Republic of Iraq
Ministry of Higher Education & Scientific Research
Apparatus of Supervision and Scientific Evaluation Directorate
Directorate of Quality Assurance and Academic Accreditation
Department of International Accreditation

Academic Program Specification Form for the Academic Year 2024-2025

University: Al Nahrain University

College: College of Engineering

Number of Departments in the College: 11

Date of form Completion:23 /6 /2025

Signature:

Name: Prof.Dr. Ayad M. Takhakh

Dean

Date:23/ 6/ 2025

Signature:

Name:Prof.Dr.Nasser A. Alhaboubi

Assistant Dean for Scientific Affairs

Date: 23/6/ 2025

Signature:

Name: Asst.Prof.Dr. Yasser Imad Abdulaziz

Division of Quality Assurance and University Performance

Date:23/6 / 2025

Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department

Academic Program and Course Description

2025

Academic Program Description

University Name: Al Nahrain University

Faculty/Institute: College of Engineering

Scientific Department: Prosthetics and Orthotics Engineering Department

Academic or Professional Program Name: B.Sc in Prosthetics and Orthotics Engineering

Final Certificate Name: B.Sc in Prosthetics and Orthotics Engineering

Academic System: Two Semesters each Academic Year

Description Preparation Date: 2025

File Completion Date: 2025

Signature:
Head of Department Name:
Asst.Prof.Dr. Fahad M. Kadhum

Date: 23/6/2025

Signature:
Scientific Associate Name: Asst.Prof .Dr.Naser A. Al Haboubi

Date:23/6/2025

The file is checked by:

Department of Quality Assurance and University Performance

Director of the Quality Assurance and University Performance Department:

Asst.Prof.Dr. Yasser Imad Abdulaziz

Date: 23/6/2025

Signature:

Ayad M.

Approval of the Dean

1. **Program Vision**

The Department of PO Engineering endeavours to be one of the leading PO Engineering Programs in Iraq and the region.

2. **Program Mission**

1. Graduating highly qualified ethical PO engineers.
2. Building the leadership qualities in its graduates through teaching problem solving, teamwork, quality considerations 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 counselling, 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.

3. **Program Objectives**

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 industry to cooperate in the advancement of the country's economy.
7. Continue to develop and maintain an adequate infrastructure.

4. Program Accreditation

5. Other external influences

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	9	20	17%	
College Requirements	13	65	25%	
Department Requirements	30	156	57%	5 courses are elective and the rest are core
Summer Training	**Satisfied**			
Other				

* This can include notes whether the course is basic or optional.

7. **Program Description**			
Level/Year	Course Code	Course Name	ECTS
1st Sem/First	URDEM	Democracy and Human Rights	2
	URCOM	Computer	3
	URARA	Arabic Language I	2
	MATH110	Mathematics	6
	CREQ110	Engineering Drawing	5
	POER110	Statics	7
	CREQ111	Chemistry	5
2nd Sem/First	MATH120	Fundemental of Engineering Mathematics	6
	CREQ111	Programing	3
	URENG1	English Language I	2
	PHYS120	Physics	6
	CREQ120	Engineering Graphics	5
	POER120	Dynamics	5
	CREQ121	Workshop Technology	3

1st Sem/Second	URENG2	English Language II	2
	CREQ211	Principles of Management	2
	URBRC	Crimes of the Defunct Baath Party	2
	MATH210	Engineering Mathematics	5
	POER210	Anatomy	6
	POER211	Strength of Materials	6
	POER212	Orthoses I	7
2nd Sem/Second	Biomaterials	المواد الحيوية	3
	Analytic Mathemantics	رياضيات تحليلية	4
	Biomechanics	الميكانيك الحيوي	4
	Electronics	الالكترونيك	4
	Prostheses I	أطراف صناعيةI	7
	Elective I	اختياريI	3
	Arabic Language II	اللغة العربيةII	2
	Computer II	حاسوبII	3
1st Sem/Third	POER310	Prosthetics III	6
	POER311	Orthotics III	4
	POER312	Biomechanical Behavior of Materials	2
	POER313	Numerical Analysis	3

	POER314	Mobility and Rehabilitation I	4
	POER315	Biomechanics III	4
	POER316	Pathology I	2
	CREQ310	Engineering Statistics	3
2nd Sem/Third	POER320	Prosthetics IV	6
	POER321	Orthotics IV	4
	POER322	Computer Applications	4
	POER323	Mobility and Rehabilitation II	2
	POER324	Nerve System	4
	POER325	Pathology II	2
	POER326	Robotics	4
	POER327	Manufacturing Processes	2
1st Sem/ Fourth	POER410	Control Measurements I	5
	POER411	Prosthetic Clinical Practice I	4
	POER412	Orthotic Clinical Practice I	4
	POER413	Mechanical Design	4
	POER414	Vibrations (Elective I)	3
	POER415	Thermodynamics (Elective II)	3
	CREQ410	Project	4
2nd Sem/ Fourth	POER420	Control Measurements II	3
	POER421	Prosthetic Clinical Practice II	4

	POER422	Orthotic Clinical Practice II	4
	POER423	Artificial Intelligent	5
	POER424	Fluid Mechanics (Elective III)	3
	POER425	Research Methodology in Health (Elective IV)	3
	CREQ420	Project	4

7. Expected learning outcomes of the program

Knowledge	
1- Understanding and comprehending after every lesson, lecture or training 2- Scientific application of theoretical lessons 3- The ability to perform and implement according to what the student studied 4- Seriously deal with situations with special cases	Learning Outcomes Statement
Skills	
1 - The ability to produce artificial limbs and supports and determine priorities for each task 2 - Mastery of the basics of the profession of manufacturing limbs and supports 3 - Determine the appropriate specialization in the field of parties and supports 4 - The ability to keep pace with the latest developments in the artificial limbs and supports industry	Learning Outcomes Statement
Ethics	
1- Learn the principles of human rights 2- The ability to deal with humanitarian situations 3- Ability to analyze 4- The ability to be creative	Learning Outcomes Statement

8. Teaching and Learning Strategies

Theoretical lessons.

