, sends the results to the Deanship of Admission and Registration..

The student should have a minimum cumulative GPA of 4.0 (out of 5.0) or equivalent from a recognized college. This is complemented with other conditions developed by the College Council. The procedure for evaluating transfer applications to the College from outside the university is as follows:

- Application form
- Upon receiving all applications, the university registrar office sends all applications that fulfil the College requirements to the College's Vice Dean of academic affairs office. The college Vice-Dean of academic affairs office prepares the applicants information for the College dean. The College Dean evaluates the applications information and makes decisions.
- 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:

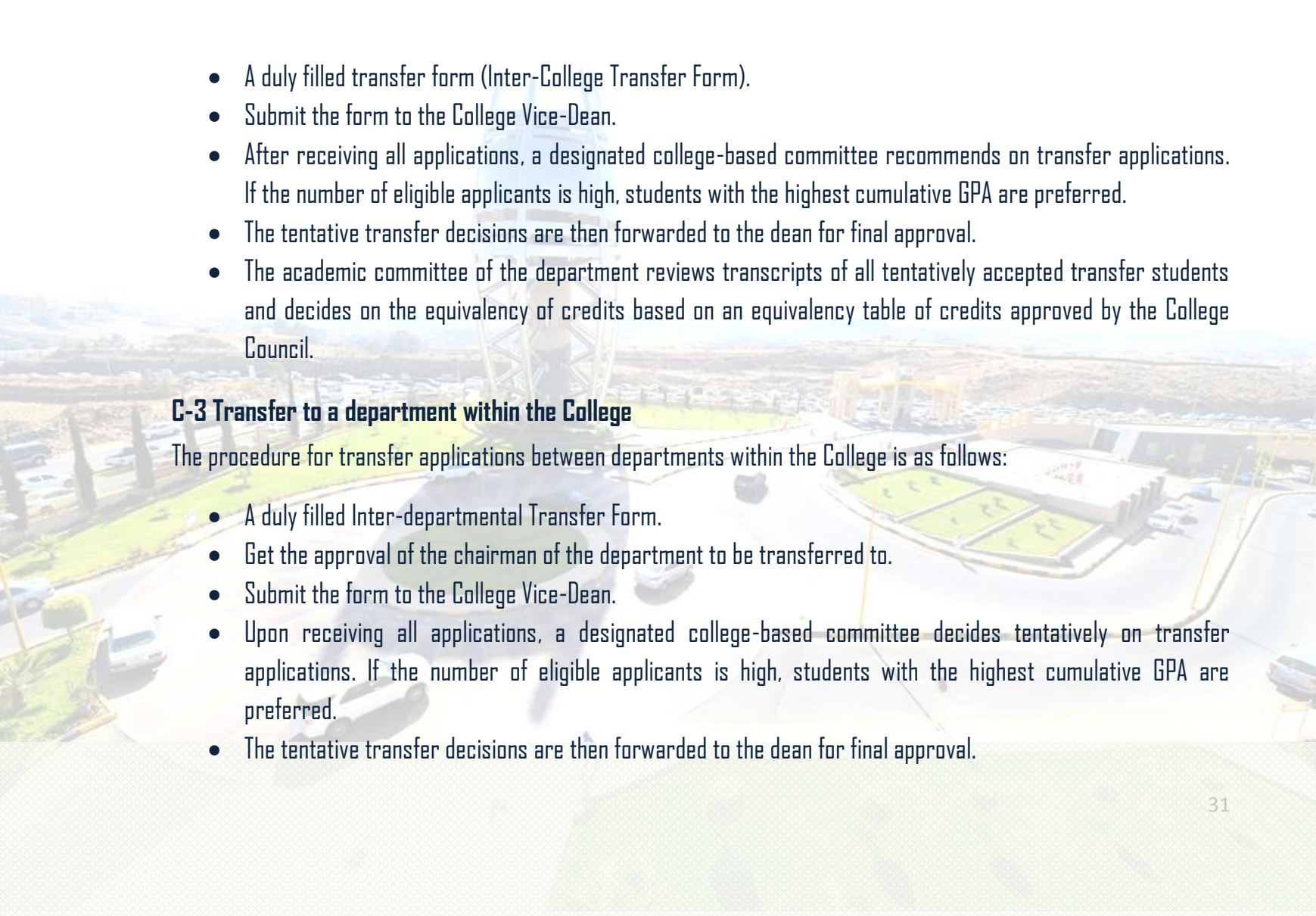
A Duly filled course transfer form and submit it to the department chairman.

- The chairman consults the faculty who teaches the course.
- The faculty reviews the syllabus of the transfer course in accordance with the departmental course syllabus verifying the equivalency of the syllabus and credits.
- The chairman approves the equivalency and signs the form.
- The student should then receive the approval of the vice dean.
- The student submits the form to university registrar office and gets an official acceptance letter to study the course at the university.
- After completing the course, the student should get an official completion letter and the transcript from the registrar office of the university where the transfer course was completed.
- Finally the student should submit the official completion letter to the KJU registrar office.

C-2 Transfer of students within the University

Student can apply for transfer only after studying at least one term in the College. The student must fulfil the College admission conditions which are announced on an annual basis.

The procedure for evaluating transfer applications is as follows:

- 
- A duly filled transfer form (Inter-College Transfer Form).
 - Submit the form to the College Vice-Dean.
 - After receiving all applications, a designated college-based committee recommends on transfer applications. If the number of eligible applicants is high, students with the highest cumulative GPA are preferred.
 - The tentative transfer decisions are then forwarded to the dean for final approval.
 - The academic committee of the department reviews transcripts of all tentatively accepted transfer students and decides on the equivalency of credits based on an equivalency table of credits approved by the College Council.

C-3 Transfer to a department within the College

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

- A duly filled Inter-departmental Transfer Form.
- Get the approval of the chairman of the department to be transferred to.
- Submit the form to the College Vice-Dean.
- Upon receiving all applications, a designated college-based committee decides tentatively on transfer applications. If the number of eligible applicants is high, students with the highest cumulative GPA are preferred.
- The tentative transfer decisions are then forwarded to the dean for final approval.

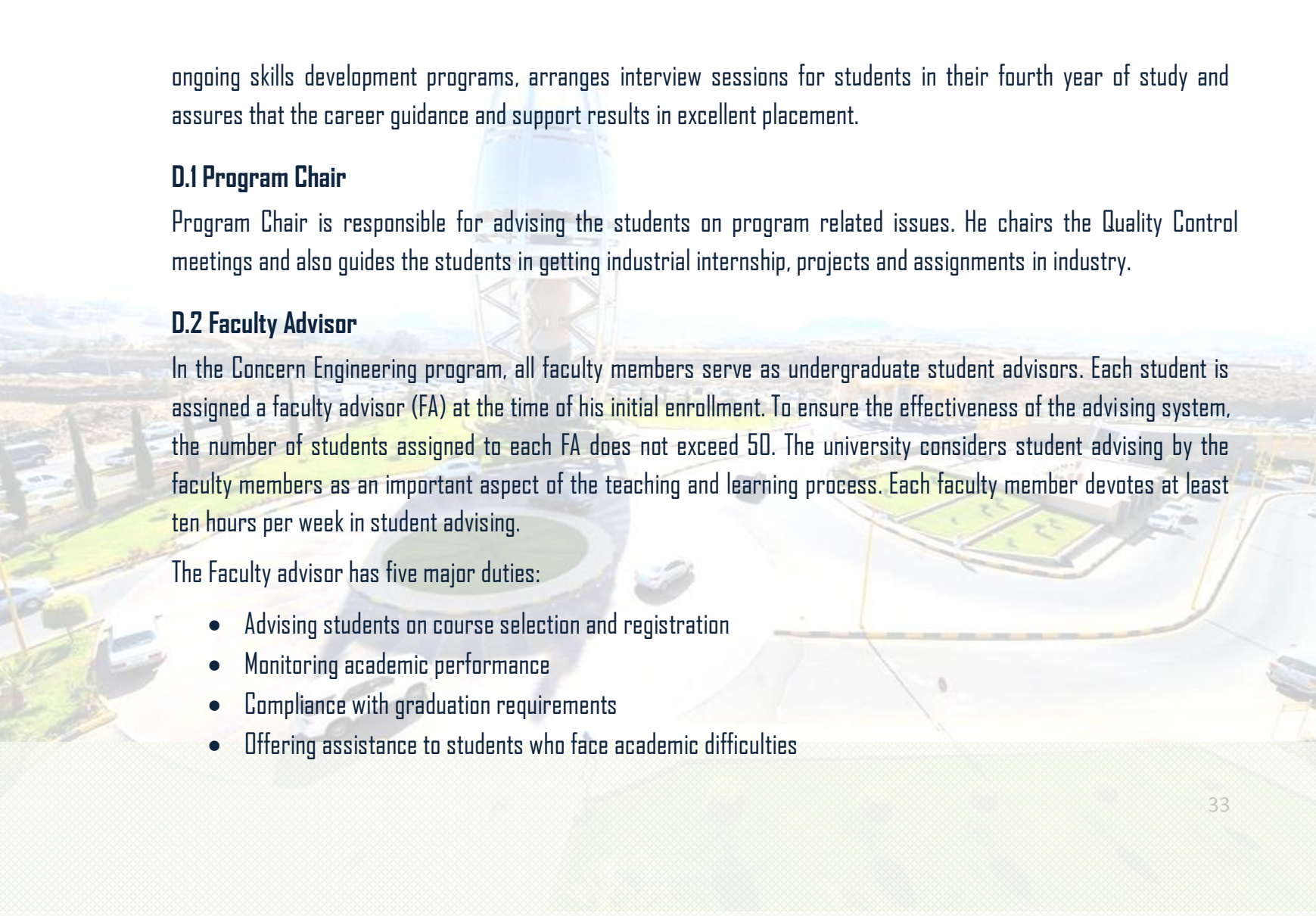
- The academic committee of each department reviews transcripts of all tentatively accepted transfer students and decides on the equivalency of credits based on an equivalency of credits approved by the College Council.

D. Advising Students and Career Guidance

Student advising and career guidance are among the most important aspects of the academic process at KKU. 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
- Faculty member help and support students solving problems
- Faculty member advice students planning their career
- 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 Placement and Training Office, in collaboration with the faculty in the department, provides career guidance, brings experts from industry to discuss about career choices, offers



ongoing skills development programs, arranges interview sessions for students in their fourth year of study and assures that the career guidance and support results in excellent placement.

D.1 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.

D.2 Faculty Advisor

In the Concern Engineering program, all faculty members serve as undergraduate student advisors. Each student is assigned a faculty advisor (FA) at the time of his initial enrollment. To ensure the effectiveness of the advising system, the number of students assigned to each FA does not exceed 50. The university considers student advising by the faculty members as an important aspect of the teaching and learning process. Each faculty member devotes at least ten hours per week in student advising.

The Faculty advisor has five major duties:

- Advising students on course selection and registration
- Monitoring academic performance
- Compliance with graduation requirements
- Offering assistance to students who face academic difficulties

- Work with the Placement and Training Office to offer career guidance

Based upon discussions at a departmental faculty meeting between faculty staffs and the Dean, the concern department head and Vice-Dean of development and Quality of College, the College of Engineering implemented an advisor evaluation process starting in 2nd Semester 2015 to provide feedback to advisors on their performance in the advising process. Student advisees rate their faculty advisors on a 5 grading scale (1 strongly disagree and 5 strongly agree) as to their: 1) Concern for the student, 2) Knowledge of the curriculum, 3) Availability during advising week and 4) Encouragement of the student. Scores for all faculty members in each department are compiled by the College of Engineering and sent to all faculty within the department for feedback.

D.3 Students Counseling Center

The Student Counseling Center provides assistance to students on matters other than the academic ones. Students receive guidance and counseling on matters pertaining to social, psychological, financial and family issues.

D.4 Students Welfare Office

The student welfare office serves as a vehicle to facilitate extra-curricular activities for the students. It also facilitates students' involvement in the activities of the student government, social functions, and professional organizations.

D.5 Placement and Training Office

The Placement and Training Office (PTO) is one of the most important organizational units of KKU, established to prepare students for their professional careers. PTO works with faculty, students, industry and the governmental agencies in providing career guidance, enabling interaction with industry, creating opportunities to discuss career choices with experts from industry, training students, identifying placement opportunities and helping the students find excellent placement opportunities.

E. Graduation Requirements

- 1) Student graduates after successfully completing all graduation requirements according to the degree plan, provided that his cumulative GPA is not less than pass.
- 2) If the student has passed the required courses but his cumulative GPA is low, the College Council, on the basis of the recommendations of the council of the department concerned, is entitled to specify the appropriate courses that the student must complete in order to improve his GPA.

E.1 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.

