

# Quality in Engineering Education Explore the weaknesses in The Quality of the Academic program – A Review

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**Abstract** - Educational programs in academic institutions play an important role in terms of the impact on the teaching and learning process, hence the importance of reviewing the quality of those programs has emerged. This review sought to examine the academic program quality standards' implementation in the Department of Architecture - Nahrain University. The review results indicated the academic program's commitment to achieving the quality standards as well as illustrating several conclusions that identify weaknesses and serve to raise the quality of the academic program adopted by the Department of Architecture - Al Nahrain University.

**Key Words:** (academic program, engineering education, Quality,).

## 1. INTRODUCTION

Education development has become a fundamental demand for contemporary societies and an urgent need to meet the challenges of the times of the revolution in information, communication, science, and technology. In the field of higher education, countries have been interested in developing education, its institutions, and academic and professional units to raise the level of output to deal with rapid changes and developments.

Contemporary global social communication confirms that university education will be a competitive field among the world's powers, especially in a world of increasing interdependence, however, educational systems are always criticized, and this criticism is a phenomenon that involves experts with different visions, as some believe that a reform project should be adopted by the developing society. The aim is to introduce higher education in developing countries so that its deviations can be adjusted and made parallel to the scientific progress of the world's first-ranked countries.

Quality Assurance in higher education institutions has become one of the most important measures to ensure the quality of university programs in terms of content, curricula, learning and teaching methods, educational evidence, responding to the needs of the market and society, competitiveness and global presence; and to prepare the university student for a sustainable job, and to be able to take part in and interact with the work environment.

## 2. Quality concept

The traditional concept of education quality is associated with screening and analysis processes, focusing only on final tests without reviewing cognitive, kinesthetic, logical, and behavioral capabilities and skills. Therefore, this traditional concept of quality in education has been transformed to the modern concept to emphasize education quality, which is based primarily on the need to choose standard performance rates and build systems for quality management of education. However, due to application difficulties, quality management in education, which needs the participation of all to ensure the survival and continuity of educational institutions, has emerged as an extremely important method of improving performance efficiently. Modern variables in the developed world have imposed on us the necessity of adopting a method that goes beyond the limits of reality and looks forward to the future with the available threats and opportunities. Hence the Educational Institution entity is directed toward quality assurance and accreditation. (5)

According to what was agreed upon at the UNESCO Conference on Education, which Held in Paris in October 1998, states that quality in higher education is a multidimensional concept that should encompass all education functions and activities such as:-

1. School curricula.
2. Educational programs.
3. Scientific researches.
4. Students.
5. Buildings, facilities, and tools.
6. Providing services to the local community.
7. Internal self-education.
8. Identify internationally recognized quality comparison standards.

Quality is considered one of the most important ways and means to improve the quality of education and its performance in the current era, which some intellectuals call an age of quality. Quality is no longer a luxury for educational institutions or an alternative for educational systems, but an urgent necessity dictated by the contemporary movement of life, a proof of the survival of the educational institution. Quality is therefore the fulfillment of the requirements expected by the customer (the beneficiary of the service), (4).

### 3. The need for quality assurance

- a. Due to the growing importance of quality assurance in today's world, many efforts have been made in this regard at the international and regional levels. At the international level, UNESCO organized a world conference on higher education, held in Paris on 9 October 1998. The emphasis was placed on quality assurance and article XI of the Declaration of the conference emphasized the importance of qualitative assessment in academic programs covering all higher education functions and activities. (14)
- b. Quality assurance in the higher education sector
- c. Quality assurance activity in the higher education sector is implemented through evaluation and accreditation in the world's higher education institutions to monitor the concepts and procedures in the global higher educational institutions (6). The Quality Assurance Movement has emerged as a positive reaction to the concern expressed by academics, officials, and society about the quality of higher education, which has resulted from many factors, including international competition, the changing needs of the market, and finance. Hence quality assurance is necessary to meet the needs associated with quality and accountability in higher education. (9)
- d. 1-1-3 Quality Control concept
- e. Several procedures that measure the compliance of a product with predefined criteria. If necessary, it may result in an adjustment in production processes to make the product more consistent with specifications (6).
- f. 3-1-2 Quality assurance concept
- g. Quality assurance is the process of developing timely and appropriate mechanisms and procedures to ensure that the desired quality will be achieved regardless of how these criteria are set (6).
- h. Standards to be followed to assess the learning process' quality:
- i. Recent trends concerned with quality control management work to estimate the university education outputs in terms of the availability of directional, cognitive, vocational, and behavioral characteristics of graduates, besides, the measurement of the quality of the educational process extends to the quality of the elements of educational delivery in educational institutions. In 1992, the British Ministry of higher Education established a Standing Committee to assess the quality of those components at the first degree in British universities (11), besides, a higher Council was established in 1995 for the Evaluation of the Quality Assurance in American Universities (National Quality Assurance and Accreditation, 2004) (9). The two committees agreed on the criteria to be followed to evaluate the quality of the educational process as indicated in the table (1) (9).