Practical lessons.

Training and practical application in peripheral centers.

9. Evaluation methods

Semester exams, tests and daily.

Written tests.

Applied practices.

Completion of graduation projects.

10. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements/Skills (if applicable)		Number of the teaching staff	
	General	Special			Staff	Lecturer
Asst.Prof. Dr. Yasser Yaarub Qahtan	Mechanical Engineering	Applied mechanics			√	
Prof. Dr. Mahmoud Rashid Ismail	Mechanical Engineering	Biomechanics			√	
Prof. Dr. Ahmed Abdel Samie Abdel Wahab	Production and metallurgy engineering	Production engineering			√	
Prof.Dr. Wajdi Sadiq Abboud	Mechanical Engineering	Mechatronics			√	
Asst.Prof. Dr. Haider Mwafaq Tawfiq	Chemical engineering	Multiphase transmission			√	
Asst.Prof. Dr. Donia Abdel-Saheb Hashem	Physics Science	Physics of biomaterials			√	
Dr. Haider Abbas Salal	Materials engineering	Materials engineering			√	
Asst.Prof. Dr. Ammar Essam Saleh	Mechanical Engineering	Applied mechanics			√	
Asst.Prof. Dr. Fahd Muhannad Kazem	Mechanical Engineering	Applied mechanics			√	
Ms. Yousra Saber Karim	Chemical engineering	Industrial units			√	

Asst.Prof. Saif Muhammad Abbas	Mechanical Engineering	Mechanical engineering			√	
Ms. Salem Fattah Awad	electrical engineering	control			√	
Ms. Hind Dhia Reda	Mechanical Engineering	Refractories			√	
Ms. Donia Khalaf Hamad	Biology	Zoology			√	

Professional Development
Mentoring new faculty members
Training courses in specialized centers. Field visits to hospitals and specialized centers. Attending seminars and workshops.
Professional development of faculty members
Training courses in specialized centers. Field visits to hospitals and specialized centers. Attending seminars and workshops.

11. Acceptance Criterion

High secondary school certificate rates (95% and above).

Desire to work in the specialty.

personal interview.

12. The most important sources of information about the program

Methodical books.

Manufacturing processes for parties.

ISPO Competent Organizations.

13. Program Development Plan

Program Skills Outline															
Year / Level	Course Code	Course Name	Basic or optional	Required program Learning outcomes											
				Knowledge				Skills				Ethics			
				A1	A 2	A 3	A 4	B1	B 2	B 3	B 4	C1	C 2	C 3	C 4
First / 1st Semester	URDEM	Democracy and Human Rights	C	√	√	√	√	√	√	√	√	√	√	√	√
	URCOM	Computer	C	√	√	√	√	√	√	√	√	√	√	√	√
	URARA	Arabic Language I	C	√	√	√	√	√	√	√	√	√	√	√	√
	MATH110	Mathematics	C	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ110	Engineering Drawing	C	√	√	√	√	√	√	√	√	√	√	√	√
	POER110	Statics	C	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ111	Chemistry	C	√	√	√	√	√	√	√	√	√	√	√	√
First / 2nd Semester	MATH120	Fundemental of Engineering Mathematics	C	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ111	Programing	C	√	√	√	√	√	√	√	√	√	√	√	√
	URENG1	English Language I	C	√	√	√	√	√	√	√	√	√	√	√	√
	PHYS120	Physics	C	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ120	Engineering Graphics	C	√	√	√	√	√	√	√	√	√	√	√	√
	POER120	Dynamics	C	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ121	Workshop Technology	C	√	√	√	√	√	√	√	√	√	√	√	√
Second / 1st Semester	UREQ210	University Requirements	C	√	√	√	√	√	√	√	√	√	√	√	√
	UREQ211	Arabic Language II	C	√	√	√	√	√	√	√	√	√	√	√	√
	MATH210	Mathematics III	C	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ210	Information Technology	C	√	√	√	√	√	√	√	√	√	√	√	√

	POER210	Prosthetics I	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER211	Orthotics I	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER212	Biomaterials	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER213	Strength of Materials I	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER214	Biomechanics I	**C**	√	√	√	√	√	√	√	√	√	√	√	√
Second / 2nd	UREQ220	University Requirements	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	MATH220	Mathematics IV	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER220	Prosthetics II	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER221	Orthotics II	**C**	√	√	√	√	√	√	√	√	√	√	√	√

	POER222	Strength of Materials II	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER223	Electronics	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER224	Biomechanics II	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER225	Physiology	**C**	√	√	√	√	√	√	√	√	√	√	√	√
Third / 1st Semester	POER310	Prosthetics III	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER311	Orthotics III	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER312	Biomechanical Behavior	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER313	Numerical Analysis	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER314	Mobility and	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER315	Biomechanics III	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER316	Pathology I	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ310	Engineering Statistics	**C**	√	√	√	√	√	√	√	√	√	√	√	√
Third / 2nd Semester	POER320	Prosthetics IV	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER321	Orthotics IV	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER322	Computer Applications	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER323	Mobility and	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER324	Nerve System	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER325	Pathology II	**C**	√	√	√	√	√	√	√	√	√	√	√	√