Student Learning Outcomes (SLOs)

ABET Code	DOMAIN	NCAAA Code	SO Description
-	A	PLD-a1	To define knowledge of mathematics, science and engineering fundamentals relevant to engineering, together with in depth knowledge of Concern Engineering Program
-		PLD-a2	To understand knowledge of societal, health, safety, legal, management, sustainability and cultural issues and the consequent responsibility reverent to Concern Engineering Program
a	B	PLD-b1	An ability to apply knowledge of mathematics, science and engineering.
b		PLD-b2	An ability to design and conduct experiments, analyze and interpret data.
c		PLD-b3	An ability to design a system, component or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, constructability, and sustainability
e		PLD-b4	An ability to identify, formulate, and solve engineering problems
h		PLD-b5	the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental and societal context
k		PLD-b6	An ability to use the techniques, skills, and modern engineering tools necessary engineering practice
i	C	PLD-c1	a recognition of the need for and an ability to engage in lifelong learning

ABET Code	DOMAIN	NCAAA Code	SD Description
d		PLD-c2	The ability to function on multidisciplinary teams
f		PLD-c3	An understanding of professional and ethical responsibility
j		PLD-c4	a knowledge of contemporary issues
gl	D	PLD-d1	An ability to communicate effectively (written)
g2		PLD-d2	An ability to communicate effectively (Oral)
	E	e	Not Applicable

(A) Knowledge; (B) Cognitive skills; (C) Interpersonal skills & responsibility; (D) communication, information technology & numerical skills; (E) Psychomotor skills



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DEPARTMENT OF CIVIL ENGINEERING



Civil Engineering Program Description

The faculty of engineering started with 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 education, leading to meet the international standards as a source of excellence engineering learning and center of research in the university

Civil Engineering Program Mission

To provide a distinguished education and professional skills in Civil Engineering that enable graduates to use modern technology to develop society through professional practices, ethical practices, innovative research practices 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:

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

Department of Civil Engineering

Level 1

Course Code	Course Title	Credit Hours	Pre-requisite
011-ENG-6	Intensive English Program (I)	6	None
107-CHEM-4	General Chemistry	4	None
119-MATH-3	Differentiation and Integration (I)	3	None
111-GE-3	Engineering Drawing-I	3	None
Total Credits Hrs.		16	

Level 3

Course Code	Course Title	Credit Hours	Pre-requisite
112-IC1-2	Islamic Culture (II)	2	111-IC1
121-ME-3	Production Technology and Workshop	3	111-GE
201-ARAB-2	Arabic Language Skills	2	None
211-CE-3	Statics	3	PHYS-129
218-EE-3	Electric Engineering (I)	3	129-MATH 129-PHYS
219-MATH-3	Differentiation and Integration (II)	3	119-MATH
Total Credits Hrs.		16	

Level 5

Course Code	Course Title	Credit Hours	Pre-requisite
202-ARAB-2	Arabic Editing	2	None
301-NGL-2	Technical Report Writing	2	012-ENG
311-CE-3	Fluid Mechanics	3	211-CE
312-CE-3	Properties and Testing of Materials	3	223-CE
313-CE-2	Properties and Testing of Concrete	2	223-CE
314CE-2	Dynamics	2	211-CE
319-MATH-3	Differential Equation	3	None
Total Credits Hrs.		17	

Level 7

Course Code	Course Title	Credit Hours	Pre-requisite
411-CE-3	Transportation Systems	3	224-CE
412-CE-3	Structural Analysis (II)	3	321-CE
413-CE-3	Reinforced Concrete (I)	3	321-CE
414-CE-4	Soil Mechanics	4	323-CE
419-MATH-3	Numerical Analysis	3	229-MATH 101-CMS
Total Credits Hrs.		16	

Level 9

Course Code	Course Title	Credit Hours	Pre-requisite
424-IE-2	Engineering Economy	2	None
511-CE-2	Pavement design and Materials 1	2	321-CE & 411-CE
512-CE-3	Hydrology	3	311-CE
515-CE-3	Advanced Reinforced Concrete Design	3	None
516-CE-3	Construction Management	3	None
519-CE-3	Graduation Projects	0	None
Total Credits Hrs.		13	

Level 2

Course Code	Course Title	Credit Hours	Pre-requisite
012-ENG-6	Intensive English Program (II)	6	011-ENG-6
111-IC1-2	The Entrance to the Islamic Culture	2	None
129-MATH-3	Algebra and Geometry	3	None
129-PHYS-4	Physics (I)	4	None
101-CMS-3	Computer Science	3	None
Total Credits Hrs.		18	

Level 4

Course Code	Course Title	Credit Hours	Pre-requisite
113-IC1-2	Islamic Culture (III)	2	112-IC1
221-GE-3	Computer for Engineers	3	101-CMS
223-CE-3	Mechanics of Materials	3	211-CE
224-CE-4	Surveying	4	129-MATH
225-CE-2	Introduction to Geotechnical Engineering	2	None
229-MATH-3	Differentiation and Integration (III)	3	219-MATH
Total Credits Hrs.		17	

Level 6

Course Code	Course Title	Credit Hours	Pre-requisite
114-IC1-2	Islamic Culture (IV)	2	113-IC1
321CE-3	Structural Analysis (I)	3	223-CE
322-CE-4	Hydraulics	4	311-CE
323-CE-2	Eng. Properties of Soils and their Measurements	2	312-CE
324-CE-4	Geographic Information Systems (GIS)	4	None
329-STAT-2	Principles of Statistics & Probability	2	None
Total Credits Hrs.		17	

Level 8

Course Code	Course Title	Credit Hours	Pre-requisite
421-CE-4	Environmental Engineering	4	322-CE
422-CE-2	Water Chemistry	2	322-CE
423-CE-3	Reinforced Concrete II	3	413-CE
424-CE-3	Foundation Engineering I	3	413-CE 414-CE
425-CE-4	Highway Engineering	4	411-CE
Total Credits Hrs.		16	

Level 10

Course Code	Course Title	Credit Hours	Pre-requisite
521-CE-2	Industry and the Environment	2	None
522-CE-2	Construction Engineering	2	None
523-CE-3	Design of Steel Structures	3	412-CE
526-CE-3	Foundation Engineering-II	3	None
527-CE-3	Soil Stabilization	3	None
519-CE-3	Graduation Projects	3	None
Total Credits Hrs.		16	

	1 st YEAR				2 nd YEAR				3 rd YEAR				4 th YEAR				5 th YEAR					
LEVEL/ SEMESTER	1		2		3		4		5		6		7		8		9		10		Total	
Credit Hrs	16	26	18	26	16	20	17	20	17	20	17	21	16	20	16	20	13	16	16	19	162	208
Contact Hrs																						
No. Courses	4		5		6		6		7		6		5		5		6		6		55	
General Education	Intens. Islamic Cul. ICI 111 2 2		Islamic Cul. II ICI 112 2 2		Islamic Cul. III ICI 113 2 2				Islamic Cul. IV ICI 114 2 2												TOTAL 26 38	
	Arabic Lang. Skills ARAB 201 2 2						Arabic Editing ARAB 202 2 2															
Math, Basic Sciences & Other Engineering	Intens. Eng. Prog. I ENG 011 6 12		Intens. Eng. Prog. II ENG 012 6 12						Technical Writing NGL 301 2 2												TOTAL 45 55	
	Chemistry Gen. CHEM 107 4 5		Computer Sc. CMS 101 3 4		Prod. Tech. & Mfg. ME 121 3 5		Comp. for Engrs. GE 221 3 4															
Civil Engineering Courses	Engg. Drawing GE 111 3 6		Algebra & Geomet. MATH 129 3 3		Elect. Engr. EE 218 3 4				Prin. Stat. Prob. STAT 329 2 2								Engr. Economy IE 424 2 2				TOTAL 91 115	
	Diff. & Integration I MATH 119 3 3		Physics I PHYS 129 4 5		Diff. & Integration 2 MATH 219 3 3		Diff. & Integration 3 MATH 229 3 3		Diff. & Integration 3 MATH 229 3 3				Numerical Analysis MATH 419 3 3									
Civil Engineering Courses					Surveying CE 224 4 5		Structure Analysis I CE 321 3 4		Transport Systems CE 411 3 4		Highway Engr. CE 425 4 5		Pav. Design&Mat. I CE 511 2 2		Steel Structure CE 523 3 4						TOTAL 26 38	
			STATICS CE 211 3 4		Mech. Of Materials CE 223 3 4		Propt. of Test. Mat. CE 312 3 4		Engr. Prep Soil CE 323 2 3		Structure Analysis 2 CE 412 3 4		Reinforced Con 2 CE 423 3 4		Construction Mang. CE 522 2 2							
Civil Engineering Courses					Intro. Geotech Engr CE 225 2 2		Propt. Of Test. Con. CE 313 2 3				Reinforced Con 1 CE 413 3 4		Foundation Engr. I CE 424 3 4		Graduation Project CE 519 0 0		Elective I CE XXX 3 4				TOTAL 45 55	
							Dynamics CE 314 2 2		GIS CE 324 4 5		Soil Mechanics CE 414 4 5		Water Chemistry CE 422 2 2		Elective II CE XXX 3 4		Industry Expt. CE 521 2 2					
Civil Engineering Courses					Fluid Mechanics CE 311 3 4		Hydraulics CE 322 4 5				Environment Engr. CE 421 4 5				Hydrology CE 512 3 4						TOTAL 91 115	

General Education

Math & Basic Sciences Courses

Comp for Engr.
GE 221
3 4

Other Engineering CoursesCivil Engineering CoursesElectives

General Education



Math & Basic Sciences Courses



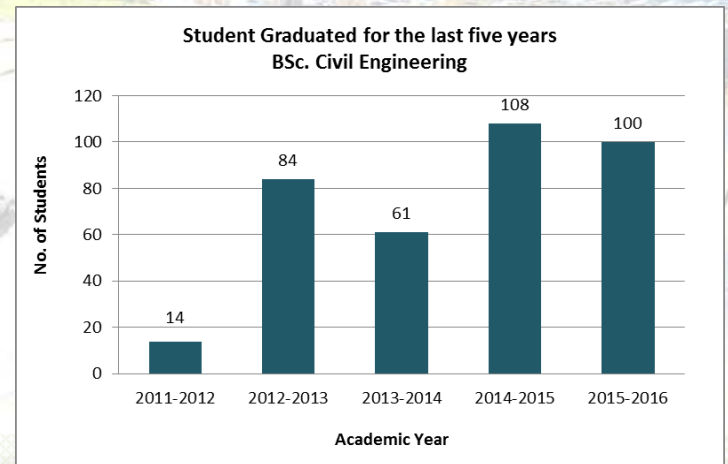
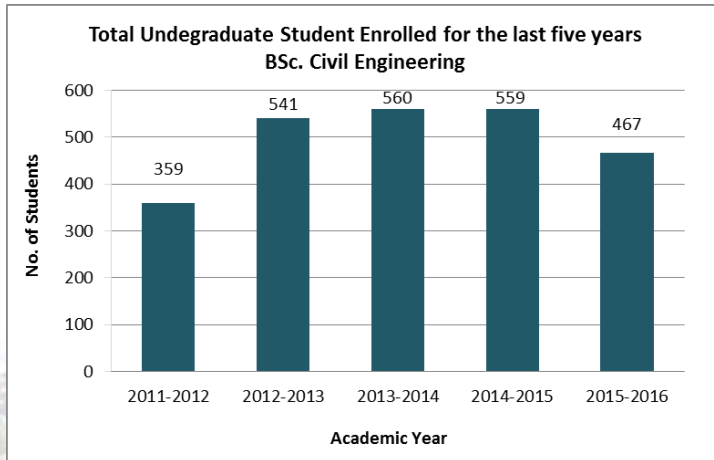
Other Engineering Courses



Civil Engineering Courses



Electives





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>

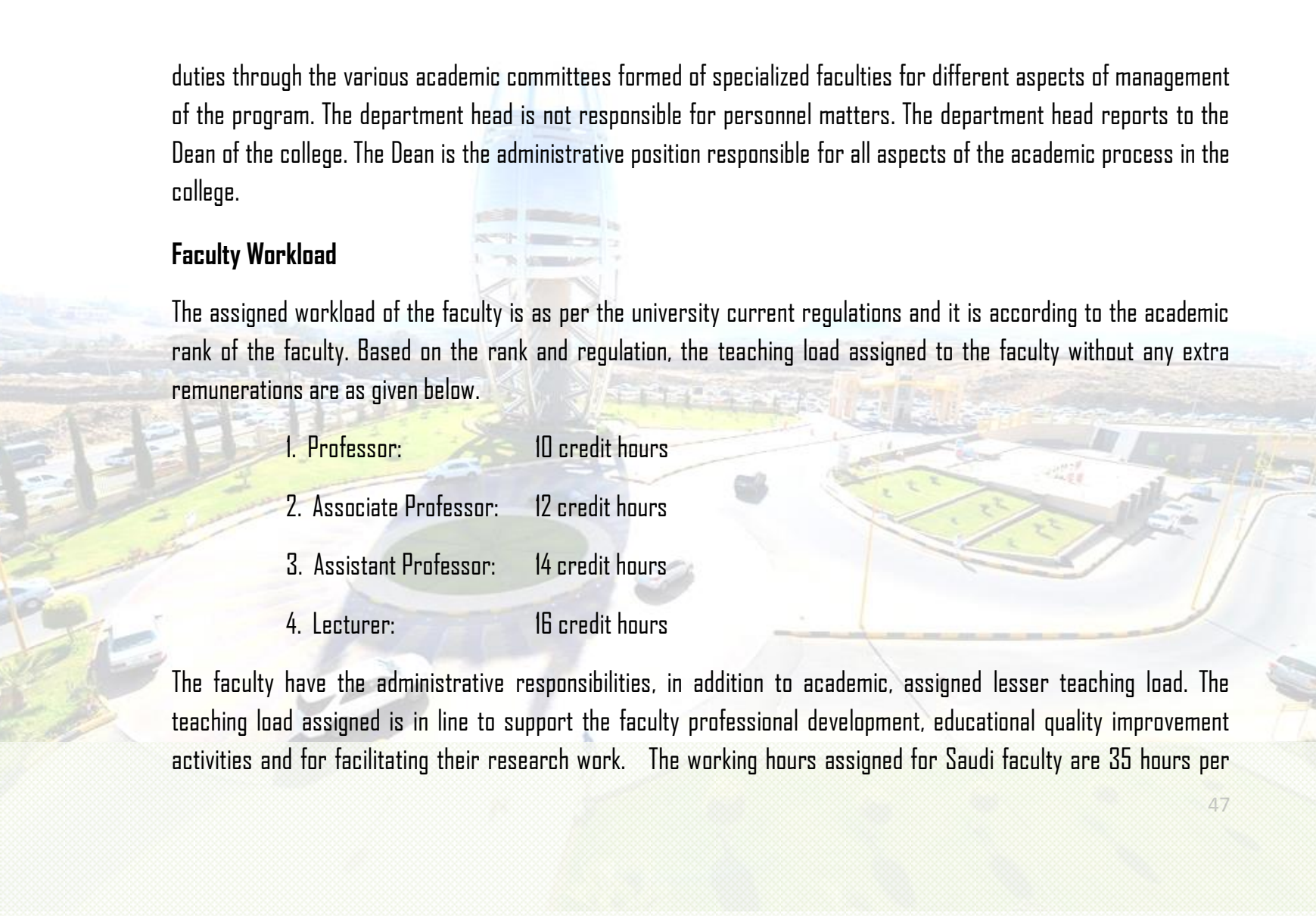
Graduation projects (Second semester 2015-2016)

Title	Supervisor
The Extent of Delay in Public Construction Projects in Asir, Saudi Arabia	Dr. Ibrahim Idris A Falqi
Surveying	Dr. Shams AlDeen Mohammad Saad
Study and Analysis of waste water treatment plant	Dr. Ahmed Babeker Elhag
Structural Analysis of Cable Stayed Bridges	Dr. Yasser Alashker
Design and study of a multi Storey Reinforced Concrete building	Dr. Mohamed Hechmi EL DUNI
Potential of Stream Restoration in Wadi Abha	Mr. Roohul Abad Khan
Monitoring Urban Sprawl Using Remote Sensing and GIS Techniques of a	Dr. Javed Mallick
Study the Effects of Earthquake Loads on Existing RC Buildings in Abha,	Dr. Mohammed Ahmed Ibrahim Ismaeil
Design of Dams to suit local need of the Kingdom of Saudi Arabia	Dr. Ram Karan Singh

Title	Supervisor
Stability Analysis of Slope	Mr. Saiful Islam
"Study of Energy Efficient Buildings using Renewable Sources of Energy"	Dr. Mohamed Abul Hasan
Foundations Design for Residential Building	Dr. Mahmoud Hussein Mohamed
Design of RC Structures	Dr. Khalid Mohammad Al Hadi Hassan

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 appoint 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.

