



# Self-Study Report

for the Degree of B.Sc. in Electrical Engineering at the University of Anbar | Ramadi, Iraq



May 2021

#### CONFIDENTIAL

The information supplied in this Self-Study Report is for the confidential use of ABET and its authorized agents, and will not be disclosed without authorization of the institution concerned, except for summary data not identifiable to a specific institution.

# 1 Program Self-Study Report for Evaluation of ABET Accreditation

# 1.1 Background Information

#### 1.1.1 Contact Information

Dr. Ahmed A. Abbas
Chair, Department of Electrical Engineering
University of Anbar
Anbar - Ramadi
P.O. Box 27272 Anbar, Iraq
E-mail: ahmed.abbas@uoanbar.edu.iq

#### Dr. Mohammed A. AlMahamdy

Faculty and Chair of the ABET Accreditation Committee in the Department of Electrical Engineering

University of Anbar

Anbar - Ramadi

P.O. Box 27272 Anbar, Iraq

E-mail: mohammed.almahamdy@uoanbar.edu.iq

# 1.1.2 Program History

The University of Anbar (UoA) was established in 1987. It is located at Ramadi City, the capital of the Governorate of Al-Anbar.

The Department of Electrical Engineering was established in 2004. The period of study is four years to obtain a Bachelor's degree in Electrical engineering. The first class graduated in 2007-2008. The motivation of establishing the department as a scientific starting point and renaissance was based on transforming knowledge and science developments into qualified human resources for the localization, innovation and creativity of technology. The department has provided the local, and international communities with hundreds of graduates.

The members of the faculty of the department of electrical engineering have made efforts to improve the level of students in order to serve the scientific process and keep abreast of the continuous developments through updating the curricula, developing laboratories and carrying out scientific research and publishing them in local and international magazines. The department has demonstrated its scientific progress on its leadership and its ability to respond to the country's development needs, the needs of the advanced field of work, and the provision of qualified graduates who can be proud of their active contribution in supporting the engineering sector.

# 1.1.3 Options

The department of electrical engineering offers one undergraduate Electrical engineering program, which leads to a degree titled: Bachelor of Science in Electrical Engineering (B.Sc. EE).

The B.Sc. EE Program provides students the opportunity to emphasize their studies in the various fields of Electrical engineering through the choice of final year technical electives and the topic of

# 2 Accreditation Criteria

## 2.1 Criterion 1: Students

#### 2.1.1 Student Admissions

Procedures for student admission and registration in the college:

First: The admission of the student to the college and specifying the scientific department are to be centralized by the Ministry of Higher Education and Scientific Research - Directorate of Studies, Planning and Follow-up - Central Admission. this is for all admission channels (central - 10% first over Iraqi institutes - 5% first on technical education - holders of an equivalent degrees) and according to what qualifies, the attained average and the student's desire to choose the college and department mentioned in the application form through the electronic portal of the Directorate of Studies, Planning and Follow-up based on the admission plan sent by the college, specifies the number of students who can be accepted in each scientific department.

**Second:** Accepted student in the college must register electronically using a prepared registration form of new students by the presidency of the university - Department of Registration and Student Affairs in order to, record his personal information in the 'My University system' to obtain university identification number of all students admitted to University of Anbar and then create an electronic account for each student, the student also will be provided with a password to enter the university electronic systems.

Third: The student must come to the new student reception committee formed in the college within a two-week period from the date of announcing the results of the central admission in Iraqi universities for the purpose of completing the personal file for admission to the college, handing over the required certificates and personal documents, medical examination, registration fees, and also conducting a personal interview to verify the student's physical and health qualifications according to the university valid instructions, completing the form for obtaining university identity and submission of a written commitment to preserve the college's property and to apply all instructions and laws that must be followed during the study period.

**Fourth:** The college issues administrative orders for enrolled students in the college and informs the scientific departments therein, the student must start attendance within a period of two weeks from the date of issuance of the administrative order, otherwise considered failed due to absence for the current academic year, according to item-9 of the examination instructions, 134 of the year 2000 issued by the Ministry of Higher Education and Scientific Research.