	POER326	Robotics	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER327	Manufacturing Processes	**C**	√	√	√	√	√	√	√	√	√	√	√	√
Fourth / 1st Semester	POER410	Control Measurements I	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER411	Prosthetic Clinical	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER412	Orthotic Clinical Practice I	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER413	Mechanical Design	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER414	Vibrations (Elective I)	**O**	√	√	√	√	√	√	√	√	√	√	√	√
	POER415	Thermodynamic (Elective	**O**	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ410	Project	**C**	√	√	√	√	√	√	√	√	√	√	√	√
Fourth /2nd Semester	POER420	Control Measurements II	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER421	Prosthetic Clinical	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER422	Orthotic Clinical Practice	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER423	Artificial Intelligent	**C**	√	√	√	√	√	√	√	√	√	√	√	√
	POER424	Fluid Mechanics (Elective	**O**	√	√	√	√	√	√	√	√	√	√	√	√
	POER425	Research Methodology in Health (Elective IV)	**O**	√	√	√	√	√	√	√	√	√	√	√	√
	CREQ420	Project	**C**	√	√	√	√	√	√	√	√	√	√	√	√

TEMPLATE FOR PROGRAM SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAM REVIEW

PROGRAM SPECIFICATION

This Program Specification provides a concise summary of the main features of the program and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the program.

1. Teaching Institution	Al Nahrain University
2. University Department/Centre	College of Engineering
3. Program Title	Prosthetics and Orthotics Engineering Department
4. Title of Final Award	B.Sc. in Prosthetics and Orthotics Engineering
5. Modes of Attendance offered	Two Semesters each Academic Year
6. Accreditation	ISPO
7. Other external influences	
8. Date of production/revision of this specification	2023
9. Aims of the Program	
Enrich the students with the scientific knowledge in the field of Prosthetics and Orthotics manufacturing.	
Introducing the theoretical and practical applications regarding Prosthetics and Orthotics	
Awarding B.Sc. degree	
Developing the ability for scientific thinking and specifying future plans	

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

A1. Understanding and comprehending after each lecture and practice.
A2. Scientific application of theoretical lessons.
A3. The ability to perform and implement what had been studied.
A4. Serious dealing with special cases.
A5.
A6.

B. Subject-specific skills

B1. The ability to produce prosthetics, orthotics and define each priorities.
B2. To obtain the fundamentals of prosthetics and orthotics manufacturing.
B3. Define the suitable specialty in prosthetics and orthotics field.
B4. The ability to keep up with the development in the prosthetics and orthotics field.

Teaching and Learning Methods

Theoretical Lectures
Laboratories Lessons
Training and Scientific Application in Prosthetics and Orthotics Centers

Assessment methods

Mid Term Exam and Daily Quizzes

C. Thinking Skills

C1. The ability to remember.
C2. The capability to analyze.
C3. The ability to create.
C4.

Teaching and Learning Methods

Using Modern Techniques and Laboratories

Assessment methods
Written Exams Applied Practice Graduation Projects

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1. Applied practice is necessary to complete the theory
D2. Professional expertise
D3.
D4.

Teaching and Learning Methods
Practical courses in specialized centers Field visits to hospitals and specialized centers Conference and workshop attendance

Assessment Methods

11. Program Structure				12. Awards and Credits
Level/Year	Course or Module Code	Course or Module Title	Credit rating	
				Bachelor Degree Requires (220 hrs/week* 15 week = 3330 hrs) credits

1st Sem/First	URDEM	Democracy and Human Rights	2	
	URCOM	Computer	3	
	URARA	Arabic Language I	2	
	MATH110	Mathematics	6	
	CREQ110	Engineering Drawing	7	
	POER110	Statics	6	
	CREQ111	Chemistry	5	
1st Sem/Second	MATH120	Fundemental of Engineering Mathematics	6	
	CREQ111	Programing	3	
	URENG1	English Language I	2	
	PHYS120	Physics	6	
	CREQ120	Engineering Graphics	6	
	POER120	Dynamics	6	
	UREQ220	University Requirements III	1	
	MATH220	Mathematics IV	4	
	POER220	Prosthetics II	2	
	POER221	Orthotics II	6	

2nd Sem/Second	POER222	Strength of Materials II	5	
	POER223	Electronics	6	
	POER224	Biomechanics II	2	
	POER225	Physiology	2	
1st Sem/Third	POER310	Prosthetics III	6	
	POER311	Orthotics III	4	
	POER312	Biomechanical Behavior of Materials	2	
	POER313	Numerical Analysis	3	
	POER314	Mobility and Rehabilitation I	4	
	POER315	Biomechanics III	4	
	POER316	Pathology I	2	
	CREQ310	Engineering Statistics	3	
	POER320	Prosthetics IV	6	
	POER321	Orthotics IV	4	
2nd Sem/Third				

	POER322	Computer Applications	4	
	POER323	Mobility and Rehabilitation II	2	

	POER324	Nerve System	4	
	POER325	Pathology II	2	
	POER326	Robotics	4	
	POER327	Manufacturing Processes	2	
1st Sem/ Fourth	POER410	Control Measurements I	5	
	POER411	Prosthetic Clinical Practice I	4	
	POER412	Orthotic Clinical Practice I	4	
	POER413	Mechanical Design	4	
	POER414	Vibrations (Elective I)	3	
	POER415	Thermodynamics (Elective II)	3	
	CREQ410	Project	4	
2nd Sem/ Fourth	POER420	Control Measurements II	3	
	POER421	Prosthetic Clinical Practice II	4	
	POER422	Orthotic Clinical Practice II	4	
	POER423	Artificial Intelligent	5	
	POER424	Fluid Mechanics (Elective III)	3	
	POER425	Research Methodology in Health (Elective IV)	3	
	CREQ420	Project	4	