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

Currently, the Department of Civil Engineering has 15 professors with PhD degree (1 full professor, 4 associate professors, and 10 assistant professors) and 5 lecturers with M.Sc. degree. The current number of students enrolled in the Civil Engineering program is 450 students (Spring 2016).

Below figure shows the number of the faculty and staff members and their distribution and also shows the number of the students in the Civil Engineering program for the years 2011 to 2016. The current ratio of faculty to students is 22.5 (that is 1 faculty member for 23 students) when we consider professors and lecturers). Figure also summarizes that during 2012-2013 the student's enrollment was high due to the government policies to enroll the working professionals in order enhance their technical and professional skills (this is for limited time period, only for one batch).

The current number of faculty and the ratio of students to faculty are significantly adequate to accommodate various needs of students including teaching (introducing the section as per the class size) with reasonable number of students in each, reserving reasonable office hours for students, advising, etc. as well as allow faculty members to perform other tasks and duties related to administrative, research, participation in committees, professional development, etc.

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 civil department hail from diverse background and nationalities i.e. Saudi Arabia, Egypt, Tunisia, India, and Sudan.

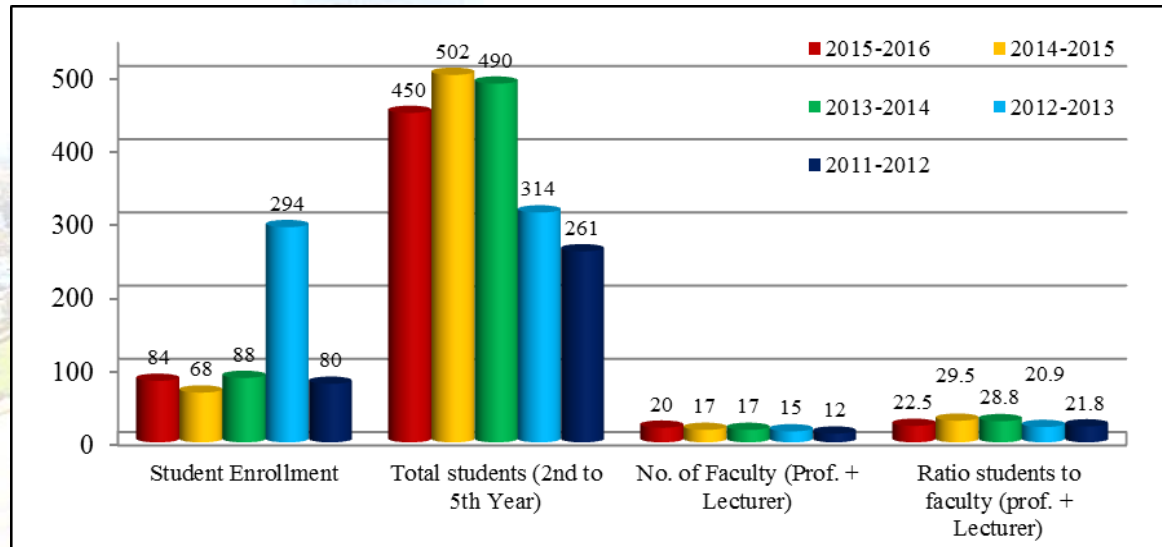


Figure: Graphical representation of faculty and students size during the different years

Table: Faculty Details

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Ibrahim I Falqi	Dean	Assistant Professor	ifalqi@kku.edu.sa	https://www.researchgate.net/profile/Ibrahim-I-Falqi
Dr. Nabil Ben Kahla	Chairman	Associate Professor	nbohla@kku.edu.sa	https://www.researchgate.net/profile/Nabil-Ben-Kahla
Dr. A. Sivakumar	Coordinator of Laboratory and Equipment's Committee	Professor	ksiva@kku.edu.sa	https://www.researchgate.net/profile/A-Sivakumar
Dr. Ram Karan	Coordinator of Research Committee	Associate Professor	ram@kku.edu.sa	https://www.researchgate.net/profile/Ram-Karan
Dr. Javed Mallick	Head and coordinator of Academic Development and	Assistant Professor	jmallick@kku.edu.sa	https://www.researchgate.net/profile/Javed-Mallick
Dr. Khalid Al Hadi	Coordinator, Community Service Committee	Assistant Professor	kalhdi@kku.edu.sa	https://www.researchgate.net/profile/Khalid-Al-Hadi
Dr. Mahmood H	Graduation Project and Summer Internship Committee	Assistant Professor	mhosyan@kku.edu.sa	https://www.researchgate.net/profile/Mahmood-H
Dr. Mohamed Elouni	Coordinator, Plan and Curricula committee	Assistant Professor	melouni@kku.edu.sa	https://www.researchgate.net/profile/Mohamed-Elouni
Dr. Mohd Abul H	--	Assistant Professor	mahasan@kku.edu.sa	https://www.researchgate.net/profile/Mohd-Abul-H

Faculty Name	Designation	Academic Position	Email	ResearchGate link
Dr. Mohd. Ahmed	--	Assistant Professor	moahmed@kku.edu.sa	https://www.researchgate.net/profile/
Dr. Yasser Alashker	Coordinator, Safety and Security Committee	Assistant Professor	yalashgr@kku.edu.sa	https://www.researchgate.net/research
Dr. Ahmad Babakar	--	Assistant Professor	abalhaj@kku.edu.sa	https://www.researchgate.net/profile/A
Dr. Shams Al Deen	Coordinator, Student Affair Committee	Assistant Professor	shms@kku.edu.sa	https://www.researchgate.net/profile/S
Dr. Mohammad Ismail	Department Registrar	Assistant Professor	maibrahim@kku.edu.sa	https://www.researchgate.net/research
Engr. Saiful Islam	--	Lecturer	sfakrul@kku.edu.sa	https://www.researchgate.net/profile/S
Engr. Roohul Abad	--	Lecturer	rakhan@kku.edu.sa	https://www.researchgate.net/profile/R
Engr. Isamaldin Yousef	--	Lecturer	ieyousef@kku.edu.sa	---



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DEPARTMENT OF MECHANICAL ENGINEERING





Mechanical Engineering Program Description

The Mechanical Engineering Department in College of Engineering offers a single major track program "Bachelor of Science in Mechanical Engineering". The program duration is five years divided into ten levels (semesters). The first and second levels are considered as preparatory year program prior to core academics in the department. The program has been following NCAAA standards and aspires to get ABET accreditation in near future. 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 area of production engineering which includes materials science, design, manufacturing etc. The second one is power such as thermodynamics, heat transfer and fluids. However, the awarded degree will not mention either disciplines rather than the "Bachelor of Science in Mechanical Engineering".

Mechanical Engineering Program Vision

Achieving academic and technological excellence in the field of Mechanical Engineering

The background of the slide features a faded, artistic rendering of a Ferris wheel, likely the Big Wheel in San Francisco, with a cityscape and hills visible in the distance. The image has a soft, painterly quality.

Mechanical Engineering Program Mission

To prepare highly-qualified mechanical engineers who are able to develop, innovate and compete in the job market, besides involving in the scientific research and community services.

Program Educational Objectives (PEOs)

1. Preparation of the graduates with high quality education to be creative, distinctive, and capable of running the industrial establishments.
2. Preparation of the graduates to pursue their professional development through continuous learning.
3. Preparation of the graduates to apply academic research in the Mechanical Engineering scope.
4. Preparation of the graduates to effectively participate in sustainable development of the community.

Department of Mechanical Engineering

Level 1

Course Code	Course Title	Credit Hours	Pre-requisite
011ENG-6	Intensive English Program 1	6	None
107CHEM-4	General Chemistry	4	None
111GE-3	Engineering Drawing -1	3	None
119MATH-3	Differentiation And Integration -1	3	None
Total Credits Hrs.		16	

Level 3

Course Code	Course Title	Credit Hours	Pre-requisite
112IC1-2	Islamic Culture -2	2	None
121ME-3	Production Technology And Workshop	3	111GE-3
201ARAB-2	Arabic Language Skills	2	None
211ME-4	Engineering Mechanics	4	None
212ME-3	Material Science -1	3	107CHEM-4 & 129PHYS-4
219MATH-3	Differentiation And Integration -2	3	119MATH-3
Total Credits Hrs.		17	

Level 5

Course Code	Course Title	Credit Hours	Pre-requisite
113IC1-2	Islamic Culture -3	2	None
202ARAB-2	Arabic Editing	2	None
218EE-3	Electric Engineering -1	3	129MATH-3 & 129PHYS-4
311ME-3	Material Science -2	3	212ME-3
312ME-3	Thermodynamics -2	3	223ME-3
319MATH-3	Differential Equations	3	219MATH-3
329STAT-2	Principles of Statistics And Probability	2	
Total Credits Hrs.		18	

Level 7

Course Code	Course Title	Credit Hours	Pre-requisite
411ME-3	Machine Elements Design -1	3	323ME-4
412ME-3	Production Engineering -2	3	324ME-3
413ME-3	Fluid Mechanics -2	3	322ME-3
414ME-2	Mechanical Measurements Instrumentation	2	323ME-4
419MATH-3	Numerical Analysis	3	101CMS-3 & 319MATH-3
424IE-2	Engineering Economy	2	
Total Credits Hrs.		16	

Level 9

Course Code	Course Title	Credit Hours	Pre-requisite
511IC1-2	Islamic Culture-4	2	None
511IE-2	Engineering Reliability & Maintenance	2	None
511ME-3	Production Engineering-4	3	422ME-3
512ME-3	Hydraulic Machines & Fluid Power Systems	3	413ME-3
514ME-3	Graduation Project (Continued to Next Sem.)	3	
Total Credits Hrs.		13	

Level 2

Course Code	Course Title	Credit Hours	Pre-requisite
012ENG-6	Intensive English Program 2	6	011ENG-6
101CMS-3	Computer Science	3	None
111IC1-2	The Entrance to the Islamic Culture	2	None
129MATH-3	Algebra and Geometry	3	None
129PHYS-4	Physics -1	4	None
Total Credits Hrs.		18	

Level 4

Course Code	Course Title	Credit Hours	Pre-requisite
221GE-3	Computer for Engineers	3	101CMS-3
219PHYS-3	Physics-2	3	129PHYS-4
223ME-3	Thermodynamics -1	3	119MATH-3 & 129PHYS-4
224ME-3	Engineering Drawing -2	3	101CMS-3 & 121ME-3
225ME-3	Strength of Materials & Testing	3	212ME-3
229MATH-3	Differentiation And Integration -3	3	219MATH-3
Total Credits Hrs.		18	

Level 6

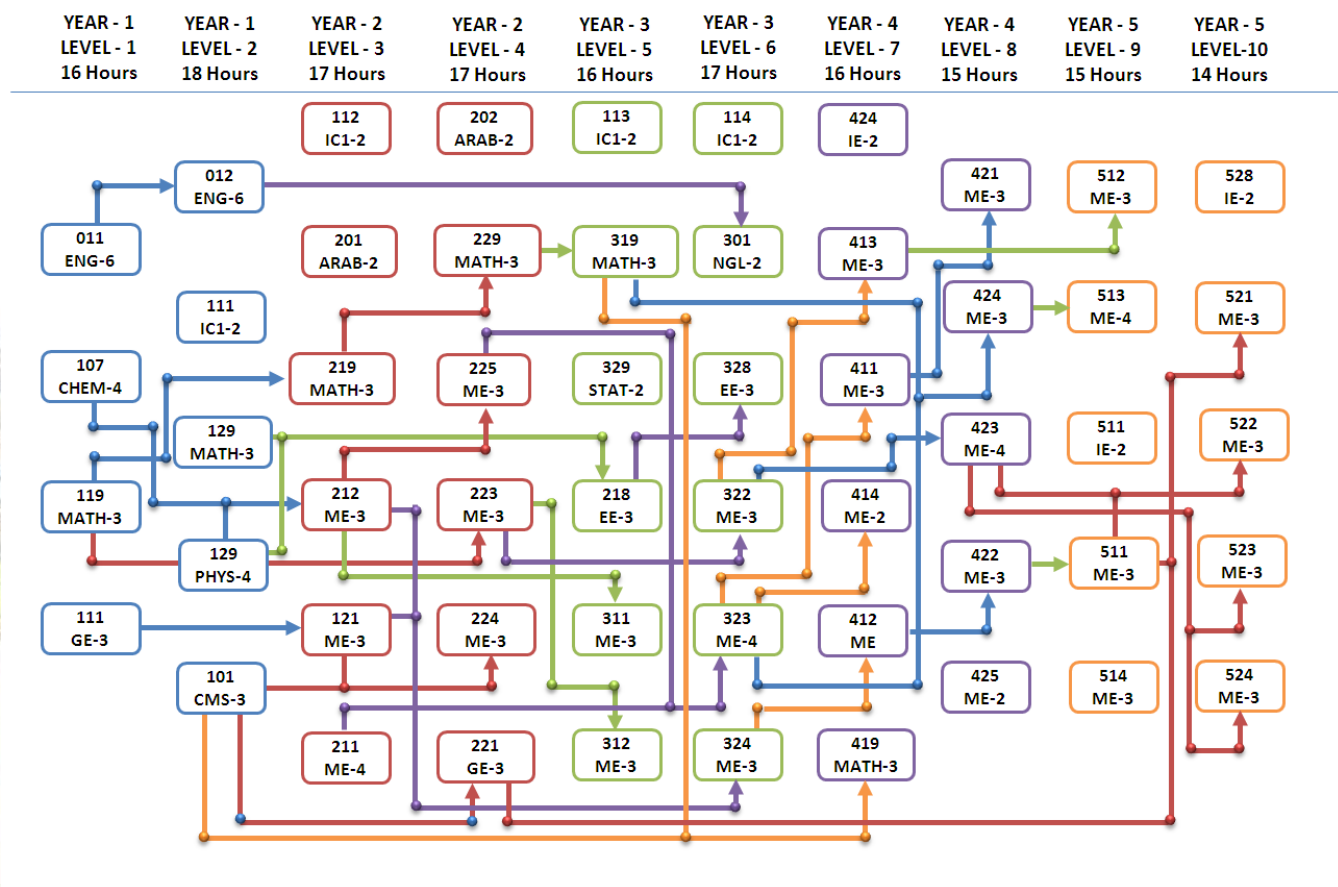
Course Code	Course Title	Credit Hours	Pre-requisite
301NGL-2	Technical Reports Writing	2	012ENG-6
329MATH-3	Linear Algebra	3	129MATH-3
322ME-3	Fluid Mechanics -1	3	223ME-3
323ME-4	Theory of Machines	4	211ME-4 & 225ME-3
324ME-3	Production Engineering -1	3	121ME-3 & 212ME-3
328EE-3	Electric Engineering -2	3	218EE-3
400ME-3	Summer Training	0	completion of all courses till 6 th level
Total Credits Hrs.		18	