# 2.1.2 Conditions for student admission to the college

- 1- Must be Iraqi nationality.
- 2- Must hold the Iraqi secondary study certificate for one of the two branches (biological or applied) or a certificate equivalent to it, supported by the approval of the General Directorate of Education in the province.
- Must be successful in the medical examination, according to the applicable health-fitness regulations based on the valid Health Fitness Regulation No. 5 of 1992.
- 4- Full-time study, it is not permissible to combine study and job.
- 5- Must be graduated of the current or previous academic year who did not have central admission or any other admission.
  - The age of the applicant to study at the college must not be more than (24) years old.

6- Faculty members' sons/daughters are entitled to transfer to universities in the governorate of their residence in the academic year in which they are admitted, provided that the difference in their pass rate does not exceed the minimum for admission to the college by only (5) five degrees.

#### Second: Scientific Set-Off

A scientific set-off/clearing is intended to make a comparison between the academic courses that the student studied in the original college and in the college to be transferred to. It is the specialty of the scientific committee formed in the department exclusively according to the following:

- 1- Admission of the student to the same academic stage. If the academic courses are identical between the two colleges (transferred to and from) or differ in one or two courses with the fact that the academic system is identical.
- 2- If the difference in academic courses between the two colleges is more than two methodological courses, then the student has the choice between getting back him/her to a lower stage of study or cancelling his/his transfer to the college, in the event that he/she chooses to transfer to a lower stage of study, the academic year is not counted within the total time limit allowed for the student.
- 3- The subjects (human rights, democracy, computer, Arabic language, English language) are not included in the scientific clearing account and the student will be demanded to them during his/her study years.
- 2.1.5 Instructions and regulations that the student must adhere to during the study **First:** Examination Instructions 134 for the year 2000 and their amendments, the most important of which are:
  - 1- clause (6): The minimum passing score that the student must obtain in order to succeed in any academic subject is (50%) fifty percent.
  - 2- Clause (9): A student is considered to have failed in any academic course if his/her absence exceeds 10% of the hours prescribed for that course without a legitimate excuse and 15% with a legitimate excuse approved by the College Council.
  - 3- Clause (12): A student has no right to postpone the second attempt of final exams in any way.
  - 4- Clause (19): A student's relationship with the college ends in one of the following two cases:
    - a. If he/she fails two consecutive years in his/her class.
    - b. If the student exceeds the total period prescribed for study in his/her major and half of this period (i.e., six years) and the years of postponement and non-failure are not counted as part of that.
  - clause (20): If it is proven that the student cheated or attempted to cheat in any of the daily, weekly, monthly, quarterly or final exams, he/she shall be considered as failing in all courses for that year, and if this is repeated, he/she shall be dismissed from the faculty and permanently closing his/her records.

# 2.2 Criterion 2: Program Educational Objectives

#### 2.2.1 Vision

- To be one of leading Electrical Engineering Departments in Iraq and the Arab world.
- To combine science, electrical engineering principles, and moral conduct to produce world class graduates.

#### 2.2.2 Mission

The mission of the Department of Electrical Engineering is to provide comprehensive quality education to the students in electrical engineering, and to adequately prepare them to meet the existing challenges in their profession and be capable of handling them in the future. Upon graduation, students will have acquired sufficient skills in critical thinking, problem solving and communication to achieve a successful career. Their background will provide them the opportunity to pursue graduate programs with ease, enabling them to take up a future role in teaching and research if they so choose. During their study, they will develop the spirit of team work and understand the desirability of following professional ethics to effectively serve the community.

## 2.2.3 Program Educational Objectives (PEOs)

#### 2.2.3.1 PEO-1: Professional Presence

As a result, within a few years, the graduate has established an Internet presence, either through professional organizations, social networking and/or other activities which demonstrate an appreciation and use of modern technological capabilities.

2.2.3.2 PEO-2: Workforce Skilled in Integrating Engineering, Design, and modern Technology As a result, graduates will identify opportunities to contribute to develop society life from a variety of positions, ranging from design and produce modern devices, conducting the awareness program in minimizing the solid waste, in the safety aspects of our mundane activities, introducing the cost effective products, using the present technology in an environmental friendly way/approach and engage professionally in private and governmental sectors such as consulting firms, contracting companies, marketing and real- estate investments. The graduate may also pursue further education in the form of graduate and professional degrees.

