Self-Assessment Report
Electrical Engineering Department
College of Engineering-University of Basra
Basra, Iraq

2016-2017

Table of Contents

BACKGROUND INFORMATION

Contact
Dr. Mofeed T. Rashid
Mobile: 07707347847
electrical.jouda@gmail.com

Criterion 1: Introduction and Context

The electrical engineering department was established in 1964 with the establishment of the College of Engineering at the University of Basra, where it was necessary to establish a department to meet the emerging need for skilled electrical engineers and to keep abreast of the scientific and technical progress in the world.

Since its inauguration, electrical engineering department adopted a well academic program equal to the electrical engineering departments worldwide by focusing on both theoretical and practical integrated aspects of the electrical engineering fields of study.

The undergraduate study at the department is four years in length; from the moment of receiving the freshman year students whose average grades qualify them to join it up till to the graduation of the senior year students where they get their Bachelor of Science degree in electrical engineering.

Three factors affect the success of the department:

- The chairman of the department and his active wise administration.
- The curricula that are taught to students.
- The employed faculty members, technicians, and other staff members.

The chairman of the department assigns the duties and jobs of every member in the department:

If the member is a faculty, then s/he will be fully responsible of her/his assigned curriculum and laboratories.

If the member is an administrative staff, s/he does what her/his work needs and gets back to the chairman with any questions and consultation.

Any crucial decisions at the department must be made by the department board which contains all the faculty members.

Students' daily issues are the responsibility of the chairman assistant.

The process of teaching in the department starts with assigning a faculty member to teach a specific curriculum; the faculty member is also given the syllabus and the textbook of the curriculum which he should use in teaching, but he has the ability to use other references. Since he will be fully responsible of teaching the curriculum to students, he must afford the examination committee with:

- 1^{st} semester examination's questions and marks.
- 2^{nd} semester examination's questions and marks.
- Final examination set questions and marks.

In doing researches, often each faculty member is working alone on his own research.

Currently, the only way to contact the department is via coming personally to the department. This can be improved if the department puts a website with official emails for its employees rather than their personal ones.

From its launch, the electrical engineering department has put its own strategies,

- Annual students' admission plan.
- Curricula.

- Staff and faculty recruitment.
- Annual academic scientific plan.
- Faculty promotion plan.

, in coherence with these of the college, university, and ministry where any department as well as any college and university in Iraq must obey the Iraqi centralized regulations and rules set by the ministry of the higher education and scientific research.

The success of the department is related to many factors:

1- The faculty size:- The department has faculty with good size allowing the department to do its activities easily.
2- The department building:- The department has its independent building which contain all of its needs:- Classrooms, laboratories, management and faculty offices and others.
3- The good relationships between the management and the faculty members and other staff of department contribute in putting forward all of department activities.
4- Due to the process of assigning budgets to universities and colleges, the department receives a guaranteed annual budget.

While the following factors may inhibit the success of the department:

1- The size of students and their quality:- the students are accepted in college according to central admission law, then these students are distributed among the departments of college. Then, the department cannot select its students and determine its own conditions and limitations. Also, some times the number of accepted students exceeds the capacity of department.
2- There is no feedback system from employers of the graduates to get indication about their quality.
3- The current adopted system to measure the achievement of the Program Outcomes (POs) is not satisfactory and need to be enhanced.
4- There are only two elective courses, which are in fact not elective since the students have no choice in studying them.

Criterion 2: Organization and Management

2.1 Department's Organization

The electrical engineering departments constitutes of:

1. The chairman of the department who manages the department's academic and administrative affairs, the chairman administrative support staff (chairman's reservist, assistant, and secretary).
2. The department panel which includes all of the faculty members of the department (44 members) whose names, ranks and their specialties are mentioned in criterion 6.
3. The department also has engineers, technicians, and administrators employees.
4. The department also has several committees:-
   - Scientific and Graduate Affairs Committee
   - Examination Committee
   - Importation Committee
   - Inventory Committee
   - Gratis Books Committee
   - Summer Industrial Training Committee
   - Laboratories Maintenance Committee
   - Quality Assurance Committee

   Figure below shows the overall structure of the department

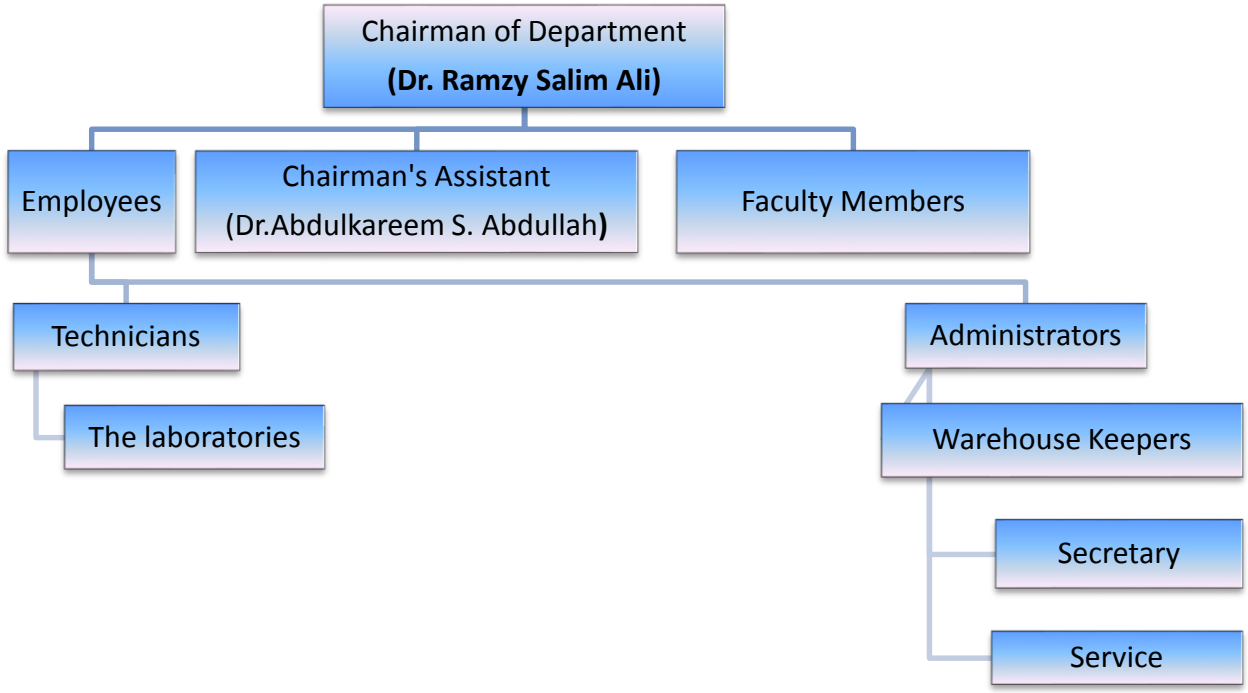

Fig.1: Department Structure

2.2 Leadership Responsibilities

The chairman of the electrical Engineering department is the most pivotal of all positions concerned with the instructional development. The policies of the college and university delegate the prime responsibility of the department daily operation to the chairman. The chairman is thus, assigned the task of running and management of the department. As the executive officer, the chairman is responsible to both the dean of the college of engineering and the department. It is the chairman who maintains daily contacts with the administration, with faculty and with students. It is in this last context where the chairman has to ensure that the department's mission and educational objectives are met. This could be achieved through the following:

1. **Departmental affairs:** developing and accomplishing departmental missions and objectives within those of the university; establishing departmental policies; conducting departmental meetings; involving faculty members and students in departmental decision making and activities.
2. **Academic affairs:** establishing departmental degree programs and curricula; evaluating, updating and improving program curricula, and the enforcing the quality of instruction.
3. **Office management:** administering departmental facilities; hiring, supervising, evaluating staff personnel (secretaries, laboratory assistants); establishing file and record systems (faculty, students, courses, academic data, correspondence); maintaining equipment and other department properties; requisitioning supplies; ordering textbooks.
4. **Personal professional performance:** providing professional leadership and setting an example in the department; demonstrating professional competence in teaching, research, and other professional activities; participating in professional associations and community service, setting academic standards; preparing term schedules of courses.
5. **Faculty affairs:**
    - Recruiting and orienting new faculty members; supporting and encouraging high performance in teaching, research, conference attendance, seminars, workshops, and other professional activities;
    - Enforcing faculty responsibilities and protecting faculty rights; evaluating faculty members and making documented recommendations to the dean for them.
6. **Student affairs:**
    - Facilitating a constructive environment to consolidate the program teaching and learning process.
    - Curricular and career advising of students.
    - Responding to student grievances and complaints.
    - Certifying students for graduation.

7. **Program affairs:**
    - Arranging meetings with faculty to decide on further steps to improve the program.
    - Managing the essential funds for laboratory equipment, day-to-day functioning, other department social activities, etc.

- Executing the electrical engineering Program, alteration, and improvement proposed by program constituencies.

8. **External communications:** conveying university policies and actions to the department, representing the department in the college, the university and all external agencies and communicating departmental programs and activities to students.
9. **Budgetary affairs:** preparing annual departmental budget requests; administering budgetary allocations (preparing requisitions, authorizing expenditures, maintaining budget records).

2.3 Department Budget Allocation Process

The Iraqi Ministry of Finance allocates the annual budget of all Iraqi ministries including the Ministry of higher Education and Scientific Research. The Ministry of Finance exerts all efforts possible in framing and application of the righteous financial policies to improve and develop the available resources for all ministries.
The Ministry of Higher Education and Scientific Research, in turn, allocates the planned annual budget to the University of Basra which gives the college of engineering its share of the budget. Then, each department gets its own financial part from the college and uses it in fulfilling:

1. Employees' expenditures: employees' salaries, lectures wages, retired faculty salaries, specific expenses, university expenses, risk expenses, affiliation rewards, and other expenses.
2. Services requirements: deputations, ceremonial activities, students' expenses, researches reinforcement, building cleaning expenses, athletic activities, conferences, and banking services.
3. Commodities requirements: all equipment's (laboratorial, medical, schooling, agricultural, publications, books, fuels, and others).
4. Equipment maintenance: all maintenances (watery, electrical, buildings, furniture, books, gardens, records, work, and appliances).
5. Funding costs: furniture (wood and metallic), appliances, personal computers, telephones, copiers, printers, books and magazines, calculators, and machines.
6. Other expenses: students and unofficially employed staff.

Table 2.1 and Fig.2.1 summarizes all previous points.

Table 2.1: College of Engineering Budget Allocated by the University of Basrah over the Five Past Years

Allocations (ID)	Academic Year				
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Employees' Expenditures	2377500000	3254470000	3203500000	3210250000	3220050000
Services Requirements	56450000	26800000	177900000	46124380	45124480
Commodities Requirements	204009750	1394000000	343600000	183487850	203488850
Equipments' Maintenance	104000000	71500000	215400400	70284200	71384200
Funding Costs	256000000	254750000	1023000000	509848500	519848500
Other Expenses	273750000	164750000	126000000	125288250	225288250
Total	**3271709750**	**5166270000**	**5089400400**	**4145283180**	**4145283180**

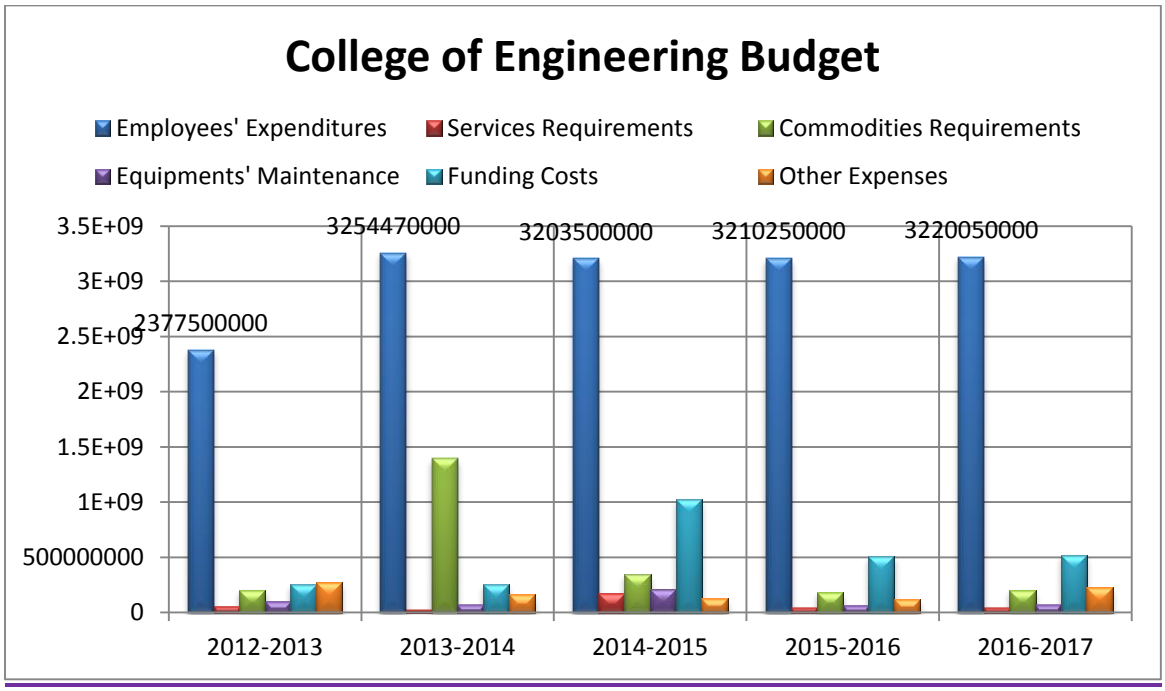

Fig. (2.1) College of Engineering Budget

2.4 Sources of Financial Support

The college of engineering is a governmental institution that funds its activities from:

1. General governmental funds which represents the greatest portion of the budget.
2. Higher education fund which includes:
    a. Laboratorial tests: 65% of funds for test team, 15% for university, 16% for bonuses, and 4% for maintenance.
    b. Shops rent: 15% for university, 68% for bonuses, and 17% for maintenance.
    c. Continuous learning courses: 65% for course trainers, 15% for university, 16% for bonuses, and 4% for maintenance.
    d. Special courses: 65% for course trainers, 15% for university, 16% for bonuses, and 4% for maintenance.
    e. Industry cooperation: 80% for work team, 10% for university, 8% for bonuses, and 2% for maintenance.
    f. Internet Center: 15% for university, 68% for bonuses, and 17% for maintenance.
    g. Student registration fees: 80% for bonuses and 20% for maintenance.
    h. Exams results objections fees: 80% for bonuses and 20% for maintenance.
    i. Self-funding study master and doctorate fees: 50% for students, 25% for lectures, and 25% for other stuff.
    j. Water desalination plant: 15% for university, 68% for bonuses, and 17% for maintenance.

Table 2.2 shows a sample of sources and their income.

Table2.2: Sources and Revenue Sample

Item	Revenue
laboratories Tests	739549000
Shop Rents	6850000
Continuous Learning Courses	11125000
Special Courses	9448000
Industry Cooperation	42693000
Internet Center	4625000
desalination Plant	2275000
Total	**816565000**

Questions and Answers:

1. How is the administrative-work organized in the department?

- The chairman of the department assigns the duties and jobs of every member in the department:

- If the member is a faculty, then s/he will be fully responsible of her/his assigned curriculum, laboratories, involved committee(s), and the community services.
- If the member is an administrative staff, s/he does what her/his work needs and gets back to the chairman with any questions and consultation.

- Any crucial decisions at the department must be made by the "department board" that includes all of the faculty members.
- Students' daily issues are the responsibility of the chairman assistant who communicates their issues to the chairman.

2. What are the means of interaction/contacting in the department? What are the evidences? Can these means be improved?

There are two ways to contact the department: either via coming personally to the department or via using the mail. This can be improved if the department puts a website with official emails for its employees rather than their personal ones.

3. Are the roles of all of the department's staff and their main jobs understood clearly?

Yes, there is a description of each job made by the ministry; the chairman, his assistant, secretaries, faculty, committees, and board all know exactly what to do.

4. How do workloads in the college compare with those say, in other countries e.g. UK, Europe, USA?

In the US and European academic engineering departments, a more authority is given to the chairman of the department such that s/he can proceed in a more active smooth way.

5. Could the organization of the department be improved? Are synergies realized?

Yes, it can by dividing the job of the chairman's assistant into two new jobs: one for administrating the students affairs and the other for administrating the faculty affairs.

Criterion 3: Staff and Facilities

3.1 Authority and Responsibility of Faculty

Faculty members are the back bone of the department and their role in the running of the department is very crucial. It is the department senate or faculty council that makes decisions, recommendations, proposals and policy changes within the department. The approval of the majority of the council is essential prior to passing to the chairman for further action. In effect, the department's council role is not limited only to academic matters but goes beyond that to include all aspects of governing the department. Though the responsibilities could vary among individuals in the department, all members participate in the following activities:

1. **Teaching:** proposing new curriculum courses, modifying and updating existing courses; course evaluation through conducting exams, quizzes, assignments, projects, etc. In order to provide consistency in the department, faculty members in the electrical engineering Department are recommended to:
   - Keeping up to date with relevant changes in their related fields and carefully preparing lectures and course materials.
   - Being accessible to students for academic consultation during scheduled or prearranged office hours.
   - Informing students regarding course formats, assignments, and methods of evaluation.
   - Maintaining teaching schedules in all but exceptional circumstances.
   - Informing students of any necessary cancellation and rescheduling of instruction.
   - Adhering to the schedules for submission of grades and evaluations by the department.

The faculty-members keep updated modern new ideas in the field of education and teaching methods technology depending on the individual motive. Each faculty member follow her/his own way in developing her/his ideas and techniques. There is also a workshop at the university called "teaching methods" which is one of the needed requirements for promoting any faculty member in her/his academic title.

Currently, there are no training activities in the college of engineering for the new faculty members.

2. **Research:** devote a good portion of their time to carry out research or creative work, within the constraints of the relatively heavy teaching loads. All full time faculty members are encouraged to make the results of such activities available, to other researchers and academicians, through publications, lectures, and other appropriate means.
3. **Service to the university:** some faculty members in the department are assigned different tasks at the university level. This is realized, among other duties, through; reviewing of academic publications, editorial board members, organizing International conferences, and other academic associations and consultancy assignments.

3.2 Faculty

The electrical engineering department has 44 full and part time faculty members, including the chairman of department. In terms of rank distribution, they are broken down as follows:

- 1 Full-Professors
- 4 Assistant Professors
- 14 Lecturers
- 25 Assistant lecturer

Also, our faculty are distributed on Electrical Engineering fields as follows:-

- 9 in electrical power specialty
- 7 in power electronics specialty
- 4 in electrical machines specialty
- 8 in communication specialty
- 10 in control and systems specialty
- 2 in computer science
- 2 in optical electronics specialty
- 1 in microelectronics specialty
- 1 in optical communication specialty

Among our faculty, the number of years of teaching experience ranges from 2 to 33 years.
In Table 3.1, we list the faculty names and their ranks and specialties.

Table 3.1 Faculty names with their ranks and specialty.

No.	Name	Rank	Specialty
1	Dr. Rabee Hashim Thijel. (deen)	Prof	Power Electronics & Machine
2	Dr. Ali Fadil Marhoon	Prof.	Comp. & Cont.
3	Dr. Ramzy Salim Ali (head)	Asist. Prof.	Control & Systems
4	Dr. Abdulkareem S. Abdullah	Prof.	Communication
5	Dr. Abbas Hafis	Asist. Prof.	Power
6	Dr. Jawad Radi Mahmood	Asist. Prof.	Power Electronics
7	Dr. Haider Mohmed Al sabag	Asist. Prof.	Communication
8	Dr. Fadil Rahma Tahir	Asist. Prof.	Control & Systems

9	Dr. Basil Hani Jasim	Asist. Prof.	Comp. & Cont.
10	Dr. khairia Abdoaljaleel	Asist. Prof.	Power
11	Dr.Mofeed Turki Rasheed	Asist. Prof.	Comp. & Cont.
12	Dr.Amar Abdoashaheed	Asist. Prof.	Comp. & Cont.
13	Dr.Abdoalmotalib Turki Rasheed	Asist. Prof.	Comp. & Cont.
14	Dr. Abduljabar Hadi Hamadi	lecturer	Power
15	Dr. Hamed wassfi	lecturer	Power & Machine
16	Dr. Basim Talib Kadim	lecturer	Power
17	Dr. Gaidaa Jawad kadim	lecturer	Comp. & Cont.
18	Dr. Khalid mahdi Abdoalhassan	Lecturer	Power elect.
19	Dr. Falih Mahdi Musa	lecturer	Communication
20	Dr. Ali Kadim	Lecturer	Power & Machine
21	Dr. Habeeb Jaber Nakad	Lecturer	Power elect.
22	Dr. Ali Ameen Abduljabar	Lecturer	Communication
23	Dr. Hosham Lateef Saoady	Lecturer	Communication
24	Khlood Musa	Lecturer	Communication
25	Osama Yaseen	Asis. Lecturer	Power
26	Ydae Basher	Asis. Lecturer	Power elect.
27	Ayad Shaker Mahmood	Asis. Lecturer	Comp. & Cont.
28	Hanan Majeed Hameed	Asis. Lecturer	Communication

29	Samya Dawood Shaker	Asis. Lecturer	Comp. & Cont.
30	Basema Abraheem	Asis. Lecturer	Power elect.
31	Ali Mohamed	Asis. Lecturer	Communication
32	Aeada Kadum Albedri	Asis. Lecturer	computer
33	Nabeel Kadim	Asis. Lecturer	Communication
34	Raonig Ali habeeb	Asis. Lecturer	Power elect.
35	Maha Kadim Gontab	Asis. Lecturer	Power & Machine
36	Aylaf Jaleel Majeed	Asis. Lecturer	Power elect.
37	Ali Abdallah	Asis. Lecturer	Comp. & Cont.
38	Ali Abdoalhady	Asis. Lecturer	Communication
39	Anwer Musa	Asis. Lecturer	Comp. & Cont.
40	Saomar Sahib Hardan	Asis. Lecturer	Power & Machine
41	Majed abdalbagi	Asis. Lecturer	Comp. & Cont.
42	Abdalbast abdsamad	Asis. Lecturer	Power & Machine
43	Intsar Taess	Asis. Lecturer	Comp. & Cont.

3.3 Faculty Size

The total number of students in the department in last year (2011-2010) was 370 and the number of the Electrical Engineering faculty members is 44, among them 3 have leave permission for PhD study and 8 members are part time members because of the same reason.

Then, the number of faculty available in department was 41 among them 33 as full time members and 8 as part time members. Thus, students to faculty ratio is 10:1.

The number of courses assigned to some faculty member is two courses, while it is three courses for others. The weekly hours for each course ranges from 2 to 4.

The Table below shows the weakly loads for faculty members.

Table 3.2 Faculty names with their weakly loads.

No.	Name	FT or PT	Load (hr/week)
1	Dr. Rabee Hashim Thijel. (deen)	FT	6
2	Dr. Ali Fadil Marhoon	FT	4
3	Dr. Ramzy Salim Ali (head)	FT	12
4	Dr. Abdulkareem S. Abdullah	FT	17
5	Dr. Abbas Hafis	FT	4
6	Dr. Jawad Radi Mahmood	FT	16
7	Dr. Haider Mohmed Al sabag	FT	14
8	Dr. Fadil Rohma Tahir	FT	12
9	Dr. Basil Hani Jasim	FT	29
10	Dr. khairia Abdoaljaleel	FT	18
11	Dr.Mofeed Turki Rasheed	FT	20
12	Dr.Amar Abdoashaheed	FT	29
13	Dr. Abdoaljabar Hadi Homadi	FT	21
14	Dr. Hamed wassfi	FT	19
15	Dr. Basim Talib Kadim	FT	11
16	Dr. Gaidaa Jawad kadim	FT	20
17	Dr.Abdoalmotalib Turki Rasheed	FT	30
18	Dr.Khalid mahdi Abdoalhassan	FT	21
19	Dr.Falih Mahdi Musa	FT	24

20	Dr.Ali Kadim	FT	29
21	Dr.Habeeb Jaber Nakad	FT	29
22	Dr. Ali Ameen Abdoaljabar	FT	24
23	Dr. Hosham Lateef Saoady	FT	28
24	Khlood Musa	FT	16
25	Osama Yaseen		
26	Ydae Basher		
27	Ayad Shaker Mahmood		
28	Hanan Majeed Hameed	FT	18
29	Samya Dawood Shaker		
30	Basema Abraheem	FT	18
31	Ali Mohamed		
32	Aeada Kadum Albedri	FT	20
33	Nabeel Kadim		
34	Raonig Ali habeeb	FT	14
35	Maha Kadim Gontab	FT	19
36	Aylaf Jaleel Majeed	FT	14
37	Ali Abdallah	FT	22
38	Ali Abdoalhady	FT	
39	Anwer Musa	FT	22

40	Saomar Sahib Hardan	FT	28
41	Majed abdalbagi	FT	26
42	Abdalbast abdsamad	FT	30
43	Intsar Taess		

3.4 Space

The Electrical Engineering Department is part of the campus of the college of engineering in Qarmat Ali district, north of Basra, Basra, Iraq. The department is a two story building that incorporates, in it, offices for the faculty members and the supporting staff together with classrooms and laboratories offices.

For the undergraduate students, the department facilities are enough to support researches, learning, and teaching activities as well as doing their experiments at laboratories

3.4.1 Offices

1. Administrative office: the office of the chairman is located on the second floor of the electrical engineering department building with approximately 35 m^2, in area.
2. Administrative Supporting Staff; this consists of:
    a. One full time secretary whose job is to administratively assist the chairman; this office is 14 m^2, in area, and is directly connected to the chairman's office.
    b. One head's assistant, who is a full-time faculty member whose job is to administratively assist the chairman. This office is 14 m^2, in area.

These three offices, the chairman's and the secretary', combine to form the administrative office of the electrical engineering Department.

3. Faculty offices are allocated in three different levels of the Department's Building. There are 26 faculty offices in the department, each of which is about 16 m^2 in area, some faculty members is assigned a separate office, while the others is shared one office for each two members. Every faculty office is furnished and equipped with one PC and a link to Internet.
4. Meeting room**:** this room is about 35 m2, is mainly used for departmental related meetings at different levels. This room is properly furnished and is equipped with data show.
5. Examination Committee Room: it is located at the second floor near the administrative office with 35 m2, in area. Here is where students' records are held. It consists of one printing machine, one PC, and one photocopying/scanner machine.

3.4.2 Classrooms

The electrical engineering department contains 8 halls as classrooms numbered from 1 to 8. The classroom area is 52 m^2. The classrooms are air conditioned and equipped with blackboards and whiteboards for some of them.

3.4.3 Laboratories

The department of electrical engineering has seven undergraduate, fully equipped, laboratories, with a total area of 1200 m^2, all of which are located in the ground floor of building of the department. These labs are utilized to perform basic experiments needed to help the students understand the engineering concepts covered in the different courses. These Lab facilities could also be utilized for building the term projects and senior projects as well. The electrical Engineering Labs, however, were structured to be adaptable and upgradable to accommodate the inevitable changes in the electrical engineering curriculum. Enough efforts are exerted in order to make sure that lab equipments are kept in good operating conditions. A summary of the 7 departmental laboratories is given, below, in Table5.1. The table also shows the courses associated with each lab.

Table 3.3: Laboratories' Names, Space Areas, and Associated Courses

Lab. Name	Area ($m^{2)}$	Associated courses
Machine Lab.	185	EEE309
Power elec. Lab.	185	EEE408
Computer Lab.	178	EEE104, EEE203
Electronics cct. Lab.	110	EEE102
Electrical cct. Lab.	178	EEE109, EEE208
Communication Lab.	178	EEE305, EEE402
Computer & Cont. Lab	178	EEE406

3.5 Resources and support

3.5.1 Department Library

The department has its own library which occupies one of the halls of the second floor of a building. Currently, this library is limited to the most important textbooks and assistance books to the curriculum of the department. Usually, each student borrows the books related to his current year curriculums at the beginning of the year; bring these books back in the end of that year.

3.5.2 The store

The department has a store located at one of the halls of the ground floor and is run by two of the technician staff. This store contains the most important electrical and electronics elements which can be needed by students during their projects development. Each student has the right to borrow the elements he need.

3.5.3 Laboratories

As noted above, there are seven laboratories in the department of electrical engineering, which are fully utilized in electrical engineering courses, term projects and senior design projects as well. All these laboratories are well conditioned to be a comfortable place and to ensure an acceptable working temperature.
These labs are well maintained and properly run by a designated laboratories maintenance committee and the technical supporting team of technicians, which consists of 11 staff members.

Questions and Answers:

1. How do the faculty-members keep updated modern new ideas in the field of education and teaching methods technology? Does this depend on the individual motive or there is a used strategy at the department?
Depending on the individual motive, each faculty member follow her/his own way in developing her/his ideas and techniques. There is also a workshop at the university called "teaching methods" which is one of the needed requirements for promoting any faculty member in her/his academic title.

2. Does the department have training activities (induction) to the new faculty members?
There are no training activities for the new faculty members.

3. What are the offered training activities to develop the technicians and staff?

There is a periodic program at the college called continuous learning courses where the technicians and staff can attend to develop their own skills and further their experience.

4. Are the department facilities enough to support researches, learning, and teaching activities?

- For teaching activities, the facilities are enough in terms of classrooms and laboratories.
- For students' learning, the department has no library or internet link, but the college has a central library as well as an internet center where students from around the college can use to enhance their learning.
- For doing researches, there are some laboratories that can be used to accomplish the needed results of specific types of researches.

5. To what extent is teaching, learning and research constrained by the availability of resources and support provided at institutional level?

As for teaching, the minimum thing that must be available in order to practice is classrooms and boards. On the other hand, learning and researches are more constrained by the availability of good enough facilities. Students need these developed instruments and tools to conduct their experiments and work.

Criterion 4: Teaching, Learning, and Assessment

4.1 Teaching and Learning Sought Assessment Process

To measure the level of success in achieving the program teaching, learning, and research, the college of engineering has put six assessment methods. A program will be a success, if a program outcome meets the criteria in five assessment tools out of six assessment tools, and no correcting measure would be taken. Corrective measures will be taken if any of the outcomes failed to meet its metric goal in two or more assessment tools. **Table4.1** summarizes the used assessment tools.

Table4.1: Assessment Tools, Indexes, and Assessment Benchmark

Assessment Method	Indexes	Assessment Benchmark
Senior Exit Survey (POs)	Scale of 1 to 5	A score of 3.5
Faculty Assessment (POs)	Scale of 1 to 5	A score of 3.5
Alumni Survey (PEOs)	**Scale of 1 to 5**	**A score of 3.5**
Employer Survey (PEOs)	**Scale of 1 to 5**	**A score of 3.5**
Evaluation of Senior Project by faculty (POs)	Scale of 1 to 5	A score of 3.5
Evaluation of Senior project by Industry expert (POs)	Scale of 1 to 5	A score of 3.5
Evaluation of Students' Industrial Training by Industry Supervisor (POs)	Scale of 1 to 5	A score of 3.5

It is worth noting that the alumni and employer surveys are only used in improving the **P**rogram **E**ducation **O**bjectives while the other mentioned tools are used in the continuous improvement of the **P**rogram **O**utcomes. **Table4.2** shows the consistency between POs and assessment tools.

Tabe4.2: Mapping of POs to Assessment Tools

Program Outcomes	Assessment Tools					
	Direct Assessment by Faculty	Senior Exit Survey	Alumni Survey	Evaluation of Senior Project by Industry Expert	Faculty Assessment of Senior Project	Industrial Training Assessment
PO-a	√	√	√	√	√	
PO-b	√	√	√	√	√	
PO-c	√	√	√	√	√	
PO-d	√	√	√	√	√	
PO-e	√	√	√	√	√	√
PO-f	√	√	√	√	√	√
PO-g	√	√	√		√	√
PO-h	√	√	√			√
PO-i	√	√	√	√	√	√
PO-j	√	√	√	√	√	√
PO-k	√	√	√	√		√

Key constituencies are sought to participate in reviewing the program teaching and outcomes:

- Faculty.
- Alumni.
- Employers.
- Senior Exit Students.

The following steps summarize the input to be obtained from these key constituencies. The Accreditation and Quality Assurance office schedules the process as in **Table4.3**.

Table4.3: Assessment Process and Timeline

Constituency	Assessment Tools	Timeline
Faculty	Faculty Survey Class Evaluation	every year every semester
Alumni	Alumni Survey	every year
Employers	Employer Survey	every year
Students	Senior Exit Survey	every year

Faculty Survey

The survey form contains three parts covering different aspects that the College of Engineering consider important for faculty members to assess**:**

PART I It has four sections that seek the faculty members' evaluation of students regarding the Program Outcomes, Program Educational Objectives, their opinions about the three most important skills that need more emphasis, and finally an open ended question about what should be done to improve engineering education at Basrah University.

PART II Also, it has four parts; the first three sections assess the level of satisfaction and the quality of services, facilities, and work environment/benefits at the department, college, and university Levels. The fourth section assesses the time management of activities of the faculty members.

PART III It is about the assessment of overall institutional quality.

Class Evaluation Survey

All instructors at the college should carry out course assessment and submit a course assessment file to their departmental assessment coordinators at the end of the term.

Alumni Survey

Alumni are important constituent group and should be involved in the evaluation process. Survey of the graduates who are pursuing graduate study locally or abroad can be obtained by inviting them to an annual meeting at the college and/or e-mailing them the survey. Selected alumni from the industry could also be consulted.

Employers Survey

A survey form could be sent to selective employers for their comments. The results of the employer survey which is distributed every year will be used by including questions about the PEOs and POs for each engineering program at the college. Also, many of our capstone design courses involve student presentations before a panel of professionals who also represent employers. We can plan to survey these professionals when they visit the department.

Senior Exit Survey

They are our most important constituent group. The response from students will formally be discussed and addressed with the faculty during their evaluation process. In general, the students' input is considered during the annual departmental assessment meeting and at regular faculty meeting:

- Seminar will be offered on September to inform all students about ABET process and importance of the evaluation of PEOs.
- Survey of student forms consists of at least 6 junior and senior students, who maintained a reasonable GPA, selected by faculty advisors, student committee or other means. This could be an initiation of student council for each program.
- Survey of graduating students who are taking senior project course.

4.1.1 Evaluating Students' Performance

The students are informed about the exams requirements at the beginning of every new academic year.

The students of college of engineering are evaluated using the following means:

1. Daily, monthly, semester, and final exams.
2. Their laboratories reports.
3. Assignments.
4. Senior year project.
5. Summer industrial training reports.

4.1.2 Advising and Guidance

The mechanism of academic guidance and educational advising in the previous years was based on the allocation of one faculty member as a supervisor for each class. This mechanism proved to be ineffective because of the inability of one faculty member to follow the large number of students in his responsibility.

Starting from this year 2011-2012, the department and the college has the intention to apply a new scheme of advising with the following steps:

1. In each department, an advising and guidance committee is formed to be responsible of arranging the work of the advisors, delivering its reports to the chairman of the department, and its recommendations of solving any problems that may face both the advisors and the students.
2. The chairman of the department distributes the students on the selected faculty members (advisors) such as each advisor is assigned a number of advisees. Each month the advisor meets her/his assigned advisees according to a pre-scheduled appointments.
3. Each advisor delivers her/his monthly report to the advising and supervision committee which in turn sends it to the chairman.
4. These appointments can be classified as:

a. Evaluation meeting: assess the student's readiness and abilities and accordingly determine the best advising approach to follow.
b. Diagnostic meeting: usually is used to make tests and answering questions to reach an accurate diagnosis in order to lay out the work plan of advising.

Guidance/treatment meeting: where the treatment is applied according to the plan set in the previous meeting. This treatment depends a lot on the skills and abilities of the advisor

4.2 Admission Process and Enrollment

Students are admissible to the college of engineering according to a central admission process called (grades comparison) managed by the Iraqi Ministry of Higher Education and Scientific Research / Studies, Planning, and Prosecution Office / Central Admission Department. The accepted students are coming from:

1. High school graduates (scientific disciplines only).
2. Institutions graduates (only who are in top 25% rank).
3. Industrial technical secondary schools (only who are in top 5% rank).
4. Distinguished employees in governmental offices who are originally institutions graduates.

After the names of the accepted students are announced, the registration committee which contains at least ten members including the dean's assistant has only ten days to meet the accepted students and to register them at the college. They are distributed again according to their high school grades on the eight departments in the college (petroleum engineering, architecture engineering, computer engineering, civil engineering, electrical engineering, chemical engineering, mechanical engineering, and materials engineering).
Table 4.4 shows the enrolled students in the department for the last five years.

Table 4.4 Records of Admissions Standards applied over the past 5 years

Academic Year	Percentile Rank in Secondary School	Number of New Students Enrolled
	% MIN	
2016-2017	92	100
2015-2016	91	100
2014-2015	90	89
2013-2014	90	100
2012-2013	89.5	100

4.3 Transfer Students

Each year, the Iraqi Ministry of Higher Education and Scientific Research issues the regulations of transferring succeeded students from/to all colleges and universities in Iraq. It also issues the nomination's modifications for the deferred and failed students. The college of engineering carries out the ministry instructions using a form given by the ministry plus other needed documents. The Students Affairs Department at the University of Basra keeps following the transferring process that happens during summer holidays, i.e., July – August.

Each transferred student undergoes what is called the scientific reprise executed by the department if the curriculum and credit hours of the two colleges are similar in more than 80%. Table4.5 shows the numbers of the transferred students from the department over the past five years.

Table 4.5 The number of students transferred during the last five years

Academic Year	Number of Transfer Students Enrolled
2016-2017	15
2015-2016	26
2014-2015	35
2013-2014	21
2012-2013	11

4.4 Enrolment and Graduation

Table4.6 shows the records, over the past five academic years, of the total number of full time students enrolled in the program and the corresponding number of graduates each year.

Table 4.6 Total Enrolled and Graduates trends for past five academic years

	Year 2012-2013	Year 2013-2014	Year 2014-2015	Year 2015-2016	Year 2016-2017
Enrolled students	137	141	115	104	104
Graduates	57	46	50	93	82

Fig.4.1 is a chart representation of the data tabulated in Table1.3 also it includes the number of the new students accepted in the department in each year.

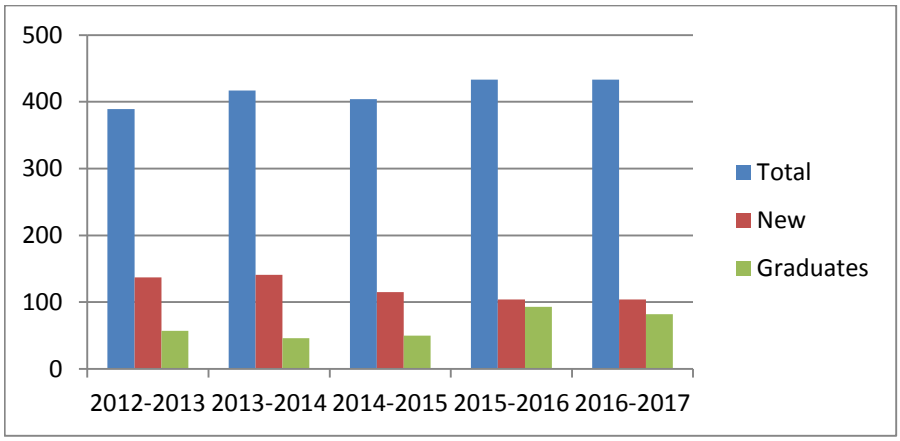

Fig.4.1: Number of: students, new students and graduates

Questions and Answers:

1. How could the department be sure that the used teaching methods reinforce the students' learning? What are your evidences?

Currently, the department has no tools to check the used teaching methods.

2. What is the proof that the teaching process in the department is of a high quality? Does the department follow a mechanism in getting feedback from students about the teaching process? If yes, then what is the used mechanism? How does the department benefit from the gotten students' responses?

We have no proof that the teaching process in the department is of a high quality, but last year, there was a survey distributed to students asking them about their opinion of each teacher and her/his teaching method.

3. What do the used surveys, assessment criteria, and the students' gotten exams' results offer to the department?

When they would be used, they would offer a good feedback that helps in the process of updating the curricula and developing the laboratories.

4. Do the examination process's assessment criteria fulfill the wanted teaching results? What are your evidences?

Currently, there is no clear strategy to check that.

5. Do the students be informed about the exams requirements at the beginning of every new academic year?

Yes, they are informed at the beginning of each academic year about.

6. Is there an academic support or any other type of help for students to overcome their problems?

According to the previous used advising method, there was not much understanding of the students' problems. With the new used advising scheme, students' academic problems as well as social ones are manageable.

7. What are the used procedures in case of emergencies?

There are not such procedures.

8. What are the good practices at the department and how to support/encourage them? Give your evidences. Are there proofs that the program is enhanced via the exchanging of these good practices?

Offering scientific visits for students to factories, companies, and other specialized agencies is a good practice at the department and it certainly enhances the program

Criterion 5: Curriculum Development and Review

5.1 Strategic Objectives of the College

The Strategic Objectives of the Engineering College in university of Basra are given by the following five points:-

Table5.1: College Educational Objectives

CEO1	Prepare globally competent and socially responsible graduates who are specialists in engineering sciences and their applications by providing quality education.
CEO2	Encourage and support the higher degree graduate studies (master and doctorate) in all college departments.
CEO3	Foster research and scholarly endeavors that advance knowledge and help in solving the industrial and social problems.
CEO4	Contribute to the welfare of the country by establishing effective partnerships that can add value and contribute to college programs.
CEO5	Create an enriching supportive working environment for the college community to ensure the achievements of the college objectives.

5.2 Strategic Objectives of the Department

The Program Educational Objectives (**PEOs**) clearly reflect the professional expectations from the graduates of the electrical engineering department and prepare them to meet that challenge. Table5.2 shows the objectives of the electrical engineering department.

Table5.2: Program Education Objectives

PEO1	**To provide students with understanding of the fundamental knowledge and skills to be able to design, run and test the electrical systems and solve the problem encountered in their fields.**
PEO2	**To provide students with the ability to work in different work environment through communication skills as members or leaders in multi-disciplinary teams.**
PEO3	**The student should be able to integrate academic knowledge with field practice for the development of the engineering profession in the context of social values and professional ethics.**
PEO4	**The student should be able to continue to develop his knowledge and skills for lifelong and take advantage of any new in the area of their fields.**
PEO5	**Refine the student's personality through extra-curricular activities and creating an environment conducive to creativity and innovation**

5.3 Consistency of the Program Educational Objectives with the Mission of the College

The electrical department seeks to harmonize the educational objectives with the strategic objectives of the engineering College.

The following table shows the Mapping between the objectives of the college and the department objectives.

Table 5.3: Mapping between the PEOs and the objectives of the College

	PEOs	PEO – 1	PEO – 2	PEO – 3	PEO – 4	PEO – 5
College objectives	P – 1	√	√	√	√	√
	P – 2	√	√	√		
	P – 3				√	√
	P – 4			√		√
	P – 5					√

5.4 Curricula

The curriculum in the Department of Electrical Engineering consists from Thirty-four courses distributed on an annual four years and forming a total of 158 units, as shown by the following tables:

First year

First Semester						*Second Semester*					
Code	*Subject*	*Units*	*Weekly hours*			*Code*	*Subject*	*Units*	*Weekly hours*		
			Th.	*Prac.*	*Tut.*				*Th.*	*Prac.*	*Tut.*
U102	*English Language*	*2*	*2*	*-*	*-*	*U102*	*Technical Writing*	*2*	*2*	*-*	*-*
E101	*Mathematics-I*	*3*	*3*	*-*	*1*	*E102*	*Mathematics-II*	*3*	*3*	*-*	*1*
EE101	*Basic of Electrical Engineering- I*	*3*	*3*	*-*	*1*	*EE102*	*Basic of Electrical Engineering-II*	*3*	*3*	*-*	*1*
EE103	*Mechanical Engineering (Static & Dynamics)**	*3*	*2*	*2*	*1*	*EE104*	*Digital Logic-I*	*3*	*3*	*-*	*-*
U101	*Basic Physics*	*3*	*3*	*-*	*-*	*U101*	*Basic Electronics*	*3*	*3*	*-*	*1*
EE106	*Computer Programming-I*	*2*	*2*	*-*	*-*	*EE107*	*Computer Programming-II*	*2*	*2*	*-*	*1*
E103	*Engineering Drawing I (Basic)*	*1*		*3*	*-*	*E104*	*Engineering Drawing-II (AutoCAD)*	*1*	*-*	*3*	*-*
EE108	*Laboratories-I [Basic of Electrical Engineering+ Computer Programming]*	*2*	*-*	*3+3*	*-*	*EE109*	*Laboratories-II [Basic of Electrical Engineering+ Computer Programming]*	*2*	*-*	*3+3*	*-*
Total		*19*	*15*	*11*	*3*	*Total*		*19*	*16*	*9*	*4*
			29						*29*		

Second year

Code	Subject	Hours/Week						Units
		First Term			Second Term			
		Th.	Prac.	Tut.	Th.	Prac.	Tut.	
EEE201	Fundamentals of Freedom	2	-	-	2	-	-	4
EEE202	Mathematics (II)	3	-	1	3	-	1	6
EEE203	Computer Programming	2	2	-	2	2	-	6
EEE204	Electronics (II)	2	-	1	2	-	1	4
EEE205	Electrical Circuits	2	-	1	2	-	1	4
EEE206	Electrical Machines (I)	2	-	1	2	-	1	4
EEE207	Electromagnetic Fields	2	-	1	2	-	1	4
EEE208	Laboratories	-	6	-	-	6	-	4
Total		**15**	**8**	**5**	**15**	**8**	**5**	**36**

Third year

Code	Subject	Hours/Week						Units
		First Term			Second Term			
		Th.	Prac.	Tut.	Th.	Prac.	Tut.	
EEE301	Eng. and Numerical Analysis	3	-	1	3	-	1	6
EEE302	Electrical Machines (II)	2	-	1	2	-	1	4
EEE303	Electrical Power	2	-	1	2	-	1	4
EEE304	Electronics (III)	2	-	1	2	-	1	4
EEE305	Communication (I)	3	-	1	3	-	1	6

EEE306	Microprocessor	2	-	-	2	-	-	4
EEE307	Control (I)	2	-	-	2	-	-	4
EEE308	Elective Subject	2	-	1	2	-	1	4
EEE309	Laboratories	-	6		-	6		4
Total		**18**	**6**	**6**	**18**	**6**	**6**	**40**

Fourth year

Code	Subject	Hours/Week						Units
		First Term			Second Term			
		Th.	Prac.	Tut.	Th.	Prac.	Tut.	
EEE401	Engineering Project	1	3	-	1	3	-	4
EEE402	Communication (II)	3	-	1	3	-	1	6
EEE403	Power Electronics & Applications	3	-	-	3	-	-	6
EEE404	Electronics	3	-	-	3	-	-	6
EEE405	Power System Analysis	3	-	1	3	-	1	6
EEE406	Control (II)	3	-	1	3	-	1	6

EEE407	Elective Subject	2	-	-	2	-	-	4
EEE408	Laboratories	-	6	-	-	6	-	4
Total		**18**	**9**	**3**	**18**	**9**	**3**	**42**

These courses cover the three requirements, university requirements, college requirements and the requirements of the department and by: -
1 - Three courses forming 14 units and represents % 8.8 of the total units as university requirements.
2 - Four courses forming 20 units, representing 12.6% of the total units as College requirements.
3 - Twenty-seven articles forming 124 units and represents 78.5% of the total units as Department requirements.
The following tables show this distribution

1. University Requirements: 9 Units

Subject Code	*Subject*	*Units*	*Weekly hours*		
			Th.	*Prac.*	*Tut.*
U101	*Basic Physics*	*3*	*3*	*-*	*-*
U102	*English Language*	*2*	*2*	*-*	*-*
U103	*Technical Writing*	*2*	*2*	*-*	*-*
U201	*Human Rights & Democracy*	*2*	*2*	*-*	*-*
Total		*9*	*9*		

2. College Requirements: 20 Units

No.	*Subject Code*	*Subject*	*Units*	*Weekly hours*		
				Th.	*Prac.*	*Tut.*
1	*E101*	*Mathematics I*	*3*	*3*	*-*	*1*
2	*E102*	*Mathematics II*	*3*	*3*	*-*	*1*
3	*E103*	*Engineering Drawing I*	*1*	*-*	*3*	*-*
4	*E104*	*Engineering Drawing II*	*1*	*-*	*3*	*-*
		Total for 1st Year	*8*	*6*	*6*	*2*

College Requirements								
Code	Subject	Hours/Week						credit hours
		First Term			Second Term			
		Th.	Prac.	Tut.	Th.	Prac.	Tut.	
EEE202	Mathematics (II)	3	-	1	3	-	1	6
EEE301	Eng. and Numerical Analysis	3	-	1	3	-	1	6
Total		**9**	**3**	**3**	**9**	**3**	**3**	**20**

3. Department Requirements: 111 Units

Subject Code	*Subject Title*	*Units*	*Weekly hours*		
			Th.	*Prac.*	*Tut.*
EE101	***Basic of Electrical Engineering I***	***3***	***3***	***-***	***1***
EE102	***Basic of Electrical Engineering II***	***3***	***3***	***-***	***1***
EE103	***Mechanical Engineering (Statics & Dynamics)***	***3***	***2***	***2***	***1***
EE104	***Digital Logic-I***	***3***	***3***	***-***	***-***
EE105	***Basic Electronics***	***3***	***3***	***-***	***1***
EE106	***Computer Programming I***	***2***	***2***	***-***	***-***
EE107	***Computer Programming II***	***2***	***2***	***-***	***1***
EE108	***Laboratories 1***	***2***	***-***	***6***	***-***
EE109	***Laboratories 2***	***2***	***-***	***6***	***-***
	Total for 1st Year	***23***	***18***	***14***	***5***

Department Requirements

Code	Subject	Hours/Week						credit hours
		First Term			Second Term			
		Th.	Prac.	Tut.	Th.	Prac.	Tut.	
EEE204	Electronics (II)	2	-	1	2	-	1	4
EEE205	Electrical Circuits	2	-	1	2	-	1	4
EEE206	Electrical Machines (I)	2	-	1	2	-	1	4
EEE207	Electromagnetic Fields	2	-	1	2	-	1	4
EEE208	Laboratories	-	6	-	-	6	-	4
EEE302	Electrical Machines (II)	2	-	1	2	-	1	4
EEE303	Electrical Power	2	-	1	2	-	1	4
EEE304	Electronics (III)	2	-	1	2	-	1	4
EEE305	Communication (I)	3	-	1	3	-	1	6
EEE306	Microprocessor	2	-	-	2	-	-	4
EEE307	Control (I)	2	-	-	2	-	-	4
EEE308	Elective Subject	2	-	1	2	-	1	4
EEE309	Laboratories	-	6		-	6		4
EEE401	Engineering Project	1	3	-	1	3	-	4
EEE402	Communication (II)	3	-	1	3	-	1	6
EEE403	Power Electronics & Applications	3	-	-	3	-	-	6
EEE404	Electronics	3	-	-	3	-	-	6

EEE405	Power System Analysis	3	-	1	3	-	1	6
EEE406	Control (II)	3	-	1	3	-	1	6
EEE407	Elective Subject	2	-	-	2	-	-	4
Total		**54**	**22**	**15**	**54**	**22**	**14**	**124**

These courses can be classified into eight groups of disciplines, as follows: -
1 - Mathematics and numerical analysis, which represent a total of 18 units.
2 - Courses that represent the foundations of electrical engineering and electronics, occupies a total of 49 units.
3 - Courses in communications majoring, occupies a total of 12 units.
4 - Courses in power engineering majoring, occupies a total of 29 units.
5 - Courses in majoring of systems and control engineering, represents a total of 10 units.
6 - Courses in majoring of computer sciences, represent a total of 24 units.
7 - Courses in majoring of humanity, represent a total of 8 units.
8 - Optional courses, represent a total of 8 units.

5.5 Program Outcomes

For the purpose of achieving its objectives, the electrical engineering department has developed eleven Program Outcomes (POs) as an initial set of POs. These outcomes are, in effect, what the students expected to know and achieve post graduation. Table5.4 shows these program outcomes.

Table5.4: Electrical Engineering Program Outcomes

Outcomes	Code
PO1 : an ability to apply knowledge of mathematics, science, and engineering fundamentals.	**a**
PO2 : an ability to outline and conduct experiments as well as analyze and interpret data.	**b**
PO3 : an ability to design an integrated system and its various components and processes, within realistic economic, environment, social, political, ethical, health and safety, manufacturability, and sustainability constraints.	**c**
PO4 : an ability to function on multi-disciplinary teams to analyze and solve problems.	**d**

PO5 : an ability to identify, evaluate and solve engineering problems.	**e**
PO6 : an understanding of the responsibility of engineers to practice in professional and ethical manner at all times.	**f**
PO7 : an ability to communicate effectively using oral, written, and graphic forms.	**g**
PO8 : the broad education necessary to understand the potential impact of engineering solutions on society and the environment.	**h**
PO9 : an understanding of the need for up-to-date engineering tools and other knowledge acquired through life-long learning.	**i**
PO10 : knowledge of contemporary issues related to engineering.	**j**
PO11 : an ability to use modern engineering tools, skills and design techniques necessary for the practice of engineering.	

5.6 Relationship of Program Outcomes to Program Educational Objectives

As it is needless to say, the Outcomes of the program should be fully achieved its objectives. The following table illustrates the ability of the Outcomes to achieve the objectives of the department:

Table 5.5 Mapping of Program Outcomes to Program Educational Objectives

POs	PEOs				
	PEO – 1	PEO – 2	PEO – 3	PEO – 4	PEO – 5
PO – a	√				
PO – b	√				
PO – c	√				
PO – d		√			√
PO – e	√				
PO – f			√		√
PO – g		√			√

PO – h			√		√
PO – i				√	
PO – j				√	
PO – k				√	

5.7 Mapping of Course Outcomes to Program Outcomes

To achieve its objectives, the department has developed curricula capable of achieving all of the eleven outcomes, which in turn ensure achievement of these objectives.
The following table shows the relationship between the curriculum of the department and the outcomes, this table identifies the ability of these curricula to achieve those outcomes.

Table 5.6: Mapping of Electrical Engineering Courses to the Program Outcomes

Course No.	Course title	Program outcomes										
		a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**
First year												
EEE101	Fundamentals of Democracy						√		√			
EEE102	Digital Techniques	√	√	√		√						
EEE103	Engineering Drawing	√				√					√	√
EEE104	Computer Science	√				√				√		√
EEE105	Principle of Mechanical Eng.	√		√		√						
EEE106	Mathematics (I)	√				√						
EEE107	Electronics (I)	√		√		√						
EEE108	Basics of Electrical Eng.	√		√		√						
EEE109	Laboratories		√	√	√	√	√	√	√			√
Second year												
EEE201	Fundamentals of Freedom						√		√			

EEE202	Mathematics (II)	√				√						
EEE203	Computer Programming	√				√				√		√
EEE204	Electronics (II)	√		√		√						
EEE205	Electrical Circuits	√		√		√						
EEE206	Electrical Machines (I)	√		√		√						
EEE207	Electromagnetic Fields	√		√		√						
EEE208	Laboratories		√	√	√	√	√	√	√			√
Third year												
EEE301	Eng. and Numerical Analysis	√				√						
EEE302	Electrical Machines (II)	√		√		√						
EEE303	Electrical Power	√		√		√						
EEE304	Electronics (III)	√		√		√						
EEE305	Communication (I)	√		√		√						
EEE306	Microprocessor	√		√		√						
EEE307	Control (I)	√		√		√						
EEE308	Elective Subject											
EEE309	Laboratories		√	√	√	√	√	√	√			√
Fourth year												
EEE401	Engineering Project	√	√	√	√	√	√	√	√	√	√	√
EEE402	Communication (II)	√		√		√						
EEE403	Power Electronics & Applications	√		√		√						
EEE404	Electronics	√		√		√						

EEE405	Power System Analysis	√		√		√						
EEE406	Control (II)	√		√		√						
EEE407	Elective Subject											
EEE408	Laboratories		√	√	√	√	√	√	√			√

Questions and Answers:

1. Why have the used curriculum been put in this way? Do they enhance the development and progress of students? Do they facilitate the intended program outcomes?

The curricula in all of the electrical engineering departments in Iraq have been put by the ministry itself. That's why, there is a 70% to 80% match between these curricula around Iraq. They definitely help in developing students since they are much similar to the most highly prestigious used international curricula.

2. Has the department mapped together the curriculum, learning outcomes, and assessments? Are there any gaps or significant overlaps? If so, what changes are planned and when?

This is the first time the department uses learning outcomes and assessments. Starting from the next academic year, the department would be able to consider changes and modifications based on what it has realized this year.

3. What evidence does the department have that standards of the program are appropriate? There is no evidence.

4. Has the department put the curriculum, learning outcomes, and assessment schemes? Are their any pitfalls, breaches, or interferences in them? If so, what are the intended changes and when will they be applied?

Starting from this year, the department has put the learning outcomes, assessment schemes. Therefore, before seeing the results of the newly used schemes, we'd not be able to decide the breaches in them.

5. Does the department have an official scheme to evaluate, revise, and improve its curriculum?

Yes, there is a "curricula development" committee in the department that is responsible of updating and refining the curricula.

Criterion 6: Management of Quality and Enhancement

6.1 Enhancement

For the main three activities at the department: teaching, learning, and research; there are no available followed mechanism of improvement, rather, the department tries to enhance the three activities whenever it is possible, for example:

Teaching enhancement:

- Based on the personal motive, each faculty member uses new updated material within the context of the department curriculum.
- Based on the gotten students' exam results, each faculty member tries to improve their own curriculum.

Learning and Research enhancement:

- Each year, the department buys new stuff and laboratory instruments that help in boosting the students' learning.

6.2 Monitoring

The only thing that the department does to monitor the teaching and learning processes is that the department chair semesterly follows up each curriculum progressive, i.e., what is the percentage of completion for the assigned curriculum? What is the percentage of students who has successfully passed their exams? The above-mentioned points can be enhanced further if there are quality-training workshops where the department selects some of its faculty and staff to participate in these training programs. By the experience they might get, when they come back, they would be beneficial for the department and help it to build more robust quality-reviewing and monitoring mechanism.

Questions and Answers

1. How are the various quality processes (e.g. reports, course evaluation, staff/student consultative committees, etc) integrated to enhance provision?

The students' examination results (percentage of those who passed exams) are used to focus on the related curriculum. Hence, the department tries to enhance that curriculum progress.

2. Discuss how good practice is identified and disseminated within the department and identify any particular elements of good practice in teaching and learning within the department?

When something good is realized, the department council is held and the matter is discussed to see its positive and negative aspects and how it can be adapted to be used in other curricula. For example, a curriculum has the highest percentage of success.

Chapter 7: Support Services

7.1 Sources of Financial Support

The financial matters of the department follow the financial arrangements of the Engineering College. These arrangements are illustrated through the subsequent paragraphs in this Criterion.

7.2 College Budget Allocation Process

The Iraqi Ministry of Finance allocates the annual budget of all Iraqi ministries including the Ministry of higher Education and Scientific Research. The Ministry of Finance exerts all efforts possible in framing and application of the righteous financial policies to improve and develop the available resources for all ministries.

The Ministry of Higher Education and Scientific Research, in turn, allocates the planned annual budget to the University of Basra which gives the college of engineering its share of the budget. Then, each department gets its own financial part from the college and uses it in fulfilling:

7. Employees' expenditures: employees' salaries, lectures wages, retired faculty salaries, specific expenses, university expenses, risk expenses, affiliation rewards, and other expenses.
8. Services requirements: deputations, ceremonial activities, students' expenses, researches reinforcement, building cleaning expenses, athletic activities, conferences, and banking services.
9. Commodities requirements: all equipments (laboratorial, medical, schooling, agricultural, publications, books, fuels, and others).
10. Equipment maintenance: all maintenances (watery, electrical, buildings, furniture, books, gardens, records, work, and appliances).
11. Funding costs: furniture (wood and metallic), appliances, personal computers, telephones, copiers, printers, books and magazines, calculators, and machines.
12. Other expenses: students and unofficially employed staff.

Table 6.1 and Fig.7.1 summarizes all previous points.

Table 7.1: College of Engineering Budget Allocated by the University of Basrah over the Five Past Years

Allocations (ID)	Academic Year				
	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
Employees' Expenditures	2377500000	3254470000	3203500000	3210250000	3220050000
Services Requirements	56450000	26800000	177900000	46124380	45124480
Commodities Requirements	204009750	1394000000	343600000	183487850	203488850
Equipments' Maintenance	104000000	71500000	215400400	70284200	71384200
Funding Costs	256000000	254750000	1023000000	509848500	519848500
Other Expenses	273750000	164750000	126000000	125288250	225288250
Total	**3271709750**	**5166270000**	**5089400400**	**4145283180**	**4145283180**

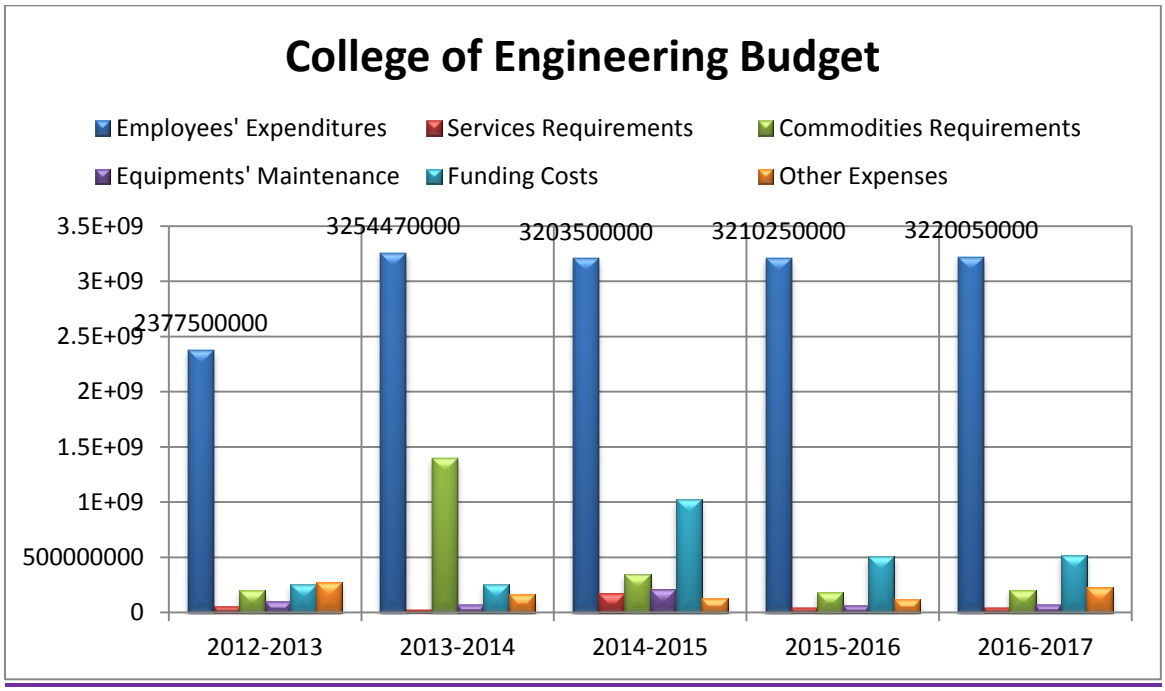

Fig. (7.1) College of Engineering Budget

7.3 Sources of Financial Support

The college of engineering is a governmental institution that funds its activities from:

3. General governmental funds which represents the greatest portion of the budget.
4. Higher education fund which includes:
    a. Laboratorial tests: 65% of funds for test team, 15% for university, 16% for bonuses, and 4% for maintenance.
    b. Shops rent: 15% for university, 68% for bonuses, and 17% for maintenance.
    c. Continuous learning courses: 65% for course trainers, 15% for university, 16% for bonuses, and 4% for maintenance.
    d. Special courses: 65% for course trainers, 15% for university, 16% for bonuses, and 4% for maintenance.
    e. Industry cooperation: 80% for work team, 10% for university, 8% for bonuses, and 2% for maintenance.
    f. Internet Center: 15% for university, 68% for bonuses, and 17% for maintenance.
    g. Student registration fees: 80% for bonuses and 20% for maintenance.
    h. Exams results objections fees: 80% for bonuses and 20% for maintenance.
    i. Self-funding study master and doctorate fees: 50% for students, 25% for lectures, and 25% for other stuff.

j. Water desalination plant: 15% for university, 68% for bonuses, and 17% for maintenance.

Table 7.2 shows a sample of sources and their income.

Table7.2: Sources and Revenue Sample

Item	Revenue
laboratories Tests	739549000
Shop Rents	6850000
Continuous Learning Courses	11125000
Special Courses	9448000
Industry Cooperation	42693000
Internet Center	4625000
desalination Plant	2275000
Total	**816565000**

7.4 Resources and support

7.4.1 Department Library

The department has its own library which occupies one of the halls of the second floor of a building. Currently, this library is limited to the most important textbooks and assistance books to the curriculum of the department. Usually, each student borrows the books related to his current year curriculums at the beginning of the year; bring these books back in the end of that year.

7.4.2 The store

The department has a store located at one of the halls of the ground floor and is run by two of the technician staff. This store contains the most important electrical and electronics elements which can be needed by students during their projects development. Each student has the right to borrow the elements he need.

7.4.3 Laboratories

As noted above, there are seven laboratories in the department of electrical engineering, which are fully utilized in electrical engineering courses, term projects and senior design projects as well. All these laboratories are well conditioned to be a comfortable place and to ensure an acceptable working temperature.

These labs are well maintained and properly run by a designated laboratories maintenance committee and the technical supporting team of technicians, which consists of 11 staff members.

Questions and Answers:

1. Are program resources poor, enough, or more than good? How does the department secure their availability? Can they be enriched?

The used department resources are enough; they are annually assigned to the department from the budget of the college □□university □□ministry.

2. What is the acquisition and updating policy for texts and journals?

At the department, the gratis textbooks are not updated on regular basis. Instead, each faculty member is responsible for updating the references s/he uses to teach her/his assigned curriculum.

3. How does the department work with the Library/IT to match texts, periodicals and IT support to the needs of the curriculum and the overall teaching strategy?

There is no such cooperation between the department and the college library or the IT center.

4. Are the arrangements for the training and induction of students adequate? Is there scope for improvement?

No, they are not. The college can set arrangements to let students participate in academic visits to universities and workshops within the Basrah and/or inside Iraq. This will help in building their experience and give them new prospects.

5. How effective are the central support services in supporting the activities of the department? Are there any improvements that could be made?

When the department has an activity, the college supports it to some extent by facilitating any difficulties that may face the department.

Chapter 8: External Relations

8.1 Faculty Deputation Summary

The office of chancellor's assistant for scientific affairs, office of chancellor's assistant for management affairs, department of planning and continuation, and the cultural affairs office in the University of Basrah participate in developing the college of engineering by offering short and long term scholarships for its master and doctorate students. Also, it offers deputations for faculty members. For example, four members of the department faculty currently have a scholarship in worldwide universities for doctorate study; also it has another six scholarships for the next year.

Questions and Answers:

1. Are there satisfactory arrangements for participation by staff and students in external training and visit programs with international universities?

No, there are not such arrangements.

2. Are there satisfactory arrangements for monitoring placements?

Placements at the department are not done by the department itself, rather they are done by the college.

3. If appropriate, do international advisors have an input to curriculum development?

No, they do not have.

Criterion 9: SWOT Analysis Summary & Recommendations for Improvement

9.1 Strengths

- The admission laws used by the ministry of higher education scientific research allow the department to get students of good quality.

- Variety of means are used to evaluate the students of department.

- The strategic objectives of the department are consistent with those of college.
- The POs of the department are fully accomplishing its PEOs.

- The courses outcomes are fully covering the POs of the department.

- The number of credit hours (158) is satisfactory and is greater than the number of credit hours determined by abet.

- The student to faculty ratio is good and it is not exceed 10:1.

- The number of classrooms, laboratories and halls in the department building are adequate.

- Due to the process of assigning budgets to universities and colleges, the department receives a guaranteed annual budget.

9.2 Weaknesses

- The capacity of department is less than the number of student.
- There is no feedback system from employers of the graduates to get indication about their quality.

- The current adopted system to measure the achievement of the POs is not satisfactory and need to be enhanced.

- The mechanisms used to measure the output of courses are not active.

- There are only two elective courses, which are in fact not elective since the students have no choice in studying them.

- 56% of the faculty members hold academic title of assistant lecturer.

- The department is more tilted towards teaching rather than research and other scholarly activities.
- The area of the classrooms is not adequate for some courses.
- Classrooms have no sound and data show systems.
- Some laboratories have devices and tools which can be classified as very old instruments.
- The department has no external financial resources - a drawback which needs to be solved. Sometimes, when the assigned annual budget is not enough, the chairman has to cut from the expenditures.

-

9.3 Opportunities

- The adopted advising and guidance system will help the department in diagnosing the students' performance.
- 8 of the faculty members currently are completing their PhD studies.
- The new adopted advising scheme will definitely improve the interaction between students and faculty members.
- All of the faculty members, who have Ms.C degree, have the intention to pursue their PhD degree.
- Recently, the department has an opportunity to get modern laboratory devices and tools by a government support
- In this year, the department gets seven scholarships at worldwide universities for PhD studies.

9.4 Threats

- There are no real jobs environments for the graduates which help in refining their knowledge and personality.
- Not precise measurements of POs lead to wrong decisions concerning the educational process in department.
- Each faculty member can only change 20% of the curriculum content.
- The inability to include new curriculum since the ministry rules doesn't allow such change.
- The inability to employ new faculty members because of the laws and rules of the ministry.
- No developing workshops or programs are offered to faculty members.