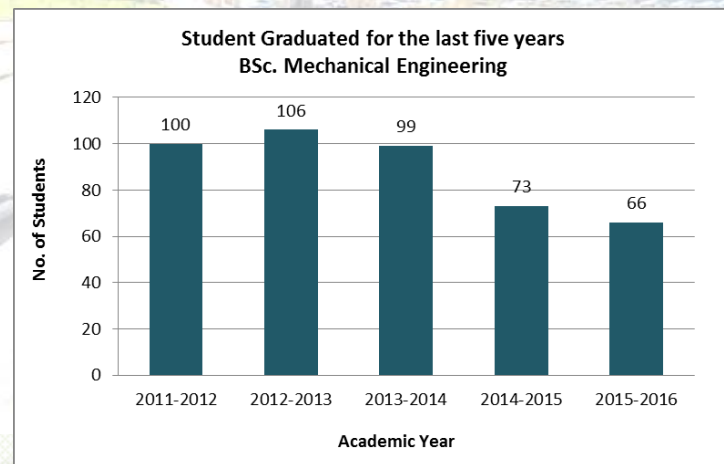
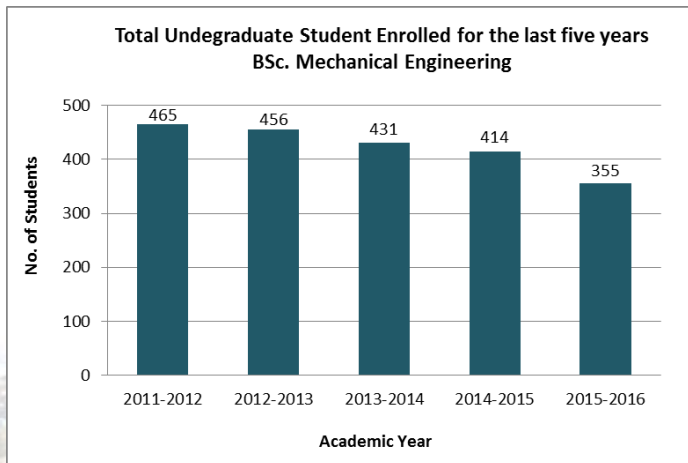
Level 8

Course Code	Course Title	Credit Hours	Pre-requisite
421ME-3	Machine Elements Design -2	3	411ME-3
422ME-3	Production Engineering -3	3	412ME-3
423ME-4	Heat Transfer	4	322ME-3
424ME-3	System Dynamics & Mechanical Vibrations	3	319MATH-3 & 323ME-4
425ME-2	Industry And Environment Pollution	2	None
Total Credits Hrs.		15	

Level 10

Course Code	Course Title	Credit Hours	Pre-requisite
511ME-4	Automatic Control	4	424ME-3
522ME-3	Power & Desalination Plants	3	423ME-4 & 512ME-3
523ME-3	Refrigeration and Air Conditioning	3	423ME-4
528IE-2	Industrial Managements & Quality Control	2	
Total Credits Hrs.		12	





Mechanical Engineering Laboratories

The computer laboratories (CL) are all located in the Under-Ground floor of building A fond in rooms 21, 23, 29, 30, and 35. The different computer and specialized laboratories beside the technical workshops are listed in the Table 1ME, 2ME and 3ME

Table 1: ME Laboratories of Mechanical Engineering Program

Laboratories of Mechanical Engineering Program		Room No.	Area (Sq. Mtr)
1	Machining Lab.	A/ME/3	Included in Conventional Machining Workshop
2	Sand Testing Lab	A/ME/5	Included in Foundry and Forging Workshop
3	CNC Lab.	BI/ME/1	91.8
4	Strength of Materials Lab.	BI/ME/2	112
5	Theory of Machines Lab.	BI/ME/4	108.73
6	Mechanical Design Lab.	BI/ME/5	47.73
7	Systems Dynamic & Vibrations Lab.	BI/ME/6	78.07
8	Automatic Control Lab.	BI/ME/7	78.07
9	Materials Science Lab.	BI/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 2: ME Workshops of Mechanical Engineering Program

Workshops of Mechanical Engineering Program		Room No.	Area (Sq Mtr)
1	Non-Conventional Machining Workshop	A/ME/1	130.66
2	Metals Plating & 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	130.66
6	Foundry Workshop	A/ME/5	
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 3: ME Laboratories used by Mechanical Engineering Department

Computer lab of Mechanical Engineering Program		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 2015-2016)

Title	Supervisor
Improving of performance of solar air heater	Dr. Ibrahim Elsayed Awwad Elseesy
Improvement of a hydraulic testing bed for centrifugal pumps	Dr. Faouzi Ben Bechir Askri
Design and Manufacturing of a Cantilever-Type Rotating Bending fatigue Testing Machine	Dr. Abdelhalim Abdelmohseen Alakabawy
Effect of pulsating flow on the film cooling of gas turbine blade	Dr. Mostafa Abdelmohimen Hussien
Assessment of Fog Collection as a Sustainable Water Resource in the Southwest of the Kingdom of Saudi Arabia	Dr. Salem Ahmed Algarni
Experimental Investigation of Performance Improvement of a Domestic Refrigerator Using Phase Change Material	Dr. Sofiene Mellouli
Theoretical and Experimental Studies on Hydrodynamic Journal Bearing	Dr. Abhilash Edacherian
Performance Improvement of Flat Pate Solar Collector Using Side Reflectors	Dr. Baiumy Taha Abdel Moati El-Assal
Estimation And Analysis of Carbon Footprint in a Case Study in KSA And Suggestions For Its Neutralization	Dr. Vineet Tirth

Title	Supervisor
An experimental investigation on effect of metallic composition in friction welding weld strength	Dr. Gulam mohammed sayeed ahmed
Theoretical and Experimental Studies on Hydrodynamic Journal Bearing	Mr. Mohammed Shabbir Ahmed
Study Of The Effect of Thermal Isolation During Cooling And Heating	Dr. Jamel Mohamed Bechir Madiouli
A Study of Green House in Abha – Saudi Arabia.	Dr. Ashraf Ahmed Abdelqawad Lashin
A Study of Turbulence Effect in Water Solar Desalination.	Dr. Ashraf Ahmed Abdelqawad Lashin
Solar Water Desalination by Using Dual Axis Tracker System.	Dr. Ashraf Ahmed Abdelqawad Lashin
Design and Fabrication of an Ergonomic Solar Vehicle at King Khalid University.	Dr. Ashraf Ahmed Abdelqawad Lashin

Faculty

The Mechanical Engineering department has a process for hiring the excellent faculty, for continuous professional development and for facilitating the research work of faculty. The Mechanical 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, the many faculties have experience in industry, consultancy, and professional organizations. The Mechanical Engineering faculties have also administrative experience at the college and the university levels. One of the Mechanical Engineering faculty has been appointed recently as a 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 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

Currently, the Department of Mechanical Engineering has thirty nine core faculty members, including all Associate Professor, Assistant Professor, and Lecturer in the Mechanical Engineering Department.

The current number of faculty and the ratio of students to faculty are significantly adequate to accommodate various needs of students including teaching (introducing the section as per the class size) with reasonable number of students in each, reserving reasonable office hours for students, advising, etc. as well as allow faculty members to

perform other tasks and duties related to administrative, research, participation in committees, professional development, etc.

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 Mechanical Department hail from diverse background and nationalities i.e. Saudi Arabia, Egypt, Tunisia, India, and Sudan.

Table: Faculty Details

Faculty Name	Academic Position	Email
Dr. Mohammed Hassan Sakr	Professor	msagr@kku.edu.sa
Dr. Mohammed Saeed Al Attiya Shehata	Professor	msshehata@kku.edu.sa
Dr. Amir Ibrahim Ali Arabi	Associate Professor	aarabi@kku.edu.sa
Dr. Vineet Tirth Ram	Associate Professor	vtirth@kku.edu.sa
Dr. Faouzi Askri	Associate Professor	faskri@kku.edu.sa
Dr. Ali Muhammad Ali Alkuzaim Algahtani	Assistant Professor	alialgahtani@kku.edu.sa
Dr. Mohamed Hamdy Gouda Gheith	Assistant Professor	mghayth@kku.edu.sa
Dr. Salem Ahmed M Algarni	Assistant Professor	saalgarni@kku.edu.sa
Dr. Ahmed Said Abd El Hafez Zedan	Assistant Professor	ahafedh@kku.edu.sa

Faculty Name	Academic Position	Email
Dr. Tarik Mohamed Tawfeek	Assistant Professor	tofea@kku.edu.sa
Dr. Mohamed Abdel-Aziz Sayed	Assistant Professor	moabdulaziz@kku.edu.sa
Dr. Nagy Kutb Taha	Assistant Professor	ntaha@kku.edu.sa
Dr. AbdElhalim Akabawy	Assistant Professor	aamahmood@kku.edu.sa
Dr. Sid Ahmed Ahmedou	Assistant Professor	suhmaad@kku.edu.sa
Dr. Baiumy El-Assal	Assistant Professor	btelaal@kku.edu.sa
Dr. Jamel Mohamed Bechir Madiouli	Assistant Professor	jmmadiouli@kku.edu.sa
Dr. Amir Mohammed Kessentini	Assistant Professor	akessentini@kku.edu.sa
Dr. Mostafa Abdelmohimen Hussien	Assistant Professor	mmhussien@kku.edu.sa
Dr. Mohamed Abdelghany Elkotb	Assistant Professor	melkotb@kku.edu.sa
Dr. Abhilash Edacherian	Assistant Professor	edalheriad@kku.edu.sa
Dr. Ibrahim Elsayed awwad Elseesy	Assistant Professor	ieelseesy@kku.edu.sa
Dr. Sofiene Habib Mellouli	Assistant Professor	sofian@kku.edu.sa
Dr. Gulam Mohammed Sayeed Ahmed	Assistant Professor	gmsa786@kku.edu.sa
Dr. Ahamed Saleel Chandu Veetil	Assistant Professor	aveetil@kku.edu.sa

Faculty Name	Academic Position	Email
Dr. Ali Essa Mohammed Anqi	Assistant Professor	aenigi@kku.edu.sa
Dr. Sayeed Thamer Mohammed al thamer	Assistant Professor	sthamer@kku.edu.sa
Dr. Ashraf Ahmed Lashin	Assistant Professor	ashraff@kku.edu.sa
Engr. Mohammed Shabbir Ahmed	Lecturer	msahmed@kku.edu.sa
Engr. Javed Syed Jaafar	Lecturer	sjawed@kku.edu.sa
Engr. Afroz Ahmed Khan Saudagar	Lecturer	aaksaudagar@kku.edu.sa
Engr. Mohammed Shafiuddin	Lecturer	maldeen@kku.edu.sa
Engr. Abdul Saddique Shaik	Lecturer	ashaik@kku.edu.sa
Engr. Syed Waheedullah Ghor	Lecturer	sgori@kku.edu.sa
Engr. Ahmed Khalid Hussain	Lecturer	ahussain@kku.edu.sa
Engr. Azam Ali Mohammed	Lecturer	mazam@kku.edu.sa
Engr. Abid Mohiuddin	Lecturer	amalil@kku.edu.sa
Engr. Abdul Rahman Abdul-Aziz Abdul-Karim	Lecturer	ababdullah@kku.edu.sa
Engr. Suhail Pasha Syed Basha	Lecturer	spsyed@kku.edu.sa
Engr. Bahaa Mustafa Kamel	Lecturer	bmehany@kku.edu.sa



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DEPARTMENT OF ELECTRICAL ENGINEERING



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 preparatory 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

The department aims at excellence and leadership qualities with a high degree of education and training. It provides advanced learning programs thereby satisfying the requirements of industries.



Electrical Engineering Program Mission

Provide high quality educational programs to the electrical engineers thereby enhancing professional practice and empowering students with a multitude professional attitude and advancing world-class research and research based education through interdisciplinary collaboration within engineering and science.

Program Educational Objectives (PEOs)

1. To provide educational and cultural programs to provide students with the knowledge assets in electrical engineering sciences and develop their abilities to analytical thinking and creativity.
2. Graduate engineers have the scientific background to meet the challenges and requirements of the huge rates of rapid growth in the areas of electrical engineering.
3. Giving the scientific and practical expertise to the practice of the profession of electrical engineering to cope with the labor market needs.
4. Supply students with basic knowledge and skills required for designing, operating and checking the electrical systems.