#### 2.2.3.3 PEO-3: Leadership in Research, Innovation and Design

As a result, within a few years of graduation, the graduate will have made significant or meaningful contributions in his or her chosen field, either thorough research publications and/or presentations, the development of a new design or conducting processes, obtaining patents, or other evidence of contributing to the advancement of knowledge, particularly in the fields of product design, fabrication/manufacture, energy and power.

#### 2.2.3.4 PEO-4: Ethical Reasoning, Behavior and Professionalism

As a result, within a few years of graduation, the graduate will demonstrate adherence to the professional codes of conduct appropriate to his or her field of study and/or practice, as well as exhibit behavior consistent with accepted standards of fiduciary responsibility, risk/benefit analysis and professional accountability.

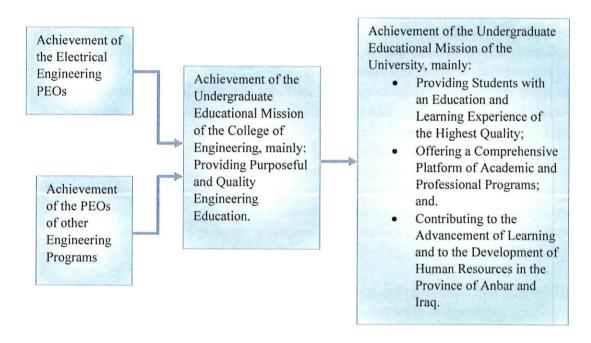


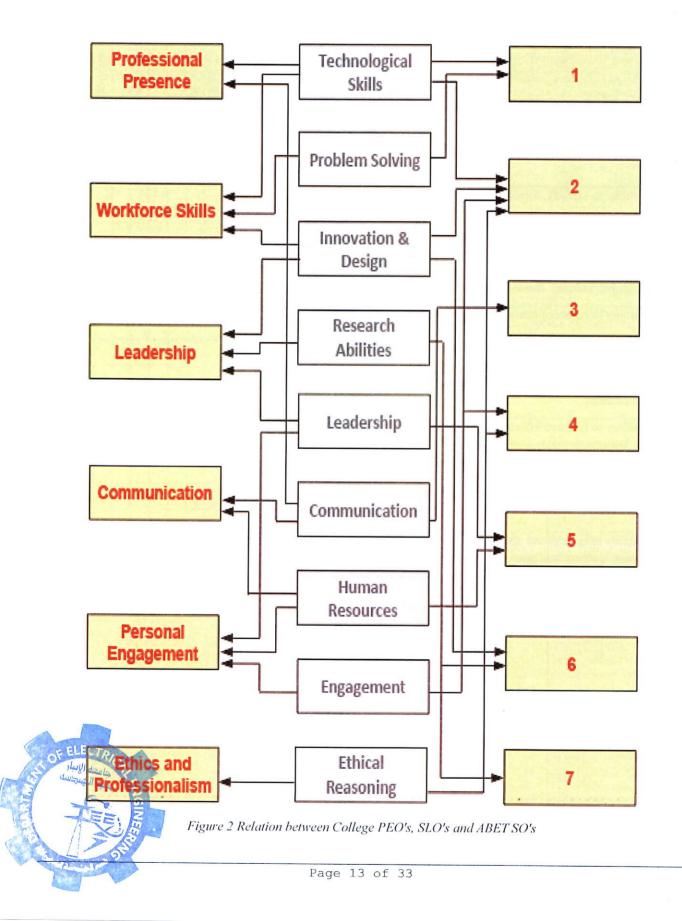
Figure 1 Linkage between the B.Sc. EE Program Educational Objectives and the College and University Undergraduate Educational Missions