**Table -1:** indicates the Criteria for assessing the quality of the educational process in the educational institution (9)

Element	Quality aspects
1. Study material.	<ul style="list-style-type: none"> <li>- The degree to which key topics are covered.</li> <li>- Suitability to the student's ability to understand at this stage.</li> <li>- Link to reality.</li> <li>- Familiarity with basic knowledge.</li> <li>- Prepare the student for the age of globalization by learning a foreign language.</li> </ul>
2. Scientific reference.	<ul style="list-style-type: none"> <li>- The reliability of the reference.</li> <li>- The scientific reference form and style.</li> <li>- Availability time of the scientific reference.</li> <li>- Scientific reference price.</li> <li>- The benefit from the scientific reference.</li> <li>- The originality of the scientific material.</li> <li>- Type of trends that the scientific reference develops.</li> </ul>
3. Teaching staff.	<ul style="list-style-type: none"> <li>- Academic level and knowledge background.</li> <li>- Realizing students' needs.</li> <li>- Joining the educational process.</li> <li>- Commitment to the study material.</li> <li>- Accept feedback.</li> <li>- Work on developing competitive intellectual skills.</li> <li>- Develop a patriotic and moral sense.</li> <li>- The aim of the teaching method used.</li> <li>- Development of analytical trend.</li> <li>- Development of in-depth look.</li> </ul>

	<ul style="list-style-type: none"> <li>- Personal interaction.</li> <li>- Awareness of the role of scientific and ethical capacity</li> </ul>
4. Evaluation method.	<ul style="list-style-type: none"> <li>- Objectivity and consistency.</li> <li>- Reliability and inclusion.</li> <li>- Not focusing on memorization.</li> <li>- Emphasis on analytical ability.</li> <li>- Focus on critical thinking.</li> </ul>
5. Administrative system.	<ul style="list-style-type: none"> <li>- Availability of Information required to operate and manage the system.</li> <li>- Moving towards the labor market.</li> <li>- Good atmosphere for sports and artistic activities.</li> <li>- Efficiency and effectiveness of the administrative system.</li> <li>- Receive and deal with complaints.</li> </ul>
6. Financial facilities	<ul style="list-style-type: none"> <li>- Correspondence to the nature of the educational process.</li> <li>- Development of the aesthetic aspect.</li> </ul>

- j. Architectural academic program concept.
  - k. To learn about the architectural academic program concept, we will first look at the definition of the concept linguistically and then idiomatically of the academic program according to the researchers' viewpoints.
  - l. Linguistic definition:
  - m. Program
  - a. Program: a plan or system under which action may be taken toward a goal. (10)
  - 1. Program: a complete plan for solving a problem by the use of a mechanism that includes both instructions to be inserted into the mechanism and plans for human activities such as interpreting the output. (10)
  - n. Academic
    - 1. Academic: is an adjective relating to, or associated with an academy or school especially of higher learning. (10)
- 5-1-1 Idiomatic definition of the Academic Program:

Researchers have defined the academic program according to viewpoints. Some definitions are listed below:

1. Definition of (Scrivener): it is the core of the educational process since it is responsible for providing specialized knowledge, mental and professional skills related to specialization to achieve the targeted learning outcomes according to approved international academic standards. External challenges have also imposed on academic programs the imperative of striving hard to improve the quality of their effectiveness, thereby increasing their ability to predict local labor market needs (13).
2. (Ruzzi & Kraeme) definition: The program is defined as every activity in the organization, or several activities, that depletes resources (funds, individuals, space, equipment, and time) such as the Bachelor's degree program in architecture science. (12).

3. (Davis & Brutseart-Durant & Lee) definition: A set of mechanisms, to achieve knowledge, skills, and attitudes offered by the university to achieve the desired learning outcomes from an academic program in a limited period (6).
  4. (Nitecki) definition: It is an integrated program of architecture education within the higher education academic unit of Iraqi universities. The components of this program are Objectives, Curriculum, Output, Assessment Resources, and Assessment tools (10).
  5. Definition of (National Quality Assurance and Accreditation): A distinguished and structured set of vocabulary leading to the academic degree attached to this program (Bachelor's, Diploma, etc.). It is also defined as a set of mechanisms for achieving knowledge and skills that are offered both within and outside the university to achieve the desired learning outcomes from an educational program in a limited time. (9)
  6. Royal Institute of British Architects(RIBA): The British Quality Assurance Agency defined it as organizing learning experiences in a field and is being developed toward certain predetermined objectives, within the context of the academic institution's educational system (college and university) (11).
- 5-2 Academic programs assessment:
1. Quantitative Assessment: In this approach, the members of the assessment team focused on the collection of information and quantitative indicators. The quantitative assessment allows accurate consideration of each element of academic performance in quantitative terms, thereby focusing on the quality of inputs, processes, and outputs. (3).
  2. qualitative assessment: Many tools and methods are used in the qualitative assessment, including Discussions, interviews, observations, the examination of records and work, case studies, measures, and questionnaires, etc. The assessment team has followed the qualitative assessment method. In light of the information, data, and evidence gathered by the team, findings are summarized by