13. Personal Development Planning
14. Admission criteria.
High averages in high school (95% minimum) The desire to work in the field of prosthetics and orthotics Personal interview
15. Key sources of information about the program
Text Books Prosthetics and Orthotics manufacturing processes Specialized Organizations (ISPO)

Curriculum Skills Map																			
please tick in the relevant boxes where individual Program Learning Outcomes are being assessed																			
				Program Learning Outcomes															
Year / Level	Course Code	Course Title	Core (C) Title or Option (O)	Knowledge and understanding				Subject-specific skills				Thinking Skills				General and Transferable Skills (or) Other skills relevant to employability and personal development			
				A1	A 2	A 3	A 4	B 1	B 2	B 3	B 4	C1	C 2	C 3	C 4	D 1	D 2	D 3	D 4
First/ 1st Semester	URDEM	Democracy and Human Rights	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	URCOM	Computer	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	URARA	Arabic Language I	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	MATH110	Mathematics	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	CREQ110	Engineering Drawing	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	POER110	Statics	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	CREQ111	Chemistry	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
First/ 2nd Semester	MATH120	Fundemental of Engineering Mathematics	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	CREQ111	Programing	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	URENG1	English Language I	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	PHYS120	Physics	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	CREQ120	Engineering Graphics	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	POER120	Dynamics	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		
	CREQ121	Workshop Technology	C	√	√	√	√	√	√	√	√	√	√	√	√	√	√		

Second / 1st Semester	UREQ210	University Requirements II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	UREQ211	Arabic Language II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	MATH210	Mathematics III	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	CREQ210	Information Technology	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER210	Prosthetics I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER211	Orthotics I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER212	Biomaterials	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER213	Strength of Materials I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER214	Biomechanics I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Second / 2nd Semester	UREQ220	University Requirements III	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	MATH220	Mathematics IV	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER220	Prosthetics II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER221	Orthotics II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER222	Strength of Materials II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	

	POER223	Electronics	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER224	Biomechanics II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER225	Physiology	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Third / 1st Semester	POER310	Prosthetics III	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER311	Orthotics III	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER312	Biomechanical Behavior of Materials	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER313	Numerical Analysis	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER314	Mobility and Rehabilitation I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER315	Biomechanics III	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER316	Pathology I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	CREQ310	Engineering Statistics	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Third / 2nd Semester	POER320	Prosthetics IV	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER321	Orthotics IV	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER322	Computer Applications	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER323	Mobility and Rehabilitation II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER324	Nerve System	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER325	Pathology II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER326	Robotics	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER327	Manufacturing Processes	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Fourth / 1st Semester	POER410	Control Measurements I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER411	Prosthetic Clinical Practice I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER412	Orthotic Clinical Practice I	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER413	Mechanical Design	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER414	Vibrations (Elective I)	**O**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER415	Thermodynamic (Elective II)	**O**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	

	CREQ410	Project	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
Fourth /2nd Semester	POER420	Control Measurements II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER421	Prosthetic Clinical Practice II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER422	Orthotic Clinical Practice II	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER423	Artificial Intelligent	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER424	Fluid Mechanics (Elective III)	**O**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	POER425	Research Methodology in Health (Elective IV)	**O**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	
	CREQ420	Project	**C**	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	

Course Specification of Second Year

Prosthetic I

1. Course Name:
prosthetic I
2. Course Code:
POER210
3. Semester / Year:
First semester / second stage
4. Description Preparation Date:
22/3/2024
5. Available Attendance Forms:
Full attendance
6. Number of Credit Hours (Total) / Number of Units (Total)
30
7. Course administrator's name (mention all, if more than one name)
Name: Assist lecture Saif Mohammed Abbas Email:
8. Course Objectives

Course Objectives	• Learning the students types and causes of limb amputation. • Learning the students type limb prostheses. • Solving problems
9. Teaching and Learning Strategies	
Strategy	A- Knowledge and Understanding A1. Different types of prosthetics limb . A2. Knowledge the way of design prosthetic limb. A3. Knowledge the materials and equipments used in munufactring the prostheses parts B. Subject-specific skills B1. B2. B3. Teaching and Learning Methods Lectures (yes) Lab Sessions (yes)

	Tutorials (yes) Assessment methods Oral Tests Report D. General and Transferable Skills (other skills relevant to employability and personal development)

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1	2		Introduction to Prosthesis cidence and Epidemilogy	Lectures	Oral, Quiz
2	2		Rehabiliation of an mputee,Problem in Stump	Lectures	Oral, Quiz
3	2		Immediate Postoperative Prosthetic Fitting	Lectures	Oral, Quiz
4	2		sthesis in Foot and Ankle Amputation	Lectures	Oral, Quiz
5	2		Prosthesis in Transtibial Amputation	Lectures	Oral, Quiz
6	2		it Analysis in Transtibial Amputation	Lectures	Oral, Quiz
7	2		Prosthesis in Knee Disarticulation	Lectures	Oral, Quiz
8	2		rosthesis in Transfemoral Amputation	Lectures	Oral, Quiz
9	2		Gait Analysis in Transemorall Amputation	Lectures	Oral, Quiz
10	2		Prosthesis in hip Disarticulation	Lectures	Oral, Quiz
11	2		dification of Lower Limb Prosthesis	Lectures	Oral, Quiz
12	2		Prosthesis for Hand and Wrist Disarticulation	Lectures	Oral, Quiz
13	2		Prosthesis for Transradial Amputation	Lectures	Oral, Quiz
14	2		osthesis for Transhumeral Amputation	Lectures	Oral, Quiz

