



Umm Al-Qura University
Honored Place and Honored Education

Strategic Plan

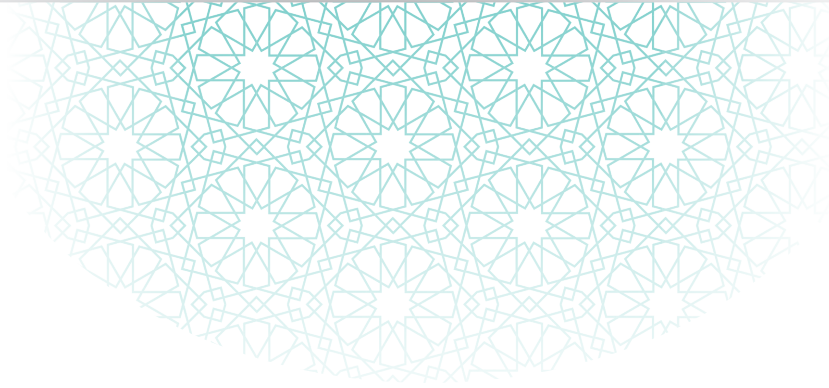
(2015 – 2020)



Computer Engineering Department

College of Computer and Information Systems

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



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Umm Al-Qura University

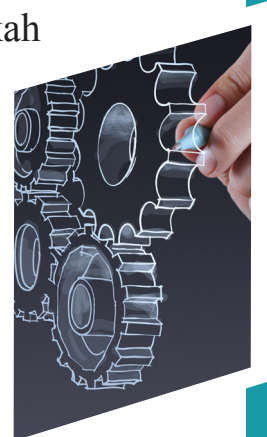
Vision

Pioneering in education, scientific research and the service of the local and global society.



Mission

The existence of Umm Al-Qura University in the Holy City of Makkah gives it a distinguished character as an academic institution that serves Islam and contributes to the development of human resources and the provision of services at the levels of both the public and private sectors in the light of the requirements of the comprehensive development plans of the country.





College of Computer and Information Systems

Mission

To provide high quality education, to conduct innovative research and to offer professional services to the Saudi community. This includes preparing students to be leaders in their profession, creating and disseminating knowledge by means of scholarly and creative achievements, and establishing partnerships with local industry, governmental organizations and leading international academic institutions.



Computer Engineering

Vision

To be among the top three Computer Engineering Departments in the Kingdom of Saudi Arabia

Mission

To be among the leading Computer Engineering Departments in the Kingdom of Saudi Arabia in education, application-oriented research and community services.

Values

- Teamwork.
- Commitment and Responsibility.
- Islamic Values.
- Professionalism.
- Innovation and Creativity.





SWOT Analysis





Strategic Track (1): Faculty

Strategic Goals

- Recognize and reward teamwork, interdisciplinary, entrepreneurial activities, and teaching innovation.
- Hire and retain outstanding faculty members taking in consideration the department's needs, and the number of faculty members in all CE majors.

Initiatives

- Creating a clear assessment process, that takes in consideration the different faculty member activities during the semester that include: committees participation, attending department's council meetings, participating in graduation projects examinations, and academic advising, ..., etc.
- Utilizing all possible means to attract distinguished professors such as: place (Makkah), working environment and tax-free income, ..., etc.



KPIs

- Students' semester evaluation.
- Administration evaluation which includes: the dean and the department head evaluations as well as committees heads.
- Awards/publications/grants/international recognition per faculty member.
- Number of new distinguished faculty members joining and staying in the department.

Mapping Strategic Goals, Initiatives & KPIs

Strategic Goals	Initiatives	KPIs
Recognize and reward teamwork, interdisciplinary, entrepreneurial activities, and teaching innovation.	Create Clear Assessment process.	<ul style="list-style-type: none"> • Students' semester evaluation. • Administration evaluation (the dean and the department head) • Awards/publications/grants/international recognition per faculty member
Hire and retain outstanding faculty members taking in consideration the department's needs, and the number of faculty members in all CE majors.	Utilizing all possible means to attract distinguished professors such as: place (Makkah), working environment,...,etc	Number of new distinguished faculty members joining and staying in the department.

 **MISSION**

 **STRATEGY**

Strategic Track (2):
Students

Strategic Goals

- **Attract and retain top quality students:**

The main key to successful CE undergraduate program is to ensure that we will attract and retain the highest quality students. The students who just join the college have passed the preparation year so that it will be their first-year in the department. It is crucial to meet students expectations and why they join the department. We should create successful stories of our student participate so that other students get inspire.

- **Enhance student outcomes:**

The department has started the ABET accreditation, and this is the first step to identify the student outcomes and their weaknesses. It will require assessment of outcomes or graduate attributes and the use of assessment results for continuous improvement. It should be reported to the department council annually.



Initiatives

- **Enhance the visibility of the department:**

Reaching the community by inviting and visiting the students from top high schools in Makkah to promote and explain what is Computer Engineering and the department can give the students. The only way can students join us is through the Preparation Year Deanship. It is important to attract top students and promote the Computer Engineering department by having different programs and communicate with the students.