answering the written paragraphs and metrology that show the quality of the academic program. The focus here is on the quality of inputs, processes, and outputs, i.e. when there an assessment, experience and different standards must be used to ensure that each of the different factors in the relevant department affect the level of student achievement, quality of education and learning, student behavior and attitudes, and overall growth (3). The qualitative assessment for each axes of quality adopted by the Quality Assurance Board includes a set of indicators covering different aspects of each axis so that the educational institution should be guided when preparing the self-assessment report. External evaluators also study and analyze these aspects when assessing the axis during their field visit to the educational institution. These groups have been included in the main indicators that are addressed in the working study tables based on the Quality Assurance Manual for Academic Programs (10).

**4. Practical study:**

A survey form was prepared that included a series of questions that the researcher found after reviewing the number of theoretical frameworks that dealt with quality

assurance evaluation of academic programs in many of the sources described in the review, which can, in turn, give a set of indicators on the quality situation of the academic program illustrated in the tables, numbered (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12). It was distributed to the teaching staff of the Department of Architecture, Nahrain University, as a teacher, Assistant Professor, Professor with at least ten years' experience in teaching at the department. They included (13) thirteen teachers out of 27 using the Likert scale in the five-point questionnaire (strongly agree, agree, neutral, disagree, strongly disagree). The answers were obtained from the teaching staff, taking into consideration their academic degree and years of service in teaching in the relevant department regarding these questions which were answered to provide indicators to assess the quality of the academic program being tested and to identify its weaknesses to meet the requirements of quality assurance.

**5. Results**

The results of conducting the survey related to quality assessment of the academic program indicated the following findings in the tables (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 12), as follows:

**Table - 2:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((1) Academic program objectives and learning outcomes)

1. Academic program objectives and learning outcomes						
Indicator		strongly agree	agree	neutral	disagree	strongly disagree
	Does the academic program have clear and specific objectives?		18 %	%28	%44	%10
	Has the academic program's message been translated into measurable procedural objectives?		%4	%21	%67	%8
	Did the faculty members and students participate in developing the academic program's mission?		%2	%14	%73	%11
	Is the academic program's message based on the objectives and mission of the college in the planning and decision-making process?		%1	%12	%81	%6
	Are the academic program objectives and learning outcomes measurable?		%5	%23	%59	%13
	Are the mission, objectives, and learning outcomes of the academic program approved by the College Board?		%3	%13	%62	%22
	Are the academic program's message, objectives, and learning outcomes published, publicly known to society, faculty, administrators, and students?			%3	%78	%19
	Do the objectives of the academic program include expected learning outcomes from graduates?		%2	%10	%71	%17
	Do the objectives of the academic program and learning outcomes focus on providing opportunities for study, specialization, and delve into knowledge?		15 %	%14	%45	%26
	Do the objectives of the academic program and the learning outcomes focus on promoting scientific research, intellectual independence, and the		%5	%12	%58	%25

	development of collective action spirit?					
	Do the objectives of the academic program and the learning outcomes include the recognition of advanced technology and capacity development to use them in the area of specialization?		32 %	%29	%39	
	Do the objectives of the academic program and the learning outcomes connect between academic education and the various work sectors?		12 %	%4	%74	%10
	Do the objectives of the academic program and the learning outcomes focus on introducing modern methods into the learning system that increase the student's ability to innovate?		%1	%22	%69	%8

**Table No- 3:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((2) Curriculum).

2. Curriculum						
Indicator		strongly agree	agree	neutral	disagree	strongly disagree
	Does the curriculum fit into the general philosophy of the educational institution, fulfill its mission and objectives, and the needs of students and society?		%2	%2	83 %	%13
	Does the department fully define the components of each academic program in terms of the system followed (semester, annual, hours)?	%7	79 %	%10	%4	
	Does the department ensure the clarity of the different roles and responsibilities of the organs involved in designing and reviewing their programs (board, committees, etc.)?	%5	67 %	%21	%7	
	Does the department care about the relevance of academic programs to the needs of society, the labor market, and the requirements of cognitive development?		%1	%26	62 %	%11
	Does the department ensure that academic learning outcomes are consistent with local and global standards in higher education by evaluating educational outcomes, academic programs, courses, and certificates?		%3	%19	56 %	%22
	Does the design of the academic program take into account the observations and opinions of specialists, practitioners, and beneficiaries?		%2	%20	60 %	%18
	Are the academic disciplines and programs implemented by the Department reviewed periodically?		10 %	%23	55 %	%12
	Does the Department have an approved system for evaluating the results of field training for students?		%7	%14	66 %	%13
	Does the department assign students to prepare a graduate project at the end of the university study?					%100
	Does the department have integrated files related to the courses with detailed data?		13 %	%36	27 %	%24
	Does the department have documentation of the academic courses for the last two semesters, including (course description, a copy of students'			%22	51 %	%27

