University name: University of Hillah

College/Institute:Faculty of Science

Scientific Department:Science DepartmentApplied Medical Physics

Name of academic or professional program: BachelorScience DepartmentApplied Medical Physics

Final Degree Name: Bachelor's inScience DepartmentApplied Medical Physics

Academic system: Semester -Bologna Process

Description preparation date: 11/10/2024

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The file was reviewed by the Quality Assurance and University Performance Division.

Name of the Head of the Quality Assurance and University Performance Division:

the date 2025/3/5

the signature

Dean's approval

Prof. Dr. Ahmed Saleem

1. **Vision**

To be a pioneer in preparing specialists capable of using " enhance the physical techniques in medical applications to effectiveness of treatments and achieve sustainable innovations through pioneering scientific research in this ".field

2. a task The program

1- **Adopting the educational system and curricula that achieve the solid scientific level that distinguishes it from international institutions**

2- **Modern sourcesAdopting methods and means and learning**

3- **Implementing educational and pedagogical programs confidence, develop mental abilities, and -that support self stimulate ambition to achieve success in practical and .academic life**

4- **Qualifying an integrated medical science department scientific medical experiments that based on distinguished are in harmony with the labor market and meet the needs .of other scientific institutions**

5- **Qualifying a specialized cadre in the field of medical physics to support medical sciences and have the ability to tive medical services in the field of medical provide suppor .diagnosis and radiotherapy**

6- **Raising the level of postgraduate studies and scientific research to address challenges and contribute to the development of developmental, environmental, economic .sand social program**

3. Goals The program

Providing integrated education that combines scientific -1
foundations and practical applications in the field of
.medical physics
Training students to use modern physical devices and -2
.treatment techniques in medical diagnosis and
Support scientific research to develop new technologies -3
in the field of medical physics
Providing practical training opportunities in cooperation -4
with hospitals and medical centers to improve students'
experience
e of providing advanced Preparing graduates capabl-5
technical solutions

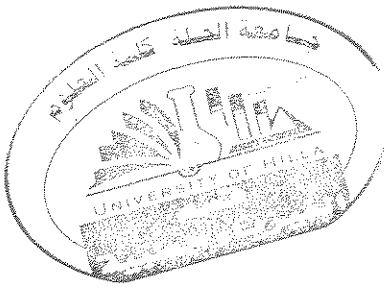
4. AccreditationProgrammatic

The programHe has no accreditation.

5. EffectsExternal

6. structureThe program

comments*	rateCentennial	UnitsApproved	numbertheMaterials	structureThe program
essential	4.6	11	5	requirementsThe institution
essential	0.8	2	1	requirementsCollege
essential	94.6	227	42	requirementsSection
Summer training starts after the end of the second .final semester			Third	TrainingSummer
				notthat



7-Program Description

Level	Semester	.No	Module Name in English	Name of the course	Language	ECTS
UGI	One	1	Mechanics	Mechanics	English	9
		2	Analytical Chemistry	Analytical Chemistry	English	7
		3	General biology	General Biology	English	9
		4	Human Rights and Democracy	Human rights and democracy	Arabic	2
		5	Computer Science 1	Computer Science 1	English	3
					Total	30
	Two	1	Organic Chemistry	Organic Chemistry	English	7
		2	Electricity and Magnetism	Electricity and magnetism	English	9
		3	Mathmetics	mathematics	English	5
		4	Computer Science 2	Computer Science 2	English	5
		5	English Language	English language	English	2
		6	Arabic Languages	Arabic	Arabic	2
					Total	30
UGII	Three	1	Heat and Thermodynamics	Heat and thermodynamics	English	6
		2	Optics	Optics	English	6
		3	Analog and Digital Electronics	Analog and digital electrons	English	6
		4	Physiology	Physiology	English	6
		5	Professional Ethics	Professional ethics	English	4
		6	crime scene	Baath Party Crimes	Arabic	2
					Total	30
	Four	1	Electromagnetic waves	electromagnetic waves	English	6
		2	Molecular Biology	Molecular Biology	English	6
		3	Medical Terminology	Medical Terminology	English	4
		4	Atomic Physics	Atomic physics	English	8
		5	Phonetics Science	Phonetics	English	6
					Total	30

Level	Semester	.No	Module Name in English	Name of the course	Language	ECTS
	Five	1	Medical Physics	Medical Physics	English	6
		2	Anatomy	anatomy	English	7
		3	Physics of Diagnostic Radiology	Diagnostic Radiology Physics	English	7
		4	Quantum Mechanics in Medicine	Quantum mechanics in medicine	English	4
		5	Basics of Laser	Laser Basics	English	6
					Total	30

UGIII	Semester	.No	Name in English Module	Name of the course	Language	ECTS
	Six	1	Medical Imaging	Medical imaging	English	7
		2	Material Science	Materials science	English	5
		3	Medical Laser Application	Medical laser applications	English	7
		4	Biochemistry	Biochemistry	English	5
		5	Biostatics	Vital statistics	English	6
					Total	30

Level	Semester	.No	Module Name in English	Name of the course	Language	ECTS
	Seven	1	Medical Image Processing and Analysis	Medical image analysis and processing	English	7
		2	Medical Instrumentation Physics	Physics of medical devices	English	6
		3	Radiotherapy Physics	Physics of radiation therapy	English	7
		4	Nanotechnology	Nanotechnology	English	4
		5	Research Project I	Graduation project I	English	6
					Total	30

UGIV	Semester	.No	Module Name in English	Name of the course	Language	ECTS
	Eight	1	Neurophysics	Neurophysics	English	6
		2	Biomaterials	Biomaterials	English	5
		3	Physics of Neuclear Medicine	Nuclear medicine physics	English	7
		4	Pollution Environmental	Environmental pollution	English	6
		5	Research Project II	Graduation project II	English	6
					Total	30

8- Academic Program Objectives

1-	Preparing cadres in the field of medical physics who are responsible for studying the country's need for development and progress and are able to meet the needs of the labor market in the country's health institutions and industrial sectors, and preparing an educated generation armed with science and adopting it as a sound basis for bringing about radical changes and placing scientific knowledge and the scientific method of thinking and analysis in the service of the country's goals, capable of pursuing higher education and adapting to the development of medical technologies in order to keep pace with the expansion of human needs.
2-	The academic program aims to apply the principles and methods of physics to diagnose diseases.Diagnosis) and its treatment (TherapyThe practice of modern medicine depends effectively on a significant number of physical techniques, tools and principles. The urgent need for accuracy in diagnostic and treatment methods, improving their performance, and the continuous development of the physical techniques and tools used in this have led to the emergence of the specialty of medical physics.
3-	Preparing cadres to support the Ministry of Health and the Ministry of Environment to work in the fields of diagnosing and treating patients in cancer departments.
4-	Balance in focusing on the principles of theoretical and applied medical physics, and working to provide students with analytical, computational, mathematical and methodological tools and means to identify, formulate and solve medical problems, and focus on introducing modern methods into the learning system that increase students' ability to design, create and innovate in the field of medical devices and equipment, and provide self-education and continuing education for the community and disseminate medical knowledge in the public and private sectors through short courses, workshops, seminars and conferences, and provide consultations and lectures and raise the level of medical studies in the scientific and research field and provide its various requirements in a manner that is consistent with the country's needs.
5-	Providing an academic environment suitable for study and research to contribute to finding solutions to medical problems using appropriate and suitable technologies through courses that provide a strong foundation in mathematics, health physics and their medical applications, in addition to effectively contributing to deepening and strengthening the university's relationship with the community through implementing consulting work, training and developing teaching and administrative cadres.