15	2		Prosthesis for Elbow and Shoulder Disarticulation	Lectures	Oral, Quiz

11. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports..... etc

12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	CORE TEXTS Short Textbook of Prosthetics and Orthotics COURSE MATERIALS · Prosthetics and orthotics / Donald Shurr, Cambodian School of Prosthetics and Orthotics John W. Michael OTHER · Otto Bock. www.ispo.org American virtual Library for prosthesis and orthosis
Main references (sources)	
Recommended books and references (scientific journals, reports...)	Reports Oral tests Labrotary
ctronic References, Websites	

Prosthetic II

13. Course Name:	
prosthetic II	
14. Course Code:	
POER220	
15. Semester / Year:	
second semester / second stage	
16. Description Preparation Date:	
22/3/2024	
17.Available Attendance Forms:	
Full attendance	
18.Number of Credit Hours (Total) / Number of Units (Total)	
30 hrs	
19. Course administrator's name (mention all, if more than one name)	
Name: assist lecture Saif Mohammed Abbas Email:	
20. Course Objectives	
Course Objectives	• Study the types of amputation
	• Study the levels of amputation of upper extremity for human
	• Study the materials for prosthesis
21. Teaching and Learning Strategies	
Strategy	
	A- Knowledge and Understanding A1. Identifying the parts of the human upper, lower extremity and spine A2. Identify the muscles and movements associated with the human u per, lowe extremi y and spine A3. Application of the mechanical principles and force analysis on h man upper lower extremity and spine.

	B. Subject-s B1. Encourage readers to link design a B2. Encourage the student to know the mechanism of work for the hu lower extremit
	Teaching and Learni
	Lecture
	Assessme
	• Exams. • Home works. • Class work application.
	C. Thin C1. Mat C2. Interpretation and Me C3
	Teaching and Learning
	Interac
	Assessmer
	• Exams. • Home works. • Class work application
	D. General and Transferable Skills (other skills relevant to em personal de
	B- Knowledge and Understanding A1. Identifying the parts of the human upper, lower extremity and spine A2. Identify the muscles and movements associated with the human u per, lowe extremity and spine A3. Application of the mechanical principles and force analysis on hu man upper lower extremity and spine.

	B. Subject-s B1. Encourage readers to link design a B2. Encourage the student to know the mechanism of work for the hu lower extremit
	Teaching and Learni
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	• Exams. • Home works. • Class work application.
	C. Thin C1. Mat C2. Interpretation and Me C3
	Teaching and Learning
	Interac
	Assessmer
	• Exams. • Home works. • Class work application
	D. General and Transferable Skills (other skills relevant to em personal de
	C- Knowledge and Understanding A1. Identifying the parts of the human upper, lower extremity and spine A2. Identify the muscles and movements associated with the human u per, lowe extremity and spine A3. Application of the mechanical principles and force analysis on hu man upper lower extremity and spine.

	B. Subject-s B1. Encourage readers to link design a B2. Encourage the student to know the mechanism of work for the hu lower extremit
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	• Exams. • Home works. • Class work application.
	C. Thin C1. Mat C2. Interpretation and Me C3
	Teaching and Learning
	Interac
	Assessmer
	• Exams. • Home works. • Class work application
	D. General and Transferable Skills (other skills relevant to em personal de

22. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method

1	2		Upper limb prosthetic anatomy, bone muscle	Lectures	Oral, Quiz
2	2		Upper limb prosthetic(biomechanics)	Lectures	Oral, Quiz
3	2		Terminal Devises	Lectures	Oral, Quiz
4	2		Voluntary Hooks and Hands	Lectures	Oral, Quiz
5	2		ist, Elbow and Shoulder Units	Lectures	Oral, Quiz
6	2		Type of Suspension Methods	Lectures	Oral, Quiz
7	2		Types of Amputations	Lectures	Oral, Quiz
8	2		osthetic Options for The Partial Hand Amputee	Lectures	Oral, Quiz
9	2		Components of The Hand and Wrist Disarticulation Prosthetic	Lectures	Oral, Quiz
10	2		Prosthetic Options for The Transradial Amputee	Lectures	Oral, Quiz
11	2		omponents of The Transradial Prosthetic	Lectures	Oral, Quiz
12	2		osthetic Options for The Trans humeral Amputee	Lectures	Oral, Quiz
13	2		Components of The Trans humeral Prosthetic	Lectures	Oral, Quiz
14	2		osthetic Options for The Elbow Disarticulation Amputee	Lectures	Oral, Quiz
15	2		Prosthetic Options for The Shoulder Disarticulation and Forequarter Amputee	Lectures	Oral, Quiz
			Upper limb prosthetic anatomy, bone muscle		

23. Course Evaluation

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports.....etc

24. Learning and Teaching Resources

Required textbooks (curricular books, if any)	Short Textbook of Prosthetics and Orthotics
Main references (sources)	Prosthetics and orthotics / Donald Shurr, John W. Michael.
Recommended books and references (scientific journals, reports...)	Cambodian School of Prosthetics and Orthotics.
ctronic References, Websites	

Course Specification of third Year

Course Specification of fourth Year

TEMPLATE FOR TYPICAL SITE VISIT CHEDULE

1. The typical site visit schedule is designed for two or three days. It includes pre-arranged meetings. The responsibility for arranging these meetings and fitting the template to the

circumstances rests with the Universities Quality Assurance and University Performance departments