Department of Electrical Engineering

Level 1

Course Code	Course Title	Credit Hours	Pre-requisite
011-ENG-6	Intensive English Program (I)	6	None
107-CHEM-4	General Chemistry	4	None
119-MATH-3	Differentiation and Integration (I)	3	None
111-GE-3	Engineering Drawing-I	3	None
Total Credits Hrs.		16	

Level 3

Course Code	Course Title	Credit Hours	Pre-requisite
211-ME-4	Engineering Mechanics	4	None
219-MATH-3	Differentiation And Integration -2	3	119-MATH-3
219-PHYS-3	Physics -2	3	129-PHYS-4
121-ME-3	Production Technology And Workshop	3	111-GE-3
211-EE-3	Electric Circuits -1	3	119-MATH-3, 129-MATH-3, 129-PHYS-4
Total Credits Hrs.		16	

Level 5

Course Code	Course Title	Credit Hours	Pre-requisite
113-IC1-2	Islamic Culture -3	2	219-MATH-3
319-MATH-3	Differential Equations	3	219-PHYS-3, 211-EE-3
311-EE-3	Electromagnetic Fields	3	211-EE-3
312-EE-3	Logic Circuits	3	211-EE-3
313-EE-3	Energy Conversion	3	222-EE-3, 223-EE-3
314-EE-1	Electric Testing -1	1	None
Total Credits Hrs.		15	

Level 7

Course Code	Course Title	Credit Hours	Pre-requisite
201-ARAB-2	Arabic Language Skills	2	None
424-IE-2	Engineering Economy	2	None
411-EE-3	Principles of Electric Machines	3	313-EE-3
412-EE-3	Automatic Control	3	221-EE-3, 319-MATH-3
413-EE-3	Communication Systems	3	322-EE-3, 329-MATH-2
414-EE-3	Computer Organization -1	3	312-EE-3, 329-STAT-2
Total Credits Hrs.		16	

Level 9

Course Code	Course Title	Credit Hours	Pre-requisite
202-ARAB-2	Arabic Editing	2	None
591-EE-3	Graduation Project	3	None
511-EE-1	Electric Testing -4	1	413-EE-3, 424-EE-3
512-EE-3	Integrated Circuits	3	422-EE-3
513-EE-3	Microprocessor Based Systems	3	414-EE-3
514-EE-3	Power Electronics	3	221-EE-3, 223-EE-3
515-EE-3	Electric Testing -5	1	421-EE-3, 425-EE-3
Total Credits Hrs.		16	

Level 2

Course Code	Course Title	Credit Hours	Pre-requisite
012-ENG-6	Intensive English Program (II)	6	011-ENG-6
111-IC1-2	The Entrance to the Islamic Culture	2	None
129-MATH-3	Algebra and Geometry	3	None
129-PHYS-4	Physics (I)	4	None
101-CMS-3	Computer Science	3	None
Total Credits Hrs.		18	

Level 4

Course Code	Course Title	Credit Hours	Pre-requisite
112-IC1-2	Islamic Culture -2	2	None
229-MATH-3	Differentiation And Integration -3	3	219-MATH-3
228-ME-3	Thermal Dynamics And Hydraulics	3	219-MATH-3, 129-PHYS-4
221-EE-3	Electric Circuits -2	3	211-EE-3
222-EE-3	Electric Measurements	3	211-EE-3
223-EE-3	Electronic Engineering	3	None
Total Credits Hrs.		17	

Level 6

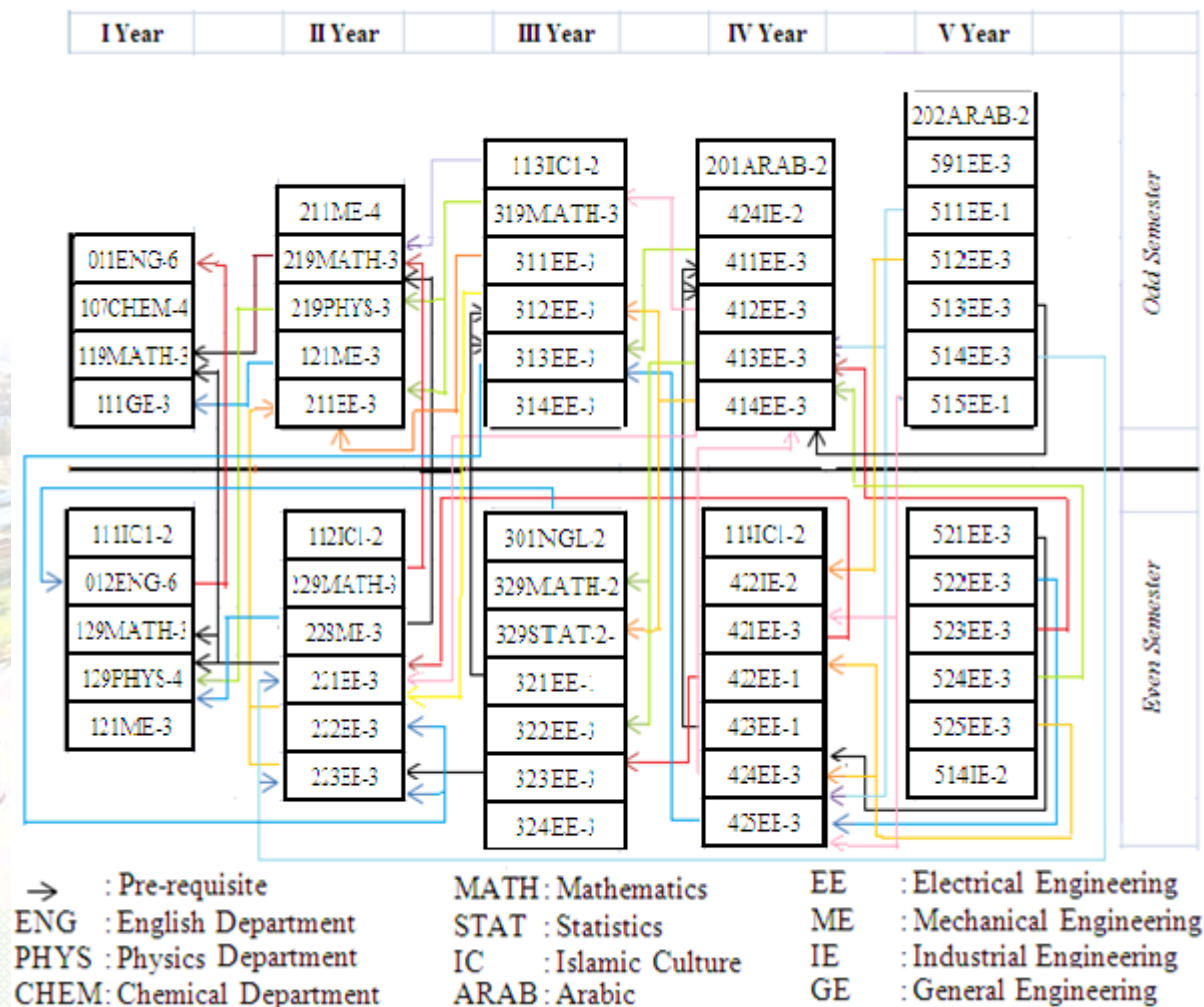
Course Code	Course Title	Credit Hours	Pre-requisite
301-NGL-2	Technical Reports Writing	2	012-ENG-6
329-MATH-2	Principles of Complex Variables And Special Functions	2	319-MATH-3
329-STAT-2	Principles of Statistics and Probabilities	2	None
321-EE-1	Electric Testing -2	1	312-EE-3, 313-EE-3
322-EE-3	Signal Processing	3	219-PHYS-3, 319-MATH-3
323-EE-3	Electronic Circuits -1	3	223-EE-3
324-EE-3	Computerized Methods for Engineering	3	101-CMS-3, 319-MATH-3
Total Credits Hrs.		16	

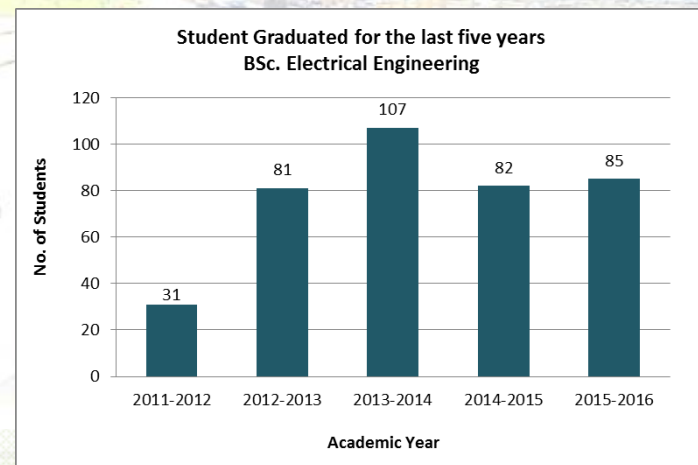
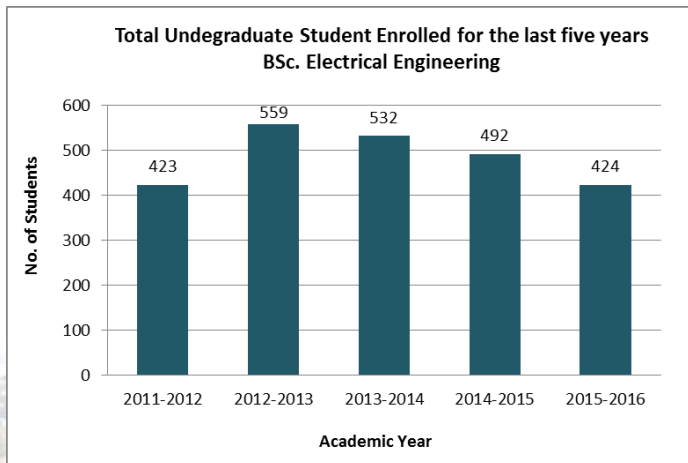
Level 8

Course Code	Course Title	Credit Hours	Pre-requisite
114-IC1-2	Islamic Culture -4	2	None
422-IE-2	Environment Engineering	2	None
421-EE-3	High Voltage Engineering	3	221-EE-3
422-EE-3	Electronic Circuits -2	3	323-EE-3
423-EE-1	Electric Testing -3	1	411-EE-3, 412-EE-3
424-EE-3	Computer Organization -2	3	414-EE-3
425-EE-3	Electric Power Systems	3	313-EE-3
Total Credits Hrs.		17	

Level 10

Course Code	Course Title	Credit Hours	Pre-requisite
521-EE-3	Operating Systems	3	424-EE-3
522-EE-3	Electric Power System Analysis	3	425-EE-3
523-EE-3	Advanced Communication Systems	3	413-EE-3
524-EE-3	Software Engineering	3	414-EE-3
525-EE-1	Electric Testing (6)	1	422-EE-3, 424-EE-3
514-IE-2	Industrial Project Management	2	None
Total Credits Hrs.		15	







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>

Graduation Projects (Second semester 2015-2016)

Title	Supervisor
Intelligent Traffic Signal Control Optimization in Urban Areas	Dr. Thafasalijyas Vayalpurayil
"Protection Schemes in the Electrical Distribution Networks"	Dr. Walid Helmy Abdel Hamid
Power distribution reliability assessment	Dr. Bushara salaheldin bushara elnoor
Remote Operated Domestic Appliances Control by Android Application.	Mr. Salman Arafath Mohammed
Impact of photo voltaic power power generation on voltage stability of the power system (co- supervisor)	Mr. Mohammad Iliyas Galab
Energy Saving and Conservation	Mr. Hamid Naseem Rashid Farooqi
Photovoltaic Generation Model for Power System Transient Stability Analysis	Dr. Abdelaziz Salah Saidi
AM/FM Radio Receiver Analysis & Design	Dr. Mohammed Farrag Mohammed

Title	Supervisor
An Improved Power-Quality 3D-Pulse AC-DC for Varying Loads	Mr. Mohammad Irshad Shaik
Performance Improvement Of The Dynamic Voltage Restorer With Closed Loop Load Voltage And Current Mode Control	Mr. Majahar hussain mahammad
Development of a microcontroller based robotic arm.	Dr. Mohammed Zubair Mohammed Shamim
Temperature Monitoring System Based On Pic16f84 And Gsm Shield	Dr. Monji Mohamed Zaidi
Software based PBX using Asterisk	Dr. Mohammed Usman
Dedicated Message Communication Wirelessly, Between Two Computers	Dr. Mohamed Abd Elhamid Abbas

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 appointed 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 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.

- 
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. Professor 1
- b. Associate Professor 2
- c. Assistant Professor 10
- d. Lecturer 14

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.