	assignments, exercises, projects, exams, grading distribution, etc.)?					
	Does the department provide advanced curricula that keep pace with the developments and ensure their quality and continuous improvement?		%5	%11	69%	%15
	Does the department compare what is taught in each course with that of the distinguished educational institutions?		24%	%12	41%	%23
	Does the department list the names of the approved books as a reference?			%2	91%	%7
	Do the curriculum and its contents meet the skills required for the labor market?		14%	%31	48%	%7
	Do the planned curricula meet the skills of developing scientific thinking and self-learning?		10%	%1	73%	%16
	Does the curriculum take into account the basic principles, theories, trends, and schools of thought in the area of specialization?		31%	%27	39%	%3
	Does the curriculum take into account deep scientific knowledge in teaching key topics?		12%	%41	35%	%12
	Does the curriculum take into account the ability to properly use concepts, terms, and content?		72%	%14	11%	%3
	Does the curriculum take into account experience in applying the knowledge and skills acquired by a student during a job study or completing his or her higher education?	%5	39%	%9	42%	%5
	Does the curriculum take into account recent developments, trends, and related contemporary issues in the area of specialization?		37%	%14	49%	
	Does the curriculum consider connecting academic knowledge related to specialization to other areas of knowledge?		51%	%32	14%	%3

**Table No - 4:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((3) Teaching and Learning)

3. Teaching and Learning						
Indicator		strongly agree	agree	neutral	disagree	strongly disagree
	Is there a documented and publicly stated plan for the teaching and learning strategy that meets its mission and objectives?		%1	%10	%82	%7
	Does the department have a clear view of the level of information and knowledge to be provided in the future with their message and vision?			%3	%86	%11
	Is there a mechanism for reviewing the teaching and learning strategy in light of the results of the exams and the survey of students and faculty?			%4	%91	%5
	Are devices and tools updated and diversified in line with the requirements of each cognitive domain?		%6	%13	%69	%12
	Does the department ensure that the learning methods used are related to the objectives of the academic program, the educational content, and the			%2	%89	%9

	learning outcomes targeted?					
	Are various teaching methods such as lecturing, discussion, brainstorming, writing projects, and others used?		30 %	%17	%39	%14
	Do the courses cover specific areas for developing self-learning?		20 %	%32	%31	%17
	Are there any procedures approved by the Department Board for the university book approved for each course?			%1	%93	%6
	Does the department provide effective field training programs for students based on their actual needs and target?		%2	%7	%88	%3
	Does the department use specific and clear mechanisms to implement, monitor, and evaluate field training programs?		%7	%16	%64	%13
	Do the students' field training programs vary and include different disciplines?			%4	%85	%11
	Are there appropriate models for conducting student assessment during and after the training?		%2	%16	%65	%17
	Is field training effective in achieving targeted training results (Student Survey/Assessment Results Analysis)?			%2	%88	%10
	Does the department conduct assessment researches on the methods used in student education?			%3	%94	%3

**Table No -5:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((4) Faculty Members)

4. Faculty Members						
Indicator		strongly agree	agree	neutral	disagree	strongly disagree
	Does the department have a clear vision of its needs from faculty members?		%29	20 %	%39	%12
	Does the department provide a sufficient number of qualified faculty members to implement academic programs and educational services?		%47	30 %	%23	
	Does the department adopt clear and transparent criteria for selecting faculty members?		%15	11 %	%61	%13
	Are there professional development and continuous education programs for faculty members?		%32	29 %	%31	%8
	Does the department organize statistics and data for faculty and assistant members by academic qualifications, degrees, experience, etc.?		%87	10 %	%3	
	Does the department apply the teaching hours specified for faculty members according to their academic degrees?		%100			
	Does the department identify for each faculty member a group of students to guide them academically during the academic years?				%100	
	Does the section provide an opportunity for faculty members to participate in scientific committees within and outside the department?		%23	32 %	%43	%2