Table 1 B.Sc. EE Program's PEOs Level of Achievement

PEOs	Alumni Survey %	Senior exit student survey %	Employer/IAB survey %	Faculty survey %
SLO-1: Professional Presence	71	70	60	81
SLO-2: Problem Solving Abilities	66	68	67	82
SLO-3: Innovation and Design	56	63	57	68
SLO-4: Research Abilities	59	64	60	67
SLO-5: Leadership	66	75	59	67
SLO-6: Communication	71	77	79	67
SLO-7: Human Resources and Interactions	58	65	70	66
SLO-8: Engagement	65	80	75	82
SLO-9: Ethical Reasoning, Behavior and Professionalism	69	85	83	88



2.3.2 Relationship of Student Outcomes to Program Educational Objectives
Figure 2 shows the Relation between College PEO's, SLO's and ABET SO's and Table 2 shows the
alignment of program educational objectives with student's outcomes.



# 2.4 Criterion 4: Continuous Improvement

#### 2.4.1 Student Outcomes

The Bachelor of Science in Electrical Engineering (B.Sc. EE) Program employs a number of tools to assess the achievement of the Student Outcomes (SOs). The system used to assess the achievement of the student outcomes relies on obtaining feedback from the program constituents using a variety of tools. This system consists of two assessment levels:

- 1. Course-level assessment
- 2. Program-level assessment

The elements of the course and program assessment are summarized in Table 3 and Table 4, respectively.

Direct Course Level	Assessment
Objectives	Assess the achievement of the course learning outcomes (CLOs)
Person in Charge	Course Instructor and Course Coordinator
Coordination	Faculty Members
Assessment tools/indicators	Level of achievement of course learning outcomes from instructor point of view.  Level of achievement of course learning outcomes from students' point of view.  Degree of coverage of course contents from instructor point of view.  Relation of individual assessment questions/items to course learning outcomes.  Achievement of course learning outcomes based on students' grades on assessment items.  Identification of issues of requiring improvement. Proposals for improvements based on assessment results. Students' evaluation of courses and instructors.
Frequency	Every time the course is taught.
Outcome	Course Learning Outcomes Assessment Report.

Table 3 Elements of the Course Level Assessment

Table 4 Elements of the Program Level Assessment

Program Level Assessment						
Objectives	Assess the achievement of the student outcomes (SOs).					
Person in Charge	Assessment Coordinator in Department/Accreditation Committee/Department Chairman					
Coordination	Assessment Coordinator in Department Chairman/Accreditation Committee/Department Council of Faculty members					
Assessment tools/indicators	Coverage of program learning outcomes based on course learning outcomes.  Achievement of program learning outcomes based on course learning outcomes assessment results.  Alumni survey.  Employers' survey.  Exit survey of graduating students.  Feedback from visiting/invited experts, including reports of visiting accreditation teams.					
OF ELECTRICA	Feedback from department advisory board. Students' internship/training survey by employers.					
Frequency	Varies from every semester (i.e., Exit Surveys) to every few years (i.e., Employer Survey).					
Outcome	Assessment Reports as Appropriate.					

The proposed plan to compute the 7 ABET outcomes: each one is computed as average from two different classes.

Table 5 Assessment plan

SOs (ABET) / NGOs (INAC)

Level	Semester	Class Number	Class Name	1/i	2/ii	3/iv	4/v	5/vii	6/iii	7/vi
1	2	EE1102	English Language I	_	-	Х	-	-	-	-
1	2	EE1302	Fundamentals of Electrical Engineering II	Х	С	-	С	1	C	-
2	1	EE2310	Electric Circuits I	С	С	-	С	1	Х	-
2	2	EE2314	DC machines II	С	С	-	(=)	X	С	С
2	2	EE2305	Digital Techniques II	С	С	:=	С	-	Х	-
2	2	EE2309	Fundamentals of Electronics II	С	С	-	-	Х	С	-
3	1	EE3328	Analog Communications and Noise	С	С	S=	Х	-	С	-
3	1	EE3317	Electric power I	С	С	-	С	С	С	Х
3	2	EE3323	Computer Networks	С	С	0 <b>=</b>	С	-	-	Х
3	2	EE3327	Electronics II	С	С	-	Х	-	С	-
4	1	EE4108	English Language IV	-		X	-		-	-
4	1	EE4334	Information Theory	С	Х	-	С	-	С	-
4	2	EE4333	Control Theory II	С	Х	-	С	-	С	
4	2	EE4337	Power Electronics	Х	С	-	С	-	С	С

Outcomes used for the assessment: X
Student Outcome is covered but not assessed: c

The degrees of achievement of the SOs based on these indicators are presented in Figure 3 and Figure 4. These indicators provide direct and indirect measures of the achievement of the CLOs based on the various assessment items in the course. The results of the other indicators showed a much higher level of achievement of the SOs.