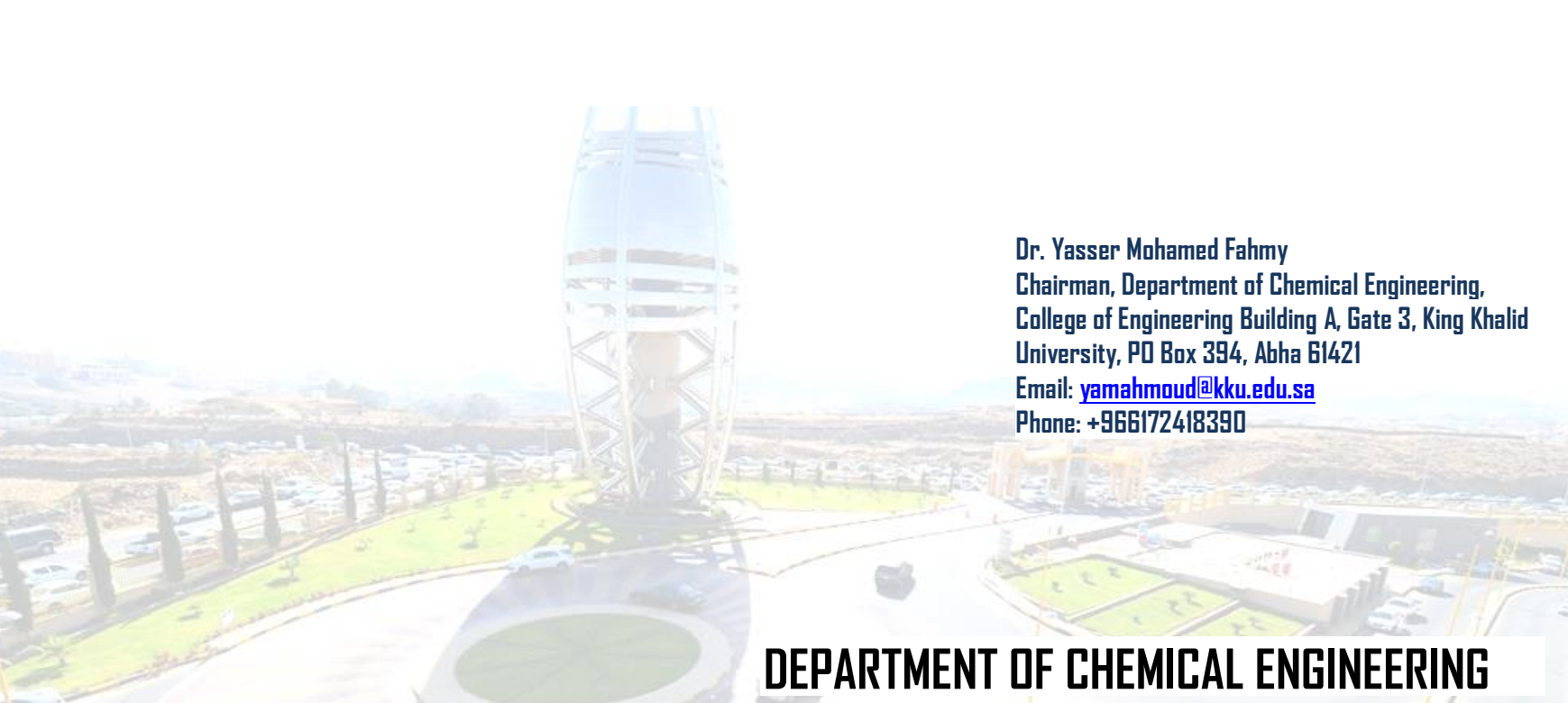
Table: Faculty Details

Faculty Name	Designation	Academic Position	Email	Researchgate link
Dr. Mohammed I. Al-Rayif	Vice Dean	Assistant Professor	malraef@kku.edu.sa	https://www.researchgate.net/profile/Mohammed_Al-Rayif
Dr. Mohammed Farrag Mohammed	Department Head, Chair Program	Assistant Professor	mfarrag@kku.edu.sa	https://www.researchgate.net/profile/Mohammed_Farrag3
Dr. Mohammad Fazle Azeem	Quality Committee	Professor	mf.azeem@gmail.com	https://www.researchgate.net/profile/Mf_Azeem
Dr. Usman Mohammed Mohammed Farooq	Time Table, Project Head	Assistant Professor	omfarooq@kku.edu.sa	--
Dr. Mohammed Abbas	Quality Committee Head	Associate Professor	mabas@kku.edu.sa	--
Dr. Mohammed Zubair M. Shamim	Curriculum and Syllabus, Lab Development	Associate Professor	mzmohammad@kku.edu.sa	https://www.researchgate.net/profile/Mohammed_Shamim3

Faculty Name	Designation	Academic Position	Email	Researchgate link
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Dr. FakherEldin Mohamed Suliman	Research	Assistant Professor	fmsuliman@kku.edu.sa	https://www.researchgate.net/profile/Fakher-El-din-Suliman
Dr. Muneer P	--	Assistant Professor	muneerpmun@gmail.com	--
Dr Monji Mohamed Zaidi	Exam Time table committee head	Assistant Professor	amzaydi@kku.edu.sa	https://www.researchgate.net/profile/Zaidi-Monji
Dr. Abdelaziz Salah Saidi	Excuse Committee	Assistant Professor	asaidi@kku.edu.sa	--
Dr. Walid Helmy	Summer Training and Intern Committee	Assistant Professor	whabdelwhab@kku.edu.sa	https://www.researchgate.net/profile/Walid-Helmy
Dr. Bushara Salaheldin Bushara	--	Assistant Professor	bushara@kku.edu.sa	https://www.researchgate.net/profile/Bushara-Elnoor
Dr. Thafasal Ilyas V. P.	--	Assistant Professor	ithafasal@kku.edu.sa	https://www.researchgate.net/profile/V-Ilyas

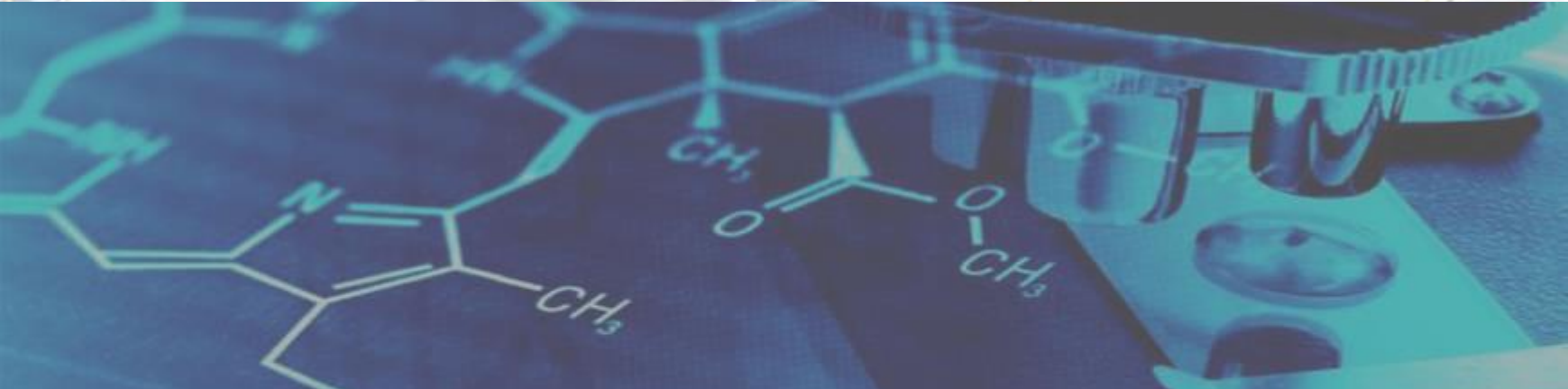
Faculty Name	Designation	Academic Position	Email	Researchgate link
Talal Alqahtani	--	Lecturer	t.alqahtani@kku.edu.sa	--
Hadi A Hakami	--	Lecturer	hahakami@kku.edu.sa	--
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Mahammad Majahar Hussain	Time Table, Project Committee	Lecturer	mhmohamad@kku.edu.sa	https://www.researchgate.net/profile/Mahammad_Hussain2
Abdul Wase Mohammed	Exam Time table Committee	Lecturer	abdulwase@kku.edu.sa	https://www.researchgate.net/profile/Abdul_Wase2
Mohammed Sayeeduddin Habeeb	Quality Committee	Lecturer	mshabeeb@kku.edu.sa	https://www.researchgate.net/profile/Mohammed_Habeeb
Hamid Naseem	Quality, Project, Lab Development Committee	Lecturer	hnaseem@kku.edu.sa	https://www.researchgate.net/profile/Hamid_Naseem
Salman Arafath Mohammed	Quality, Mid Exam Time Table Committee	Lecturer	salman@kku.edu.sa	--
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Sultan At Allah R Aljohani.	--	Teaching Assistant	s45117231@gmail.com	--



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DEPARTMENT OF CHEMICAL ENGINEERING



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 seventeen academic staff and around 200 students among its five years program.

Chemical Engineering Program Vision

Providing education and knowledge of combining theoretical and practical knowledge of the specialty chemical engineering to serve the Kingdom and community value

Chemical Engineering Program Mission

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.



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:

1. Pursue professional careers in the process industries, primarily as process engineers in leading roles.
2. Work effectively in corporate or government sector.
3. Function with ethical and environmental responsibility and will remain involved as full participant in the profession and society.
4. Follow advanced studies and research work.
5. Serve the community and the nation through technical expertise, innovative design, managerial skills and entrepreneurship.

Level 1

Course Code	Course Title	Credit Hours	Pre-requisite
011ENG-6	Intensive English Program 1	6	None
107CHEM-4	General Chemistry	4	None
	Engineering Drawing -I	3	None
	Differentiation And Integration -1	3	None
	Total Credits Hrs.	16	

Level 2

Course Title	Credit Hours	Pre-requisite
Production technology And Workshop	3	None
Arabic Language Skills	2	None
Organic chemistry 1	3	107CHEM-4
Static & Dynamic	3	None
Differentiation & Integration -2	3	119MATH-3
Physical Chemistry	3	107CHEM-4
Total Credits Hrs.	17	

Level 3

Course Title	Credit Hours	Pre-requisite
Strength of Materials & Testing	3	None
Fundamentals of Thermodynamics in Chemical Engineering -1	3	129-PHYS-4
Fundamentals of Chemical Engineering -2	3	222-CHEM-3
Mass Transfer	3	None
Differential Equations	3	219-MATH-3
Total Credits Hrs.	15	

Level 4

Course Title	Credit Hours	Pre-requisite
Islamic Culture -3	2	None
Technical Reports Writing	2	None
Chemical Industries Engineering	3	322CHEM-3
Principles of Engineering Design	3	224CHEM-3 + 225ME-3
Numerical Analysis	3	319MATH-3
Engineering Economy	2	None
Total Credits Hrs.	15	

Level 5

Course Title	Credit Hours	Pre-requisite
Attractive Metallurgy	2	223CHEM-3
Industrial Safety	2	None
Modeling & Simulation	3	419MATH-3
Computer applications in Chemical Engineering	3	412CHEM-3
Polymers Engineering	3	None
Capstone Design Project	3	None
Total Credits Hrs.	16	

Level 2

Course Code	Course Title	Credit Hours	Pre-requisite
012ENG-6	Intensive English Program 2	6	011ENG-6
101CMS-3	Computer Science	3	None
111IC1-2	The Entrance to the Islamic Culture	2	None
129MATH-3	Algebra and Geometry	3	None
129PHYS-4	Physics -1	4	None
	Total Credits Hrs.	18	

Level 4

Course Code	Course Title	Credit Hours	Pre-requisite
202ARAB-2	Arabic Editing	2	None
221CHEM-3	Organic Chemistry -2	3	211CHEM-3
222CHEM-3	Fundamentals of Chemical Engineering - 1	3	211CHEM-3
223CHEM-3	Materials Engineering	3	231CHEM-3
224CHEM-3	Advanced Engineering Drawing	3	111GE-3
229MATH-3	Differentiation And Integration -3	3	219MATH-3
	Total Credits Hrs.	17	

Level 6

Course Code	Course Title	Credit Hours	Pre-requisite
112IC1-2	Islamic Culture -2	2	None
218EE-3	Electric Engineering -1	3	129PHYS-4 + 129MATH-3
321CHEM-3	Momentum Transfer	3	313CHEM-3
322CHEM-3	Chemical Reactions Engineering	3	312CHEM-3
323CHEM-3	Thermodynamic in Chemical Engineering -2	3	311CHEM-3
329STAT-2	Principles of Statistics and Probability	2	None
	Total Credits Hrs.	16	