2. Site visits will normally commence at 09:00 on day 1. Start times of pre-arranged meetings are indicated. Pre-arranged meetings should not normally last more than one hour. The schedule should not completely fill all times with meetings, but leave space for additional activities by peer reviewers including preparing for meetings, updating notes and records and drafting paragraphs for the draft Program Review report

Table (1)

Session	Time	Activity
Day 1		
1	09:00	Welcome and introductions; brief introduction to the review (purposes, intended outcomes, use of evidence and self-evaluation report) – Program Team
2	09:30	Curriculum; discussion with faculty members
3	11:00	Meeting with a group of students
4	12:30	Efficiency: tour of resources
5	14:00	Review panel meeting: scrutiny of additional documentation including sample of students' assessed work
6	15:00	Efficiency: meeting with faculty members
7	16:00	Review panel meeting: review of the evidence and any gaps or matters to follow-up
8	17:00	Meeting with external stakeholders (sample of graduates, employers, other partners)
Day 2		
9	08:45	Review meeting with review chairperson, review coordinator, program leader: summary of day 1 findings, addressing any gaps, adjust the schedule for day 2 if required
10	09:00	Academic standards: meeting with faculty members
11	10:30	Effectiveness of quality management and assurance: meeting with faculty members
12	12:00	Review panel meeting: review of evidence and any matters still to be addressed
13	14:00	Flexible time to pursue any matters arising
14	14:30	Review panel final meeting: decisions on outcomes and drafting oral feedback
15	16:30	Oral feedback by review chairperson to review coordinator and faculty members
	17:00	Close

TEMPLATE FOR THE FOLLOW-UP PROCESS AND REPORT, AND OUTLINE OF TYPICAL SITE VISIT SCHEDULE FOR FOLLOW-UP

TEMPLATE FOR FOLLOW-UP REPORT

Quality Assurance and Academic Accreditation Directorate / International Accreditation Department.

Institution:

Faculty:

Program:

Follow-up Report

1. This report presents the findings of the follow-up visit, which took place on / /20__. This is part of the Universities Quality Assurance and University Performance departments' arrangements to provide continuing support for the development of internal quality assurance processes and continuing improvement

2. The purposes of the follow-up review are to assess the progress made in the program since the Program Review report, and to provide further information and support for the continuing improvement of academic standards and quality of higher education in Iraq.

3. The evidence base used in this follow-up review and report includes:
    a) Self-Evaluation Report for the program together with supporting information
    b) Improvement plan prepared and implemented since the Program Review report
    c) Program Review Report
    d) Higher Education Quality Review Report and institutional strategic plan (if any)
    e) Additional evidence presented during the follow-up visit.

4. The overall conclusions reached as the outcome of the follow-up review are as follows:
    a) The program (give title) at (give name of institution) has/has not successfully implemented an improvement plan.
    b) Good practice in the indicators demonstrated since the Program Review site visit includes: (insert)
    c) Matters of particular importance that should be addressed by the institution in its continuing improvement of the program are: (insert and indicate if they are, or as yet are not, addressed by the improvement plan).

5. The detailed report is provided in Annexure A below.

Annexure A

Name of Institution_____

Date of initial Program Review site visit_____

Date visited in follow-up _____

Date of follow-up report _____

Names of follow-up reviewers Position/title Signed

Part 1: The Internal Quality Assurance System in operation				
	Questions	**Yes? (√)**	**Comment**	**Further action required?**
1	Is the program Self- Evaluation Report complete?			
2	Do the most recent self-evaluation reports indicate the extent to which the criteria in the Framework for Evaluation are met and/or are being addressed?			
3	Is there an improvement plan in place, informed by external and internal review?			
4	Are there any major gaps that appear not to be addressed?			
5	Is progress with the improvement plan monitored?			
6	Are there any major obstacles to the expected achievement of the improvement plan?			
7	What is the institution's estimate of the time needed to complete improvements to the program?			
8	What is the reviewers' assessment of the time needed to complete improvements to the program that would demonstrate the indicators?			

Part 2: Progress demonstrated with the indicators			
Indicators (refer to Framework of Evaluation)	Improvement plan points (comment on match with the Program Review report's recommendations)	New information from follow-up site visit	Overall conclusion
<u>Curriculum</u> Aims and ILOs Syllabus (content) Progression year on year Teaching and Learning Student assessment			
<u>Efficiency</u> Profile of admitted students Human resources Physical resources Uses made of available resources Student support Ratios of graduation to admitted students			
<u>Academic Standards</u> Clearly articulated standards Use of appropriate benchmarks Achievement of graduates Standards of students' assessed work			
<u>Program management and Assurance</u> Arrangements for program management Policies and procedures applied Structured comments collected and used Staff development needs identified and addressed Improvement planning processes working			

CRITERIA FOR A SUCCESSFUL REVIEW AND EVALUATION OF THE PROCESS

CRITERIA FOR A SUCCESSFUL REVIEW

1. The criteria for a successful review that informs the arrangements for Program Review and its evaluation are as follows:
    i. The program being reviewed is supported by existing or developing internal systems including specifications and review with a culture of self-evaluation and continuing improvement. These features of internal review provide a sound basis for the external review.
    ii. The timing of the external review is appropriate.
    iii. The profile of the visiting peer review panel matches in broad terms the profile of the academic activities in the institution.
    iv. There is due attention to detail in planning and preparation, by -
        a. The Quality Assurance and Academic Accreditation Directorate applies consistently its procedures for working with the institution and the reviewers and provides appropriate support for the external review as required
        b. The review coordinator: ensures that the evidence base generated by internal review and reporting systems is available on time to the visiting peer reviewers, and any requirements for clarification and supplementary information are satisfied
        c. The institution: provides a self-evaluation report for the program to be externally reviewed
        d. The peer reviewers: undertake their preparation for the visit including reading the advance documentation and preparing initial commentaries that inform the conduct of the visit
    v. There is consistency in the application of the published review method and the protocols by all participants in a way that respects and supports the mission and philosophy of the overall process for continuing review and continuing improvement.
    vi. Reviewers and representatives of the institution conduct an open dialogue throughout the review that shows mutual respect.
    vii. The judgments reached by the reviewers are clear, based on the evidence available and systematically recorded.
    viii. The review report is produced on time in line with the standard report structure and is confirmed by the institution to be factually accurate.
    ix. The set of conclusions arising from the review are constructive, offering a fair and balanced view of the program.
    x. The institution is able to benefit from the external review by giving due reflection and consideration to the findings and preparing where appropriate a realistic improvement plan