**Table No - 6:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((5) Library and learning resources).

5. Library and learning resources					
Indicator	strongly agree	agree	neutral	disagree	strongly disagree
Does the department provide a library, Internet room, electronic databases, etc.?			%3	%74	%23
Does the department provide instructions for using the devices available in workshops and Labs?				%69	%31
Does the department provide the required teaching techniques and equipment in the teaching process (data projectors, data show, slide show, video, etc.)?		32 %	17 %	%51	
Are students' information and grade stored on the computer?		100 %			
Does the section have a film library and tutorials?		%2	12 %	%86	
Does the Library provide time to assist its beneficiaries?		26 %	27 %	%47	
How appropriate are the Library's holdings with the academic course?		30 %	31 %	%39	
Does the library obtain holdings from references and periodicals in the field of specialization?			29 %	%71	
Is the computer used in the library for research purposes and lending books?		36 %	34 %	%30	

Table No (7) shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((6) student progress and their performance assessment)

6. Student progress and their performance assessment					
Indicator	strongly agree	agree	neutral	disagree	strongly disagree
Does the department adopt high-quality standards in selecting students?		%11	%31	%58	
Does the department ensure that students are accepted according to their planned plans?		%61	%23	%16	
Does the department take tests for students to check their scientific and mental readiness?		%71	%24	%5	
Does the department apply behavioral sanctions instructions to students?		%45	%21	%34	
Does the department keep a special file for each student containing information about his or her behavior, activity, academic, and social level?		%100			
Does the department distribute guides to new students to familiarize them with the department and its facilities?			%7	%93	
Do the Department share with its students' decision making and problem-solving related to		%6	%3	%91	



	student issues and academic aspects?				
	Does the department inform labor markets of its graduates' competencies and seeks to provide them with job opportunities?		%1	%10	%89
	Does the department provide statistics on the number and distribution of students by type, stage, course, socio-economic status, etc.?		%13	%35	%52
	Does the department support targeted social and entertainment programs for its students?		%75	%21	%4
	Does the department look at students' opinions on the quality of teaching and learning?		%91	%2	%7
	Does the department survey students' views on evaluating the teaching process?		%67	%23	%10
	Does the Department seek to attract and select outstanding students and encourage them to enroll in its academic programs?		%49	%10	%41
	Does the department assess the level of academic achievement of its students and present it to its council?		%100		
	Does the department survey the views of the recruiters on the quality and level of graduates in all disciplines to identify and correct skills deficiencies to address them?		%5	%1	%94
	Does the department examine students' academic background when registering for the academic program?		%100		
	Does the department conduct studies in which students' opinions are periodically consulted on supplementary services, sports activities, indoor accommodation, restaurants, parking, etc.?		%5	%34	%61
	Does the department care about the non-methodological activities to deepen the relationship between faculty and students?		%42	%2	%46
	Do student assessment methods align with the content of their adopted courses?		%56	%19	%25
	Do the exams measure students' different cognitive levels?		%71	%16	%13
	Are student assessment methods varied and not limited to editorial tests?		%100		
	Is assessment methods with students able to measure targeted learning outcomes?		%44	%20	%36
	Do the assessment methods used correspond to the content of the students' adopted courses?		%30	%29	%41
	Is the analysis of student assessment results and feedback from external reviewers at the academic program and course level used to take corrective action and to develop courses?		%4	%31	%65
	Do exam schedules be announced at appropriate student intervals?		%100		
	Do exam schedules fit students' needs and desires?		%100		
	Are the exam results announced on appropriate dates without delay?		%100		
	Is there feedback for students on assessment results?		%100		
	Are feedback reviewed and corrective actions taken in light of student results?		%100		

	Is there a mechanism that is announced and applied to deal with students' complaints about exam results?		%100			
	Does the department support different assessment methods?		%100			
	Does the department use the External examiners' System to assess students?		%100			
	Do the student exams correspond to the content of the courses?		%100			

**Table No – 8:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field (7) supporting facilities and services.

7. supporting facilities and services					
Indicator	strongly agree	agree	neutral	disagree	strongly disagree
Are the department buildings designed for their intended use?				%100	
Is the size of the department's buildings commensurate with the student capacity?		%30	%14	%56	
Does the department have suitable rooms for studying in terms of space, ventilation, lighting, etc.?		%100			
Does the department provide offices and appropriate places for faculty members?		%76	%1	%23	
Does the department provide a library, an internet hall, databases, etc.?		%43		%47	
Does the department provide security and safety conditions in all its facilities?		%100			
Does the department provide an opportunity for faculty members to practice the types of teaching techniques available in the department?		%100			
Does the department use new technologies in administrative and office work?		%100			
Are students' information and grade stored and retrieved using appropriate and up-to-date databases and information systems?		%100			
Does the department have a seminar room and other halls according to the nature of the academic program and its needs?		%100			
Is there a meeting room?		%100			
Does the section have a class break?				%100	

Table No (9) shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((8) Administration of the academic program. - A - department head).