ABET Outcomes	1	2	3	4	5	6	7
First Year	48.94	53.95	60.6	61.8	45.9	36.96	45.4
Second Year	64.41	57.33	87.45	53.2	48.55	58.68	60.967
Third Year	47.7	44.84	42.1	46.8	41.1	49.33	40.17
Fourth Year	52.625	45.09	65.3	53.63	62.5	43.4	45.96
Total	53.4	50.3	63.9	53.9	49.5	47.1	48.1

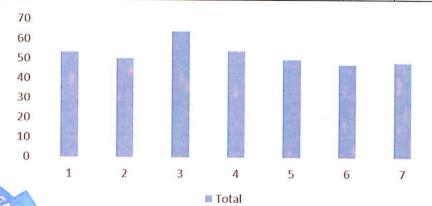


Figure 3 Student Outcomes: Direct Assessment First Course- 2018/2019

Table 7 Curriculum Name of Program Level 2

Semester	Required	Class Name : Class Code	(R)equired	Subject	Area (Credit H	Last Two	Maximum	
/Year	by		(E)lective	Math & Basic	Engineering Topics	Other	Terms the Course was	Enrollment for the Last
				Sciences			Offered:	Two Terms
							Year and	the Course
	College	Calculus III : EE2208	R	3			F18, F19	42;34
	Department	Electro-Magnetics I : EE2315	R		2		F18, F19	42;36
	Department	Fundamentals of Electronics I : EE2308	R		2		F18, F19	41;33
1st Sem.	Department	DC Machines I : EE2313	R		2		F18, F19	44;58
2nd Year	Department	EE Lab I : EE2306	R		2		F18, F19	41;33
	Department	Electric Circuits I : EE2310	R		3		F18, F19	42;33
	Department	Digital Techniques I : EE2304	R		2		F18, F19	42;29
	University	English II: EE2103	R			2	F18, F19	38;42
	College	Calculus IV : EE2209	R	3	22 (CO A CO TO	VI. 100 100 100 100 100 100 100 100 100 10	S18, S19	44;50
	Department	Electro-Magnetics II : EE2316	R		2		S18, S19	42;49
	Department	Fundamentals of Electronics II : EE2309	R		2		S18, S19	42;40
2nd Sem.	Department	DC Machines II : EE2314	R		2		S18, S19	42;49
2nd Year	Department	EE Lab II : EE2307	R		2		S18, S19	42;34
	Department	Electric Circuits II : EE2311	R		3		S18, S19	42;37
	Department	Digital Techniques II : EE2305	R		3	***************************************	S18, S19	43;31
	Department	Computer Programming : EE2312	R	2	7.		S18, S19	42;37

Table 8 Curriculum Name of Program Level 3

Semester	Required	Class Name : Class Code	(R)equired	Subject	Area (Credit H	Last Two	Maximum	
/Year	by		(E)lective	Math & Basic	Engineering Topics	Other	Terms the Course was	Enrollment for the Last
				Sciences			Offered:	Two Terms
						3	Year and	the Course
	Department	Analog Communications and Noise : EE3328	R		2		F18, F19	40;50
	Department	Electronics I: EE3326	R		3		F18, F19	39;50
	Department	EE Lab III : EE3321	R		2		F18, F19	37;49
1st Sem.	Department	Signals and Systems I : EE3319	R		2		F18, F19	40;53
3rd Year	Department	Electric Power I : EE3317	R		2		F18, F19	41;48
olu i cai	Department	AC-Machines I : EE3324	R		2		F18, F19	40;54
	College	Engineering Statistics : EE3212	R	3			F18, F19	38;52
	Department	Computer Networks : EE3323	R		3		F18, F19	39;48
	University	English III: EE3107	R			2	F18, F19	37;52
	Department	Digital Communications : EE3329	R		2		S18, S19	39;49
	Department	Electronics II: EE3327	R		3		S18, S19	40;50
	Department	EE Lab IV : EE3322	R		2		S18, S19	38;48
2nd Sem.	Department	Signals and Systems II : EE3320	R		2		S18, S19	40;52
3rd Year	Department	Electric Power II : EE3318	R		2		S18, S19	38;55
	Department	AC-Machines II : EE3325	R		2		S18, S19	38;53
	College	Engineering Numerical Methods : EE3211	R	3			S18, S19	39;50
	College	Engineering Economy : EE3210	R			3	S18, S19	39;49