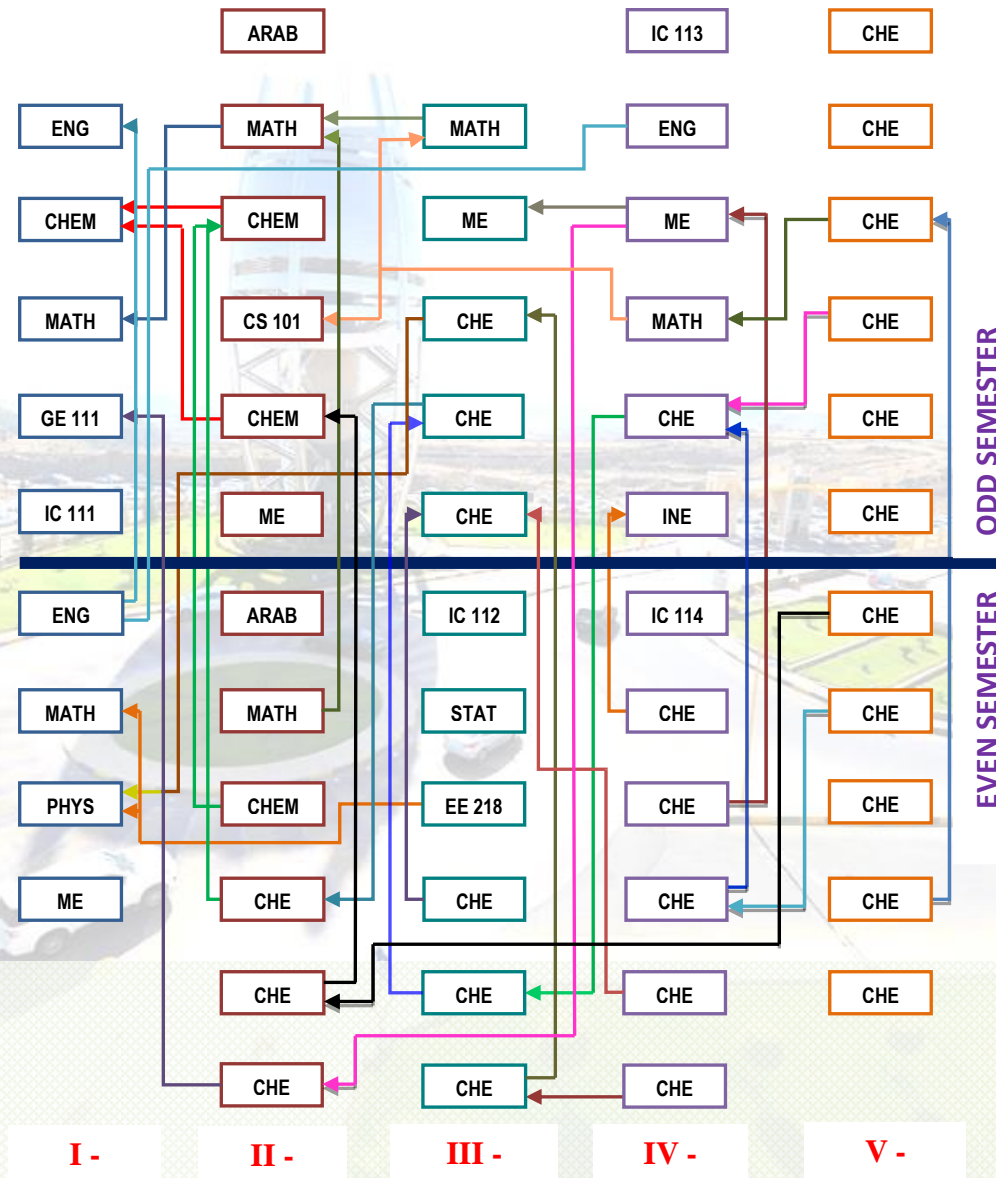
Level 8

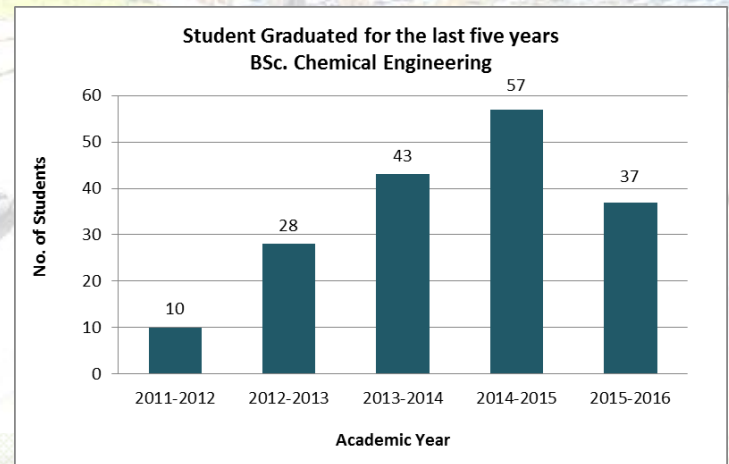
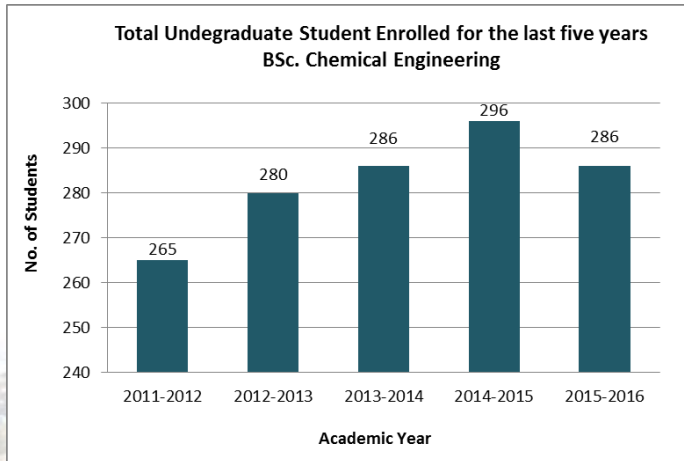
Course Code	Course Title	Credit Hours	Pre-requisite
114IC1-2	Islamic Culture -4	2	None
421CHEM-2	Plants And Chemical Processes Design	2	424IE-2
422CHEM-3	Advanced Engineering Design	3	418ME-3
423CHEM-3	Catalysis & Catalytic Processes	3	412CHEM-3
424CHEM-3	Separation Processes	3	313CHEM-3
425CHEM-3	Heat Transfer	3	323CHEM-3
	Total Credits Hrs.	16	

Level 10

Course Code	Course Title	Credit Hours	Pre-requisite
521CHEM-3	Petroleum Refining & Petrochemicals	3	None
522CHEM-3	Chemical Reactors Design	3	423CHEM-3
523CHEM-3	Corrosion & Electrochemical Engineering	3	None
524CHEM-3	Control of Processes	3	513CHEM-3
525CHEM-3	Water And Solid Waste Treatment	3	None
	Total Credits Hrs.	15	

Department of Chemical Engineering







Chemical Engineering laboratories

- 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>

Graduation projects (Second semester 2015-2016)

Title	Supervisor
Extraction of Potassium Bicarbonate from Polyamide-6 pellets-Experimental	Dr. Mohammed Khaloofah Al-Mesfer
Production of Ceramic Tiles.	Dr. Muhammad Arshad Nadir Khan
Catalytic Hydration of Ethylene to Produce Ethanol	Dr. Hamed Nasser Mohsen Ben Harharah
Boiler Calculation (In progress)	Dr. Atef EL JERY
Production of Sodium Dichromate	Dr. Moutaz Mustafa AbdElrahman Eldirderi
Recovery of Used Lubricating Oil	Mr. MD Mamoon Rashid
Production of cement in perspective of Kingdom of Saudi Arabia.	Dr. Chandrakant s. Sarkar
Extraction of Potassium Bicarbonate from Polyamide-6 Pellets	Mr. Mohd Danish
Production of sodium dichromate	Mr. Dhanaraja Dhanpal
Removal of Cadmium (Cd) and Lead (PB) metal ions from aqueous solutions by	Dr. Mohammad Ilyas Khan

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 allows 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 emphasize on the following areas:

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

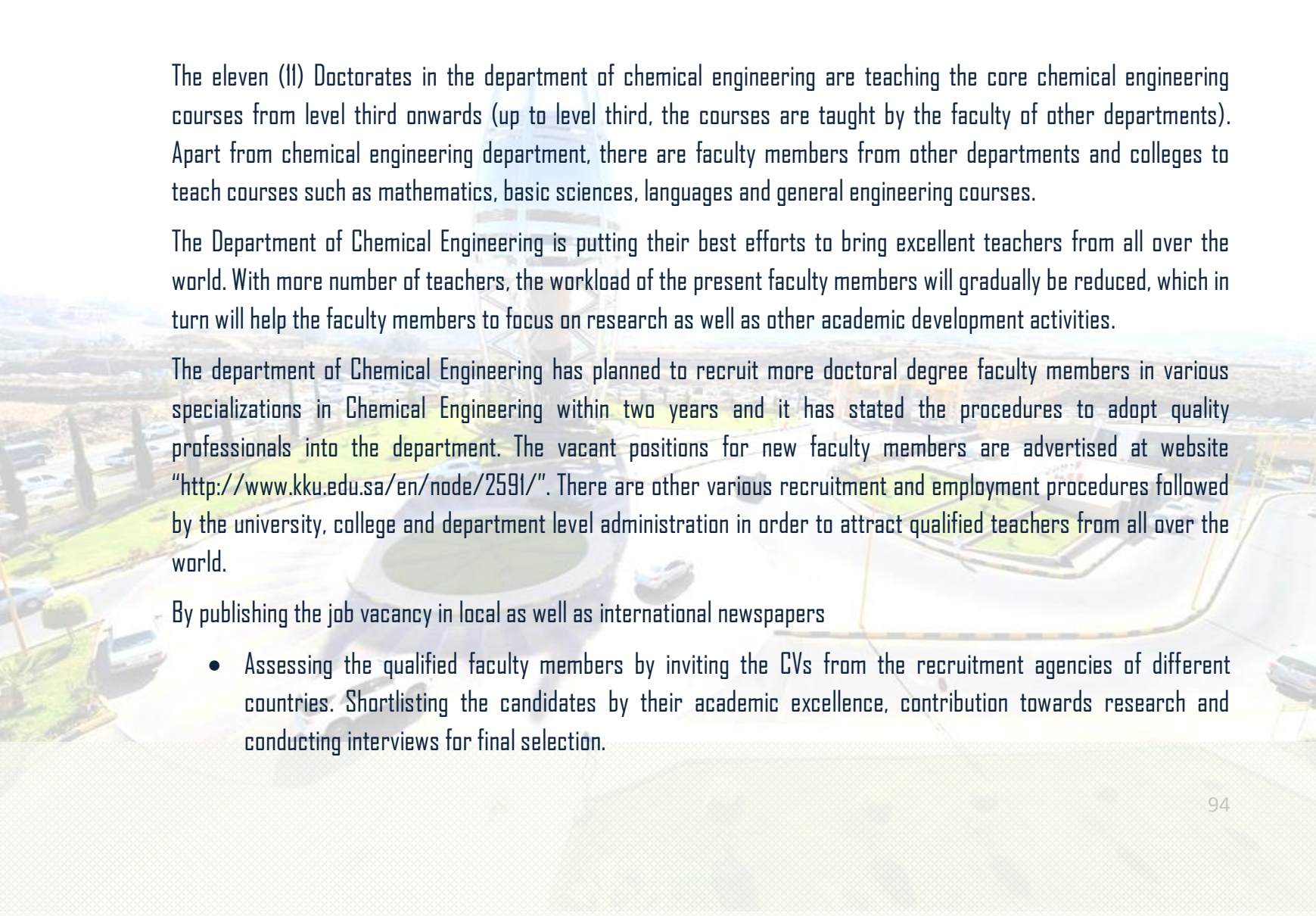


Each Chemical Engineering faculty member is part of one or more groups according to their specialization. All theory lectures of the courses are taken by the doctorates according to their expertise and the laboratory courses are engaged by the Master's Degree holders. The faculty members are engaged 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 (11) doctorates and five (5) 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 more 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 "<http://www.kku.edu.sa/en/node/2591/>". 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 above mentioned procedures.
- This academic year (2015-2016), PhD holder is recruited at the rank of full Professor.

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 17 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 1
- Associate Professor 2
- Assistant Professor 10
- Lecturer 14

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, India and Sudan.

Professional Development

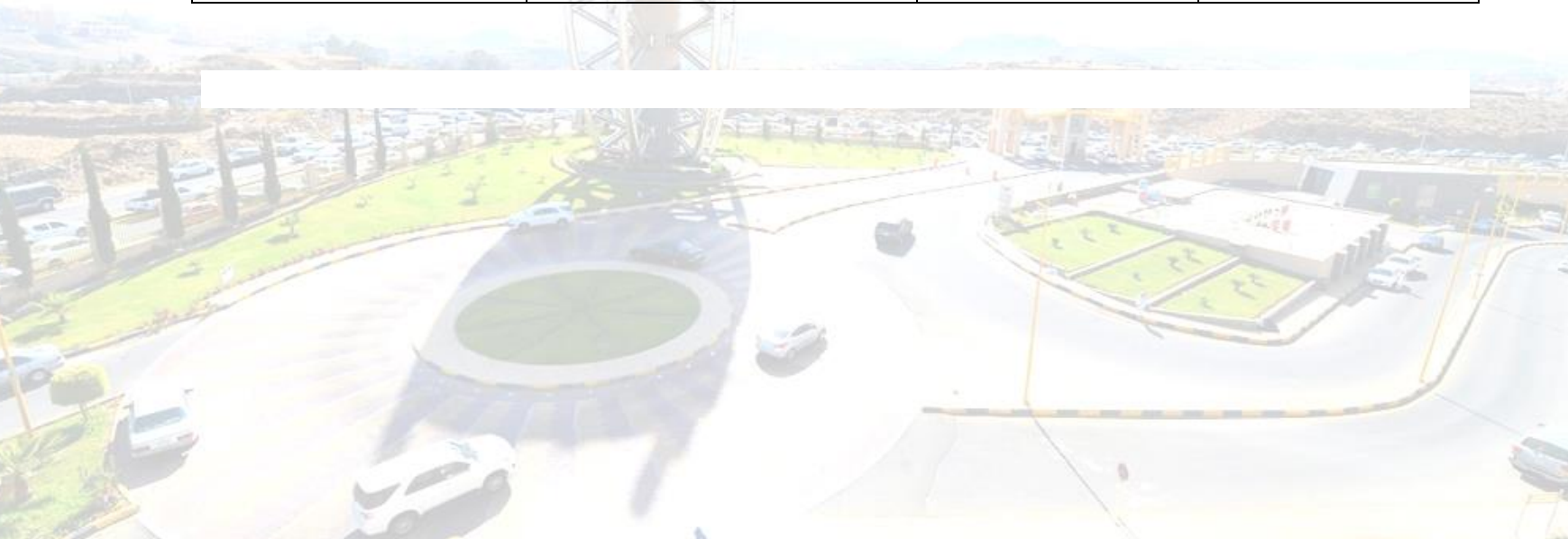
Faculty members are committed and very active in all professional activities. Many faculty members are in the process of publishing research papers. During the university research day the chemical engineering department has contributed immensely in the various fields of faculty members' specialization. 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.

Table: Faculty Details

Faculty Name	Designation	Academic Position	Email
Dr. Yasser Mohamed Fahmy	Chairman	Professor	yamahmoud@kku.edu.sa
Dr. Hamed Nasser Ben Harharah	--	Professor	hhharharah@kku.edu.sa
Dr. C. K. S. Sarkar	--	Associate Professor	cssarkar@kku.edu.sa
Dr. Mohammed Khaloufa Al Mesfer	Vice Dean for Academic Affairs	Assistant Professor	almesfer@kku.edu.sa
Dr. Ihab Mohammed Taha Shiggidi	Director, Research Center	Assistant Professor	etaha@kku.edu.sa

Faculty Name	Designation	Academic Position	Email
Dr. Haitham M. Osman	--	Assistant Professor	haman@kku.edu.sa
Dr. Muhammad Arshad Khan	Coordinator Graduation Project	Assistant Professor	moakhan@kku.edu.sa
Dr. Muhammad Ilyas Khan	Coordinator Laboratories	Assistant Professor	mkaan@kku.edu.sa
Dr. Moutaz Mustafa ElDirderi	Quality Coordinator	Assistant Professor	maldrdery@kku.edu.sa
Dr. Atef El Jery	--	Assistant Professor	ajery@kku.edu.sa
Dr. Abdelfattah Ali Amari	--	Assistant Professor	aamary@kku.edu.sa
Dr. Hasan Mudassir	--	Assistant Professor	hasanmudassir@kku.edu.sa
Dr. Mohamed A. A. Ismail	--	Assistant Professor	maismail@kku.edu.sa
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Faculty Name	Designation	Academic Position	Email
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DEPARTMENT OF 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 under College of Engineering (COE) at King Khalid University (KKU). The authorized body i.e. MoE (private institutions and Council of Higher Education for public institutions) has approved. The Industrial Engineering Department was established in year 2007 at the Gareiger 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

Preparing and introducing an engineering educational program in the field of Industrial Engineering which participates in community services to face its technical and administrative needs for development.



Program Educational Objectives (PEOs)

1. Qualifying and preparing national staff equipped with high level of knowledge in the field of Industrial Engineering able to use modern technology.
2. Feeding the student with basic knowledge and professional experience to identify, formulate and solve engineering problems related to industrial system in companies and organizations.
3. Using modern educational programs to develop the ability of student to use effective e-media, computers and software in solving engineering problems in the field of Industrial Engineering.
4. Develop the scientific research program in the field of Industrial Engineering.
5. Develop the professional and continuous educational program to serve the community.
6. Support quality and accreditation program to reach to international level in the field of Industrial Engineering.