- **Define & resolve the issues related to why students leakage:**

Identifying the issues related to why students leakage is important to keep our top students in the CE department. This process can also identify other issues that may not be direct to the education process.

- **Select the most senior instructors to teach the first year students:**

First-year students in the department should be treated differently. One way is to have senior instructors who have experience to teach first-year students.

- **ABET assessment & evaluation:**

The ABET accreditation including assessment & evaluation is important to improve the student and the department outcomes.



KPIs

- **How many students join the department and the percent compared with previous years from last (term) year.**


- **ABET & course results:**

ABET assessment and evaluation have many indicators that can be help to improve the teaching quality.

- **Average CGPA:**
The average CGPA of our graduates.
- **Average Term to complete program:**
The number of terms that the students take before they graduate.
- **Alumni satisfaction rate:**
This rate determines how the graduates satisfy with their department program.
- **Student success rate.**

Mapping Strategic Goals, Initiatives & KPIs

Strategic Goals	Initiatives	KPIs
Attract and retain top quality students	<ul style="list-style-type: none"> • Enhance the visibility of the college in targeted high schools • Define & resolve the issues related to why students leakage • Select the most senior instructors to teach the first year students 	<ul style="list-style-type: none"> • How many students join the department & % from last (term) year • Percent of transferred students to other department (lower better)
Enhance Student Outcomes	<ul style="list-style-type: none"> • ABET assessment & evaluation 	<ul style="list-style-type: none"> • ABET & course results • Average CGPA • Average Term to complete program • Alumni satisfaction rate • Student success rate (honors)



Strategic Track (3): Academic Environment

Strategic Goals

- Build and maintain laboratories with state-of-the art equipment and tools to enhance students' design skills.
- Enhance of library's impact as an academic partner by building and maintaining a library with state-of-the art facilities.
- Developing a pleasant environment for students and faculty members.

Initiatives

- **Establish an assessment methodology that covers relationship between theory and laboratory practice by ensuring vertical and horizontal integration of laboratories (in terms of concepts, equipment, and tools)**
It is crucial that students realize how theory is applied and establishing assessment tools to measure the success of this realization is essential.

- **Establish an assessment methodology that covers facilities support, reliability, safety, and laboratory manuals. It is vital to provide support for our labs to keep up with advances in computer technology:**
Maintaining up-to-date facilities and laboratory manuals will provide support for the students.
- **Integrate the teaching services and programs of the library with those of faculty:**
Coordination between the college library and the university library by providing the department faculty and students with educational programs as well as other resources (books, previous CE project reports, faculty and students' publications, magazines, articles, tutorials, newspapers, etc.) is required.
- **Establishing a prayer area (Masjed), cafeteria, and a common room.**

 **KPIs**

- **The score of maintenance and reliability matrix for each laboratory is above 8/10:**
This score indicates how safe and reliable a laboratory is.
- **The score of facilities support matrix for each lab is above 8/10:**
Such a good score indicates how well-equipped and up-to-date a laboratory is.
- **The score of laboratory manual matrix for each laboratory is above 8/10:**
This score measures the availability of and how current laboratory manuals are.



- **The score of facilities support matrix for the library is above 8/10:**
Resourceful library is an indicator of how good the learning environment is.
- **The number of books and periodicals borrowed by students and faculty during one academic year:**
This number indicates how involved faculty and students are in research and professional activities.
- **Students and colleagues evaluation of labs, library, and services:**
Constructive feedback from students and faculty will indicate whether the department is on track to achieve its goals and help the department to continue to provide them with necessary support for their success.

Mapping Strategic Goals, Initiatives & KPIs

Strategic Goals	Initiatives	KPIs
<ul style="list-style-type: none"> • Build and maintain laboratories with state-of-the art equipment and tools to enhance students' design skills. 	<ul style="list-style-type: none"> • Establish an assessment methodology that covers relationship between theory and laboratory practice by ensuring vertical and horizontal integration of laboratories (in terms of concepts, equipment, and tools). • Establish an assessment methodology that covers facilities support, reliability, safety and laboratory manual. 	<ul style="list-style-type: none"> • The score of maintenance and reliability matrix for each lab above 8/10. • The score of facilities support matrix for each lab above 8/10. • The score of laboratory manual matrix for each lab above 8/10. • Students and colleagues evaluation of labs services.
<ul style="list-style-type: none"> • Enhance of library's impact as an academic partner by building and maintaining a library with state-of-the art facilities. 	<ul style="list-style-type: none"> • Integrate the teaching services and programs of the library with those of faculty. 	<ul style="list-style-type: none"> • The score of facilities support matrix for the library is above 8/10. • The number of books and periodicals borrowed by students and faculty during one academic year. • Students and colleagues evaluation of library services.
<ul style="list-style-type: none"> • Developing a pleasant environment for students and faculty members. 	<ul style="list-style-type: none"> • Establishing a prayer area (Masjed), cafeteria, and a common room. 	<ul style="list-style-type: none"> • Students and colleagues evaluation of the pleasant environment facilities.



Strategic Track (4): Research

Strategic Goals

- Promote research and encourage creativity & invention.

Initiatives

- Create research groups & labs.
- Conduct seminars, tutorials, workshops & invited talks.
- Establish “Calls” calendar.
- Timestamp ideas by “Technical Reports”.
- Recognize excellence through awards and prizes.

 **KPIs**

- Grants (25% of the No. of faculty members per year).
- Filed Patents (50% of the No. of faculty members per year).
- Journal Papers (100% of the No. of faculty members per year).
- Conference Papers (100% of the No. of faculty members per year).
- Technical Reports (150% of the No. of faculty members per year).

 **Mapping Strategic Goals, Initiatives & KPIs**

Strategic Goals	Initiatives	KPIs
Promote research and encourage creativity & invention.	<ul style="list-style-type: none"> • Create research groups & labs. • Conduct seminars, tutorials, workshops & invited talks. • Establish “Calls” calendar. • Timestamp ideas by “Technical Reports”. • Recognize excellence through awards and prizes. 	<ul style="list-style-type: none"> • Filed Patents (50% of the No. of faculty members per year). • Grants (25% of the No. of faculty members per year). • Journal Papers(100% of the No. of faculty members per year). • Conference Papers (100% of the No. of faculty members per year). • Technical Reports (150% of the No. of faculty members per year).



Strategic Track (5) Job Market

Strategic Goals

- **Effective Engagement with the job market:**
It is essential to have strong connections with the job market. These connections will be reflected in increasing the employment rate.
- **Identify the needs of potential job market:**
This goal is very important to discover the new trends in the job market. Knowing such trends will facilitate the integration of department graduates into different vacancies in the job market.

Initiatives

- **Offer free training courses and workshops.**
These training courses and workshops will increase the eligibility of graduates to be employed in high standard companies. This can be done in collaboration with the vice deanship for development academic affairs.

- **Agreement with high standard companies for summer training courses:**
Build strong connections with high standard companies in the field to train CE students. These companies should provide a detailed schedule for the training period including the software and the hardware devices that will be used in the training. This can be done in calibration with the summer training unit in the college.
- **Organise effective career day events:**
Invite high standard companies to the carrier day event. These companies should sign contracts with senior students during these events. This can be done in collaboration with the vice deanship for development academic affairs.
- **Conduct regular visits to the job market by student and faculty:**
These visits will strengthen the relationship between the department and the job market. These visits will familiarize the students with the environment of the job market. In addition, Faculty members will discover the latest development in the technology.

 **KPIs**

- **Employer satisfaction (using surveys):**
This factor indicates the satisfactory level of the companies about the skills of CE graduates. Such skills include the English language proficiency, technical skills and team working. This can be evaluated by using employer surveys
- **Median score in outcome and professional career exams:**
There are different exams to evaluate both technical and practical skills of the graduates. The performance of the graduates in these exams will signify the level of our graduated compared to other graduates from other universities.



- **Employment rate:**

This key is very important for us because it shows the percentage of the CE graduates that are employed each year. By comparing the employment rate of each year, we can find if this percentage is increasing or decreasing. Corrective actions should be taken to rectify the problems, if any.

- **No. of employers in public and private sectors:**

This factor specifies the number of CE graduates in both public and private sectors. This number is essential for us to recognize any problem in one sector and then go back to the job market to identify their needs.

- **No. of contracts with students before graduation:**

The main objective of the CE program is to graduate successful candidates to be the leaders in the near future. Such successful stories should begin before graduation. Number of contracts with students before graduation will reflect the strength of the program. These contracts can be done, for example, in career day events.

- **Average salary of graduates students:**

This key is very important because it shows the financial standing of the CE graduates compared to other graduates.

Mapping Strategic Goals, Initiatives & KPIs

Strategic Goals	Initiatives	KPIs
Effective Engagement with the job market.	<ul style="list-style-type: none"> • Agreement with high standard companies for summer training courses. • Offer free training courses and workshops. 	<ul style="list-style-type: none"> • Employer satisfaction. • No. of contracts with students before graduation. • Median score in outcome and professional career exams.
Identify the needs of potential job market.	<ul style="list-style-type: none"> • Conduct regular visits to the job market by student and faculty. • Organize effective career day events. 	<ul style="list-style-type: none"> • Employment rate. • No. of employers in public and private sectors. • Average salary of graduate students.



CE Strategic Planning Committee

Members:

- | | |
|---------------------------|----------|
| 1. Dr. Turki F. Al-Somani | (Chair) |
| 2. Dr. Omar Sonbul | (Member) |
| 3. Dr. Khalid Khayyat | (Member) |
| 4. Dr. Khaled Al-Mutairi | (Member) |
| 5. Dr. Loai Tawalbeh | (Member) |
| 6. Dr. Abdulbasit Abid | (Member) |

Acknowledgement

We would like to acknowledge the efforts of Eng. Anas H. Daghistani in preparing this report.



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