Ministry of Higher Education & Scientific Research

Kirkuk University – College of Engineering

Civil Engineering Department

Self-Assessment Report
Civil Engineering Program
Bachelor of Science in Civil Engineering
Civil Engineering Department
College of Engineering – Kirkuk University

December, 2013

E-mail: engcollege_kirkuk@yahoo.com

PREFACE

The present report is the second self-assessment report written for the Department of Civil Engineering at the College of Engineering – Kirkuk University over the date. The report represents the first step towards achieving Quality Assurance (QA) in accordance with international standards, which is a strategic and important decision for the scientific and educational process of the department. The report coincides with a wide and comprehensive campaign carried out by the College of Engineering and Kirkuk University in this area and under a central guidance and support from the Iraqi Ministry of Higher Education and Scientific Research (MOHESR).

The report includes in its first and second parts a definitive introduction to the department and its history, scientific disciplines and awarded degrees, the system of study and curriculum, organizational structure, the general features of the policy of the department in the various fields and aspects ... etc.

NOTE: This is the second report written for self assessment section. We hope that we have been successful in our writing of this report.

Prepared by:

Mr. **Romel Nano Yaqob**
Lecturer, Civil Eng. Dept. /Transportation Engineering
College of Engineering / University of Kirkuk
Tel: +9647703713300
Email: romel.yaqob@fulbrightmail.org or eldadoner@yahoo.com
Revised by Dr. Mariwan R. Faris
Lecturer, Civil Eng. Dept. /Water Resources Engineering
College of Engineering / University of Kirkuk
Tel: +9647701242676
Email: mrnfaris63@yahoo.com

Table of Contents

Article **Page No.**

1. INTRODUCTION

The Civil Engineering (CE) Department at the College of Engineering / Kirkuk University (KU) offers engineering program leading to the degree of Bachelor of Science (B.Sc.). The B.Sc. degree includes one specialty; the **"General Civil Engineering"**, which was established at 29/5/2005 for the first time in the department.

1.1 Vision and Mission Statements

1.1.1 Vision

Upgrade to a section distinct and renewed in the field of education, scientific research, community service and contribute to its growth and development in the areas of civil engineering to become part of global classification.

1.1.2 Mission

1. Graduating highly qualified ethical Civil engineers.
2. Building the leadership qualities in its graduates through teaching how to lead, problem solving, team work, quality considerations, decision making and professionalism at work.
3. Instilling in graduates the spirit and commitment for acquiring knowledge and community service.
4. Contributing ideas of projects and carrying out research for the benefit and development of the community.
5. Nurturing and care of outstanding students and encouraging them to use their skills.
6. Student counseling, guidance and strengthening of citizenship spirit.
7. Providing good working environment for students, faculty, and other personnel with emphasis on high academic, professional and ethical standards within the university campus. Freedom of opinions and respect of others opinions and encouragement in exchanging knowledge.

1.2 Program Educational Objectives (PEO)

Since its establishment, the CE Department at Kirkuk University worked hardly and continuously based on his noble mission in society service to achieve a number of strategically goals and objectives, the most important of them are:

1. Graduate Civil engineers to serve in construction and other sectors of the civil engineering labor market.
2. Create a grade of research through the revitalization of the research the students and train them to use the Web and electronic libraries and programs and conduct scientific tests.
3. Enrich the practical side when students through field visits to engineering projects and see how the implementation of projects through global giant scientific films
4. Improving the teaching and administrative activities to meet international accreditations standards and the mission of the department.
5. Improving the academic abilities of the faculty and attracting highly skilled personnel.
6. Improve the abilities of management and technical supporting staff and attract the highly skilled for employment.
7. Optimum use of resources and potentials of the department.
8. Cooperation, academic exchange programs, partnerships with other universities and academic centers in developed countries.
9. Establishing viable applied research that generates knowledge for local and foreign markets.

1.2.1 Consistence of the Program Educational Objectives with the Mission and Activities of the Engineering College of Kirkuk University

The Civil Engineering Department PEOs are aligned well, closely linked to, and consistent with the department's mission. The first one of the objectives (PEO-1) provides the first step towards a career of achievement and service. The needed background of knowledge and skills are acquired to achieve this objective. Students acquire quality education through several avenues, including knowledge, skills and values as reflected in PEO 1. The professional and ethical issues are also preserved in (PEO-1). PEOs 2, 3, 4 and 6 ensure the qualities for self-development and professional growth and improvement of the faculty and administrative and technical staff.

The Civil Engineering Department PEOs are closely linked to, and consistent with College of Engineering missions. The College missions are directly served by the first, fifth and seventh Civil Engineering Department PEOs.

1.2.2 Process for Establishing Program Educational Objectives PEO Definition

The primary function of the CE program that is compatible with the missions of the College of Engineering of KU is to instill in its graduates a solid foundation of mathematical, scientific, and engineering knowledge in addition to developing the intellectual skills essential for excelling in their careers. The PEOs were discussed with all faculty members in several departmental meetings.

Objective #1 provides students with a solid foundation in the Mechanical Engineering discipline and design methodologies through emphasis on the application of mathematical, scientific, and engineering principles. It provides the students with the knowledge of proper ethical and professional practices relevant to Civil Engineering.

Objective #2 focuses on the improvement, development and qualification of the teaching and administrative activities of the department.

Objectives #3 & #4 concentrate on the development and improvement of the faculty, engineering, technical, and administrative staff capabilities.

Objectives #5 considers the optimum use of the department facilities and resources, and improvement and qualification of these facilities.

Objectives #6 is related to the engagement and cooperation of the department with the highly qualified and developed universities and countries in order to improve and develop the CE Program of the department.

Objectives #7 focuses on the scientific research activities of the department and how it can be directed towards the service of community, government and state.

PEOs Review

The process of review and evaluation of the CE program is done through the following assessment channels:

1. Alumni survey.
2. Employer's survey.
3. Faculty discussion.
4. Student's survey.
5. Civilian consultations.

1.3 Program Outcomes

The outcomes of CE Program of the College of Engineering of Kirkuk University are:

a. An ability to apply knowledge of mathematics, science, and engineering.

b. An ability to design and conduct experiments, as well as to analyze and interpret data.

c. An ability to design a system, component, or process to meet desired needs.

d. An ability to function on multi-disciplinary teams (Our interpretation of multidisciplinary teams includes teams of individuals with similar educational backgrounds focusing on different aspects of a project as well as teams of individuals with different educational backgrounds).

e. An ability to identify, formulates, and solves engineering problems.

f. An understanding of professional and ethical responsibility.

g. An ability to communicate effectively.

h. The broad education necessary to understand the impact of engineering solutions in a global and societal context.

i. A recognition of the need for, and an ability to engage in life-long learning (Our interpretation of this includes teaching students that the underlying theory is important because the technology changes, coupled with enhancing their self-learning ability).

j. Knowledge of contemporary issues (Our interpretation of this includes presenting students with issues such as the impact of globalization, the outsourcing of both engineering and other support jobs as practiced by modern international companies).

k. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

The program outcomes are closely linked to the program educational objectives. The relationship illustrating the program outcomes serving each objective is mapped in Table (1-1).

1.4 Continuous Improvement

The most important responsibilities and tasks performed in CE department for the purpose of continuous improvement of the educational program are:

A. Organize Information Used for the Program Improvement

Continuous improvement of the CE program is a continuous task that is carried out by the CE Department through the Scientific Committee and the specialized committees branched from it. Curriculum revisions or corrective actions proposed by either of the above committees are presented to all Civil Engineering Department faculty members in General Board meetings for discussion, review, and approval. The CED faculty actively participates in board discussions leading to a finalized set of curriculum revisions and / or corrective actions.

B. Actions to Improve the Program

Continuous improvement is a focus of our department and is done every day as a natural part of our profession. We strive always to improve processes that are weak and fix processes that are broken. We have not set “degrees of attainment” goals for each of the outcomes. We attempt to work on every deficit we uncover in our efforts to achieve outcomes. We expect every instructor to continuously improve the performance of students in his / her subjects, whether they are currently at low or high level.

The following specific actions have either been successfully implemented or are in process.

