

Self-Assessment Report

**Civil Engineering Department
College of Engineering,
University of Basrah,
Basrah, Iraq**

2016-2017



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Chapter 1: Introduction and Context

The civil engineering program at the College of Engineering at Basrah University is designed to give students a broad background in all areas of civil engineering, permitting specialization in the senior year. Practical applications are emphasized with sufficient theory so that the individual can grow with the future as new materials, methods, and designs develop.

Students must first complete basic courses in mathematics, physics, and chemistry, and must learn to communicate in written, oral, and graphic forms as well as through the use of computers. Courses in the Democracy and Human Rights add perspective; allowing students to recognize and understand some of the non-engineering systems and forces at work in the world.

1.1 What is Civil Engineering?

The planning, designing, and construction of facilities that serve people are what civil engineering is all about. These facilities include the highways that connect our nation's cities, airports that serve our travellers, bridges that span our rivers and harbours, dams that control floods and supply water for our cities, and sewage treatment plants that protect our environment. Working with architects and engineers from other disciplines, the civil engineer also participates in the design and construction of buildings.

The civil engineering process begins with the accumulation and analysis of basic data. These data may include the topography and geology for a highway route; the flood history of a river that must be bridged or dammed; general information on population growth or earthquake history; laboratory test of construction materials; or pollution surveys for air, land, and water. The collection and analysis of these kinds of data are absolutely essential for any type of planning, whether it is long-range (for future needs) or immediate (as required for a specific project). With these data, civil engineers can apply their knowledge of science and engineering design to meet a project's requirements, assuring its successful completion.

The Civil Engineering Departments constitutes of:

1. The **chairman** of the department who manages the department's academic and administrative affairs, the **chairman administrative support staff** (assistant, and secretary).
2. The **department panel** which includes all of the faculty members whose names are listed in **Table 1.1**.



Table 1.2: Administrators in Civil Engg. Department

Name	Position and Specialty
Hassan Mowafak Abdulghani	Administrator
Aqila Jameal	Administrator
Khaireaa Thejil	Administrator

4. The department also has engineers, technicians, and administrators employees whose names listed in **Table 1.3**.

Table 1.3: Engineers, Technicians, and administrators in Civil Eng. department

Name	Position and Specialty
Hassan Mowafak Abdulghani	Administrator
Najat Hantosh	Chief Engineer
Adwia Salim Kayon	Assist. Chief Engineer
Duha Kadhim Raheem	Engineer
Ali Abdulhassan Kalaf	Assist. Engineer
Sammar Abdulkareem	Assist. Engineer
Nidaa Tuma Kadhim	Administrator
Suaad Resan Abud	Assist. Engineer
Jaafar Abduljaleel Radhi	Technician
Hanadi Hameed Majeed	Assist. Engineer
Nidhal Nimaa Mohammad	Assist. Engineer
Batool Mohammad Salim	Assist. Engineer
Bihar Abdul Lateef	Assist. Engineer
Najlaa Ubeed Khudair	Assist. Engineer
Aqeela Jameel Abood	Administrator

5. The department also has several committees, see **Table 1.4**.

Table 1.4: Departmental Committees

Committee Name
Scientific and Graduate Affairs Committee
Examination Committee
Textbooks storage Committee
Summer Industrial Training Committee
Laboratories Maintenance Committee
Quality Assurance Committee



In this way, the overall department structure as shown in **Fig. 1.1**:

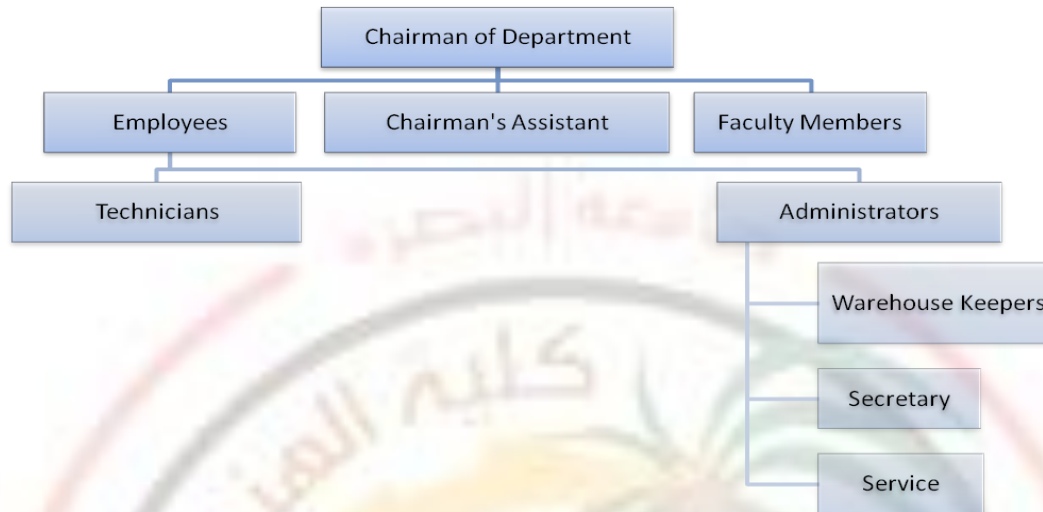


Fig. 1.1: Department Structure

1.2 Organization and Management:

The head of the Civil 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 managing 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 Civil Engineering Program, alteration, and improvement proposed by program constituencies.

7. 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.

8. Budgetary affairs: preparing annual departmental budget requests; administering budgetary allocations (preparing requisitions, authorizing expenditures, maintaining budget records).

1.3 Authority and Responsibility of Faculty

Faculty members are the backbone 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 pass 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 Civil 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.
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.



Chapter 2: Staff :

2.1 Introduction

Civil Engineering Department of College of Engineering of Basrah University represented by the Department Head and the lecturing staff aims to be the typical department by its student's abilities and the lecturing staff efficiency on both the local and regional levels. The capacity of this department has increased due to the increase in both the lecturing staff number and the accepted students according to the local and regional requirements.

The lecturing staff in this department is qualified and well prepared. They have experimental and academic experiences in all civil engineering fields including structural, highway, soil, environmental, water, construction materials and engineering projects management.

This department provides its students with all facilities and laboratories which are supplied with instruments and tools used to raise up the student abilities. There are eight laboratories in this department supplied with high efficient instruments and running by trained engineers of high efficiency. These laboratories are updated continuously to provide the required facilities used for students training and development.

2.2 Faculty

The civil engineering department has 79 full and part-time faculty members, including the chairman of the department. In terms of rank, the faculty are distributed as follows:

- 4 Full-Professors
- 14 Assistant Professors
- 35 Lecturers
- 26 Assistant Lecturers

Among our faculty, the number of years of teaching experience ranges from 2 to 44 years. The detailed information regarding the credentials, experience of the faculty member in the CiE department is included in **Tables 2.1**.