8. Administration of the academic program. - A - department head						
Indicator		strongly agree	agree	neutral	disagree	strongly disagree
	Does the academic program head have leadership qualities commensurate with the overall quality requirements?		%43	%45	%12	
	Is the head of the academic program interested in providing the appropriate scientific atmosphere and human relations within the department for the success of the educational process?		%87	%4	%7	
	Does the head of the academic program make optimal use of human, material, and technical resources?		%79	%13	%8	
	Does the head of the Academic Program meet its needs for new scientific disciplines?		%89	%2	%9	
	Does the head of the academic program support mechanisms for promoting scientific research?		%90	%2	%8	
	Does the head of the academic program take the views and proposals of representatives of the community in the development of the academic program?				%100	
	Does the head of the academic program ensure an effective working relationship between senior management and faculty members?		%85	%4	%11	
	Does the head of the academic program exercise all their powers?		%100			
	Is the head of the academic program interested in enhancing interaction with local community institutions?		%4	%5	%91	
	Does the head of the academic program take into consideration the opinions of the students' representatives in the specialized councils?		%73	%15	%12	
	Is the head of the academic program keen to solve the problems facing the Deanship?		%100			
	Does the head of the academic program take into consideration the opinions and suggestions of those working in the department and discuss their complaints?		%100			
	Does the head of the Academic Program keep track of its performance in the field?		%100			
	Does the head of the Academic Program encourage initiatives to improve work performance?		%100			
	Does the head of the academic program have an information system that meets the needs of planning, follow-up, and decision-making?		%100			

**Table No-10:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((9) Administration of the academic program. B- Department plans).

9. Administration of the academic program. B- Department plans					
Indicator	strongly agree	agree	neutral	disagree	strongly disagree
Does the department have future action plans that demonstrate how to achieve its objectives?		%3	%4	%93	
Are the Department's plans flexible to absorb educational developments?		%42	%4	%54	
Are the department plans reviewed periodically and amended?		%93	%7		
Does the department involve faculty, specialists, and graduate beneficiaries in preparing annual plans and making decisions?		%20	%16	%64	
Are the academic program plans transferable to applied projects?		%51	%8	%41	
Does the department provide an internal audit system for the results of plans for continuous improvement?				%100	
Does the department section provide the required statistics on the number of employees, faculty, qualifications, experience, and their CVs?		%100			

**Table No - 11:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((10) Scientific research and outreach).

10. Scientific research and outreach					
Indicator	strongly agree	agree	neutral	disagree	strongly disagree
Does the department adopt clear and explicit mechanisms to follow up on its plan research?		%100			
Is the Department's research plan and its human and material potential compatible?		%100			
Does the department document and adopt its research plan in the Council of the Department?		%100			
Does the department provide an appropriate environment for scientific research that encourages faculty members to carry out scientific research related to the needs of society and the labor market?		%5	%2	%93	
Does the department encourage joint scientific research?		%46	%13	%41	
Does the department cooperate with scientific and research institutions in conducting joint research?		%3	%30	%67	
Does the department use its scientific research activities to address and develop community problems?		%16	%27	%57	
Does the department give priorities to field scientific research with material and economic returns to the local community and its institutions?		%10	31%	%59	
Does the department encourage innovative research		%39	%21	%40	

	that opens up new scientific or application horizons?				
	Are there any methods adopted by the department to motivate, care, and support researchers?	%2	%2	%96	
	Does the department encourage faculty members to receive research grants inside and outside the country?	%46	%3	%51	
	Does the department encourage faculty members to participate in local conferences and seminars?	%100			
	Does the department contribute through research teams to serving the different production sectors of the community?	%3		%97	
	Does the department benefit from the results of scientific research in developing curricula?			%100	
	Do you have research skills development programs in the department that develop the skills of the scientific research methodology (to help researchers)?			%100	
	Does the Department encourage researchers and students to participate in research projects?	%43	%1	%56	
	Does the Department have a special budget to support and disseminate scientific research?			%100	
	Does the Department provide the equipment and tools needed for research and establish rules to ensure its efficient use?			%100	
	Do students participate in scientific conferences and seminars?	%33	%24	%43	
	Do students participate in research projects?	%44	%4	%52	
	Does the department seek to establish a good relationship between its students and the institutions of society before leaving the labor market?			%100	
	Does the Department hold scientific, cultural, development, and training seminars?	%64	%22	%14	
	Does the department provide consultations for public and private community institutions?	%43	%17	%40	
	Does the department motivate faculty members to contribute to community service?	%4	%20	%86	
	Does the department survey the institutions in which graduates of the department work to periodically identify the competence of graduates?	%3		%97	
	Does the department seek to provide specialized services to different sectors of society?	%10	%3	%87	

**Table No -12:** shows the percentages of the respondents' answers to quality assessment questions for the academic program in the following field ((11) Quality Management and Improvement).

11. Quality Management and Improvement					
Indicator	strongly agree	agree	neutral	disagree	strongly disagree
	Does the college have a quality assurance unit?	%100			
Does the department have specialized manuals for the quality of academic programs and apply the mechanisms of work?		%51	%9	%40	

	Does the department conduct a self-evaluation of its specialized programs periodically?		%100			
	Does the department have a close relationship with the program accreditation institutions?		%40	%12	%45	%3
	Does the section have a system for the self-and external assessment?		%100			
	Are there effective mechanisms to continue to improve and develop the teaching process?		%24	%7	%69	
	Are there effective mechanisms to evaluate the performance of faculty members?		%100			
	Are there mechanisms for continuous academic development for faculty and supporting staff?		%52	%6	%41	%1
	Are there clear mechanisms for accepting students in the major?		%100			
	Do quality management mechanisms and procedures apply and are effective in improving quality?		%35	%14	%44	%7
	Does the department document all of its data and procedures related to the assessment and development process?		%100			
	Does the department use assessment results, development, and improvement according to a specific time planning?		%27	%24	%49	
	Has the academic program been subject to third-party performance evaluation?		%79	%13	%8	
	Does the department care about the results of assessment reports and benefit from them in developing improvement and development plans?		%55	%5	%35	%5
	Does the department provide financial and moral support for conducting assessment studies?				%100	

**6. Conclusions:**

Tables in numbers (12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22,23) show the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher).

**Table No. -13:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((1) the objectives of the academic program and the learning outcomes).

1-9-5	1. The objectives of the academic program and the learning outcomes	
Weaknesses:		The answer to the question percentage
	Has the academic program's message been translated into measurable procedural objectives?	( 67%) disagree
	Did the faculty and students participate in the development of the academic program mission?	( 73%) disagree
	Is the academic program's mission based on the objectives of the college in the planning and decision-making process?	( 81%) disagree
	Are the academic program's mission, objectives, and learning outcomes endorsed by the College Council?	( 62%) disagree
	Are the academic program's message, objectives, and learning outcomes published, publicly known to society, faculty, administrators,	( 78%) disagree

	and students?	
	Do the objectives of the academic program include expected learning outcomes from graduates?	(71%) disagree
	Do the objectives of the academic program and the learning outcomes mean linking academic education with different work sectors?	( 74% ) disagree
	Do the objectives of the academic program and the learning outcomes focus on introducing modern methods into the learning system that increase the student's ability to innovate?	(69%) disagree

**Table No.-14:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((2) Curriculum).

2-9-5	2. Curriculum	
Weaknesses:		The answer to the question percentage
	Does the department care about the suitability of the academic programs to the needs of society, the labor market, and the requirements of cognitive development?	( 62% ) disagree
	Does the design of the academic program take into account the observations and opinions of specialists, practitioners, and beneficiaries?	( 60% ) disagree
	Does the department have an approved system for evaluating the results of field training for students?	( 66% ) disagree
	Does the department provide advanced curricula that keep up with the developments and ensure quality and continuous improvement?	( 69% ) disagree
	Does the department list the names of books approved as sources for each course?	( 71% ) disagree

**Table No. -15:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((3) Teaching and learning).

3-9-5	3. ((3) Teaching and learning).	
Weaknesses:		The answer to the question percentage
	Is there a documented and publicly stated plan for the teaching and learning strategy that meets its mission and objectives?	( 82 % ) disagree
	Does the department have a clear view of the level of information and knowledge needed to achieve its message and future vision?	( 86 % ) disagree
	Is there a mechanism for reviewing the teaching and learning strategy in light of the results of the exams, survey results of students and faculty?	( 91 % ) disagree
	Are devices and tools updated and diversified in line with the requirements of each cognitive domain?	( 69 % ) disagree
	Does the department ensure that the learning methods used are related to the objectives of the academic program, the educational content, and the learning outcomes targeted?	( 89 % ) disagree
	Are there procedures approved by the department council regarding the approved university book for each course?	(93 %) disagree
	Does the department provide effective field training programs for students based on their actual needs and target?	( 88 % ) disagree
	Does the department use specific and clear mechanisms to	(64 %) disagree

	implement, monitor, and evaluate field training programs?	
	Do the students' field training programs vary and include different disciplines?	(85 %) disagree
	Are there appropriate forms for evaluating students during and after training?	(65 %) disagree
	Is field training effective in achieving targeted training results (Student Survey/Assessment Results Analysis)?	(88 %) disagree
	Does the section conduct evaluation research on the methods used in student education?	(94 %) disagree

**Table No.- 16:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((4) Faculty Members)

4-9-5	4. ((4) Faculty Members)	
	Weaknesses:	The answer to the question percentage
	Does the department adopt clear and transparent standards for selecting faculty members?	(61 %) disagree
	Does the department identify a group of students for each faculty for academic guidance during the years of study?	(100%) disagree

**Table No.- (17):** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((5) Library and learning resources).

5-9-5	5. ((5) Library and learning resources).	
	Weaknesses:	The answer to the question percentage
	Does the department provide a library, an Internet hall, electronic databases, etc.?	(74 %) disagree
	Does the department provide instructions for using devices available in labs and workshops?	(69 %) disagree
	Does the department have a film library and tutorials?	(86 %) disagree

**Table No. -18:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator student progress and their performance assessment

6-9-5	6. student progress and their performance assessment	
	Weaknesses:	The answer to the question percentage
	Does the department distribute guides to new students to familiarize them with the department and its facilities?	(93 %) disagree
	Do the Department share with its students' decision making and problem-solving related to student issues and academic aspects?	(91 %) disagree
	Does the department inform labor markets of its graduates' competencies and seeks to provide them with job opportunities?	(89 %) disagree
	Does the department survey the views of the recruiters on the quality and level of graduates in all disciplines to identify and correct skills deficiencies to address them?	(94 %) disagree
	Does the department conduct studies in which students' opinions are periodically consulted on supplementary services, sports activities, indoor accommodation, restaurants, parking, etc.?	(61 %) disagree
	Are the analysis of student assessment results and feedback from	(65 %) disagree



	external reviewers at the academic program and course level used to take corrective action and to develop courses?	
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**Table No. -19:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((7) supporting facilities and services)

7-9-5	1. supporting facilities and services	
Weaknesses:		The answer to the question percentage
	Are the department buildings designed for their intended use?	(100%) disagree
	Does the section have a class break?	(100%) disagree

**Table No. - 20:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((8) Administration of the academic program. - A - department head).

8-9-5	2. Administration of the academic program. - A - department head	
Weaknesses:		The answer to the question percentage
	Does the head of the academic program take the views and proposals of representatives of the community in the development of the academic program?	(100%) disagree
	Is the head of the academic program interested in enhancing interaction with local community institutions?	(91 %) disagree

**Table No. -21:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((9) Administration of the academic program. B- Department plans).

9-9-5	3. Administration of the academic program. B- Department plans	
Weaknesses:		The answer to the question percentage
	Does the department have future action plans that demonstrate how to achieve its objectives?	(93 %) disagree
	Does the department involve faculty, specialists, and graduate beneficiaries in preparing annual plans and making decisions?	(64 %) disagree
	Does the department provide an internal audit system for the results of plans for continuous improvement?	(100%) disagree

**Table No. -22 :** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((10) Scientific research and outreach).

10-9-5	Scientific research and outreach	
Weaknesses:		The answer to the question percentage
	Does the department provide an appropriate environment for scientific research that encourages faculty members to carry out scientific research related to the needs of society and the labor market?	(93 %) disagree
	Does the department cooperate with scientific and research institutions in conducting joint research?	(67 %) disagree

	Are there any methods adopted by the department to motivate, care, and support researchers?	(96 %) disagree
	Does the department contribute through research teams to serving the different production sectors of the community?	(97 %) disagree
	Does the department benefit from the results of scientific research in developing curricula?	(%100) disagree
	Do you have research skills development programs in the department that develop the skills of the scientific research methodology (to help researchers)?	(%100) disagree
	Does the Department have a special budget to support and disseminate scientific research?	(%100) disagree
	Does the Department provide the equipment and tools needed for research and establish rules to ensure its efficient use?	(%100) disagree
	Does the department seek to establish a good relationship between its students and the institutions of society before leaving toward the labor market?	(%100) disagree
	Does the department motivate faculty members to contribute to community service?	(86 %) disagree
	Does the department survey the institutions in which graduates of the department work to periodically identify the competence of graduates?	(97 %) disagree
	Does the department seek to provide specialized services to different sectors of society?	(87 %) disagree

**Table No- 23:** shows the most important weaknesses concluded from the results of the practical study that targeted the qualitative quality indicators of the academic program in the Department of Architecture, University of Nahrin (source/researcher) regarding the following indicator ((11) Quality Management and Improvement).

11-9-5	5. Quality Management and Improvement	
	Weaknesses:	The answer to the question percentage
	Are there effective mechanisms to continue to improve and develop the teaching process?	(69 %) disagree
	Does the department provide financial and moral support for conducting assessment studies?	(%100) disagree

**7. Recommendations:**

1. The findings illustrate the main weaknesses of the academic program in the Department of Architecture, Nahrain University, as well as the quality assurance indicators, as the review recommends that it be considered with a view to raising the quality of the academic program.

2. Review the quality indicators of other local architecture departments in light of the weaknesses identified in the program Review for trade-off and enhancing participation and communication among them to demonstrate the most important mechanisms adopted in those departments that would raise the quality of their academic programs.

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## BIOGRAPHIES



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