1. Continuous improvement of faculty through training programs.
2. Promoting a number of faculty members to higher ranks.
3. Purchasing a number of laboratory equipment and instruments.
4. Purchasing a number of books for the library of the department.
5. Purchasing a number of computers.
6. Employment a number of faculty, engineering and technical staff.
7. Increase in extra-curricular activities for students such as setting up scientific conferences and seminars.

8. Reconstruction and rehabilitation of classrooms and rooms in the department, as well as services and infrastructure.

2. HISTORY AND ORGANIZATIONAL STRUCTURE

2.1 The Program History

The Department of CE at the Kirkuk University is the oldest Department among all the Departments of our college. The department was established in 29/5/2005. The duration of study was four years, after which the graduate obtains a bachelor degree in Civil Engineering. The specialization starts from the third year.

2.2 Contact Information

Dr. Mariwan Ridha Faris

Civil Engineering Department

College of Engineering /Kirkuk University

Tel: +00964-7701242676

Email: mrnfaris63@yahoo.com

2.3 Organizational Structure

The scientific, technical and administrative structure of the CE Department at the College of Engineering – KU includes a set of integrated elements. Each one of these elements of the structure has authorities, duties and responsibilities which are specified accurately so that the department can works well and achieve the required goals through the integrity of work of these elements. The figure (2.1) shows the organizing structure of the department. Appendix A presents the most important activities of the department during the academic year 2012-2013, which are the results of integration between the elements of this structure.

2.4 SWOT Analysis for Civil Engineering Program

2.4.1 SWOT Analysis for the Organizational Structure of CE Department

In carrying out the SWOT analysis for the CE Program, a balanced approach has been adopted which views all facilities in each section. The assessment of strengths and weaknesses are facilitated through surveys and information gathering activities of the committees and documentation in the department, and the evidence provided by the faculty and associates. The external look to identify opportunities and threats is considered complimentary to the internal self-study in the SWOT analysis. National and regional influences and concerns are of paramount importance when deciding about the strategies and actions to address the weaknesses. Furthermore, any strategic planning should also address the local and regional threats. Though no formal survey has been conducted to identify the opportunities and threats, group brainstorming, extensive consultations with knowledgeable faculty, review of local, regional and international developments, a thorough review of existing literature on engineering education, lead to the identification of the most relevant opportunities and threats.

2.4.2 Strategic Objectives

A closer examination of the SWOT analysis reveals that college strategic plan, including CE Program, should focus on the improvements that are related to students, teaching methods, faculty, and facilities. Therefore, the following strategic objectives have been developed to address the weaknesses and threats related to various aspects of those issues…

1. Recruit, nurture and retain outstanding students.
2. Honoring, caring and retain outstanding faculty and staff.
3. Promote a strong sense of community and collegiality among the students, faculty, staff and alumni.
4. Improve teaching and learning through continuous assessment.
5. Promote research and consultation that address the immediate and long-term needs of the society.

6. Create a strong relationship with society in particular with market to cooperate in the advancement of the country's economy.
7. Continue to develop and maintain an adequate infrastructure.

2.4.3 SWOT Analysis

STRENGTHS (INTERNAL)	WEAKNESSES (INTERNAL)
1. Faculty a) A very good experience in academic education for the faculty members. b) A very good number of young and dynamic faculty members. c) Sufficient number of faculty members. d) Excellent and versatile academic backgrounds. e) Great loyalty and affiliation to the department, college and university for most faculty members. f) Good salaries and wages. 2. Curriculum a. Designed to meet both local needs and international standards. b. Strong engineering science components. c. Availability of a good variety of general education subjects. d. There is constancy throughout the years of study in the process of "pumping" subjects of the department, so that there is no gap in the four years of study. 3. Acceptable equipped laboratory, library and IT Facilities. 4. A very well specifically defined responsibilities and authorities for all committees of the department. 5. Large and continuous desire for development, and strong motivation for service for most employees of the department. 6. Good social relationships between employees of the department. 7. Good relationships between employees and students of the department.	1. Deficiencies in certain outcomes in graduating students. a) Communication skills. b) Design / real world applications. c) Contemporary technical and economic issues. d) Impact of engineering solutions in a global and societal context. 2. Quality and quantity of current students. a) The lack of motivation to excel. b) The culture of being "spoon-fed". c) Inadequate language preparation. d) Inadequate training in critical or analytical thinking. 3. Inappropriate mode of teaching. a. Inadequate classroom assessment. b. Increasing proportion of new faculty with limited teaching experience due to inadequate training programs for development. 4. Large proportion of faculty with limited research experience. a) Poor rehabilitation programs for faculty members. b) Poor relationship with international research centers and academic institutions. 5. Inconsistencies in the quality of supporting staff. a) Engineers (Teaching Assistants). b) Technicians. c) Secretarial and administrative staff. 6. Insufficient space for expansion. a) Limited extension and expansion of the department, allowing being productive. b) Limited excellence for scientific research locally and regionally. 7. Complicated decision-making process at the College level. a) Complicated and restrictive purchasing

	procedures. b) Complicated and restrictive hiring procedures. 8. Insufficient funding for; a) Research. b) Teaching improvement. c) Hiring adequate human resources. d) Maintaining and upgrading facilities. 9. Weak contact and weak alumni relations.

OPPORTINITIES (EXTERNAL)	THREATS (EXTERNAL)
1. Available faculty development opportunities. a) Institutional support for sabbaticals travels. b) Availability of international conferences, workshops, seminars etc. c) Possibility of utilizing local talent for teaching and research. 2. Emerging technologies. a. Technologies that does not require extensive industrial infrastructure. b. Information based technologies. 3. New trends in multi-disciplinary professional education and new teaching methods. a. Possibility of re-designing curriculum and by-laws to allow multi-disciplinary teaching and learning. b. Possibility of utilizing e-learning and distance education. 4. Young and dynamic society. a) A good pool for potential students. b) Readiness to accept changes. 5. Good case for the security of the local community and environment. a. High proportion of demand for higher education in Iraq. b. High rate of population growth in Iraq. 7. Developing good relationships with alumni. 8. Interdisciplinary teaching.	1. Competition (local, regional and global). a. Emerging local and regional private colleges. b. Accessibility of international schools via distance education. c. Fast pace of developments in technology (e.g. IT, emerging new fields). d. Start the establishment of private universities in neighboring countries and the opening of branches in Iraq. e. Weaknesses in general level of scientific awareness in the community. 2. Declining interest in engineering. a. Lack of sufficient number of quality students with strong interest in engineering. b. Inadequate public awareness for engineering profession and job opportunities. 3. Quality of incoming students (language, analytical thinking, motivation). 4. Instability of the country situation (political, security, economic... etc.)

2.4.4 Action Plan

- Nomination of eligible junior faculty members as PhD candidates to the available scholarships, fellowships and leaves of absence opportunities.
- Formal requests for appointment of qualified staff, technicians and administrative staff.
- Formal requests for construction of lectures halls and office rooms.

3. STUDENTS

3.1 Students Admissions

An applicant for admission to an undergraduate program of Civil Engineering (CE) at the Engineering College / KU must satisfy the following minimum requirements:

1. He / She should have an Iraqi secondary school certificate, or its equivalent, and majored in natural or technological sciences.
2. Acceptance is centrally controlled by the Ministry of Higher Education and Scientific Research.
3. Distribution of students to the 3 engineering departments of the college of engineering, including the CE Department, is made according to the capacity plan of the departments and the rating average of the applicants and their desires. The capacity plan of the CE Department in the last four years was 60 students.
4. Also included a plan to accept the top students from Technical Institutes Foundation, and the outstanding employees from state institutions and ministries.
5. The applicant must submit the required documents within a specified period.
6. An applicant who has graduated from a high school system outside Iraq must have completed twelve years of combined elementary and high school studies from a recognized school. He is also required to provide an equivalency certificate from the Iraqi Ministry of Education.

Our data from the last four years tells us that approximately (41 %) of our undergraduate students enrolled from institutes.