# 2.6 Criterion 6: Faculty

#### 2.6.1 Faculty Qualifications

Qualified and competent faculty members are key to the success of the Electrical Engineering Department. Detailed qualifications of the faculty members can be found in the following university of Anbar website: <a href="https://www.uoanbar.edu.iq/Staff">https://www.uoanbar.edu.iq/Staff</a> Form.php

The faculty members teach courses, conduct research in their specialty areas, and mentor and supervise students at both undergraduate and graduate levels of the offered programs. The faculty specialization and expertise cover the following Electrical Engineering disciplines:

- 1. Electronics;
- 2. Power:
- 3. Communications;
- 4. Control;

Table 12 Faculty Qualifications

#### Years of Experience

	rears of experience								
#	Faculty Member Name	Highest Degree Earned, Field and Year	Scientific Rank	Type of Academic Appointment	FT or PT	Govt./Ind. Practice	Teaching	This Institution	
1	Settar Subry Keream	Ph.D. Control, 2017	L	PS	FT	33	28	14	
2	Ahmed. A. Abbas	Ph.D. Communication, 2017	L	PS	FT	30	17	15	
3	Yousif Ismail Mohammed	Ph.D. Control Systems, 2010	ASP	PS	FT	30	16	16	
4	Adnan Salih Suhail	Ph.D. Computer Engineering, 2016	L	PS	FT	27	15	15	
5	Balasem Salem Sumait	Ph.D. Wireless Communication,	L	PS	FT	20	15	15	
6	Mohammed A. Almahamdy	Ph.D. Communications, 2017	L	PS	FT	14	14	14	
204	Arrak Mhsen Edan	M.Sc. Electronics, 1987	ASL	PS	FT	40	14	14	
8	Mohammed Shahooth Humadi	M.Sc. Electronics, 1988	ASL	PS	FT	38	14	14	
9	Muanna Waleed Naji	Ph.D. Islamic Law,	L	PS	FT	2	14	14	
10	Munther Naif Thiyab Ric	M.Sc. Electronic, 1987	L	PS	FT	37	14	14	
11		M.Sc. Power, 2005	ASL	PS	FT	31	13	13	

Faculty Member	PT	Classes Tought (Course No /Court)	Program	% of Time		
(name)	or FT1	Classes Taught (Course No./Credit Hrs.) Term and Year <sup>2</sup>	Teaching	Research or Scholarship	Other <sup>4</sup>	Devoted to the Program5
Omar Kamil Dahham Alazzawi	FT	AC Machines I, AC Machines II, Electric Power III, Power System Analysis	60%	30%	10%	100%
Mohammed A. Almahamdy	FT	Analog Communications and Noise, Engineering Statistics, Digital Communications, Engineering Numerical Methods	60%	30%	10%	100%
Ehsan Hamyan Sabbar	FT	Calculus I, Physics I, Calculus II, Engineering Mechanics - Statics	60%	30%	10%	100%
Adnan Salih Suhail	FT	Calculus III, Calculus IV, Signals and Systems I, Computer Networks	60%	30%	10%	100%
Maath Jasem Mahammad	FT	Computer Science, Computer Programming, Programmable Logic Controller (PLC)	60%	30%	10%	100%
Settar Subry Keream	FT	DC Machines I, DC Machines II	60%	30%	10%	100%
Zainab Najeeb Abdulhameed	FT	Digital Techniques I	60%	30%	10%	100%
Balasem Salem Sumait	FT	Digital Techniques II, Power Electronics	60%	30%	10%	100%
Mushtaq Najeeb	FT	Electric Circuits I, Electric Circuits II, Electric Power I, Electric Power II	60%	30%	10%	100%
Ahmed. A. Abbas	FT	Electromagnetics I, Electromagnetics II	20%	20%	60%	100%
Yasir Abdulhafedh Ahmed	FT	Engineering Drawing	60%	30%	10%	100%
Elaf Hamzah Yahia	FT	English I	60%	30%	10%	100%
Abdullah Khalid Ahmed	FT	English II, English III, English IV	60%	30%	10%	100%
Naser Farhan Abdullah	FT	Fundamentals of EE I, Fundamentals of EE II, Information Theory, Advanced Communications Systems	60%	30%	10%	100%
Munther Naif Thiyab	FT	Fundamentals of Electronics I, Fundamentals of Electronics II	60%	30%	10%	100%
Yousif Ismail Mohammed	FT	Signals and Systems II, Control Theory I, Control Theory II	60%	30%	10%	100%