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Table 2.1: Faculty Workload Summary for the Academic Year 2015-2016

Faculty Member	Rank	Degree, Institution from which Degree Earned, Year	Prof. Society	Experience		
				Total Faculty	This Institution	Work & Other
Anis Abdulkudher Mohammad Ali	Professor	Ph.D. University of Edinburgh, UK 1983	Follow ASCE	34	34	7
Nabeel Abdulrazaq Jasim	Professor	Ph.D., University of Basrah, 1995		31	31	---
Salih Essa Khasaf	Professor	Ph.D., Technology University, 1999		27	27	
Mohamad Jawad kadhim	Professor	Ph.D., University of Arizona, USA, 2013		27	27	
Jamal Abdusamad Kdhir	Assist. Professor	Ph.D., University of Basrah, 2005		30	30	---
Haider Saad Yaseen	Assist. Professor	Ph.D., Iraq, 2002		25	10	---
Lamyaa Abduljalil Ahmad	Assist. Professor	Ph.D., University of Basrah, 2006		23	23	---
Kifah Muhammad Kudhier	Assist. Professor	Ph.D., University of Baghdad, 2000		30	30	---
David Abed Mohammad Jawad	Assist. Professor	Ph.D., University of Basrah, 2006		28	28	---
Samir Abdulbaqi Jabar	Lecturer	Ph.D., University of Basrah, 2000		13	13	---
Mahdi Ali Jawad	Lecturer	Ph.D., Politecnica Valencia University, 1989		17	14	---
Abdulamir AtaAllah Kariem	Lecturer	Ph.D., University of Basrah, 2008		19	19	---



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Table 2.1: continue

Faculty Member	Rank	Degree, Institution from which Degree Earned, Year	Prof. Society	Experience		
				Total Faculty	This Institution	Work & Other
Uday Adnan Abdulrazaq	Lecturer	Ph.D., University of Basrah, 2007		16	16	---
Alaa Chasib Kalib	Lecturer	Ph.D., University of Basrah, 2008		17	17	---
Abdulnasir Muhammad Abbas	Lecturer	Ph.D., University of Basrah, 2008		19	19	---
Wisam Sabeeh Neima	Assist. Professor	Ph.D., Chongqing University, 2008		20	20	---
Ahmad Sakban Sadoon	Lecturer	Ph.D., University of Basrah, 2011		14	14	---
Thaer Mohammed Saeed	Lecturer	Ph.D., University of Wollongong, 2011		14	14	---
Jaafar Ahmad Kadhim	Lecturer	Ph.D., University of Basrah, 2012		19	19	---
Ali Hassan Duhaim	Assist. Professor	Ph.D., University of Basrah, 2012		15	15	---
Abdulhussain Abdulkareem Abbas	Lecturer	Ph.D., Chongqing University, 2010		20	20	---
Ihab Sabri Salih	Lecturer	Ph.D., University of Basrah, 2010		13	13	---
Zuhal Abdulhadi Hamza	Lecturer	Ph.D., University of Basrah, 2013		32	32	---



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Table 2.1: continue

Faculty Member	Rank	Degree, Institution from which Degree Earned, Year	Prof. Society	Experience		
				Total Faculty	This Institution	Work & Other
Haleem Kadhim Hussain	Lecturer	Ph.D., University of China, 2013		15	15	---
Khalid Abduljalil Abdulrazaq	Lecturer	Ph.D., University of USA, 2016		25	25	
Ammar Salman Dawood	Assist. Professor	Ph.D., University of China, 2013		16	16	
Aseel Yassen Ahmad	Lecturer	M.Sc., University of Basrah, 1997		20	20	
Fatima Abdulemam Jiad	Assist. Lecturer	M.Sc., University of Basrah, 2006		25	25	---
Ahmad Nasih Ahmad	Assist. Professor	Ph.D., University of Basrah, 2013		18	14	2
Aqil Hatem Jkheor	Assist. Professor	Ph.D., University of Basrah, 2013		15	15	---
Fatima Kalie Ibrahim	Assist. Lecturer	M.Sc., University of Basrah, 2006		18	18	---
Zainab Abdulelah Abdullatif	Assist. Lecturer	M.Sc., University of Basrah, 2008		25	25	---



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Table 2.1: continue

Faculty Member	Rank	Degree, Institution from which Degree Earned, Year	Prof. Society	Experience		
				Total Faculty	This Institution	Work & Other
Hussain Ali Hussain	Assist. Lecturer	M.Sc., University of Basrah, 2003		15	15	---
Wesam Qasim Flaih	Assist. Lecturer	M.Sc., NIT Warangal, 2011		11	11	
Husham Taha Yasin	Lecturer	Ph.D., University of China,2014		16	16	---
Aiman Alak Hassan	Lecturer	Ph.D., University of Basrah,2015		15	15	---
Fareed Hamid Majied	Lecturer	Ph.D., University of Basrah,2015		12	12	---
Saad Aboalhail Arab	Lecturer	Ph.D., University of China,2013		15	15	---
Amar Ashor Akash	Lecturer	Ph.D., University of Basrah,2015		15	15	---
Majid Ashor Kalaf	Lecturer	Ph.D., University of Basrah,2015		14	14	---
Zahir Muhammad Naji	Lecturer	Ph.D., University of Basrah,2015		10	10	---
Jawad Abid Maatuk	Lecturer	M.Sc., University of Basrah, 2006		8	8	
Muhammad Hamid Sabhan	Assist. Lecturer	M.Sc., University of Basrah, 2006		10	10	---



Table 2.1: continue

Faculty Member	Rank	Degree, Institution from which Degree Earned, Year	Prof. Society	Experience		
				Total Faculty	This Institution	Work & Other
Ehsan Qasim Muhammad	Assist. Lecturer	M.Sc., University of Basrah, 2002		15	15	---
Kadhim Zuboon Nasir	Lecturer	M.Sc., University of Basrah, 2002		9	13	4
Samuaal Mahdi Salih	Lecturer	Ph.D., University of Basrah, 2015		15	15	---
Adel Ahmad AbdulZahra	Assist. Lecturer	M.Sc., University of Basrah, 2001		15	15	---
Abdullah Abdulameer Abdullah	Lecturer	Ph.D., University of Basrah, 2015		15	15	---
Ahad Zuhair Hamody	Lecturer	Ph.D., University of Basrah, 2015		15	15	---
Sarmad Abdullah Abbas	Lecturer	Ph.D., University of Basrah, 2015		15	15	---
Usama Sailm Abdulkariem	Assist. Lecturer	M.Sc., University of Basrah, 2001		10	10	---
Rana Uda Mutashar	Assist. Lecturer	M.Sc., University of Basrah, 2008		11	11	---



Table 2.1: continue

Faculty Member	Rank	Degree, Institution from which Degree Earned, Year	Prof. Society	Experience		
				Total Faculty	This Institution	Work & Other
Falah Majeed Hameed	Assist. Lecturer	M.Sc., University of Basrah, 2008		11	11	---
Ansam Zuhair Thamir	Lecturer	M.Sc., University of Basrah, 2009		11	11	---
Mazen Abdulemam Ahmad	Lecturer	Ph.D., University of Basrah, 2013		11	11	---
Khaldoon Shehab Ahmed	Lecturer	Ph.D., University of Salford, 2017		7	7	
Ammar Jasim Dakhil	Lecturer	Ph.D., University of Salford, 2017		8	8	
Mustafa Sharif	Assist. Lecturer	M.Sc., University of Basrah, 2009		6	6	
Dina Ali Yassin	Assist. Lecturer	M.Sc., University of Basrah, 2009		14	14	
Yosif Jabar	Lecturer	Ph.D., University of Basrah, 2015		6	16	10
Muthana Shakir	Assist. Lecturer	M.Sc., University of Basrah, 2011		12	12	
Haider Abdulredha	Assist. Lecturer	M.Sc., University of Basrah, 2011		12	12	
Ahamd Naiema	Assist. Lecturer	M.Sc., University of Basrah, 2011		11	11	



Table 2.1: continue

Faculty Member	Rank	Degree, Institution from which Degree Earned, Year	Prof. Society	Experience		
				Total Faculty	This Institution	Work & Other
Alyaa Shati Muhan	Assist. Lecturer	M.Sc. University of Basrah, 2010		7	7	---
Reem Abdulameer	Assist. Lecturer	M.Sc. University of Basrah, 2010		7	7	
Zaid F. Abdul Abbas	Lecturer	Ph.D., University of Basrah, 2015		7	7	
Mayada Yuhia Muhammad	Assist. Lecturer	M.Sc. University of Basrah, 2009		9	9	
Wisam Abid Ali	Assist. Lecturer	M.Sc. University of Basrah, 2003		7	7	
Muhammad Jabar Mawat	Assist. Lecturer	M.Sc. University of Basrah, 2008		7	7	
Mudhar Hassan Katea	Assist. Lecturer	M.Sc. University of Basrah, 2010		7	7	
Maha Ata Faraon	Assist. Lecturer	M.Sc. University of Basrah, 2012		6	6	
Mohammad Farhan	Assist. Lecturer	M.Sc. University of Basrah, 2012		6	6	



Zainab Mowafq	Assist. Lecturer	M.Sc. University of Basrah, 2012		6	6	
Ali Abdulhassan Kalaf	Assist. Lecturer	M.Sc. University of Basrah, 2012		6	6	
Zahraa Tareq	Assist. Lecturer	M.Sc. University of Basrah, 2012		6	6	
Yasameen Tahseen	Assist. Lecturer	M.Sc. University of Basrah, 2012		6	6	
Fadil Kamel Edan	Assist. Lecturer	M.Sc. University of Basrah, 2003		12	6	6

4.5 Faculty Size

The total number of students in the department is 440, and the number of the CiE faculty members is 79. This data clearly indicates that, in terms of numbers, there has been no serious problem in handling the teaching loads for current undergraduate students enrolled in the program. Thus, student to faculty ratio is 8.4.

4.6 Interaction with Students

Every faculty members in the department are requested to allocate a certain number of office hours, depending on their teaching load, per week. These office hours are mainly assigned to helping the students. They have the responsibility of making the students aware of the scheduling of these hours. This interaction is much more manifested in; student advising, supervising senior projects, attending senior project exhibitions, professional society advising, and coordinating industrial training. For this section, SWOT gives us:

Helpful
(to achieving the objective)

Harmful
(to achieving the objective)



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Internal origin (attributes of the department)	Strengths <ul style="list-style-type: none"> - The faculty members have teaching or working experience ranges from 2 to 44 years. 	Weaknesses <ul style="list-style-type: none"> - Many of the faculty members are teaching courses in fields other than their own area of interest.
	Opportunities <ul style="list-style-type: none"> - Different types of scholarships have been offered in which open opportunities in developing the academic staff. 	Threats <ul style="list-style-type: none"> - The retirement of staff members with high academic titles. - Most of the faculty members are involved in activities such as consultations and testing of construction materials that prevent them from assigning enough time for scientific research.





Chapter 3: Teaching, Learning and Assessment

3.1 Preface:

Civil Engineering Department of College of Engineering of Basrah University represented by the Department Head and the lecturing staff aims to be the typical department by its student's abilities and the lecturing staff efficiency on both the local and regional levels. The capacity of this department has increased due to the increase in both the lecturing staff number and the accepted students according to the local and regional requirements.

The lecturing staff in this department is qualified and well prepared. They have experimental and academic experiences in all civil engineering fields including structural, highway, soil, environmental, water, construction materials and engineering projects management.

This department provides its students with all facilities and laboratories which are supplied with instruments and tools used to rise up the student abilities. There are eight laboratories in this department supplied with high efficient instruments. These laboratories are updated continuously to provide the required facilities used in students teaching and development. These laboratories are run by trained engineers of high efficiency.

3.2 Admission Process and Enrollment

Civil Engineering Department in College of Engineering of Basrah University aims to put an integrated plan to accept students according to its available abilities and incomes, taking in consideration the actual need of this department graduates from both the field and academic sides. Therefore, it aims to graduate the sufficient number of graduates to fit the actual need of the local and regional market of the civil engineers in all specializations of civil engineering, that's from the field side, whilst from the academic side, it aims to treat the shortage in lecturing staff in all specializations related to civil engineering, in addition to raise up the skills of the existing staff and increase its scientific abilities in order to get the maximum benefit from the available abilities approaching the optimum acceptance capacity of this department according to a time schedule which puts in consideration the future need of this country due to the current and future revival.

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:

High school graduates (scientific disciplines only with average examination degree more than 90%).



Institutions graduates (only who are in top 10% rank).

Distinguished employees in governmental offices who are originally institutions graduates.

After the announcement of the accepted students, the registration committee which includes 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 have distributed again according to their high school grades on the eight departments in the college (petroleum engineering, architecture engineering, civil engineering, computer engineering, electrical engineering, chemical engineering, mechanical engineering, and materials engineering).

For the civil engineering department, the numbers of the newly enrolled students through the past five years are shown in Table 3.1.

Table 3.1: Records of newly enrolled students over the past five years.

Academic Year	Number of New Enrolled Students	
2016-2017	Normal 103	Private 94
2015-2016	103	
2014-2015	124	
2013-2014	152	
2012-2013	169	

3.3 Admission Facts:

Civil Engineering Department in College of Engineering of Basrah University accepted from 150-170 students annually. It has accepted 103 students for the study year 2016-2017. Four courses years are required for graduation. The numbers of students distributed on the four years are shown in the following table:

Year	No. of Students	
First Year	Normal 103	Private 94
Second Year	97	
Third Year	139	
Fourth Year	101	
Sum	440	



3.4 Evaluating Students' Performance

Civil Engineering Department in College of Engineering of Basrah University contains a specialized educational staff whom take the responsibility for the students' education and evaluation of their scientific and field abilities according to a series of scheduled examinations and tests which examine their scientific and academic skills depending on the competition basis to reach the planned goals and the more precise evaluation in classes, laboratories, and fields.

The principal aim of the evaluation process is to diagnose the strength and weakness points in student personality and analyzing the failure reasons than supporting treatment strategies. In addition to giving a special attention to the high skilful students and developing their mental abilities by a perfect description of the science courses and distributing the outlines to this degree that exactly fitting students levels, department capacity, and the actual need of these outlines.

The study courses contain both theoretical and experimental materials. That includes theories exhibition and explanation in a clear and precise method, also continuous updating to meet the developed changes in the world. The experimental part of these courses contains the application of the proposed theories within an integrated number of modern and specialized laboratories. These courses which are not containing an experimental part they are given to students in a clear, precise and suspicious manner that far away from routine and complexity and by relating them as good as possible with the real life.

In general, the students of the college of engineering are evaluated using the following means:

Daily, monthly, semester, and final exams.

Their laboratories reports.

Assignments.

Senior year project.

Summer industrial training reports.

3.5 Advising, Guidance and Follow-up:

During the past years, the CiE department, as well as the college of engineering, had an educational advising scheme where one or two advisors were assigned to give advice to one level of study (1st, 2nd, 3rd, or 4th) year.

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

The chairman of the department distributes the students to the selected faculty members (advisors) such as each advisor is assigned a number of advisers from the same that the faculty



member teaches. Each month the advisor meets her/his assigned advisees according to pre-scheduled appointments.

Each advisor delivers her/his monthly report to the chairman who is responsible for arranging the work of the advisors and gives recommendations for solving any problems that may face both the advisors and the students.

These appointments can be classified as:

Evaluation meeting: assess the student's readiness and abilities and accordingly determine the best advising approach to follow.

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.

Civil Engineering Department in College of Engineering of Basrah University takes on his responsibility observation and follow-up the student progress in different ways. The field observation is only one method of these ways, this includes the sudden visits to the study lectures and giving instructions to both lecturers and students. For lecturers to use simple methods and making tests just to evaluate the real abilities of students, also to support the highly skilled students and advising the low skill student to make benefit of their courses and treat the weakness points reaching the optimum performance.

3.6 Graduation Requirements

In the Civil Engineering Department, the student has to complete 150 credit hours in order to get a Bachelor of Science degree; these credit hours are divided across four years of study as:

For the 1st year:

1. 8/38 credits (21.6%) are of Civil Engineering courses requirements.
2. 21/38 credits (56.8%) are of College courses requirements.
3. 8/38 credits (21.62%) are of university courses requirements.

For the 2nd year:

1. 15/40 credits (37.5%) are of Civil Engineering courses requirements.
2. 17/40 credits (42.5%) are of College courses requirements.
3. 8/40 credits (20%) are of university courses requirements.



For the 3rd year:

1. 27/34 credits (88.88%) are of Civil Engineering courses requirements.
2. 4/34 credits (11.42%) are of College courses requirements.
3. 4/34 credits (11.42%) are of university courses requirements.

For the 4th year:

1. 35/38 credits (94.73%) are of Civil Engineering courses requirements.
2. 4/38 credits (10.25%) are of College courses requirements.
3. 0/38 credits (0%) are of university courses requirements.

Overall credits during four years:

1. 85/150 credits (56.29%) are of Civil Engineering courses requirements.
2. 46/150 credits (30.46%) are of College courses requirements.
3. 20/150 credits (13.24%) are of university courses requirements.

Table 3.4 and illustrate the records over the past five academic years including newly enrolled students and the number of graduate students.

Table 3.4: Total enrollment and graduates trends for the past five years

	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
New enrolled students	169	152	124	103	103 + 94
Graduated students	120	123	125	111	72



The SWOT analysis for this criterion is shown below:

	Helpful (to achieving the objective)	Harmful (to achieving the objective)
Internal origin (attributes of the department)	Strengths According to the law of central admission, the department gets only those high-grade students each year. Many aspects are used in evaluating students.	Weaknesses The summer training reports from the companies do not give us a robust feedback. including what students had learned; whether they were active or not; what their flaws and strengths are.
	Opportunities The newly adopted advising and guidance method will help the department in diagnosing the students' performance. There are good opportunities for students pursue their higher studies due to the ability of our department to provide the postgraduate program. Employment opportunities in the civil engineering field are very high due to the demand of market in which increase the competition for joining the studies in the department. Training opportunities are much more available now.	Threats
External origin (attributes of the environment)		



Chapter 4: Curriculum Development and Review:

Part I: Program Educational Objectives

4.1 Vision of the Department

Civil Engineering Department of College of Engineering of Basrah University has a vision that it aims to be one component of these corporations have interest in engineering education in Iraq throughout a distinct program which has known on both the local and international levels. This department provides an educational engineering environment high in quality along with researchers and services that enrich the profession, raise up the community, and provide civil engineers with high efficiency to build and serve their country.

4.2 Mission of the Department

Civil Engineering Department of College of Engineering of Basrah University aims to fulfil the Iraqi community requirements and all the region of civil engineers by providing high-quality programs in education and scientific research. It aims also to serve the community by providing the best educational opportunities to graduate distinct students capable to follow up the last scientific developments according to the extensive quality standards. It also takes on his responsibility students support to increase their abilities and enhance their field and technical skills to enable them to enter the work market and make success in it, in addition, to continuing their education and development in their chosen professions, as well as providing an educational creative environment leads the department staff to more and better productivity.

4.3 Strategic Objectives of the Department

The Program Educational Objectives (PEOs) clearly reflect the professional expectations from the graduates of the civil engineering department and prepare them to meet that challenges. Table5.1 shows the CiE department PEOs.

Table4.1: Program Education Objectives

PEO1	Graduates will be engaged in civil engineering related careers that could serve the needs of both industry and academia, in private and public sectors, as well. They will adapt to the rapidly changing work
------	---



	environment and attain leadership positions in their business, profession, and community.
PEO2	Graduates must have the pursuit of knowledge and active, continuous and lifelong professional development through the continuous reading of up to date scientific researchers, the engagement in the further/continual education courses, and admission to graduate studies.
PEO3	Graduates will contribute to the welfare of society and the development of their profession, through the responsible practice of engineering.

4.4 Consistency of the PEOs with the College Educational Objectives (CEOs)

The PEOs of the civil engineering department are coherent and in flow with those of the college of engineering. They are stated in accordance with the College Educational Objectives (CEOs); mentioned in Table4.2, while preserving the unique characteristics of the department of civil engineering.

Table4.2: College Education 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 endeavours 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.

4.5 Program Outcomes

The main objective of the program outcomes, POs, and Program Educational Objectives, PEOs, is to measure the level of achievement of the curricular requirement of the department in preparing the graduates to meet the challenges presented to them by the fascinating Construction industry. In other words, civil engineering Program outcomes, POs, and Program Educational Objectives, PEOs, are two different, but interrelated mechanisms that were developed in order to measure the level of achievement and success of the program.



The CiE department has developed ten Program Outcomes (POs) as an initial set of POs. These outcomes are, in effect, what the students expected to know and achieve post-graduation. Table 4.4 shows these program outcomes.

Table 4.4: Civil Engineering Program Outcomes

Symbol	Description
<u>A</u>	<u>PO1</u> : ability to apply knowledge of mathematics, science, and engineering fundamentals.
<u>B</u>	<u>PO2</u> : the ability to outline and conduct experiments as well as analyze and interpret data.
<u>C</u>	<u>PO3</u> : the ability to design an integrated system and its various components and processes, within realistic economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints.
<u>D</u>	<u>PO4</u> : the ability to function on multi-disciplinary teams to analyze and solve problems.
<u>E</u>	<u>PO5</u> : ability to identify, evaluate and solve engineering problems.
<u>F</u>	<u>PO6</u> : understanding of the responsibility of engineers to practice in a professional and ethical manner at all times.
<u>G</u>	<u>PO7</u> : ability to communicate effectively using oral, written, and graphic forms.
<u>H</u>	<u>PO8</u> : the broad education necessary to understand the potential impact of engineering solutions on society and the environment.
<u>I</u>	<u>PO9</u> : understanding of the need for up-to-date engineering tools and other knowledge acquired through life-long learning.
<u>J</u>	<u>PO10</u> : knowledge of contemporary issues related to engineering.
<u>K</u>	<u>PO11</u> : ability to use modern engineering tools, skills and design techniques necessary for the practice of engineering.

4.6 Relationship of the Program Outcomes to the PEOs

The mapping between the Program Outcomes and the Program Educational Objectives is shown in Table 4.5.

Table 4.5: Mapping of Program Outcomes to PEOs

	PEOs		
POs	PEO1	PEO2	PEO3



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PO-a	X		
PO-b	X		
PO-c	X	X	X
PO-d	X	X	X
PO-e	X	X	
PO-f	X		X
PO-g	X	X	
PO-h	X	X	X
PO-i	X	X	
PO-j	X	X	
PO-k	X	X	X

The SWOT analysis gives us:

Helpful

Harmful

(to achieving the objective)

(to achieving the objective)

Internal origin
(attributes of
the department)

External origin
(attributes of
the environment)

Strengths -The department vision, mission, and objectives focus on the graduates and the overall knowledge they get to apply in their future carrier. - Continuously updating the PEO and PO in the department.	Weaknesses
Opportunities	Threats

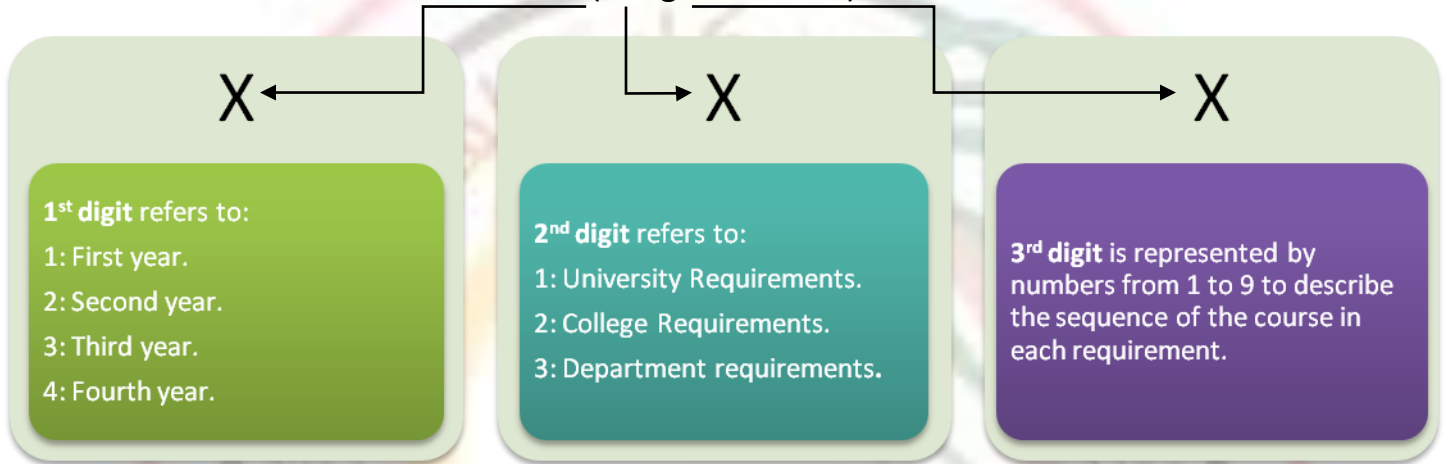
Part II: Curriculum

4.7 Curricular/Course Description

In civil engineering department, each curricular is described by:

Curricular/Course Number and Title: each course is coded as:

Course Number = CiE + X X X (3 Digits Number)



For example CiE432 Methods of Construction and Estimating means that this is a civil engineering department course that is given to the fourth year; it is the second course within the department requirement curriculum.

4.8 Graduation Requirements

To graduate, students have to complete 150 credit hours during their four years study. Fig. 4.1 and Table 4.1 show the CiE curriculum requirements.



Fig.4.1: Roadmap to Graduation





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Table4.1: CiE Curriculum Requirements

Total CiE Requirements: 150 credit hours / 30 courses					
Requirements			Credit Hours		
University Requirements			8		
College Requirements			25		
Department Requirements			117		
Elective classes			0		
Total			150		
University Requirements: 8 credit hours / 2 courses					
Course No.	Course Title	Credit Hours	Weekly Hours		
CiE111	Physics and chemistry	4	2		
CiE211	Democracy and Freedom Concepts	4	2		
	Total	8	4		
College Requirements: 26 credit Hours / 6 courses					
Course No.	Course Title	Credit Hours	Weekly Hours		
			Lec.	Tut.	Lab.
CiE121	Mathematics I	6	3	1	
CiE122	Engineering Statistics	2	1	1	
CiE123	Engineering Workshops	2			2
CiE221	Mathematics II	6	3	1	
CiE321	Engineering and Numerical Analysis	5	2	2	1
CiE421	Engineering Project	4	1		2
	Total	25	10	5	5
Department Requirements: 116 credit hours / 24 courses					
Course No.	Course Title	Credit Hours	Weekly Hours		
			Lec.	Tut.	Lab.
CiE132	Engineering Geology	3	1		1
CiE133	Principles of Computer Science	6	2		2



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CiE131	Engineering Mechanics	6	3	1	
CiE134	Engineering Drawing	4			4
CiE135	Building material science	5	2		1
CiE231	Survey Engineering	6	2	1	2
CiE234	Concrete Properties	6	2		2
CiE233	Fluid Mechanics	5	2	1	1
CiE232	Strength of Materials	6	3	1	
CiE235	Computer Programming	4	1		2
CiE236	Building construction	3	1	1	1
CiE333	Soil Mechanics	6	2	1	2
CiE334	Concrete Design	6	3	1	
CiE335	Irrigation and drainage engineering	4	2	1	
CiE336	Traffic Engineering	3	1	1	1
CiE332	Theory of Structure	6	3	1	
CiE331	Management and Economic engineering	4	2		
CiE431	Design and analysis of the foundations	6	3	1	
CiE435	Hydrology	4	2	1	
CiE434	Design of reinforced concrete	4	2	1	
CiE433	Design of Steel Structures	4	2	1	
CiE432	Methods of Construction and Estimating	4	2	1	
CiE436	Hydraulic Structure	2	1	1	
CiE437	Sanitary and environmental engineering	5	2	1	1
CiE438	Highway engineering	5	2		1
	Total	117	48	17	21

Elective Courses Requirements: 0 credit hours / 0 courses

Course No.	Course Title	Credit Hours	Weekly Hours		
			Lec.	Tut.	Lab.
	Total				



4.7 Mapping of Course Learning Outcomes to Program Outcomes

An academic program is, in effect, the superposition of a set of courses, somehow, linked together to achieve program outcome. This means that courses in any academic program represent the building blocks of that program. Assessment of the program would only be possible if the course learning outcomes are mapped to the program outcomes. Course learning outcomes of individual program courses are listed in the detailed course syllabus which is prepared by faculty teaching that particular course and submitted to the student at the beginning of the year. Each year, immediately after tallying the final grades of all courses, the mapping between the courses and program outcomes is also established. Mapping of all the courses offered by the CiE department is given below in Table4.2.

Table 4.2: Mapping of the CiE Core Courses to the Program Outcomes

Course No.	Course Title	Program Outcomes										
		A	B	C	D	E	F	G	H	I	J	K
First Year												
CiE132	Engineering Geology	X				X		X		X	X	X
CiE121	Mathematics I	X	X			X		X	X			
CiE133	Computer Science and Programming	X	X			X		X	X	X	X	X
CiE122	Statistics Engineering	X	X	X		X			X			
CiE131	Engineering Mechanics	X	X	X		X		X	X		X	
CiE111	Physics and chemistry						X		X			
CiE123	Engineering Workshops				X			X		X		X
CiE134	Engineering Drawing	X	X	X	X	X		X	X	X	X	X
Second Year												
CiE221	Mathematics II	X				X		X	X	X	X	
CiE231	Survey Engineering	X				X		X	X		X	
CiE234	Concrete Properties			X		X		X		X		X
CiE233	Fluid Mechanics	X		X		X		X	X	X	X	
CiE232	Strength of Materials	X	X	X		X		X	X		X	
CiE235	Computer Programming	X		X		X		X	X	X	X	X
CiE211	Democracy and Freedom Concepts						X		X			



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CiE236	Laboratories	X	X	X	X	X		X	X	X	X	X
Third Year												
CiE321	Engineering and Numerical Analysis	X	X			X			X			
CiE333	Soil Mechanics			X			X	X	X	X		
CiE334	Concrete Design	X		X		X		X	X	X	X	
CiE335	Irrigation and drainage engineering			X				X	X	X	X	X
CiE336	Traffic Engineering	X	X	X		X		X	X		X	
CiE332	Theory of Structure	X		X		X			X		X	
CiE331	Management and Economic engineering	X		X		X		X	X	X	X	X
CiE337	Laboratories	X	X	X	X	X		X	X	X	X	X
Fourth Year												
CiE431	Design and analysis of the foundations	X		X			X	X	X	X		
CiE435	Hydrology	X		X		X		X	X	X	X	X
CiE434	Design of reinforced concrete	X		X		X			X		X	
CiE433	Design of Steel Structures	X		X		X		X	X		X	
CiE432	Methods of Construction and Estimating								X	X	X	X
CiE436	Hydraulic Structure	X		X		X			X	X	X	X
CiE421	Engineering Project	X	X	X	X	X	X	X	X	X	X	X
CiE437	Laboratories	X	X	X	X	X		X	X	X	X	X



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The SWOT analysis gives:

Helpful (to achieving the objective)		Harmful (to achieving the objective)	
Internal origin (attributes of the department)	Strengths The 150 total credit hours are equal to the number of credit hours at other CiE departments in Iraq and worldwide. The used textbooks are updated by the faculty member by using the internet facilities. Thus, no outdated textbooks are used.	Weaknesses There are no elective courses. Each faculty member can only add 10% of curriculum content.	
	Opportunities If each faculty member well writes and updates her/his curriculum outcomes, she/he will definitely help in improving the overall POs of the program.	Threats	
External origin (attributes of the environment)			



Chapter 5: Facilities

5.1 Introduction

The CiE Department is part of the campus of the college of engineering in Qarmat Ali district, north of Basrah, Basrah, Iraq. The department is a three-story building that incorporates, in it, offices for the faculty members and the supporting staff together with classrooms and laboratories offices:

1. Administrative office: the office of the chairman is located on the second floor of the civil engineering department building with approximately 28 m², in the area.
2. Administrative Supporting Staff; this consists of one full-time secretary whose job is to administratively assist the chairman; this office is 14 m², in the area, and is directly connected to the chairman's office. These two offices, the chairman's and the secretary', combine to form the administrative office of the Civil Engineering Department.
3. Faculty offices are allocated in two different levels of the Department's Building. There are 24 faculty offices in the department, each of which is a 14 m² in area, each faculty (with a PhD or higher) is assigned a separate office. Every faculty office is furnished and equipped with 1 PC and an activated link to the Internet.
4. Storage rooms: There are a total of two storage rooms in the department. Each of these rooms is of 110.25 m², each.
5. Meeting room: this room is about 28 m², is mainly used for departmental related meetings at different levels. This room is properly furnished and is equipped with data show.
6. Examination Committee Room: it is located on the second floor near the administrative office with 28 m², in the area. Here is where students' records are held. It consists of one printing machine, one PC, and one photocopying/scanner machine.

5.2 Classrooms

The civil engineering department contains 12 halls used as classrooms. A typical classroom in the building is equipped with the following:

- 2X4 m² Whiteboard.
- Classroom space area 7m X 10.5m (73.5 m²).
- Air conditioning unit with adjustable temperature.
- Adequate classroom chairs for up to 60 chairs per classroom.

5.3 Laboratories

The department of civil engineering has six fully equipped, laboratories, with a total area 650 m², all of which are located in the 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 used for building the term projects and senior projects as well. The Civil Engineering Labs, however, were structured to be adaptable and upgradable to accommodate the inevitable changes. Enough efforts are exerted in order to make sure that lab equipment are kept under good operating conditions. A summary of the 6 departmental laboratories is given, below, in **Table5.1** Also, it shows the courses associated with each lab.

Table5.1: Laboratories' Names, Space Areas, and Associated Courses

Laboratory' Name	Area in m2	Associated Courses
Sanitary Engineering Lab.	200	CiE437
Structural Materials Lab.	200	CiE135, CiE234
Soil and Highways Engineering Lab.	200	CiE333, CiE438
Geology Engineering Lab.	150	CiE132
Light Structures/Traffic Engineering Lab.	200	CiE336
Fluid Engineering Lab.	200	CiE233
Computer Engineering Lab.	200	CiE133, CiE235
Surveying Engineering Lab.	200	CiE231

The civil engineering students' utilization of the lab space and equipment could be measured in terms of an index representing the ratio between the number of students registered in a certain lab and the lab space area, at a given time slot. This is shown in **Table5.2**.

Table5.2: Student Utilizing Space Area Ratio to Instructional laboratories Space Area

Lab's Name	Sunday	Monday	Tuesday	Wednesday	Thursday
Sanitary Engineering Lab.	-	-	-	Open hours 4 (50.0%)	-
Structural Materials Lab.	Open hours 4 (36.28%)	Open hours 4	Open hours 2	Open hours 2	-
Soil and Highways Engineering Lab.	-	-	Open hours 4	Open hours 4	-
Geology Engineering Lab.	Open hours 4 (33.33%)	-	Open hours 2 (16.67%)	-	-
Light Structures/Traffic Engineering Lab.					
Fluid Engineering Lab.	Open hours 3 (100%)	-	-	-	-
Computer Engineering Lab.					
Surveying Engineering Lab.	-	Open hours 2 (33.33%)	Open hours 2 (33.33%)	-	Open hours 2 (33.33%)



5.4 Labs Staff:

As mentioned before, there are six major labs, in the department of civil engineering, that are fully utilized in civil engineering courses, term projects and senior design projects as well. The CiE labs are well maintained and properly run by a designated laboratories maintenance committee and the technical supporting team of technicians. The most recent load distribution among the technical staff is shown in **Table5.3**.

Table5.3: Technicians Assigned Responsibilities for the Operation of the Labs

Technician	Lab. Name
Dr. Kifah Mohammed Chief Eng. Najat Hantoosh	Sanitary Engineering Lab.
Dr. David Abid M. Jawad	Structural Materials Lab.
Dr. Mohamad Jawad K. Essa Ass. Proff. Lamy'a Abd Al-Jaleel	Soil and Highways Engineering Lab.
Proff. Dr. Majeed Abbood Jasim	Geology Engineering Lab.
Ass. Lec. Muthanna Shakir Ass. Lec. Wisam Qasim	Light Structures/Traffic Engineering Lab.
Dr., Ahmad Sagban	Computer Engineering Lab.
Dr. Aqeel Hatam Ass. Lec. Ahmed Nu'aima	Surveying Engineering Lab.

Doing the SWOT analysis, we get:

External origin (attributes of the environment)	Helpful (to achieving the objective)	Harmful (to achieving the objective)
	Strengths <ul style="list-style-type: none"> - The department building area is adequate. Also, the number of classrooms/laboratories and their area are adequate. 	Weaknesses <ul style="list-style-type: none"> - The department has an Internet connection with often disconnection. - Classrooms have no data show devices. - The department has no library of its own; it only has textbooks storage. - Limited laboratories space that affects the performance and production of these laboratories for both students and community services.
	Opportunities <ul style="list-style-type: none"> - The department laboratories may be supplied with a new instruments and machines from collage annual budget. 	Threats



Chapter 6: Criterion6 (Support)

6.1 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 Basrah 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, researchers reinforcement, building cleaning expenses, athletic activities, conferences, and banking services.
3. Commodities requirements: all equipment (laboratory, 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.

6.2 Sources of Financial Support

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

1. General governmental funds which represent the greatest portion of the budget.
2. Higher education fund which includes:
 - a. Laboratory tests: 65% of funds for the test team, 15% for the university, 16% for bonuses, and 4% for maintenance.
 - b. Shops rent 15% for the university, 68% for bonuses, and 17% for maintenance.
 - c. Continuous learning courses: 65% for course trainers, 15% for the university, 16% for bonuses, and 4% for maintenance.
 - d. Special courses: 65% for course trainers, 15% for the university, 16% for bonuses, and 4% for maintenance.
 - e. Industry cooperation: 80% for work team, 10% for the 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 in 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 the university, 68% for bonuses, and 17% for maintenance.

Doing the SWOT analysis, we get:

Helpful

(to achieving the objective)

Harmful

(to achieving the objective)

Internal origin
(attributes of
the department)

External origin
(attributes of
the environment)

Strengths Due to the process of assigning budgets to universities and colleges, the department receives a guaranteed annual budget.	Weaknesses
Opportunities	Threats



Chapter 7: Research

7.1 Introduction:

Within the Department of Civil Engineering at the College of Engineering, the academic staff and researchers focused on high-level research in structural engineering, offshore structures, fluid mechanics, sanitary engineering, water resources, geotechnics and highway engineering. The researchers adopt the scientific research and utilize a variety of theoretical analysis, advanced computational and experimental techniques to provide optimum solutions in broad aspects of Civil Engineering. Also, the academic staff works on training the most capable students to provide the industry with a high level of engineers, researchers and advice experts.

Currently, the main areas of research include:

- High-performance concrete.
- Self-consolidated concrete.
- FRP strengthening of structural elements.
- Developing finite element modelling in structural analysis.
- Developing finite element modelling in water flow and fluid mechanics.
- Soil structure interaction problems.
- Use of recycled material in concrete.
- Optimum design of structures.
- Fluid-structure interaction.
- Offshore structures.
- Dynamic analysis of structures.
- Modeling of groundwater flow.
- Recycling of wastewater for irrigation purposes.
- Simulation of hydrological processes.
- Water treatment.
- Water resources management.
- Ferro-cement.
- Composite structures.

Furthermore, the department develops researchers through the postgraduate studies including both master and Ph.D. The academic staff supervises postgraduate students on various topics. Table 7.1 summarizes the published papers and supervising outline in the department within the last five years. On the other hand, Fig. 7.1 illustrates faculty's fields distributions in the department.



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Table 7.1: Published papers and supervising outline in the department within the last five years

Faculty Member	Rank	Field	No. of supervised Ph D and M Sc students (continued)	No. of published and accepted papers.
Anis Abdulkudher Mohammad Ali	Professor	Civil Eng.\ Structures	4	
Nabeel Abdulrazaq Jasim	Professor	Civil Eng.\ Structures	5	
Salih Khasaf Essa	Professor	Civil Eng.\Hydraulic Structures	2	
Mohamad Jawad kadhim	Professor	Civil Eng.\ Structures	1	
Jamal Abdusamad Kdhir	Assist. Professor	Civil Eng.\ Structures	2	
Haider Saad Yaseen	Assist. Professor	Civil Eng.\ Soil mechanics	4	
Lamia Abduljalil Ahmad	Assist. Professor	Civil Eng.\ Transportation	0	
Ali Hasan Duheim	Assist. Professor		2	
Kifah Muhammad Kudhier	Assist. Professor	Civil Eng.\ Sanitary engineering	3	
David Abed Mohammad Jawad	Assist. Professor	Civil Eng.\ Structures	3	
Samir Abdulbaqi Jabar	Lecturer	Civil Eng.\ Structures	1	
Mahdi Ali Jawad	Lecturer	Civil Eng.\ Structures	0	
Abdulamir Atalla Kariem	Lecturer	Civil Eng.\ Structures	3	
Uday Adnan Abdulrazaq	Lecturer	Civil Eng.\ Structures	3	
Alaa Chasib Kalib	Lecturer	Civil Eng.\ Structures	3	
Abdulnasir Muhammad Abbas	Lecturer	Civil Eng.\ Structures	2	
Wisam Sabeeh Neima	Lecturer		1	
Ahmad Sakban Sadoon	Lecturer	Civil Eng.\ Structures	1	



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Table: 7.1Continue

Faculty Member	Rank	Field	No. of supervised Ph D and M Sc students (continued)	No. of published and accepted papers.
Thaer Mohammed Saeed	Lecturer	Civil Eng.\ Structures	1	
Jaafar Ahmad Kadhim	Lecturer	Civil Eng.\ Structures	---	
Abdulhussain Abdulkareem Abbas	Lecturer		---	
Ihab Sabri Salih	Lecturer	Civil Eng.\ Structures	1	
Zuhal Abdulhadi Hamza	Lecturer	Civil Eng.\ Water resources	---	
Khalid Abduljalil Abdulrazaq	Lecturer	Civil Eng.\ Water resources		
Amar Salman Dawwd	Lecturer	Civil Eng.\ Water resources		
Aseel Yassen Ahmad	Assist. Lecturer	Civil Eng.\ Soil mechanics and Foundation		
Imad Hassan Muheraldin	Assist. Lecturer	Civil Eng.\ Structures		
Fatima Abdulemam Jiad	Assist. Lecturer	Civil Eng.\ Water resources	---	
Ahmad Nasih Ahmad	Assist. Lecturer	Civil Eng.\ Water resources	---	
Aqil Hatem Jkheor	Assist. Lecturer	Civil Eng.\ Structures		
Fatima Kalie Ibrahim	Assist. Lecturer	Civil Eng.\ Soil mechanics	---	
Zainab Abdulelah Abdullatif	Assist. Lecturer	Civil Eng.\ Water resources	---	
Hussain Ali Hussain	Assist. Lecturer	Civil Eng.\ Structures	---	
Wesam Qasim Flaih	Assist. Lecturer			
Husham Taha Yasin	Assist. Lecturer	Civil Eng.\ Water resources		
Haleem Kadhim Hussain	Assist. Lecturer	Civil Eng.\ Structures		



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Table 7.1: Continue

Faculty Member	Rank	Field	No. of supervised Ph D and M Sc students (continued)	No. of published and accepted papers.
Aiman Alak Hassan	Assist. Lecturer	Civil Eng.\ Water resources	---	
Fareed Hamid Majied	Assist. Lecturer	Civil Eng.\ Structures	---	
Saad Aboalhail Arab	Assist. Lecturer	Civil Eng.\ Water resources		
Amar Ashor Akash	Assist. Lecturer	Civil Eng.\ Water resources		
Majid Ashor Kalaf	Assist. Lecturer	Civil Eng.\ Structures		
Zahir Muhammad Naji	Assist. Lecturer	Civil Eng.\ Structures		
Jawad Abid Maatuk	Assist. Lecturer	Civil Eng.\ Structures		
Muhammad Hamid Sabhan	Assist. Lecturer		---	
Ehsan Qasim Muhammad	Assist. Lecturer	Civil Eng.\ Structures		
Kadhim Zuboon Nasir	Assist. Lecturer	Civil Eng.\ Structures	---	
Samuaal Mahdi Salih	Assist. Lecturer	Civil Eng.\ Structures		
Adel Ahmad AbdulZahra	Assist. Lecturer	Civil Eng.\ Structures		
Abdullah Abdulameer Abdullah	Assist. Lecturer	Civil Eng.\ Structures		
Ahad Zuhair Hamody	Assist. Lecturer	Civil Eng.\ Structures		
Sarmad Abdullah Abbas	Assist. Lecturer	Civil Eng.\ Water resources	---	
Usama Sailm Abdulkariem	Assist. Lecturer	Civil Eng.\ Structures		
Rana Uda Mutashar	Assist. Lecturer	Civil Eng.\ Structures		
Falah Majeed Hameed	Assist. Lecturer	Civil Eng.\ Structures		
Ansam Zuhair Thamir	Assist. Lecturer	Civil Eng.\ Structures		
Mazen Abdulemam Ahmad	Assist. Lecturer	Civil Eng.\ Structures		
Khaldoon Shehab Ahmed	Assist. Lecturer	Civil engineering\ project management		



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Table 7.1 :Continue

Faculty Member	Rank	Field	No. of supervised Ph D and M Sc students (continued)	No. of published and accepted papers.
Ammar Jasim Dakil	Assist. Lecturer	Civil Eng.\ Structures		
Mustafa Sharif	Assist. Lecturer	Civil Eng.\ Structures		
Dina Ali Yassin	Assist. Lecturer	Civil Eng.\ Structures		
Yosif Jabar	Assist. Lecturer	Civil Eng.\ Structures		
Muthana Shakir	Assist. Lecturer	Civil Eng.\ Structures		
Haider Abdulredha	Assist. Lecturer	Civil Eng.\ Water resources		
Ahamd Naiema	Assist. Lecturer	Civil Eng.\ Structures		
Alyaa Shati Muhan	Assist. Lecturer	Civil Eng.\ Structures	---	
Reem Abdulameer	Assist. Lecturer	Civil Eng.\ Structures		
Zaid F. Abdul Abbas	Assist. Lecturer	Civil Eng.\ Structures		
Mayada Yuhia Muhammad	Assist. Lecturer	Civil Eng.\ Structures		
Reem Abdulameer Abod	Assist. Lecturer	Civil Eng.\ Structures		
Wisam Abid Ali	Assist. Lecturer	Civil Eng.\ Water resources		

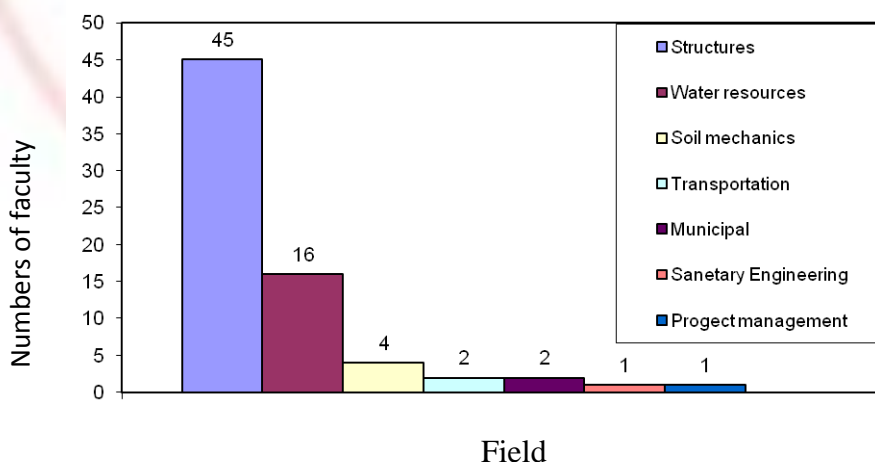


Fig. 7.1 : Distribution of the faculties' research field In the department.



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The SWOT analysis gives:

		Helpful (to achieving the objective)	Harmful (to achieving the objective)
		Internal origin (attributes of the department)	External origin (attributes of the environment)
	Strengths	<p>The faculty working on resent and variety research topics and support the market needs with required studies.</p>	<p>Weaknesses</p> <p>63.3 % of the faculties' fields are structured, 22.5 % of the faculties' fields are Water resources, 5.6 % of the faculties' fields' are soil mechanics, the rest (8.6 %) are distributed between transportation, sanitary engineering, municipal engineering and project management. This trend weakening the research in some areas.</p>
	Opportunities	<p>The government provides scholarships, especially for the missing fields.</p>	<p>Threats</p> <ul style="list-style-type: none"> - The staff members will not give enough time for the research work.