3.2 Evaluating Student Performance.

Student performance in each subject is evaluated by the faculty member, culminating with the assignment of a grade for that subject. The number and types of graded assignments vary according to what is most appropriate for the subject in question. These assignments are generally a combination of examinations, quizzes, homework, and/or laboratory reports. Projects and/or oral presentations are required for some subjects. Certain assignments are

graded by a group of the faculty or instructors. For example, at the end of the senior year, the student presents a final written graduation project report. The student also gives an oral presentation of his / her project work, and answer questions on it.

3.2.1 Educational Programs / Credit Hour Definition

The department follows the university wide standard definition of a credit hour. (CE) program has the annual system of study which is followed for all subjects. Excluding the final examination week, one semester credit hour represents one class hour per week with a stipulated duration of 50 minutes. Based on the definition of a 30-week per year, a typical three-credit hour class consists of 90 hours of contact hours.

3.2.2 Participants and Graduation Trends

Table (3.2) shows participants and the percentage of success for each class over the past four years of (CE) Bachelor's degree program.

3.2.3 Monitor the Progress of Students

A student's progress is monitored by faculty advisors and the Registration Committee, they turn in final grades at the end of the academic year to the Examining Committee, and each student's transcript is checked to ensure that he / she remains in good academic standing. If the cumulative average is below 50%, the student is suspended. Grades are also forwarded to advisors, to assist them in monitoring student progress.

To enable the student to follow the curriculum and study vocabulary and assimilated well, he / she must abide by the attendance on a regular basis and not to repeat his absence of classes so as not to exceed the percentage specified (15% of the total number of hours during the year).

3.2.4. Grading System

Excellent (90-100), Very Good (80-89), Good (70-79), Medium (60-69), Pass (50-59), Failure (49 & below)

3.3. Advising of Students

Full-time faculty members in the CE Department advise students. Table 3.3 shows the percentage of faculty members and their qualifications to the (305) number of students during the academic year (2012-2013).

3.3.1 Opinion of Students

During the period of the academic year, the student is required to meet with a faculty members and to review his/her progress. The Department of CE determined that a standardized advising process needed to be developed and posted to make students aware of the correct procedures for being advised, this proposal process is shown in Figures (3.2) and (3.3) for the students opinion about curriculum and faculty, respectively.

3.4 Transfer Students

Admission of transfer students is done centrally by the college through a committee chaired by the Dean and worked according to laws and legislations made by the Ministry of Higher Education and Scientific Research MOHESR. The transfer students are subjected to a scientific cut-off for the subjects taken at their institutions or universities. The Scientific Committee of the Department converts the subjects from the other institutions to actual ME subject numbers and posts them to the student's CE transcript. Table (3.4) shows the number of transfer students enrolled in the department over the past four academic years.

3.5 Graduation Requirements

To become eligible for a Bachelor of Science degree in an engineering program, a student must fulfill the academic status which includes the following requirements:

1. Passing the four academic years successfully within the maximum allowed period of study (8 years).
2. Passing the summer training successfully.

The College Records Office, Graduation Records and Examination Committees of the department maintain a complete file on the academic program and progress of each student. This file contains all academic records and related correspondence and documents for the student, including the following:

- Transcript, updated at the completion of the senior year with 34 Subjects and 152 Units.

 Computer-generated degree audit sheet tailored to the civil engineering curriculum, which shows subjects completed in required categories and separate sections detailing math and science, humanities, engineering major, and other credits.

 Copies of all correspondence of an academic nature with the student, including letters of admission to the College of Engineering.

 Any exceptions to the rules filed by the student and any action taken on those exceptions.

 Any comments or instructions included by the student's faculty advisor, department chair, Engineering Records Office, or other pertinent source.

3.5.1 Degree Check

The department head meets with some graduating students to evaluate his / her academic record during the study period. Table (3.5) shows the Total Credits Required for Graduation**.** This evaluation also ensures that the CE program criteria are fulfilled.

3.5.2 Enrollment and Graduation Trends

Table (3.6) shows enrollment trends for the last four academic years.

3.6 SWOT Analysis

STRENGTHS (INTERNAL)	WEAKNESSES (INTERNAL)
1. A very good experience in academic education for a good number of the faculty members. 2. A very good number of young and dynamic faculty members. 3. Sufficient number of faculty members. 4. The long and rich history, as well as the good reputation of the department. 5. Good relationships between employees and students of the department.	1. Deficiencies in certain outcomes in graduating students. a. Communication skills. b. Design / real world applications. c. Contemporary technical and economic issues. d. Impact of engineering solutions in a global and societal context. 2. Quality and quantity of current students. a. The lack of motivation to excel. b. The culture of being “spoon-fed”. c. Inadequate language preparation. d. Inadequate training in critical or analytical thinking. 3. Inappropriate mode of teaching. a. Inadequate classroom assessment. 4. Weak contact and weak alumni relations.
OPPORTINITIES (EXTERNAL)	**THREATS (EXTERNAL)**
1. Emerging technologies. a. Technologies that does not require extensive industrial infrastructure. b. Information based technologies. 2. New trends in multi-disciplinary professional education and new teaching methods. a. Possibility of re-designing curriculum and by-laws to allow multi-disciplinary teaching and learning. b. Possibility of utilizing e-learning and distance education. 3. Young and dynamic society. a. A good pool for potential students. b. Readiness to accept changes. 4. Good case for the security of the local community and environment. a. High proportion of demand for higher education in Iraq. b. High rate of population growth in Iraq. 5. The presence of government financial support for official universities 6. Developing good relationships with alumni. 7. Interdisciplinary teaching. 8. Good opportunities for investment in Iraq.	1. Competition (local, regional and global). a. Emerging local and regional private colleges. b. Accessibility of international schools via distance education. c. Fast pace of developments in technology (e.g. IT, emerging new fields). d. Start the establishment of private universities in neighboring countries and the opening of branches in Iraq. e. Weaknesses in general level of scientific awareness of society. 2. Declining interest in engineering. a. Lack of sufficient number of quality students with strong interest in engineering. b. Inadequate public awareness for engineering profession and job opportunities. 3. Quality of incoming students (language, analytical thinking, motivation). 4. Instability of the country situation (political, security, economic... etc.)

3.7 Actions to Improve the Program

The following specific actions have either been successfully implemented or are in process.

1. Continuous improvement of faculty staff through training programs to increase their capability of English language speaking.
2. Purchasing a number of laboratory equipment and instruments.
3. Increase in extra-curricular activities for students such as setting up scientific conferences and seminars.
4. Reconstruction and rehabilitation of classrooms and rooms in the department, as well as services and infrastructure.
5. Increase in giving projects competent realistic designs

Trying to engage students in the shed or express his opinion on the lecture even a small part rather than the style of indoctrination.

4. CURRICULUM

4.1 Overview

The curriculum requirements specify subject areas appropriate to engineering but do not prescribe specific subjects. The professional component must include:

a. A combination of mathematics and basic sciences general education component (some with experimental experience) appropriate to the discipline.

b. Engineering topics, consisting of engineering sciences and engineering design appropriate to the student's field of study.

c. A general education component that complements the technical content of the curriculum and is consistent with the program and institution objectives.

4.2 CE Program: Curriculum

Typical degree program is shown in Tables (4.1) for general Civil Engineering.

4.2.1 Requirements for Bachelor of Science in Civil Engineering

The following subsections describe the program areas: (1) Mathematics, (2) General Education includes Technical engineering component (non-Civil) and non technical component including social and humanity component. (3) Topics of Core Engineering

The civil engineering program subjects develop the knowledge and skills that will enable students to:

- apply basic mathematical and scientific concepts for the description and solution of engineering problems,
- develop initial proficiency in civil engineering disciplines,
- develop the ability to conduct experiments, and critically analyze and interpret data,
- perform civil engineering integrated design of systems, components, or processes by means of practical experiences (group projects),
- identify, formulate, and solve civilian engineering problems using modern engineering tools, techniques, and skills,

 collaborate in group projects,

 develop their written and oral communication skills through presentations of project results,

 acquire an appreciation for some of the ethical problems that arise in the exercise of the profession.

4.2.2 Summer Training

The civil engineering curriculum requires students to complete thirty days of summer training at private industries or governmental firms. This training is a compulsory component of graduation requirements. It is supervised by the Summer Training Committee of the department.

4.2.3 How the Curriculum Aligns with the Program Educational Objectives

The faculty has complete authority to define, revise, implement, and achieve program educational objectives. Input is required from the students, alumni, and the employers of our alumni in the implementation of program objectives. The major role of the faculty is to create, revise, and evaluate subjects for the program as well as define and revise program educational objectives and ensure achievement of student outcomes. Therefore, the above process ensures alignment of the curriculum with Program Educational Objectives as shown in various tables. The Civil faculty insures that the students receive all the engineering analysis within the context of engineering program. At our faculty meetings, the discussion is possible subjects to be introduced in the different subjects and brainstorm on ways to bring engineering program and open-ended problems into our subjects.

4.2.4 Curriculum Relationship to the Program Outcomes

The learning outcomes of the curriculum are mapped to the Program Outcomes with a level of emphasis being Low (L), Medium (M), or High (H). The level of emphasis of a program outcome is determined by the weight used for assessing the outcome in each subject. The level of emphasis for an outcome is determined by the weight as follows:

- When the subject outcome weight is < 10%, it will be given a Low rank.

- When the subject outcome weight is between 10% and 20% it will be given a Medium rank.
- When the subject outcome weight is > 20% it will be given a High rank.

4.3 SWOT Analysis

STRENGTHS (INTERNAL)	WEAKNESSES (INTERNAL)
1. Designed to meet both local needs and international standards. 2. Strong engineering science components. 3. Availability of a good variety of general education subjects. 4. A well structured laboratory experience. 5. A strong professional component. 6. There is constancy throughout the years of study in the process of "pumping" subjects, so that there is no gap in the four years of study where the student does not take a subject. 7. Acceptable equipped laboratory, library and IT Facilities.	1. Central control of curriculum development by the spectral committee in the ministry, and the possibility of changes in the curriculum only in a limited rate. 2. Lack of attention to give courses in English, especially in the scientific discussion within the classroom. 3. The style of the given curriculum tends to make the student recipients and not learner. 4. Lack of allocation enough credit hours to acquire good skills in computer programs that needed for the civil engineer. 5. Lack concentration of curriculum to teach students to work in team.
OPPORTINITIES (EXTERNAL)	**THREATS (EXTERNAL)**
1. Emerging technologies. a. Technologies that does not require extensive civilian infrastructure. b. Information based technologies. 2. New trends in multi-disciplinary professional education and new teaching methods. a. Possibility of re-designing curriculum and by-laws to allow multi-disciplinary teaching and learning. b. Possibility of utilizing e-learning and distance education.	Quality of incoming students (language, analytical thinking, motivation).

4.4 Action Plan

- Try to expand the percentage change in the curriculum for the percentage specified in order to expand the possibility to contain the topics most effective in practice in sync with global standards

- Urged faculty member to teach the curriculum in English and promoting their language abilities through their participation in the English language courses

- Make the education process to be through partnership between the students and the teacher, not the style of indoctrination by urging students ask questions and try to answer them and make discussions.

5. FACULTY

5.1 Faculty Size

The number of faculty members in the CE Department for the academic year 2012-2013 is (23). It is adequate to teach the required courses and also to perform other tasks related to program assessment and continuous improvement. The faculty is composed of 4 Ph.D. and 19 M.Sc. carriers. By gender, the faculty is 87 % male and 13 % female. By academic rank, 9% are Assistance Professor, 17 % Lecturer, and 74% Assistance Lecturer.

The faculty is organized around several technical areas in civil engineering classified in multi main specialties; Structural, Transportation, Geotechnical Engineering. The number of faculty members in each area allows the department to offer all required core civil engineering classes during a year. Table (5.1) shows a list of the faculty members' size. We should mention here that 11 of the faculty members are now joining Ph.D. programs to obtain the Ph.D. degree,2 inside and 9 outside the country.

The CE Department has a strong culture of teaching and a strong commitment to undergraduate education. We are in the process of filling two faculty vacant positions and another two positions mortgaged against a next retirement and resignation.

The CE student to full-time faculty ratio is approximately 7.3:1 (for Ph.D. Carriers staff), 9.2:1 (for M.Sc. Carriers Full-Time staff), and 4:1 (for Full-Time total staff) which is close to the average in the College of Engineering. Consequently, we are able to provide sufficient interaction program with students.

Interactions with Students

At CE Department, quality teaching and student interactions are emphasized. All faculty members maintain regular posted office hours, and most have an open-door policy; supervise senior design project teams, requiring regular weekly meetings with the students; and many serve as advisors to undergraduate research projects. Faculty members also serve as advisors for professional societies requiring attendance at chapter meetings, advising

student leaders, and traveling with students to regional and national conferences and competitions.

Interactions with Work and Government

The department contributed over many years in providing services to several different state offices and the private sector as well within the cooperation machinery. These services have included a variety of activities including engineering consultancy, to conduct preliminary and final designs, check designs, supervision of project implementation.

Student Advising

Freshman advising is handled by the Committee of Student Affairs in the Department of CE. The Committee consisting of some members of the faculty is responsible for advising students. The faculty advises, motivates, and helps students with their professional development. There are occasions in which faculty members spend time with students outside the classroom on special projects and in undergraduate research activities. Students' advising is provided by all faculty members based on expertise and guidance as preferred by the student. This service is provided by all civil faculties and it is offered voluntarily, with no academic release time. Figure (3.3) shows the self-assessment questioners for students indicating their opinions in faculty members.

5.2 Faculty Qualifications

This article describes the qualifications of the faculty and how they are adequate to cover all the curricular areas of the program and also meet any applicable program criteria. The faculty research and areas of interest are explained in Table (5.2).

5.3 Authority and Responsibility of Faculty

The head of the department is appointed by the President of the University based on the recommendation of the Dean of the Faculty of Engineering. The authority of the department's head spans in general for four conductive years. At the end of four years, the authority can be extended or another faculty member is appointed to take his place. The department's head assigns the members and coordinators of the department and various committees. He distributes the administrative tasks and academic affairs to the designated department Committee. The department's head leads the department council meetings and represents the department at the college of engineering's council meetings. The Head of Department shall exercise scientific, administrative and financial authorities by which he can perform his job.

Our full-time faculty responsibility includes teaching, research, institutional and committee services, and professional society services. Most of the department academic and the general program issues are taken care of by the relevant committees. Usually, course modification and evaluation is the main task of the scientific committee. However, a faculty member can initiate the creation of a new course. Major curriculum renovation is usually presented by the scientific committee at the department's General Board meeting where each faculty member has the chance to interfere in the creation or modification process. The curriculum modification proposal is presented to the college of engineering curriculum committee for final approval.

5.4 Faculty Workload

The number of faculty staff changed through the last three years while the number of enrolled students is fluctuating. The course load is distributed in accordance with faculty rank; that is; 6 credit hours maximum for Professor, 8 credit hours maximum for an Assistance Professor, 10 credit hours maximum for Lecturer, and 12 credit hours maximum for Assistance Lecturer. Any extra course load for each faculty member is compensated for financially. The faculty work load for the fulltime of the academic year 2012-2013 is shown in Table (5.3). The table also shows the distribution of the faculty activity.

5.5 Faculty Development

Faculty professional development activities include: attending seminars and lectures, participation in training workshops, attending professional conferences, professional writing activities, review activities, conducting new and original research, training programs inside and outside Iraq.

❖ Leave of Absence (Study Abroad):

An institutional program allows faculty who have not completed a Ph.D. degree and are in a tenure or tenure-track position to obtain an opportunity to study abroad. The ministry provides tuition, travel, and a monthly stipend. Those who are not in tenure-track positions also participate through temporary contracts with the same benefits. Many lecturers have successfully participated in this program and have been successfully retained at the department.

❖ Center for Continuing Education .

The center offers professional development courses and training to faculty and to recently admit graduate teaching assistants. All new faculty and graduate teaching assistants are required to take at least one year of training in their first year of work.

❖ Sabbatical Leave:

The University supports a faculty professional leave (sabbatical) activity after five years of service. Some members of the faculty take advantage of this opportunity.

5.6 SWOT Analysis

STRENGTHS (INTERNAL)	WEAKNESSES (INTERNAL)
1. A very good experience in academic education for a good number of the faculty members. 2. A very good number of young and dynamic faculty members. 3. Sufficient number of faculty members. 4. Excellent and versatile academic backgrounds. 5. Great loyalty and affiliation to the department, college and university for	1. Increasing proportion of new faculty with limited teaching experience due to inadequate training programs for development. 2. Large proportion of faculty with limited services and research experience. 3. Poor rehabilitation programs for faculty members. 4. Poor relationship with international

most faculty members. 6. Faculty salaries and wages are good compared to other categories of state employees, and to other universities in neighboring countries. 7. A very well specifically defined responsibilities and authorities for all faculty members. 8. Large and continuous desire for development, and strong motivation for service for most faculty members of the department. 9. Good social relationships between faculty members of the department. 10. Good relationships between faculty members and students of the department.	research centers and academic institutions. 5. Insufficient funding for faculty development.
OPPORTINITIES(EXTERNAL)	**THREATS (EXTERNAL)**
1. Available faculty development opportunities. a) Institutional support for sabbaticals travels. b) Availability of international conferences, workshops, seminars etc. c) Possibility of utilizing local talent for teaching and research. 2. Emerging technologies. a) Technologies that does not require extensive industrial infrastructure. b) Information based technologies. 3. New trends in multi-disciplinary professional education and new teaching methods. a) Possibility of re-designing curriculum and by-laws to allow multi-disciplinary teaching and learning. b) Possibility of utilizing e-learning and distance education. 4. Good case for the security of the local community and environment. a) High proportion of demand for higher education in Iraq. b) High rate of population growth in Iraq. 5. The presence of government financial support for official universities	1. Competition (local, regional and global). a) Emerging local and regional private colleges. b) Start the establishment of private universities in neighboring countries and the opening of branches in Iraq. c) Weaknesses in general level of scientific awareness of society. 2. Declining interest in engineering. a) Lack of sufficient number of quality students with strong interest in engineering. b) Inadequate public awareness for engineering profession and job opportunities. 3. Quality of incoming students (language, analytical thinking, motivation). 4. Instability of the country situation (political, security, economic... etc.) 5. Reduced financial support for professor as a scientific researcher, leading to a reduction in the level of research, where publishing in international scientific journals is the basis for enhancing the reputation of the college and then the university to be in level of international universities.

5.7Actions to Improve the Program

The following specific actions have either been successfully implemented or are in process.

1. Continuous improvement of faculty staff through training programs to increase their capability of English language speaking.
2. Urged Staff members to participate in the services of civil society and establish applied researches than it be a theory.
3. Increase in giving projects competent realistic designs
4. Confirmation wrote to the university about the intensification of the establishment of training courses for staff member for rehabilitation.
5. Request to increase allocations to faculty and to pay full wages to faculty member while attending scientific conferences.

6. FACILITIES

6.1 Space

The CE Department faculty and students have sufficiently adequate (with minimum requirements) facilities available for conducting a successful program. The facilities include several classrooms, laboratories, workshop, faculty offices, college and university libraries, university students club, and network access facilities. As for the university library it is located in campus center. The network access facilities are provided by the Computer Center of Kirkuk University in the form of a Wireless LAN network available in all university buildings. Only 15 terminals are available now in the department. In the following sections we provide detailed information regarding the faculty offices, classrooms, laboratories, workshop, faculty offices, department library, and college and university libraries.

6.1.1 Faculty Offices

The faculty offices are located in the building. Most of these offices are for three faculty members each. The offices have adequate furniture, air-conditioned and equipped with computers or network connection. It should be noted, though, that the faculty offices are small in size such that they are inadequate to hold a discussion between the faculty and more than 2-3 students. The average faculty office space is about 12 square meters.

6.1.2 Classrooms

The classrooms include large and small ones. All are equipped with whiteboards, as the main tool for lecture presentation. Table (6.1) provides the classrooms types and sizes and the number of students (or persons) the classroom can accommodate. All classrooms are not equipped with network connected computers or high resolution projectors which can be used to deliver electronic class notes and perform in-class demos and presentations.

6.1.3 Laboratories

Civil Engineering Department contains many laboratories with workshop which includes many devices and equipment used to conduct the experimental tests by undergraduate students and it is helpful to conduct the engineering projects by the forth class students, in addition to the ability of using many of them to achieve different tests and other works to the government establishments, private sector, postgraduate students and researchers generally. These labs are located in building 2.

6.1.4 Libraries

The students can have access to three libraries in the university campus; these are the libraries of the department, college and the university.

The College's Library

The Library of Engineering College is one of the biggest scientific libraries in the Kirkuk University. It was established in 2003, and then developed well in the later years to become one of the mother libraries in engineering and contains more than (5000 books) and (130 periodicals titles). The library offers its services to the students, faculty members, and researchers from inside and outside the college. Lastly, the library finished the documentation of all books, periodicals, theses and dissertations in a complete data base to facilitate the accessing process for students and researchers. The library continuously organizes and / or participates in book fairs.

6.2 Resources and Support

6.2.1 Computing Resources

As stated above, the network access facilities are provided by the Computer Center of Kirkuk University in the form of a Wireless LAN network available in all university buildings. Only 10 terminals are available now in the department. Both faculty and students can access the network. Networking

facilities at Kirkuk University have seen exponential growth over the last few years.

6.2.2 Laboratory Equipment Planning, Acquisition, and Maintenance

One of the most important and challenging problems encountered in the department is the lack of laboratory equipment and instrumentation in the department laboratories, in spite of considerable progress achieved by the department in this area in the last year.

The Civil Engineering Department continuously addresses any upgrades / additions for the labs by estimating the yearly budget needed for the labs and submitting it to the college and university, in addition to the governorate funding in terms of petrodollar. The full process used to determine the department lab budget is divided into two levels: (1) the college and university level, and (2) the department level. The two levels are described next.

At the college and university level, as every fiscal year is coming to an end, the planning committee at the college and university level is required to review the needs of major equipment and PCs of all academic colleges and departments make consolidated recommendations for the allocation of an appropriate budget for the next fiscal year. In this connection, a memo will be sent to all the academic colleges / departments by the chairman of the university planning committee before the end of every fiscal year requesting them to prepare their lists of major equipment and PCs for labs to be procured during the following fiscal year. A standard form is provided to all the departments to fill their lists of major equipment and PCs for labs.

At the department level, the Head of the labs committee in the CED is used to send a memo to all the faculty and lab supervisors asking them to prepare the list of major equipment for all the labs to be procured during the present or following fiscal year. The lists of items required for all the labs are to be prepared on the prescribed form providing appropriate information (Item description, quantity, estimated unit cost, Total amount, Priority, justification ...etc). These form the basis for future lab budget allocations and justifications.

The objective is to consider the upgrade / enhancement of lab facilities (in terms of addition of new equipment and PCs as well as replacing old ones) to:

- Support lab experiments, students senior design projects, course projects, and PG thesis and dissertation work.
- Support the conduct of newly proposed lab experiments.
- Support setting up of new labs proposed in the emerging areas.
- To support faculty research.
- To remove obsolescence (i.e., Modernization of the labs).

New laboratory equipment and maintaining some equipment. The laboratory equipment planning, acquisition, and maintenance processes are adequate with minimum requirements for achieving the program's outcomes at the CED.

6.3 SWOT Analysis

STRENGTHS (INTERNAL)	WEAKNESSES (INTERNAL)
1. Acceptable equipped laboratory, library and IT Facilities.	1. Complicated decision-making process at the College level. a) Complicated and restrictive purchasing procedures. b) Complicated and restrictive hiring procedures. 2. Insufficient funding for Maintaining and upgrading facilities. 3. Centrality of work and rely mainly on the decisions of the university and the ministry which limits the possibility of development.
OPPORTINITIES(EXTERNAL)	**THREATS (EXTERNAL)**
1. Emerging technologies. 2. Technologies that does not require extensive industrial infrastructure. 3. Information based technologies. 4. The presence of government financial support for official universities.	1. Administrative and financial corruption. 2. Intense competition from new and private colleges of higher financial support compared to the old College of Engineering, which caused the low level of infrastructure compared to the modern college.

7. FINANCIAL SUPPORT

7.1 Program Budget Process

The CE Departmental budget is part of the overall College of Engineering budget. The departmental budget is mainly dominated by the laboratory budget that is submitted separately per the process explained in the previous article. Additional budget items include furniture, rehabilitations of university buildings, books, supplies… etc. In addition to the approved laboratory budgets presented earlier, Table (7.1) provides the departmental expenditures for the fiscal year 2010 for items other than lab equipment.

7.2 Sources of Financial Support

Kirkuk University and its colleges and departments are a fully supported government institution, with the entire budget coming from the Iraqi government. Moreover, the university also receives some grants and gifts from some state offices and institutions, as well as from some international organizations and civil society organizations. However, such contributions amount to only a small fraction of the government allocations. Thus, the main source of departmental financial support is from government allocations. Additional sources of departmental financial support come indirectly from faculty funded research grants, experimental tests made in some laboratories for various state organizations, and industry consultations. All these activities are covered by the Central Cooperation Mechanism Committee of the university, which is working according to the law of cooperation mechanism.

7.3 Support of Faculty Professional Development

As stated in the Faculty Development article (5.5), the faculty professional development efforts represent a prime objective of the department, college and university administrations and are manifested in the following two areas:

1. Academic Development, which is administered by the Ministry (R & D Office in the MOHESR), College and University.
2. Research Development, which is administered also by the Ministry (R & D Office in the MOHESR), College and University.

7.4 Support of Facilities and Equipment

The allocation of office space and laboratory facilities is the responsibility of the college and university with suggestions and recommendations from the department. On the other hand, the scheduling of classrooms is the responsibility of the department. Moreover, the college maintenance department is responsible for all maintenance issues related to offices, laboratories. The college maintenance department accepts maintenance requests from the departments through written orders. In general, the support of facilities and equipment is inadequate to achieve program's outcomes in a perfect manner.

7.5 Inadequacy of Support Personnel and Institutional Services

The CE Department has one unqualified secretary to assess the department in all administrative aspects. Similarly, the department relies on the college Network/Computing services group for support on computing and networking facilities. The department has no engineer or technician to supervise the tasks of running, maintaining, and upgrading the various teaching and research laboratories at the department. Accordingly, the aforementioned personnel resources are inadequate to meet the program's outcomes. Furthermore, the department and faculty rely heavily on some resources and support facilities provided by the college and university. These include:

1. The Electronic Computer Center of the University.
2. The Purchasing Committees in both college and university.
3. The Maintenance Department in the college.
4. The College Library.
5. The Central Library of the University.

With respect to the college and university libraries, both contain a good collection includes books, periodicals, proceedings, theses, reports, maps, charts, electronic resources, and audiovisual materials. The libraries provide assistance to the faculty and students in their search for information and library materials.

7.6 SWOT Analysis

STRENGTHS (INTERNAL)	WEAKNESSES (INTERNAL)
1. Good salaries and wages for the staff.	1. Complicated decision-making process at the College level. a) Complicated and restrictive purchasing procedures. b) Complicated and restrictive hiring procedures. 2. Insufficient funding for; a) Research. b) Teaching improvement. c) Hiring adequate human resources. d) Maintaining and upgrading facilities.
OPPORTINITIES(EXTERNAL)	**THREATS (EXTERNAL)**
1. The presence of government financial support for official universities	1. Administrative and financial corruption. 2. Lack of self-care and unfaith, especially from some officials on the decision-making, especially with regard to factors associated with the development of the university, college, and the department.

APPENDIX A

Table (1-1): Mapping Between Program Outcomes and Program Educational Objectives

Program Outcomes and Program Educational Objectives Program Educational Objectives	Program Outcomes
Graduate Civil engineers to serve in construction and other sectors of the civil engineering labour market.	a, b, c, d, e, f, g, h, i, j, k
Improving the teaching and administrative activities to meet international accreditations standards and the mission of the department.	b, c, e, k
Improving the academic abilities of the faculty and attracting highly skilled personnel.	a, b, c, d, h, j, k
Improve the abilities of management and technical supporting staff and attract the highly skilled for employment.	b, k
Optimum use of resources and potentials of the department.	a, b, c, k
Cooperation, academic exchange programs, partnerships with other universities and academic centers in developed countries.	d, f, h, i, j
Establishing viable applied research that generates knowledge for local and foreign markets.	d, h, i, j

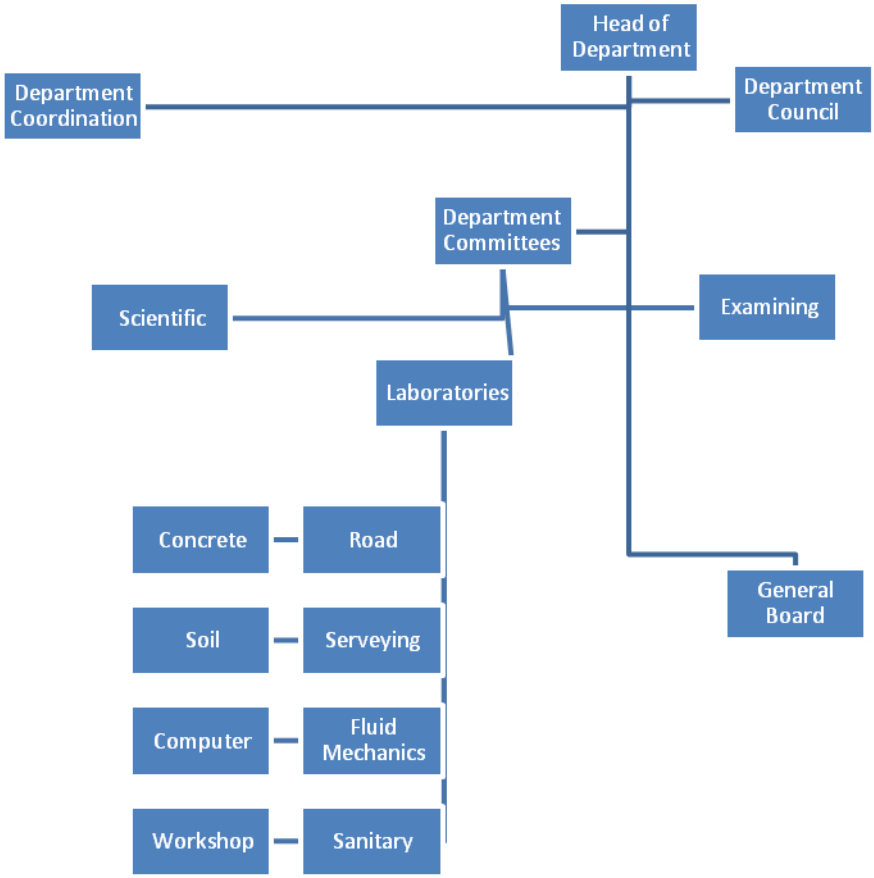

Figure (2.1): Organizational Structure of the CE Department / College of Engineering – KU

Table (3.1): History of Admissions Standards for Past four Years

Academic Year	Composite Score		Number of New Students Enrolled	Transfer Students	Number of Graduates
	Min.	Avg.			
2012-2013	91.71	92.00	52	39	62
2011-2012	89.85	89.428	23	28	49
2010-2011	88.71	89.194	51	41	68
2009-2010	87.57	88.166	46	17	79
2008-2009	88.00	88.871	38	41	67

Table (3.2): Participants and Graduation Trends

Academic Year	Number of Participants Students / Percentage for Success %				
	1st Year	2nd Year	3rd Year	4th Year	Total
2012-2013	91/97.8%	49/93.61%	81/91.35%	88/89.77%	309/93.16%
2011-2012	43/95.34%	78/94.87%	84/92.85%	59/86.44%	264/92.42%
2010-2011	66/98%	97/95%	61/97%	70/96%	294/96.5%
2009-2010	94/90%	51/78%	80/81%	80/99%	305/87%
2008-2009	41/78%	84/66%	84/88%	76/89%	285/80.3%

Table (3.3): Number of Faculty Members / 211 Students for the Academic Year (2011-2012)

	Number of Faculty Member						Total
	Certification		Scientific Rank				
	Ph.D.	M.Sc.	Prof.	Asst. Prof.	Lect.	Asst. Lect	
	4	21	-	2	4	19	25
Percentage of (309) Students	1.2%	6.5%	0%	0.6%	1.2%	6.2%	7.5%

University of Kirkuk / College of Engineering
Civil Engineering Department
Students Opinion Questionnaire about Curriculum
Academic Year 2011 - 2012

Code No. & Curriculum Name:

Year:

Faculty Member's Name:

Dear Students: For the development of the educational process at the university, we hope to express your opinion by answering accurately with mark √ in the place which reflects your opinion taking into consideration the accuracy and objectivity.

Score		1	2	3	4	5
No.	**Question**	**Strongly Agree**	**Agree**	**I Don't Know**	**Disagree**	**I Don't Agree At All**
1	Overall, this Curriculum subject is good and useful					
2	Lecture time is sufficient to cover the contents of the article					
3	The content of article commensurate with the objective of Curriculum					
4	Subject content is an interdependent information					
5	Textbooks and references are available and meaningful					
6	available of References helpful for stimulate and thinking					
7	The book is free of grammatical errors Printing					
8	Contents of the book are of outdated information					
9	The book contains a variety of examples and exercises					
10	The evaluation of the subject system is appropriate (test method)					
11	Exams reflect the content of the					

	subject					
12	Number of exams be exhaustive of the content subject					
13	Examinations and assignments helped to absorb the subject					
14	Examinations and exercises are in line with the objectives of the subject					
15	Examinations and exercises help to think of more conservation					
16	Number of exams and the their recurrence are appropriate					
17	The case of equipped lecture halls satisfactory					
18	Capabilities and laboratories are appropriate and effective					

Figure (3.2): CE Questionnaire Process: Curriculum

University of Kirkuk / College of Engineering
Civil Engineering Department
Students Opinion Questionnaire about faculty member
Academic Year 2011 - 2012

Code No. & Curriculum Name:
Year:
Faculty Member's Name:

Is the plan of teaching the subject was distributed from the beginning of the year? Yes ☐ No ☐ I don't know ☐

Is the faculty member is committed to the specific office hours of the subject? Yes ☐ No ☐ don't know ☐

If the answer is (No) explained that_____

Dear Students: For the development of the educational process at the university we hope to express your opinion by answering accurately with mark √ in the place which reflects your opinion taking into consideration the accuracy and objectivity.

Score		**1**	**2**	**3**	**4**	5
No.	**Question**	**Strongly Agree**	**Agree**	**I Don't Know**	**Disagree**	**I Don't Agree At All**
1	Has the ability to communicate scientific material in a smooth and easy manner					
2	Keep to use the tools and techniques of modern education					
3	Illustrates the theoretical aspects in the subject with examples from the reality					
4	Gives the scientific material in a manner covering the time of the lecture					
5	Committed to the dates of lectures					
6	Improve in the management ranks and give equal					

	opportunities to students in dialogue and discussion					
7	Motivates students and encourages them to think and research					
8	Respects the different views of the students					
9	Through self-learning encourages students to search for what is new and modern					
10	Accept criticism and suggestions with an open mind					
11	Be objective and fair in his / her evaluation of students					
12	Uses a variety of methods to assess the performance of students (such as reports, research, and quizzes(,					
13	Follow up activities and duties to put the evaluation weights					
14	Has the ability to discuss all issues of the subject					
15	Working to increase the knowledge of the outcome requested					

Figure (3.3): CE Questionnaire Process: Faculty

Table (3.4): Transfer Students for Past Three Academic Years

Academic Year	Number of Transfer Students Enrolled
2012-2013	49
2011-2012	51
2010-2011	41
2009-2010	17
2008-2009	41

Table (3.5): Total Credits Required for Graduation

Class	No. of Subjects	No. of Units	Number of Hours/ Week			
			Total	Th.	App.	Exp.
1st year	9	36	29	13	4	12
2nd year	8	40	30	16	5	9
3rd year	8	38	28	17	7	4
4th year	9	38	30	17	8	5
TOTAL	34	152	117	63	24	30

SUM						

Table (3.6): Enrollment Trends for Past Three Academic Years

Academic Year	Full-time Students		No. of Graduates (B.Sc.)
	Male	Female	
2012-2013	139	170	62
2011-2012	125	135	49
2010-2011	149	156	67
2009-2010	167	139	75
2008-2009	172	127	68

*the number represents graduates from the first attempt exam

Table (4.1): B.Sc. Degree Curriculum \ Civil Engineering

1st yr	Subject	Unit	2nd yr	Subject	Unit
CE 101	Mathematics I	6	CE 201	Mathematics II	6
CE 102	Engineering Mechanics	6	CE 202	Strength of Materials	6
CE 103	Computer Science	4	CE 203	Computer Programming	4
CE 104	Engineering Drawing	4	CE 204	Engineering Survey	6
CE 105	Engineering Statistics	2	CE 205	Build Construction	3
CE 106	Workshops	2	CE 206	Fluid Mechanics	5
CE 107	Human Rights and democracy	4	CE 208	Concrete Technology	6
CE 108	Construction Material Test	5			
CE 109	Engineering geology	3			
CE 110	English Language	-			
3rd yr	**Subject**	**Unit**	**4thyr**	**Subject**	**Unit**
CE 301	Reinforced Concrete I Design	6	CE401	Reinforced Concrete Design II	4
CE 302	Structure Theory	6	CE402	Steel Structure Design	4

CE 303	Soil Mechanics	6	CE403	Hydraulic Structure	4
CE 304	Irrigation and Drainage Engineering	4	CE404	Foundations Engineering	6
CE 305	Engineering Analysis and Numerical Methods	5	CE 405	Highway Engineering	5
CE 306	Engineering Economic and Administration	4	CE 406	Sanitary Engineering	5
CE 307	Environmental Engineering	4	CE 407	Estimation and Construction Methods	4
CE 308	Traffic Engineering	3	CE408	Hydrology	4
CE 309	Summer Training	-	CE 409	Engineering Project	4

Table (5.1): Civil Engineering Department Faculty Size (Academic Year 2012/2013)

Specialization	Certificate		Rank				Gender		Total
	PhD	Msc	Prof	Asst. Prof.	Lec.	Asst. Lec.	Male	Female	
Structure	2	3	-	2	-	3	5	-	5
Water resource	2	1	-	-	3	-	1	2	3
Transportation	-	2	-	-	2	-	2	-	2
Geotechnical & foundation	-	4	-	-	-	4	4	-	4
Environmental	-	2	-	-	-	2	1	1	2
Architecture	-	2	-	-	-	2	2	-	2
Construction Material	-	1	-	-	-	1	1	-	1
Computer engineering	-	1	-	-	-	1	1	-	1
Geology	-	1	-	-	-	1	1	-	1
Concrete	-	1	-	-	-	1	1	-	1
Survey Eng.	-	2	-	-	-	2	1	1	2
Total	4	20	-	2	5	17	20	4	24

Code: Prof. = Professor, Asst. Prof. = Assistance Professor, Lec. = Lecturer, Asst. Lec. = Assistance Lecturer

Table (5.2): Faculty Research and Areas of Interest

Faculty Member	Rank	Highest Degree	Institution from which Highest Degree Earned \ Year	FT or PT	Research and Areas of Interest
Saad Farhan Salih Majid	Asst. prof.	Ph.D.	Nahrain university/2002	FT	Pre-stressed concrete behavior
Moayad Mohammed Qasim	Asst. prof.	Ph.D.	Kiev Institute/1990	FT	Mortar produced durability
Mariwan Radha Faris Mustafa	Lec.	Ph.D.	Sulaymani University/ 2012	FT	Water resources conflict resolution
Chelang Akram Omar	Lecture	Ph.D.	University of Technology/2009	FT	Stream flow simulation and Synthetic flow calculation
Suhail Fadil Hussien Mustafa	Lecture	M.Sc.	University of Baghdad/1985	FT	Truck traffic composition
Romel Nano Yaqob Lazar	Lecture	M.Sc.	University of Baghdad/2004	FT	Pavement design, pavement performance
Sahar A.Hussein Mohammad	Lecture	M.Sc.	Tikrit university/2000	FT	Hydrological aspects
Hammad Dhari Merie Hassan	Asst. Lec	M.Sc.	University of Technology/2004	FT	Analysis and design of spherical domes
Waleed Salahdin Sidik Khalid	Asst. Lec	M.Sc.	University of Technology/2001	FT	Soil improvement techniques
Najat Kader Omer Maolod	Asst. Lec	M.Sc.	University of Baghdad/2002	FT	Urban planning
Abdul ameer Husseen Qasim	Asst. Lec	M.Sc.	Mustansiriya University/1998	FT	Environment effects aspects
Aram Mohammed Raheem	Asst. Lec	M.Sc.	University of Baghdad/2005	FT	Foundation design
Khamees Nayyef Abdul-Haleem	Asst. Lec	M.Sc.	University of Mosul/2004	FT	Concrete beams additives
Qubad Sabah Haseeb	Asst. Lec	M.Sc.	University of Baghdad/2004	FT	Shell and domes design

Majid Hussain Hamed Majid	Asst. Lec	M.Sc.	Nahrain University/2004	FT	Soil mechanics
Mohammed Adnan Mohammed	Asst. Lec	M.Sc.	Gazi university/2004	FT	Interior design
Fouod Addullah Mohammed Ali	Asst. Lec	M.Sc.	University of Mosul/2006	FT	Soil mechanics
Oday Ali Azez Muhammad	Asst. Lec	M.Sc.	University of Technology/2005	FT	Concrete additives
Ahmed Freidoon Fadhil Khalil	Asst. Lec	M.Sc.	University of Baghdad/2007	FT	Computer programming
Bakhtiar Aziz Muhaidden Qader	Asst. Lec	M.Sc.	University of Mosul/2008	FT	Concrete behavior
Falah Mohammed Ahmed	Asst. Lec	M.Sc.	University of Mosul/2007	FT	Geological composites
Emdad Kadhim Zainal Khider	Asst. Lec	M.Sc.	Ege university/Turkey/2008	FT	Additives in concrete admixture
Shno Mustafa Ali Muhammad	Asst. Lec	M.Sc.	Tikrit university/2009	FT	Sanitary design
Muhammad Kamal Ali	Asst. Lec.	M.Sc.	Gazi University/2010	FT	Pre-stressed Concrete, Concrete Bridge beams
Saba Fadhil Ahmad	Asst. Lec.	M.Sc.	Sulaimania University/2011	FT	Electrons and Communication
Iman Ali Shawkat	Asst. Lec.	M.Sc.	University of Technology/2002	FT	Remote sensing

Table (5.3): Faculty Teaching Load Summary (Academic Year 2011/2012)

No.	Faculty Member (Name)	FT or PT	Classes Taught (Course No. /Credit Hrs.) Fulltime Academic Year	Program Activity Distribution%		
				Teaching	Research	Other
1	Saad Farhan Salih Majid	FT	, CE 401 (4), CE101 (6)	40	20	40
2	Moayad Mohammed Qasim	FT	CE402 (4), CE208 (6)	40	40	20
3	Chelang Akram Omar	FT	CE403 (4),	40	50	10
4	Suhail Fadil Hussien Mustafa	FT	CE 308(3)	40	30	30
5	Romel Nano Yaqob Lazar	FT	CE405(5),	40	30	30
6	Sahar A.Hussein Mohammad	FT	CE408(4), CE307(4)	40	40	20
7	Mariwan Ridha Faris Mustafa	PT	CE105 (2), CE206(5), CE406(5)	40	40	20
8	Hammad Dhari Merie Hassan	FT	CE108(5)	20	30	50
9	Waleed Salahdin Sidik Khalid	FT	-	-	-	-
10	Najat Kader Omer Maolod	FT	-	-	-	-
11	Abdul Ameer Husseen Qasim	FT		-	-	-

12	Aram Mohammed Raheem	FT	-	-	-	-
13	Khamees Nayyef Abdul-Haleem	FT	-	-	-	-
14	Qubad Sabah Haseeb	FT	-	-	-	-
15	Majid Hussain Hamed Majid	FT	CE303(6),CE110	40	30	30
16	Mohammed Adnan Mohammed	FT	-	-	-	-
17	Fouod Addullah Mohammed Ali	PT	-	-	-	-
18	Oday Ali Azez Muhammad	FT	-	-	-	-
19	Ahmed Freidoon Fadhil Khalil	FT	-	-	-	-
20	Bakhtiar Aziz Muhaidden Qader	FT	CE202(6), CE407(4)	40	40	20
21	Falah Mohammed Ahmed	FT	CE109(3),CE107(4)	40	30	30
22	Emdad Kadhim Zainal Khider	FT	-	-	-	-
23	Shno Mustafa Ali Muhammad	FT	-	-	-	-
24	Iman Ali Shawket	FT	CE204(6), CE104(4)	40	30	30
25	Mohammad Kamal	FT	CE301 (6)	40	30	30

Table (6.1): Classrooms Types and Sizes

Classroom		Area (m^2)	Maximum No. of Students
Room No. / Name	Type		
C1	Lectures	48	40
C2	Lectures	48	40
C3	Lectures	48	40
C4	Lectures	80	55
C5	Lectures	60	45
C6	Lectures	80	55
C7	Drawing room	220	50

Table (7.1): College Expenditure for faculties' capabilities (Fiscal year 2013)

Item	ID
The total amount allocated by the University for Collage for the purchase of books, periodicals and reference	21937500
The total amount allocated by the University for the Collage for conferences and seminars	2000000
The total amount allocated by the University for the Collage for the purposes of scientific research and postgraduate studies	185000000
The total amount allocated by the University for the College to train academic and administrative staff	18000000
The total amount allocated by the University for the College for the purposes of other expenses (such as festivals, scientific or technical exhibition	6375000
The total amount allocated by the University for the College to scientific dispatch	Zero
The total amount allocated by the University for the College to purchase of textbooks	33625000

Table (7.2): College Expenditure for scientific research (Fiscal year 2013)

Item	ID
The total amount allocated by the University for the Collage for purchase of books, periodicals and references	21937500
The total amount allocated by the University for the Collage for conferences and seminars	2000000
The total amount allocated by the university for the collage for the scientific research and postgraduate studies	185000000

Table (7.3): College balancing for the year 2013

No	Paragraphs of the financial field	Amount in Iraqi dinars
١	Total budget allocated to the collage	965105745
٢	Financial Resources and sources of funding that the college depend on them to cover annual expenditure: University of Kirkuk	0
٣	Total salaries of academic staff in the College	649881146
٤	Total salaries of employees in the administrative and ancillary services	576047626
٥	Total additional wages charged by the academic staff	10238000
٦	Total wages charged by the part time additional external lectures	zero
٧	The total amount allocated by the University for the College for purposes of maintenance of buildings and appliances and equipment	34572000
٨	The total amount allocated by the University for the College for purchasing of equipment, materials and other supplies	51250000
٩	The total amount allocated by the University for the College for purchase of books, periodicals and reference	21937500
١٠	The total amount allocated by the University for the College for conferences and seminars	2500000
١١	The total amount allocated by the University for the college for scientific research and postgraduate studies	185000000
١٢	The total amount allocated by the University for the College to train academic and administrative staff	18000000
١٣	The total amount allocated by the University for College for the other activities such as celebration, scientific or technical exhibitions, etc…	3187500
١٤	The total amount allocated by the University for the College workshops	zero
١٥	The total amount allocated by the University for the College for student services	zero
١٦	The total amount allocated by the University for the College to scientific dispatch	zero
١٧	The total amount allocated by the University for the College to purchase of textbooks	23625000
١٨	The total amount allocated by the University for the College as incentives and bonuses for college staff	4481980