- 1- FT = Full-Time Faculty or PT = Part-Time Faculty, at the institution
- 2- For the academic year for which the Self-Study Report is being prepared.
- 3- Program activity distribution should be in percent of effort in the program and should total 100%.
- 4-5 ELE Indicate sabbatical leave, etc., under "Other."
- 5- dut of the total time employed at the institution.

#### 2.6.4 Professional Development

Faculty members are actively involved in professional development activities. The department of electrical engineering supports and encourages faculty members to benefit from the various professional development activities offered by the university. The university provides the faculty members with opportunities and support to attend local and international conferences, seminars, forums, workshops, and training programs. Funds for these opportunities are allocated within the College budget. Additional faculty development opportunities are also provided by the College of Graduate Studies and Research in the form of research grants, establishment and support of interdisciplinary research groups, and research visits to reputable universities and research organizations to help faculty conduct part of their research and collaborate with other researchers. Applying for these opportunities starts with proposals submitted by the concerned faculty members, and then is reviewed and assessed as per the university procedures for potential award.

The university also organizes workshops and forums geared toward enhancing educational process (teaching and learning), training on the use of IT in education, and educational assessment and continuous improvement, where local, regional and international experts are invited to campus to share knowledge and experience with all faculties.

## 2.6.5 Authority and Responsibility of Faculty

The University of Anbar has a well-established decision-making process that outlines the responsibilities and authorities of the faculty as per the university bylaws. At the department level, the faculty is primarily responsible for all curricular and academic affairs related to the program. This includes deciding on which courses are required within the curricula and determining what new positions are needed, and in which areas. Important decisions related to the curriculum or hiring for vacant positions involve the formation of designated committees to analyze the requirements and to bring recommendations to the department council for deliberation and approval.

The development and implementation of the assessment, evaluation, and continuing improvement of the curricula and courses are primarily a faculty responsibility. Every course is assigned a coordinator (i.e., course coordinator) who is responsible for course updating, maintenance, and development. To improve or add new courses, faculty members and course coordinators follow a systematic procedure that is well-established. The process is discussed in details in Criterion 4: Continuous Improvement.

The electrical department has representatives on the college-level and university-level committees that coordinate academic and administrative activities across the electrical department, the college of engineering, and the university. This coordination includes identification of best practices, sharing of central data, and ensuring communication concerning basic logistics, procedures, and deadlines.

The university bylaws specify the duties and responsibilities of faculty members. The main duties are the following:

- 1. Teaching: Teaching and curricular development are the main duties of faculty members at the University of Anbar.
- 2. Research: Faculty members are expected to actively engage in and lead relevant research, publish their research findings in recognized specialized journals, and present their results at regional and international forums and conferences.
- 3. Academic Advising: Faculty members are assigned academic advising duties to guide students through completing their graduation requirements, assist students with relevant academic issues during their studies, and to help them graduate from the university.

following labs complement the respective classes to incorporate the practical understanding along with the theoretical class works.