EVALUATION

2. The Quality Assurance and Academic Accreditation Directorate wishes to establish and implement procedures for the systematic evaluation of all external Program Reviews arranged by it. The institution, the review chairperson and the peer reviewers will all routinely be asked to evaluate each external review by completing a short questionnaire. The structured comments will be analyzed by the Quality Assurance and Academic Accreditation Directorate and where necessary the Quality Assurance and Academic Accreditation Directorate will take action to follow-up any difficulties highlighted. In addition, the Quality Assurance and Academic Accreditation Directorate will collate the structured comments to compile regular summary reports indicating the main features of the review process in practice, including the overall levels of satisfaction expressed by the participants, together with examples of good practice and opportunities for continuing improvement.

GLOSSARY OF TERMS IN PROGRAM REVIEW

DEFINITIONS OF TERMS USED IN THE PROGRAM REVIEW HANDBOOK

Some of the terms used in the Handbook and/or used in internal and external review and reporting may have different meanings according to the context in which they are used. To remove possible ambiguities, the following working definitions of the terms are offered.

ADEMIC FIELDS/SUBJECT AREAS/DISCIPLINES

Academic fields categorize recognizable and coherent domains or the scope of study such as Mathematics, Medicine, Engineering and Philosophy. Fields that have a wide scope are often subdivided; for example, Humanities include subjects like History and Literature and Arts may include separate disciplines of Fine Arts and Photography. The curriculum of some programs may combine academic fields, or may include different subjects and disciplines such as Mathematics in Engineering or Accountancy in Business Administration.

ACADEMIC STANDARDS

Specific standards decided by the institution, and informed by external reference points. They include the minimum or threshold level of knowledge and skills to be gained by the graduates from the program, and can be used in evaluation and review.

ACCREDITATION

The recognition accorded by an agency or other organization to either an education program or to an institution to confirm that it can demonstrate that the program(s) meet acceptable standards and that the institution has effective systems to ensure the quality and continuing improvement of its academic activities, according to published criteria.

ACTION OR IMPROVEMENT PLANS

Realistic plans for improvement derived from the consideration of available evidence and evaluations; they may be implemented for more than one year, but should be prepared and reviewed annually at each level of courses, programs and the institution.

ADMITTED STUDENTS

Students registered on a program, including those accepted holding prior credits for admission after year 1.

BENCHMARK/REFERENCE POINTS

Benchmark statements represent general expectations about the standards of achievement and general attributes to be expected of a graduate in a given academic field or subject. Reference standards may be external or internal. External reference points allow comparison of the academic standards and quality of a program with equivalent programs in Iraq and internationally. Internal reference points may be used to compare one academic field with another, or to identify trends over a given time period.

COMMUNITY

A defined segment of wider society served by the institution, as determined in its mission and bylaws. It may be defined geographically or in terms of the range of organizations, groups and

individuals engaged in its activities.

COURSE AIMS

Overall course aims should be expressed as the outcomes to be achieved by students completing the course as significant and assessable qualities. They should contribute to the achievement of defined aims within one or more education programs.

CURRICULUM OR (IN THE PLURAL) CURRICULA

The complete organized learning as designed and managed by an institution for an admitted student, determined by the intended learning outcomes (ILOs) and comprising the content, the arrangements for teaching and learning and assessments of students' achievements together with the access to the range of facilities available within the University and, by arrangement, outside it, including libraries, computers studies, social, sports, internships and field studies.

DIRECTED SELF-LEARNING/INDEPENDENT LEARNING

The active promotion of personal skills included in the curriculum that support the student and graduate to seek, assimilate and learn from a range of structured and unstructured experiences. Methods of promotion include e-learning, personal and autonomous learning and fieldwork, assignments, internships, and reflexive learning. Devices commonly used that support directed self-learning beyond formal teaching lectures include logbooks, self-assessment reports, interactive learning tools or the equivalent.

E-LEARNING

Electronic-based learning using information technology may be the primary or secondary element in material associated with a program or a course. It may be stand-alone or integrated with other teaching and learning approaches. It may include self-determination
of aims, ILOs and materials using self-selection and will usually include self-assessment. It generally increases the levels of autonomy in, and responsibility for, learning. Converting existing texts or lecture notes to a website or pre-recorded media alone is generally not considered to be e-learning.

EXTERNAL EVALUATOR/EVALUATION

An appointment to a specific program, part of a program or course(s) by the institution to establish an independent and external professional opinion on the academic standards set and achieved in the examinations for the award of the degree.

FRAMEWORK FOR EVALUATION

The framework for evaluation provides a standard structure for evaluation of programs. It will form the basis for self-evaluation, the site visit by external peer reviewers and the Program Review report. It is designed to operate in all academic fields and institutions, and to apply to internal and external reviews.

GENERAL PRECEPTS/BY-LAWS

Principles, by-laws and regulations, which the educational institution must have as part of the policies covering its operations.

HIGHER EDUCATION INSTITUTE (HEI)/INSTITUTION

A Faculty, College or University providing higher education programs leading to a first university degree (B.Sc. or B.A.) or a higher degree.

INTENDED LEARNING OUTCOMES (ILOS)

The ILOs are the outcome-related definition of knowledge, understanding and skills which the institution intends for its programs. They should be mission-related, capable of measurement (assessable) and reflect the use of external reference standards at appropriate level.

INTERNAL SYSTEM FOR QUALITY MANAGEMENT AND ASSURANCE

The system adopted by the institution to ensure that its education programs and contributing elements meet specified needs and are continually reviewed and improved. An outcomes-related system of quality management involves precise specifications for quality from design to delivery; evaluation; the identification of good practice as well as of learning deficiencies and obstacles; performance follow-up; suggestions for development and enhancement; and the systematic review and development of processes for establishing effective policies, strategies and priorities to support continuing improvement.

JOB/LABOUR MARKET

The availability of professional, commercial, research-oriented or other fields of employment that a graduate is qualified to join upon graduation.

MISSION STATEMENT

A brief statement clearly identifying the educational institution's duty and its role in the development of the community; a mission statement may also offer brief supporting statements on the vision, values and strategic objectives of the institution.

PEER REVIEWER

A person who is professionally equal in caliber and with management and/or subject expertise to those delivering the provision, but not from the same institution and without any conflict of interest, who can contribute to the review of an education program for internal and external quality assurance or for accreditation purposes.

PROGRAM

For the purpose of Program Review an education program is defined as one which admits students who, on successful completion, receive an academic award.

PROGRAM AIMS

The broad purposes for providing the program which in turn guide the development and implementation of strategic objectives (to ensure that the aims are met) and ILOs (to ensure that the students work towards attaining the specified outcomes).

PROGRAM REVIEW

Program Review applies to all education programs in all higher education institutions.
Where the program is studied in more than one institution, the whole program is included in Program Review. Program Review in Iraq has three objectives:

1) To provide decision-makers (in the higher education institutions, Quality Assurance and Academic Accreditation Directorate , parents, students, and other stakeholders) with evidence-based judgments on the quality of learning programs
2) To support the development of internal quality assurance processes with information on emerging good practice and challenges, evaluative comment and continuing improvement
3) To enhance the reputation of Iraq's higher education internationally.

QUALITY ASSURANCE

The institution has the means of assuring that for each education program, academic standards are defined and achieved in line with equivalent national and international standards, that the quality of the curriculum and related infrastructure are appropriate and fulfill the expectations of the range of stakeholders, that its graduates represent the range of attributes specified and that the organization is capable of sustained, continuing improvement.

REVIEW COORDINATOR

The nominee of an institution to coordinate a Program Review to assist in the gathering and interpretation of information and to support the application of published methods of review.

REPORT

The regular reports prepared on the basis of Program Reviews and evaluations of its education program.

SELF-EVALUATION

n institution's process of evaluating a program as part of Program Review and within an internal system of quality management and assurance.

SITE VISIT

A scheduled visit by external peer reviewers as part of Program Review. Normally the site visit will be for two or three days. A typical outline timetable is provided in Appendix (1).

SPECIFICATION

The detailed description of the aims, construction and intended outcomes of a program, and any courses, specific facilities or resources that contribute to it. The specification provides information to design, manage, deliver and review the program.

STAKEHOLDER

Those organizations, groups or individuals which have a legitimate interest in the educational activities of the institution both in respect of the quality and standards of the education and also in respect of the effectiveness of the systems and processes for assuring the quality. An effective strategic review process will include the key stakeholder groups. The precise range of stakeholder groups and their differentiated interests depend upon the mission of the institution, its range of educational activities and local circumstances. The range is usually defined by a

scoping study. Examples of groups with a legitimate interest include current students, graduates, intending students and their parents or family, staff in the institution, the employing community, the relevant Government ministries, the sponsors and other funding organizations and, where appropriate, professional organizations or syndicates.

STRATEGIC OBJECTIVES/PLANS

A collection of institution-specific objectives that are derived from its mission and developed into a realistic plan based on evidence-based evaluations. Objectives concentrate on the means by which an institution seeks to deliver its mission. The plan sets out the matters to be addressed, timeframe, person responsible and estimate of costs, and is accompanied by an implementation plan with arrangements for monitoring the progress and evaluating impact.

STUDENTS'ASSESSMENT

A set of processes, including examinations and other activities conducted by the institution to measure the achievement of the intended learning outcomes of a program and its courses. Assessments also provide the means by which students are ranked according to their achievement. Diagnostic assessment seeks to determine the existing range of knowledge and skills of a student with a view to constructing an appropriate curriculum. Formative assessment provides information on the student's performance and progress to support further learning, without necessarily counting a grade towards graduation. Summative assessment determines the final level of attainment of the student on the program or at the end of a course that contributes credits to the program.

STUDENTS' EVALUATIONS

The systematic gathering of students' opinions on the quality of their program in a standardized structure together with the analysis and outcomes. Surveys using questionnaires are the most frequently used methods to collect opinions; other mechanisms include websites conferences, panels or focus groups, and representation on councils or other committees.

TEACHING AND LEARNING METHODS

The range of methods used by teachers to help students to achieve the ILOs for the course. Examples include: lectures, small group teaching such as tutorials, seminars and syndicate groups; a case study to teach students how to analyze information and reach a decision; assignments such as writing a review paper for the students to gain the skills of self-learning and presentation; field trips; practical sessions for the students to gain practical skills; and carrying out experiments to train the students to analyze the results, reach specific conclusions and prepare a report, presentation or poster.