Department of Industrial Engineering

Level 1			
Course Code	Course Title	Credit Hours	Pre-requisite
011-ENG-6	Intensive English Program-1	6	None
107-CHEM-4	General Chemistry	4	None
119-MATH-3	Differentiation and Integration-1	3	None
111-ICI-2	Engineering Drawing-1	3	None
Total Credits Hrs.		16	

Level 2			
Course Code	Course Title	Credit Hours	Pre-requisite
101-ARAB-2	Arabic Culture-2	2	None
111-ICI-2	Islamic Culture-2	2	None
201-ARAB-2	Arabic Language Skills	2	None
219-ARAB-2	Engineering Mechanics	4	None
219-ARAB-2	Differentiation and Integration-2	3	119-MATH-3
219-ARAB-2	Engineering Drawing-2	3	119-MATH-3
Total Credits Hrs.		17	

Level 3			
Course Code	Course Title	Credit Hours	Pre-requisite
101-ARAB-2	Arabic Culture-4	2	None
301-ARAB-2	Technical Reports Writing	2	012-ENG-6/M
401-ARAB-2	Machine Design-1	3	222-ME
301-ARAB-2	Measurement and Instruments	3	121-ME-3/M
219-ARAB-2	Thermal Engineering-1	3	129-MATH-3+129-PHYS-4
319-ARAB-2	Differential Equations	3	219-MATH-3/M
Total Credits Hrs.		16	

Level 4			
Course Code	Course Title	Credit Hours	Pre-requisite
401-ARAB-2	Modeling and Simulation	3	329-STAT-2
401-ARAB-2	Manufacturing Engineering-2	3	324-IE-3/M
401-ARAB-2	Production Planning and Control	3	None
401-ARAB-2	Operation Research-2	3	322-IE-3
401-ARAB-2	Computer Aided Manufacturing	3	324-IE-3/M
419-ARAB-2	Numerical Analysis	3	101-CMS-3+319-MATH-3/M
Total Credits Hrs.		18	

Level 5			
Course Code	Course Title	Credit Hours	Pre-requisite
501-ARAB-2	Engineering Reliability and Maintenance	2	None
501-ARAB-2	Industrial Safety	2	422-IE-2
501-ARAB-2	Industrial Operations Analysis	2	412-IE-3
501-ARAB-2	Industrial Projects management	2	None
516-IE-2/M	Automatic Control	3	319-MATH-3/M
516-IE-2/M	Costs Analysis and Value Engineering	2	424-IE-2
519-IE-3	Graduation Projects	0	None
Total Credits Hrs.		13	

Level 2			
Course Code	Course Title	Credit Hours	Pre-requisite
111-ICI-2	The Entrance to the Islamic Culture	2	None
012-ENG-6/M	Intensive English Program-2	6	011-ENG-6
129-MATH-3	Algebra and Geometry	3	None
129-PHYS-4	Physics-1	4	None
121-ME-3/M	Production Technology and Workshop	3	111-GE-3
Total Credits Hrs.		18	

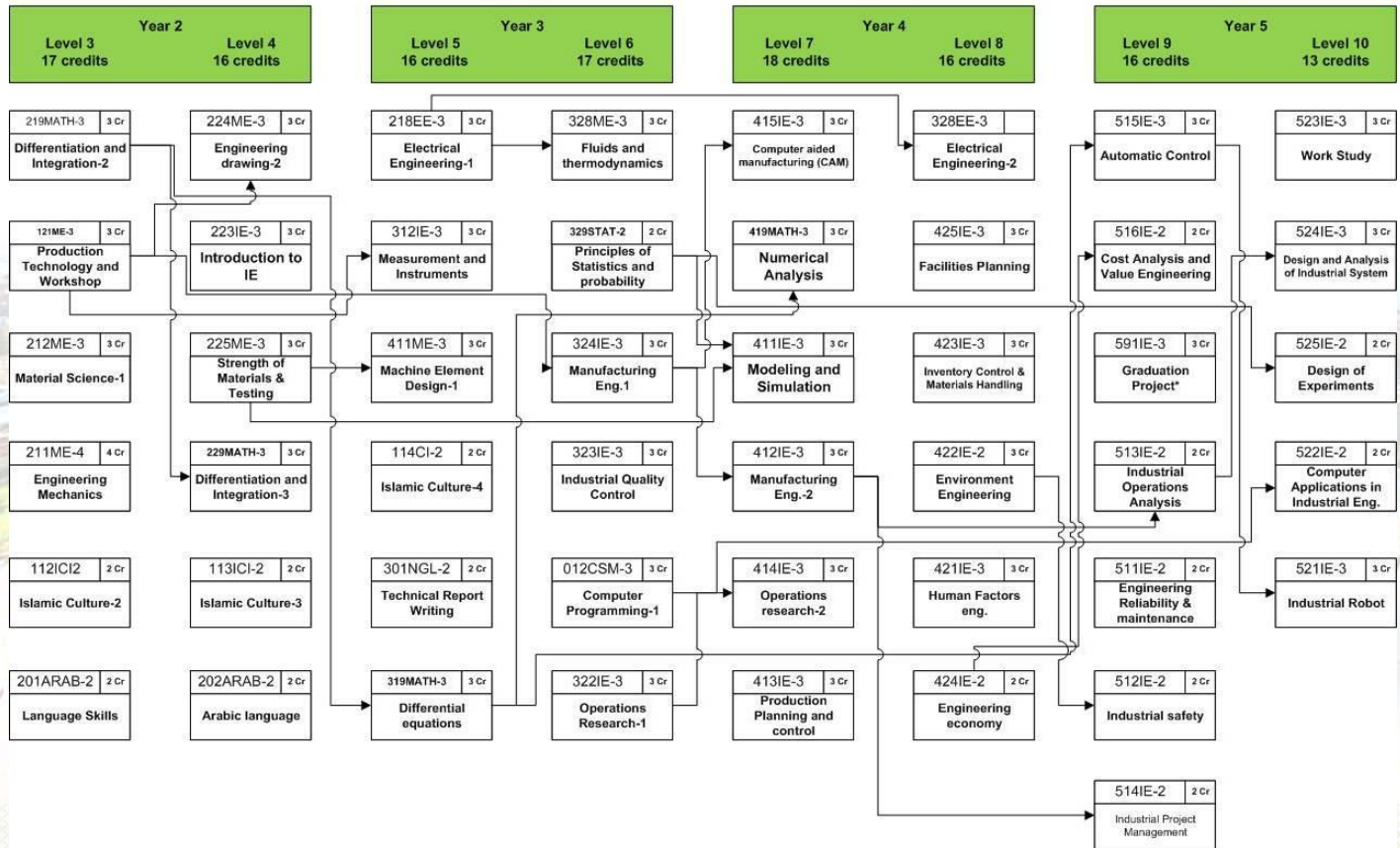
Level 4			
Course Code	Course Title	Credit Hours	Pre-requisite
113-ICI-2	Islamic Culture-3	2	None
202-ARAB-2	Arabic Writing	2	201-ARAB-2
223-IE-3	Introduction to Industrial Engineering	3	None
225-ME-3	Strength of Materials & Testing	3	None
224-ME-3/M	Engineering Drawing-2	3	101-CMS-3+121-ME-3/M
229-MATH-3/M	Differentiation and Integration-3	3	219-MATH-3/M
Total Credits Hrs.		16	

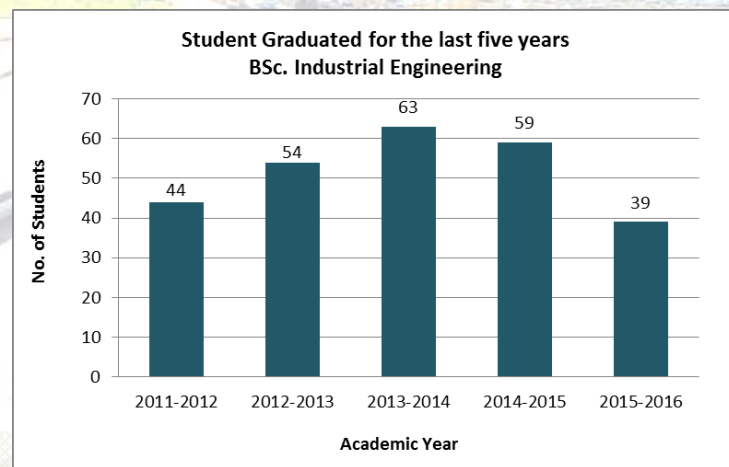
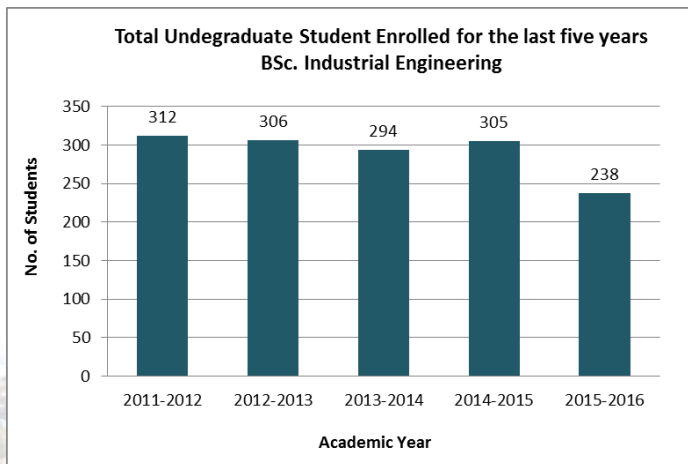
Level 6			
Course Code	Course Title	Credit Hours	Pre-requisite
012-CMS-3/M	Computer Programming-1	3	101-CMS-3
322-IE-3	Operation Researches-1	3	None
323-IE-3	Industrial Quality Control	3	None
324-IE-3/M	Manufacturing Engineering-1	3	121-ME-3/M
328-ME	Fluids and Thermodynamics	3	129-PHY-4
329-STAT-2	Principles of Statistics and Probability	2	None
Total Credits Hrs.		17	

Level 8			
Course Code	Course Title	Credit Hours	Pre-requisite
421-IE-3	Human Factors Engineering	3	None
422-IE-2	Environment Engineering	2	None
423-IE-3	Inventory Control and Materials Handling	3	None
424-IE-2	Engineering Economy	2	None
425-IE-3	Facilities Planning	3	None
328-EE-3	Electric Engineering-2	3	218-EE-3/M
Total Credits Hrs.		16	

Level 10			
Course Code	Course Title	Credit Hours	Pre-requisite
521-IE-3/M	Industrial Robots	3	515-IE-3/M
522-IE-2/M	Computer Applications in Industrial Engineering	2	101-CMS-3
523-IE-3	Work Study	3	None
524-IE-3/M	Design and Analysis of Industrial Systems	3	513-IE-2/M
525-IE-2/M	Design of Experiments	2	329-STAT-2
519-IE-3	Graduation Projects	3	
Total Credits Hrs.		16	

Industrial Engineering Department Undergraduate Curriculum Guide







Industrial Engineering Laboratory

- 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 2015-2016)

Title	Supervisor
Application of Fuzzy Based VIKOR approach for Multi-Attribute Decision Making (MADM)	Dr. Elsayed Abdelhamed Elsayed Esmaeel
Design and Fabrication of an Ergonomic Solar Vehicle at King Khalid University	Dr. Mohamed Ali Abdel-Fattah Mansour

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 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 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 4 Professors, 5 lecturers with M.Sc. degree and 2 with B.Sc. degree Teaching Assistants. One Associate Professor and three Assistant Professors. The current number of students enrolled in the IE program is 200 students (Spring 2016). The teacher student ratio is 1:22.

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 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, 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

Faculty Name	Designation	Academic Position	Email	ResearchGate Link
Dr. Mohamed A.A. Mansour	Chairman & Coordinator of Research	Assistant Professor	momansor@kku.edu.sa	https://www.researchgate.net/profile/Mohamed_Mansour27
Dr. Mohamed Rafik Noor Mohamed Qureshi	Coordinator of Plan and Curricula Committee	Associate Professor	mrnoor@kku.edu.sa	https://www.researchgate.net/profile/M_N_Qureshi
Dr. Elsayed A. Elsayed Esmaeel	Coordinator of Graduate Projects	Assistant Professor	eismaeel@kku.edu.sa	https://www.researchgate.net/profile/Elsayed_Eismaeel
Dr. Shaik Dawood Abdul Khadar	Coordinator of Community Service Committee	Assistant Professor	shdawood@kku.edu.sa	https://www.researchgate.net/profile/Shaik_Dawood_Abdul_Khadar
Engr. Shanmuganathan Appukutti		Lecturer	shanmuganathan@kku.edu.sa	https://www.researchgate.net/profile/Shanmuganathan_Appukutti
Engr. Abdul Salam Ahmed Alqarni		Lecturer	aalqarni@kku.edu.sa	
Engr. Abdullah Mohammed Al Fatais		Lecturer	alftas@kku.edu.sa	
Engr. Mohammed Al Awadh		Lecturer	mohalawadh@kku.edu.sa	

Faculty Name	Designation	Academic Position	Email	ResearchGate Link
Engr. Mohammad Tarique Jamali	Coordinator of Laboratory and Equipment	Lecturer	mtjamali@kku.edu.sa	https://www.researchgate.net/profile/Mohammad_Jamali_8
Engr. Mohammed Mousa Al Qahtani		Lecturer	m.alqahtani@kku.edu.sa	https://www.researchgate.net/profile/Mohammed_Alqahtani24
Engr. Ali Abdu M.Awaji Arishi		Lecturer	awaje@kku.edu.sa	
Engr. Badar Mohammed Mohammed Al Fardan		Teaching Assistant	balfardan@kku.edu.sa	

INFRASTRUCTURE



Administrative Block



Auditorium and other facilities



Central library, King Khalid University

SUMMER FESTIVAL



SPORTS INFRASTRUCTURE



STUDENT LOUNGE, COLLEGE OF ENGINEERING





College location

King Khalid University Map

Contact us:

College of Engineering
Building A, Gate 3, King Khalid University
PO Box 394, Abha 61421, Kingdom of Saudi Arabia
Tel: +966 17 241 1866; **Fax:** +966 17 242 8184
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