- Fundamentals of Electrical Engineering
- Digital Techniques
- Fundamentals of Electronics
- Electronics
- DC Machines
- AC Machines
- Analog Communications
- Digital Communications
- Control Theory

In addition, the college of engineering in the university of Anbar provides three central labs to be used by the different departments. These labs are monitored and administrated by experts in the respected field. The labs are also accompanying theoretical classes provided and required by the department. These labs are:

- Computers and Programming (Matlab, Multisim, and Visual Basic)
- Physics
- Chemistry

#### 2.7.3 Guidance

The program of the electrical engineering gives the candidate a high level of experience in both theoretical and experimental study. To achieve this, different ways are used for example lectures prepared by teaching staff according to the universal level are available to students. To ensure the engaged of theoretical and experimental aspects, the supervisory team who is responsible about each laboratory prepares a guideline book for each lab. Besides, workshops and seminars can add another option to accomplish the criteria of electrical engineering requirements.

# 2.7.4 Maintenance and Upgrading of Facilities

The maintenance unit at engineering college is responsible about the minor maintenance workout at the electrical department. This unit is financially sponsored by the University of Anbar and the Ministry of Higher Education and Scientific Research.

# 2.7.5 Library Services

The college of engineering has an excellent library to provide students by text books, and students' theses.

## 2.7.6 Overall Comments on Facilities

Currently, all facilities are acceptable in terms of students and other staff can do their goals successfully. However, financial issue is the most challenge to maintain and upgrade the current facilities. Most laboratories in the department of electrical engineering need for new devices and allocated area for each lab should be extended.

of meetings of the Department Council and committees are recorded and approved by all members. The roles of the faculty, the department chair, the department council, the college dean, the college council, and other individuals and entities are well defined in the university bylaws. The department's organization chart is shown in Figure 5.

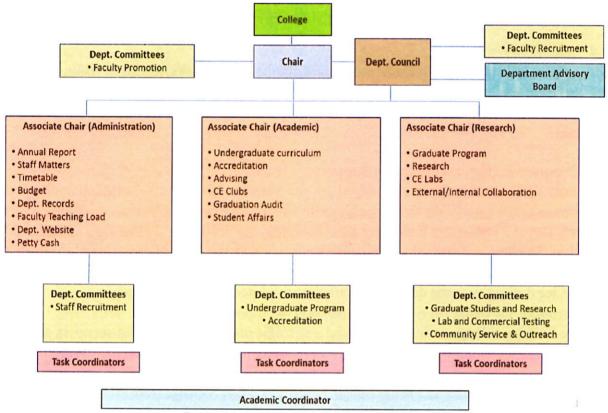


Figure 5 Department organizational chart

#### 2.8.2.2 Chairperson's Role

- 1. Preparation of department's needs after consultation with other faculty and staff members in the department so that it can be taken into consideration when the budget is prepared.
- 2. Maintaining records for the activities of the department, university documents relating to the department and supervision of their use in accordance with rules and practices followed in the university.
- 3. Supervising the selection of course textbooks and references.
- 4. Proposing the distribution of courses to be taught among staff members and submitting it to the departmental council.
- 5. Encouraging academic research and assisting faculty members in conducting research.
- 6. Distributing students amongst academic advisors and following up the progress of their study plans.

#### 2.8.2.3 Faculty Role

- 1. Teaching and conducting examinations.
- 2. Conducting original research.
- 3. Supervision of dissertations, student research and student academic and social activities.
- 4. Academic advising.
- 5. Participation in university committees and in councils and committees which the university approves or participates in.

# 3 Appendix A – Course Syllabi

Attached.



# **Attesting Signature**

By signing below, I attest to the following:

That <u>Bachelor of Science in Electrical Engineering (B.Sc. EE) program</u> has conducted an honest assessment of compliance and has provided a complete and accurate disclosure of timely information regarding compliance with the *National Criteria for Accrediting Engineering Programs* to include the General Criteria and any applicable Program Criteria, and the *National Council Accreditation Policies and Procedures*.

Dean's Signature:

Dean's Name: Dr. Ahmeel A. Abbas

Date: