



2010

**COLLEGE OF
SCIENCE**



Deanery

Prof. Dr. Abbas Noor Mohammed Al-Sharify
Dean

Assist. Prof. Dr. Hayder Mohammed Abduljalil
Vice Dean of Administrative Affairs

Assist. Prof. Dr. Sadiq Jaafer Baqir
Vice Dean of Academic Affairs

Mahira Azaldeen Jameel
Responsible of Registration Office

E-mail: science@uobabylon.edu.iq

Introduction:

The college of science was established in 1988. It consists of five departments. It offers undergraduate and postgraduate studies in all of its departments. The bachelors degree awarded after four years of full-time study program. The master degree (courses and research) awarded after two academic years (at least) of full-time study program. The philosophy doctorate degree (courses and research) awarded after three academic years (at least) of full-time study program.

Objectives:

The College aims to achieve the following:

- A graduate should be aware of our civilization mission and its historic and pioneer role in establishment and progress of the world civilization.
- A graduate should be qualified to have the theoretical principles of basic science and their field applications.
- Providing graduates with scientific expertise, required in field of work in future by informing him of recent technical updates.
- Providing scholars with proper principles in scientific research in order to develop the scientific and technical research in the country.
- Providing scholars with advanced technologies.
- Distinctive graduates are supported to apply for higher studies and contribute actively in solving complicated scientific and technical problems.
- Supporting the teaching staff and all scholars to participate in local and international seminars, symposiums, workshops and conferences.



Registration Unit :

The tasks of this unit include the followings :

- Organizing the files of new candidates in addition to the files of existing students in the College.
- Recording students marks for all the departments of the College.
- Providing the examination committees with necessary information for estimating graduation.
- Providing the students with the clearance paper, students identification cards (I.D.) and entrance permission cards.
- Distributing examination results to all students.
- Issuing transferring acts for admitted students from | and to the College.
- Following up these acts till informing other colleges.
- Providing the graduates with transcripts, mark sheets and certificates to prove their passing and graduation.

Teaching Staff

Department of Computer Science

No.	Name	Qualification	Academic Title	Specialization	Specific Specialization
1	Sa'ad Talib Hasson AL-Jibory	Assist. Prof	Ph.D	Operation Systems	Electricity Engineering
2	Israa Hadi Ali AL-Shemarry	Assist. Prof	Msc	Computer Science	-
3	Bahiga Khodiar Shukir AL-Ganimy	Assist. Prof	Msc	Computer Science	-
4	Nedaa Abd AL-Mohsin Al-Atwany	Lecturer	Ph.D	Computer Science	Signe Process
5	Asad Sbah Hadi ALJibory	Lecturer	M.Sc.	Computer Science	-
6	Eman Salih Sagban AL-Rewashidy	Lecturer	M.Sc.	Computer Science	-
7	Ali Hadi Hasan AL-Najaar	Lecturer	M.Sc.	Computer Science	-
8	Huda Najii Nawwaf AL-Maamory	Lecturer	M.Sc.	Computer Science	-
9	Wafaa Mohammed Saied Al-Asady	Lecturer	M.Sc.	Computer Science	-
10	Ahmed Khilfa Aubeed AL-Egely	Lecturer	M.Sc.	Computer Science	-
11	Baiadir Abbas Husain AL-Hemerry	Lecturer	M.Sc.	Computer Science	-
12	Yaseen Asd Mehana AL-Rajihi	Assist. Lecturer	M.Sc.	Computer Science	-
13	Hashim Kareem Abd AL-Aaragy	Assist. Lecturer	M.Sc.	Computer Science	-
14	Ahmed Mahdi Mohammed Saaed AL-Salih	Assist. Lecturer	M.Sc.	Computer Science	-
15	Tariq Alwan Khadhim AL-Murshidy	Assist. Lecturer	M.Sc.	Computer Science	-
16	Smahir Husain Ali AL-Ganaby	Assist. Lecturer	M.Sc.	Computer Science	-
17	Mohanned Mohammed Jasim AL-Yasiry	Assist. Lecturer	M.Sc.	Computer Science	-
18	Goarge Escander Husain Eagam	Assist. Lecturer	M.Sc.	Computer Science	-
19	Ameer Khadhum Hadi AL-Shakarchy	Assist. Lecturer	M.Sc.	Computer Science	-
20	Mahdi Nissiaf Jasim	Assist. Lecturer	M.Sc.	Computer Science	-
21	Ghaidaa Abd AL-Husain Bilal AL-Sultany	Lecturer	M.Sc.	Computer Science	-
22	Enaam Mahdi Jabir AL-Jibory	Assist. Lecturer	M.Sc.	Computer Science	-
23	AL-Harith Abd AL-Kareem	Assist. Lecturer	M.Sc.	Computer Science	-

Department of Physics

No.	Name	Qualification	Academic Title	Specialization	Specific Specialization
1	Ahmed Mehmood Abdul-Lettif	Ph.D	Prof.	Physics	Solid State Physics
2	Kalid H. H. Al-Attiah	Ph.D	Assist. Prof	Physics	Nuclear Physics
3	Abdul/Aziz O. Musa	Ph.D	Assist. Prof	Physics	Polymer
4	Mohammed A. Al-Ameer	Ph.D	Assist. Prof	Physics	Theoretical Physics
5	Yasin Hassn Kadum	Ph.D	Assist. Prof	Physics	Electro/Optics
6	Musa Kadom Al-Aujani	Ph.D	Assist. Prof	Physics	Image Processing
7	Hamed Ibrahim Aboud	Ph.D	Assist. Prof	Physics	Theoretical Physics
8	Nihad A. Saleh Kdeer Al-Maamory	Ph.D	Assist. Prof	Physics	Health Physics
9	Hayder M. Abdualjalil	Ph.D	Lecturer	Physics	Theoretical Physics
10	Raheem Ga'ayid Kadhm	Ph.D	Assist. Prof	Physics	Solid State Physics
11	Nahida Bukheet Hasan	Ph.D	Lecturer	Physics	Solid State Physics



No.	Name	Qualification	Academic Title	Specialization	Specific Specialization
15	Rabab Saadoon Abdoon	M.Sc.	Lecturer	Physics	Astrophysics
16	Addnan H. Al-Aarajiy	M.Sc.	Lecturer	Physics	Nuclear Physics
17	Amera Abo Al-Soud	M.Sc.	Lecturer	Physics	Electron Optics
18	Ban Ali Nasir Al-Jomaa	M.Sc.	Lecturer	Physics	Electron Optics
19	Bashaeer Salih Mahdi	M.Sc.	Lecturer	Physics	Solid State Physics
20	Samira Adnan Mahdi Al-Haran	M.Sc.	Lecturer	Physics	Electron Optics
21	Nihal Abdullah Abdul-Wahab	M.Sc.	Lecturer	Physics	Laser
22	Nedahl Mohammed	M.Sc.	Lecturer	Physics	Image Processing
23	Rwa'a Mezher Obead	M.Sc.	Lecturer	Physics	Astrophysics
24	Wasnaa Jafar Wetwet	M.Sc.	Lecturer	Physics	Image Processing
25	Ali Madlol	M.Sc.	Assist. Lecturer	Physics	Nuclear Physics
26	Mehsen Kadum M.	M.Sc.	Lecturer	Physics	Nuclear Physics
27	Ibtesam Omran Radi Al-Jelaw	M.Sc.	Assist.Lecturer	Physics	Solid State Physics
28	Mohammed Ganem	M.Sc.	Assist.Lecturer	Physics	Solid State Physics
29	Hikmat Adnan	M.Sc.	Assist. Lecturer	Physics	Material Physics
30	Borak Yhya	M.Sc.	Assist.Lecturer	Physics	Solid State
31	Laith Tablib Hadi	M.Sc.	Assist.Lecturer	Physics	Astrophysics
32	Inaam Mahdi	M.Sc.	Assist. Lecturer	Public Law	Constitutional Law



Department of Chemistry

No.	Name	Academic Title	Qualification	Specialization	Specific Specialization
1	Abbas Noor Mohahammed	Prof	Ph.D.	Chemistry	Analytical Chemistry
2	Oda Miziel Yassir	Prof	Ph.D.	Chemistry	Biochemistry
3	Hussien Abi Mohammed	Prof	Ph.D.	Chemistry	Inorganic Chemistry
4	Falah Hassan Hussien	Prof	Ph.D.	Chemistry	Physical Chemistry
5	Dakhil Nasir Taha	Prof	Ph.D.	Chemistry	Analytical Chemistry
6	Qassim Hassan Kadhum	Prof	Ph.D.	Chemistry	Analytical Chemistry
7	Ali Abdul-Sahib Mahdi	Assist. Prof	Ph.D.	Chemistry	Physical Chemistry
8	Ameera Mohammed Ali Jassim	Assist. Prof	M.Sc.	Chemistry	Biochemistry
9	Sa`adoun Abdulla Oda	Assist. Prof	Ph.D.	Chemistry	Organic Chemistry
10	Thamer Abdul-Hamza Mohammed	Assist. Prof	Ph.D.	Chemistry	Inorganic Chemistry
11	Sadiq Ja`afar Baqir	Assist. Prof	Ph.D.	Chemistry	Analytical Chemistry
12	Lamya`a Abdul-Majeed	Assist. Prof	Ph.D.	Chemistry	Biochemistry
13	Abbas Abid Ali Dura`a	Assist. Prof	Ph.D.	Chemistry	Physical Chemistry
14	Nada Yahia Fairouz	Assist. Prof	Ph.D.	Chemistry	Physical Chemistry
15	Abbas Jassim Ateya	Assist. Prof	M.Sc.	Chemistry	Physical Chemistry
16	Salih Hadi Kadhum	Assist. Prof	M.Sc.	Chemistry	Inorganic Chemistry
17	Nadhir Najim Abdulla	Lecturer	M.Sc.	Chemistry	Organic Chemistry
18	Wissam Abdul-Jalil Jawad	Assist. Lecturer	M.Sc.	Chemistry	Physical Chemistry
19	Mohanad Musa Kareem	Lecturer	M.Sc.	Chemistry	Organic Chemistry
20	Khudhaier Jawad Kadhum	Assist.Lecturer	M.Sc.	Chemistry	Organic Chemistry
21	Sa`ad Madlool Mahdi	Assist. Lecturer	M.Sc.	Chemistry	Biochemistry
22	Mahmood Hussein Hadwan	Assist. Prof	M.Sc.	Chemistry	Biochemistry
23	Aqeel Ketab	Assist.Lecturer	M.Sc.	Mathematics	Al-Jabir
24	Saba Sahib Mohsin	Assist.Lecturer	M.Sc.	Chemistry	Analytical Chemistry
25	Bassim Mohammed Hasan	Assist. Lecturer	M.Sc.	Chemistry	Organic Chemistry
26	Jassim Mohammed Abdul-Hussein	Lecturer	M.Sc.	Chemistry	Inorganic Chemistry
27	Ahmed Ali Abdul-Sahib	Lecturer	M.Sc.	Chemistry	Analytical Chemistry
28	Shereen Ridha Rasool	Lecturer	M.Sc.	Chemistry	Organic Chemistry
29	Ala Khudhaier Hashim	Assist.Lecturer	M.Sc.	Chemistry	Physical Chemistry
30	Ali Jassim Hussein	Assist.Lecturer	M.Sc.	Chemistry	Organic Chemistry
31	Rana Sahib Khalaf	Assist.Lecturer	M.Sc.	Chemistry	Analytical Chemistry
32	Huda Sami	Assist.Lecturer	M.Sc.	Chemistry	Analytical Chemistry

Department of Geology

NO.	Name	Academic Title	Qualification	Specialization	Specific Specialization
1	Amer Atyah Leafa	Prof	Ph.D	Geology	Engineering Geology
2	Baqir Hassan Hashim	Assist. Prof	Ph.D	Engineering	Cities Planning
3	Haqi Ismael Hussain	Lecturer	Ph.D	Geology	Geophysics
4	Abdul Wahab Naief Katham	Assist. Prof	M.Sc.	Geology	Geophysics
5	Ahmed khudhair Salan Al. Jumaili	Assist. Prof	Ph.D	Geology	Geochemistry
6	Jaffar Houssien Ali Al – Zubadi	Assist. Prof	Ph.D	Geology	Engineering Geology
7	Jawid Kadhim Manni	Assist. Lecturer	Ph.D	Geology	Geochemistry
8	Hamed Ali Ahamed AL.Sultan	Assist. Lecturer	M.Sc.	Geology	Stratigraphy
9	Linan Anis Fadhil	Assist. Lecturer	M.Sc.	Geology	Geochemistry
10	Wassan Abbas Jassim	Assist. Lecturer	M.Sc.	Mathematics	Mathematics
11	Muhssen Abaid Khalif	Lecturer	M.Sc.	Geology	Engineering Geology
12	Haider Abaid Sloomy	Assist. Lecturer	M.Sc.	Geology	Hydrogeology
13	Mohammed Sattam Abbas Al-Temimi	Lecturer	Ph.D	Geology	Paleontology
14	Furat Attaa Salih	Assist. Lecturer	Ph.D	Geology	Paleontology
15	Ali Hussain	Lecture	Ph.D	Geology	Geology
16	Saad Kmal Al-Dian	Lecture	M.Sc.	Geology	Geophysics



Department of Biology

No.	Name	Academic Title	Qualification	Specialization	Specific Specialization
1.	Ali Shaálan	Prof.	Ph.D.	Biology	Entomology / Insect Classification
2.	Abdulla Ibrahim Shaheed	Prof.	Ph.D.	Biology	Botany/Physiology of Plant Hormones
3.	Jawad Kadhem Abood	Prof.	Ph.D.	Biology	Plant Pathology/ Fungi
4.	Ebrahim Mohamed Saeed	Prof.	Ph.D.	Biology	Microbiology/ Genetic & Immunology
5.	Faris Naji Abood	Prof.	Ph.D.	Biology	Zoology / Fertility & Sterility Physiology
6.	Abdulla Kadhem Hindi	Assist. Prof.	Ph.D.	Biology	Microbiology Environment
7.	Qasim Najim Aubaid	Assist. Prof.	Ph.D.	Biology	Microbiology/ Pathogenesis Bacteria
8.	Haider Kamil Zaidan Al-Saadi	Prof.	Ph.D.	Biology	Zoology / Animal Physiology
9.	Alaa Jawad Hassan	Assist. Prof.	Ph.D.	Biology	Microbiology/ Immunology
10.	Hasan Fadhel Nagi	Assist. Prof.	Ph.D.	Biology	Biotechnology
11.	Ali Hmood Mohaissn	Prof.	Ph.D.	Biology	Genetic Engineering
12.	Maysoon Mahdi Salih	Assist. Prof.	Ph.D.	Biology	Ecology / Environment & Pollution
13.	Rabab Omran Radii	Assist. Prof.	Ph.D.	Biology	Biotechnology & Genetic Engineering
14.	Wejdan Abd-Alhadi Abd Ali	Assist. Prof.	Ph.D.	Biology	Genetic of Cell Biology
15.	Azhar Omran Lateef	Assist. Prof.	Ph.D.	Biology	Microbiology/ Pathogenesis Bacteria
16.	Maher Ali	Assist. Prof.	Ph.D.	Biology	Zoology / Medical Parasitic
17.	Esam Kadhom Abood	Lecturer	Ph.D.	Biology	Entomology / Insect Classification
18.	Abd –Alhussan Mahdi Kadhom	Lecturer	Ph.D.	Biology	Chemistry / Biochemistry
19.	Mohamed Abdulla Jabber	Lecturer	Ph.D.	Biology	Biotechnology
20.	Basheer Abdul-Hamzah Al. Alwani	Lecturer	Ph.D.	Biology	Botany/Technology & Physiology
21.	Hussien Jassim Obaid	Lecturer	Ph.D.	Biology	Zoology / Animal Physiology
22.	Feryal Jameel Abd	Lecturer	Ph.D.	Biology	Microbiology/ Immunology
23.	Wijdan Redha Mahmood	Lecturer	Ph.D.	Biology	Microbiology
24.	Morog Saadi Abass	Lecturer	M.Sc.	Biology	Microbiology/ Mycology
25.	Amal Ali Mhaseen	Lecturer	M.Sc.	Biology	Zoology
26.	Jenan Mahdi Jwad	Lecturer	M.Sc.	Biology	Zoology / Histology & Embryology
27.	Odi Jassim Abd – Alrazaak	Lecturer	M.Sc.	Biology	Ecology / Environment & Pollution
28.	Kassim Abdullah Hamza	Lecturer	M.Sc.	Biology	Zoology / Parasitology
29.	Neda`a Adnan Abu seraj	Lecturer	M.Sc.	Biology	Botany/ Plant Classification
30.	Eman Mohamed Jar Alah	Lecturer	Ph.D.	Biology	Bacteriology
31.	Wathiq Jassim Al- Rakaby	Assist.Lecturer	M.Sc.	Biology	Ecology /Ecotoxins

Department of Biology

NO.	Name	Academic Title	Qualification	Specialization	Specific Specialization
32.	Rihab Edan Kadhim Al- Jibouri	Assist.Lecturer	M.Sc.	Biology	Botany/ Plant Physiology
33.	Ebtihal Muitz Abdui-Mahd	Assist.Lecturer	M.Sc.	Biology	Botany/ Plant Classification
34.	Maysa`a Adel Hadi	Assist.Lecturer	M.Sc.	Biology	Cell biology
35.	Shyma`a Abd- Alhadi Kadhom	Assist.Lecturer	M.Sc.	Biology	Ecology /Environmental Physiology
36.	Wela`a Salih Hassen	Assist.Lecturer	M.Sc.	Biology	Genetic Engineering
37.	Farah Tariq Abdul-Rudha	Assist.Lecturer	M.Sc.	Biology	Microbiology/ Enzymology
38.	Nagham Adil Ghani	Assist.Lecturer	M.Sc.	Biology	Genetic of Microbiology
39.	Nuha Ya`rob Mohamed	Assist.Lecturer	M.Sc.	Biology	Zoology / Fertility & sterility Physiology
40.	Nuha Faleh Kadhom	Assist.Lecturer	M.Sc.	Biology	Ecology
41.	Nada Saad Naji Al- Tae	Assist.Lecturer	M.Sc.	Biology	Ecophysiology
42.	Zeena Hadi Obaid	Assist.Lecturer	M.Sc.	Biology	Plant Pathology/ Fungi
43.	Soaad Ghali	Assist.Lecturer	M.Sc.	Biology	Ecology / Environment & Pollution
44.	Wasan Mudhar Abu-Al-Temman	Assist.Lecturer	M.Sc.	Biology	Botany/ Plant Physiology
45.	Afaf Khaiery Esmaeel	Assist.Lecturer	M.Sc.	Biology	Zoology
46.	Hanan Ahmed Hadi Al- Gariawi	Assist.Lecturer	M.Sc.	Biology	Botany/ Plant Classification & Anatomy
47.	Lubna Abd – Aladhem Majeed	Assist.Lecturer	M.Sc.	Biology	Microbiology/ Immunology
48.	Fadia Hameed Mohamed	Assist.Lecturer	M.Sc.	Biology	Botany / Plant Physiology
49.	Hala Muhi Nagi	Assist.Lecturer	M.Sc.	Biology	Zoology / Fertility & Sterility Physiology
50.	Eman Fadhel Abass	Assist.Lecturer	M.Sc.	Biology	Zoology / Fertility & Sterility Physiology
51.	Anwar Ali Abdulla Al-Hussieny	Assist.Lecturer	M.Sc.	Biology	Microbiology/ Biotechno & Genetic
52.	Thekra Abdul A`ali Al-Kaabi	Assist.Lecturer	M.Sc.	Biology	Microbiology/ Genetic Engineering
53.	Anwar Kadhem Hussein	Assist.Lecturer	M.Sc.	Biology	Microbiology
54.	Nadia Hameed Abd- Oun	Assist.Lecturer	M.Sc.	Biology	Biotechnology/ Microbial Poisons
55.	Batol Mohammad Hassan	Assist.Lecturer	M.Sc.	Biology	Ecology / Environment & Pollution
56.	Evan Ibrahim Merhej	Assist.Lecturer	M.Sc.	Biology	Botany / Plant Physiology
57.	Azhar Hamza Hassan	Assist.Lecturer	M.Sc.	Biology	Botany / Plant Physiology
58.	Athir Saieb Naji Al- Azaway	Assist.Lecturer	M.Sc.	Biology	Ecology / Environment & Pollution
59.	Eyad Mohammed Jaber	Assist.Lecturer	M.Sc.	Biology	Ecology / Environment & Pollution
60.	Abdullah Oda Alwan	Assist.Lecturer	M.Sc.	Biology	Botany / Plant Physiology
61.	Moayed Jassim Yass	Assist.Lecturer	M.Sc.	Biology	Zoology / Environment
62.	Fakhir Magtoof Shumran	Assist.Lecturer	M.Sc.	Biology	Zoology / Fertility & Sterility Physiology
63.	Bashar Odda Jawad	Assist.Lecturer	M.Sc.	Biology	Molecular Genetic
64.	Nehad Kadhom Jassim	Assist.Lecturer	M.Sc.	Biology	Genetic Engineering
65.	Tareq Shaker	Assist.Lecturer	M.Sc.	Biology	Zoology / Parasitology
66.	Shakir Hammad Mohammad	Assist.Lecturer	M.Sc.	Biology	Microbiology/ Immunology

Department of Biology

No.	Name	Academic Title	Qualification	Specialization	Specific Specialization
67	Mohamed Jwad Kazel	Assist. Lecturer	M.Sc.	Biology	Molecular Biology
68.	Dalya Salah Mahdi	Assist. Lecturer	M.Sc.	Biology	Microbiology/ Biotechnology
69.	Shaimaa Jassim Mhameed	Assist.Lecturer	M.Sc.	Biology	Microbiology
70.	Shaima`a Muhi	Assist. Lecturer	M.Sc.	Biology	Botany
71.	Samir Moaen Khudier	Assist.Lecturer	M.Sc.	Biology	Microbiology
72.	Rasha Waheed Swadi	Assist. Lecturer	M.Sc.	Biology	Microbiology



**Courses of Undergraduate Studies
Department of Chemistry**

First Year

Subjects	Hours		Units
	Pract.	Thero.	
Analytical Chemistry	2	2	6
Physics	2	2	6
Inorganic Chemistry	-	3	6
Mathematics	-	3	6
Computer Programming	1	1	3
Geology	2	2	6
Human Rights	-	2	2

Second Year

Subjects	Hours		Units
	Pract.	Thero.	
Organic Chemistry	2	3	8
Analytical Chemistry	2	1	4
Inorganic Chemistry	2	2	6
Mathematics	-	2	4
Computer Programming	1	1	3
Freedom and Democracy	-	2	4
Physical Chemistry	2	3	8

Third Year

Subjects	Hours		Units
	Pract.	Thero.	
Organic Chemistry	2	3	8
Physical Chemistry	2	3	8
Inorganic Chemistry	2	2	6
Biochemistry	2	2	6
Industrial Chemistry	-	2	2
Optional Subject	-	1	2
Optional Subject	-	1	2

Fourth Year

Subjects	Hours		Units
	Pract.	Thero.	
Instrumental Analysis & Separating Technique	2	3	8
Industrial Chemistry	2	3	8
Quantum & Spectroscopy Chemistry	-	3	6
Identification of Organic Chemistry	2	1	4
Biochemistry	2	2	6
Optional Subject	-	1	2
Optional Subject	-	1	2
Research Project	-	1	2

Department of Computer Science

First Year

Subjects	Hours		Units
	Pract.	Thero.	
Structured Programming	2	2	6
Discrete Structures	2	2	6
Mathematics	2	2	6
Computer Organization	-	3	6
Logic Design	-	3	6
Human Rights	-	2	4

Second Year

Subjects	Hours		Units
	Pract.	Thero.	
Object Oriented	2	2	6
Computer Architecture	2	2	6
Data Base and System Analysis	2	2	6
Numerical Methods	2	2	6
Data Structure	2	2	6
Computing Theory	2	2	6
Freedom and Democracy	-	4	2

Third Year

Subjects	Hours		Units
	Pract.	Thero.	
(A.I) Artificial Intelligence	2	2	6
Operational Research	2	2	6
Software Engineering	2	2	6
Computer Graphic	2	2	6
Application	-	3	6
Compiler	-	3	6
Computer Architecture	-	3	6

Fourth Year

Subjects	Hours		Units
	Pract.	Thero.	
Algorithm Design and Analysis	2	2	6
Information Security	2	2	6
Communication Network	2	2	6
Image Processing	2	2	6
Operating system	2	2	6
Web Development	2	4	1
Research Project	2	2	2

Department of Geology
First Year

Subjects	Hours		Units
	Pract.	Thero.	
Physical and Historical Geology	2	2	6
Crystallography and Minerals	2	2	6
General Physics	2	2	6
Analytical Chemistry	2	2	6
Applied Mathematics and Statics	2	1	5
Paleontology and Micro Paleontology	2	2	6
Principles of Computers	1	2	4
Human Rights	2	-	4
English Course	1	-	2

Third Year

Subjects	Hours		Units
	Pract.	Thero.	
Applied Geophysics	2	2	6
Soil Mechanic	2	2	6
Survey and Field Work	2	2	6
Stratigraphy and Geology of Iraq	2	2	6
Applied Geochemistry and Geochemical Exploration	2	2	6
Economic Geology and Metamorphic Rocks	2	2	6
Environmental Geology and Sedimentation Engineering	2	1	5
Mining Engineering and Quarries	-	2	4

Second Year

Subjects	Hours		Units
	Pract.	Thero.	
Sedimentology and Sedimentary Rocks	2	2	6
Optical Minerals and Igneous Rocks	2	2	6
Applied Structural Geology	2	2	6
Geomorphology and Remote Sensing	2	2	6
Practical Computer and Geographic Information's System	1	1	4
Building Materials and Industrial Rocks	2	2	6
Numerical Analysis	2	1	5
Engineering Drawings and Descriptive Engineering	1	2	4
Human Freedom	2	-	4

Fourth Year

Subjects	Hours		Units
	Pract.	Thero.	
Engineering Geophysics	2	2	6
Hydrology and Hydrogeology	2	2	6
Petroleum Reservoirs and Organic Geochemistry	2	2	6
Petroleum Geology and Wells Logging	2	2	6
Microfiches and Basin Analysis	2	2	6
Mining Engineering and Quarries	2	1	5
Rock Mechanics and Rock Slope Stability	2	2	6
Research Project	2	1	4
Field Course (between third class and fourth class)			

Department of Biology

First Year/General

Subjects	Hours		Units
	Pract.	Thero.	
General Biology	2	2	8
Geology	2	2	6
Computer Science	1	1	3
General Chemistry	2	2	6
Mathematics & Statistics	-	2	4
Physics	2	2	6
Human Rights	-	2	4

Second Year/General

Subjects	Hours		Units
	Pract.	Thero.	
Plant Anatomy & Taxonomy	2	2	6
General Microbiology	2	2	6
Entomology	2	2	6
Biochemistry	2	2	6
Invertebrate Biology & Parasitology	2	2	6
Computer Science	1	1	3
Democracy	-	2	2
Plant Groups	2	2	3

Third Year/General Biology

Subjects	Hours		Units
	Pract.	Thero.	
Animal Physiology & Histology	2	2	6
Ecology & Pollution	2	2	6
Fungi & Plant Pathology	2	2	6
Cell Biology & General Genetic	2	2	6
Protozoology	2	2	3
Plant Physiology	2	2	3
Endocrinology	2	2	3
Molecular Biology	-	2	2

Third Year/Microbiology

Subjects	Hours		Units
	Pract.	Thero.	
Animal Physiology & Histology	2	2	6
Ecology & Pollution	2	2	6
Cell Biology & General Genetic	2	2	6
Sewage and Soil Microbiology	2	2	6
Protozoology	2	2	3
Endocrinology	2	2	3
Immunology	2	2	3
Microbial Physiology	2	2	3

Third Year / Environment and Pollution

Subjects	Hours		Units
	Pract.	Thero.	
Animal Physiology & Histology	2	2	6
Plant & Animal Ecology	2	2	6
Bio radiation/ Microbial Ecology	2	2	3
Plant Eco Physiology	2	2	3
Ecosystems	2	2	3
Fresh Water Biology	2	2	3
Soil Chemistry	2	2	3
Cell Biology & General Genetic	2	2	6
Molecular Biology	-	2	2

Third Year/ Biotechnology

Subjects	Hours		Units
	Pract.	Thero.	
Animal and Plant Histology	2	2	6
Cell Biology and Molecular Biology	2	2	6
General Genetic	2	2	6
Ecology and Environmental Pollution	2	2	3
Pathogenic Bacteria	2	2	3
Fundamentals of Biotechnology	2	2	3
Microbial Ecology	2	2	3
Antibiotics	2	2	3

Fourth Year/ Microbiology

Subjects	Hours		Units
	Pract.	Thero.	
Fungi & Fungi Taxonomy	2	2	6
Food & Industrial Microbiology	2	2	6
Pathogenic Bacteria and Virology	2	2	6
Molecular Biology & Microbial genetic	2	2	6
Biotechnology and Genetic Engineering	2	2	3
Comparative Cordite Anatomy	2	2	3
Antibiotics	2	2	3
Research Project	-	2	2

Fourth Year/ General Biology

Subjects	Hours		Units
	Pract.	Thero.	
Comparative Anatomy	2	2	6
Embryology & Development Biology	2	2	6
Plant Growth & Nutrition	2	2	3
Immunology	2	2	3
Plant Biotechnology	2	2	3
Biotechnology and Genetic Engineering	2	2	3
Tissue Culture	2	2	3
Growth & Development of Plant	2	2	3
Ichthyology	2	2	3
Research Project	1	2	2

Fourth Year/ Biotechnology

Subjects	Hours		Units
	Pract.	Thero.	
Fermentation Technique	2	2	6
Plant and Animal Physiology	2	2	6
Immunology and Vaccine Technology	2	2	6
Genetic engineering	2	2	3
Plasmids	2	2	3
Virology	2	2	3
Fungi	2	2	3
Microbial Toxin	2	2	3
Plant Biochemistry	2	2	
Research Project	-	2	2

Fourth Year/ Environment

Subjects	Hours		Units
	Pract.	Thero.	
Ecological Treatment	2	2	6
Environmental Pollution	2	2	6
Microbial Pollution	2	2	6
Biotechnology and Genetic Engineering	2	2	3
Biodiversity	2	2	3
Planktonic	2	2	3
Instrumental Analyses	2	2	3
Animal Physiology	2	2	3
Research Project	-	2	2



Department of Physics

First Year

Subjects	Hours		Units
	Pract.	Thero.	
Mechanics And properties of matter	2	2	6
Electricity and magnetism	2	2	6
General Astronomy	-	2	4
Mathematics (1)	-	2	4
Computers (1)	2	1	4
General Chemistry	2	2	6
Human Rights	-	2	4
Geology	2	2	6

Second Year

Subjects	Hours		Units
	Pract.	Thero.	
Modern Physics	2	2	6
Analogue Electronics	2	2	6
Heat and Statistics	2	2	6
Mathematics (2)	-	2	4
Analytical Mechanics	2	2	6
Advanced Computers	2	1	4
Material Physics	2	2	6
Freedom & Democracy	-	2	4

Third Year/ General Physics

Subjects	Hours		Units
	Pract.	Thero.	
Quantum Mechanics	-	3	6
Physical Optics	2	2	6
Mathematical Modeling	2	2	6
Laser and Applications	2	2	6
Digital Electronics	2	2	6
Optional Subject 1	-	2	4
Optional Subject 2	2	1	4

Third Year/ Space and Astronomy

Subjects	Hours		Units
	Pract.	Thero.	
Quantum Mechanics	-	3	6
Physical Optics	2	2	6
Mathematical Modeling	2	2	6
Remote Sensing	-	2	4
Astrophysics (1)	-	3	6
Physics of Atmosphere	2	2	6
Digital Electronics	2	2	6

Fourth Year/ General Physics

Subjects	Hours		Units
	Pract.	Thero.	
Nuclear Physics	2	2	6
Solid state Physics	2	2	6
Computers Application	2	1	4
Electromagnetism	-	2	4
Optional Subject 1	-	2	4
Optional Subject 2	2	1	4
Optional Subject 3	-	2	4
Research Project	-	1	2

Fourth Year/ Space and Astronomy

Subjects	Hours		Units
	Pract.	Thero.	
Nuclear Physics	2	2	6
Solid Sate Physics	2	2	6
Computers Application	2	1	4
Electromagnetism	-	2	4
Astrophysics (2)	-	3	6
Image Processing	2	2	6
Astronomical Techniques	-	2	4
Research Project	-	1	2



Courses of Postgraduate Studies

Department of Chemistry

Master Degree

First Year

1st Term

No.	Subjects	Hours	Units
1	Physical Chemistry	2	2
2	Analytical Chemistry	2	2
3	Organic Chemistry	2	2
4	Inorganic Chemistry	2	2
5	Biochemistry	2	2
6	English Course	2	2
7	Literature Survey	1	1

Second Year : Research project and submitting a dissertation

2nd Term

No.	Subjects	Hours	Units
1	Chromatography	2	2
2	Seminar	1	1
3	English Course	2	2
4	Molecular spectroscopy	2	2
5	Flow Injection	2	2
6	Organic Reagents	2	2
7	Instrument Technicians	2	2
8	Photochemistry	2	2
9	Quantum Chemistry	2	2
10	Chemical Equilibrium	2	2
11	Chemical Bonding	2	2
12	Organic Metallic	2	2
13	Mechanism of Inorganic Reaction	2	2
14	Mechanism of Organic Reaction	2	2
15	Heterocyclic	2	2
16	Polymer Chemistry	2	2
17	Enzymologist chemistry	2	2
18	Biochemical Calculation	2	2
19	Metabolism Chemistry	2	2

Courses of Postgraduate Studies

Department of Chemistry

Ph. D Degree

First Year

1st Term

No.	Subjects	Hours	Units
1	Physical Chemistry	2	2
2	Analytical Chemistry	2	2
3	Organic Chemistry	2	2
4	Inorganic Chemistry	2	2
5	Biochemistry	2	2
6	English Course	2	2
7	Literature Survey	1	1



2nd Term

No.	Subjects	Hours	Units
1	Molecular Spectroscopy	2	2
2	Separation Methods	2	2
3	English Course	2	2
4	Seminar	1	1
5	Flow Injection	2	2
6	Atomic Absorption	2	2
7	Thermal Analysis	2	2
8	Free Radicals	2	2
9	Photo Conversion	2	2
10	Quantum Mechanics	2	2
11	Inorganic Applications	2	2
12	Lanthanide and Actinides	2	2
13	Kinetic and Mechanism of	2	2
14	Substitution Reactions	2	2
15	Synthesis of Organic	2	2
16	Compound	2	2
17	Stereochemistry Natural Products	2	2
18	Alternative Metabolism	2	2
19	Chemistry	2	2
20	Enzymeology Chemistry	2	2
21	Clinical Chemistry	2	2

Second Year: Research project. The minimum period of research and submitting a dissertation is at least three years

Courses of Postgraduate Studies

Department of Computer Science Master Degree

First Year

1st Term

Subjects	Hours		Units
	Pract.	Thero.	
Advance Artificial Intelligence		4	2
Computer Architecture		4	2
Data Compression		4	2
Cryptography		4	2
Advance Mathematics		4	2
English Course		4	2

2nd Term

Subjects	Hours		Units
	Pract.	Thero.	
Petri Nets		4	2
Advance Graphics		4	2
Advance Operating Systems		4	2
Computer Simulation		4	2
Data Mining		4	2
English Course		4	2

Second Year : Research project and submitting a dissertation

Ph.D. Degree

First Year

1st Term

Subjects	Hours		Units
	Pract.	Thero.	
Intelligent Data Analysis		4	2
Advance Image Processing		4	2
Intelligent Agent		4	2
Information Security		4	2
Computer Network		4	2
English Course		4	2

2nd Term

Subjects	Hours		Units
	Pract.	Thero.	
Fuzzy Logic		4	2
Information Systems		4	2
Parallel Processing		4	2
Mathematical Modeling		4	2
Digital Signal Processing		4	2
English Course		4	2

Second Year: Research project. The minimum period of research and submitting a dissertation is at least three years

Courses of Postgraduate Studies

Department of Biology

Master Degree

First Year/ 1st term

No.	Subjects	Units
1	Biochemistry	2
2	Biostatistics	2
3	Biosystematics	2
4	Molecular Biology	2
5	Environment Pollution	2
6	English Course	2
7	Periodicals	



2nd Term/ Animal

No.	Subjects	Units
1	Advanced Animal Physiology	2
2	Advanced Animal Histology	2
3	Advance Immunology	2
4	Advance Helminthology	2
	Pollination in insects	
	Endocrinology	
5	English Course	2
6	Seminar	1

2nd Term/ Microbiology

No.	Subjects	Units
1	Advanced Immunology	2
2	Advanced Pathogenic Bacteria	2
3	Industrial Microbiology	2
4	Advance Mycology	2
5	English Course	2
6	Seminar	2

2nd Term/ Botany

No.	Subjects	Units
1	Advanced Plant Physiology	2
2	Advanced Plant Anatomy	2
3	Vegetative Propagation	2
4	Advanced Plant Ecology	2
5	English Course	2
6	Seminar	1

2nd Term/ Advanced

No.	Subjects	Units
1	Advanced Biotechnology	2
2	Advanced Genetic Engineering	2
3	Biofertilizers	2
4	Enzyme Technology	2
5	English Course	2
6	Seminar	2

2nd Term/ Ecology

No.	Subjects	Units
1	Advanced Aquatic Ecology	2
2	Advanced Ecological Evolution	2
3	Water Pollution	2
4	Fresh Water Biology	2
5	English Course	2
6	Seminar	1



Second Year : Research project and submitting a dissertation

Courses of Postgraduate Studies

**Department of Biology
Ph.D Degree**

First Year/ 1st Term

No.	Subjects	Units
1	Enzymology	2
2	Design and Analysis Experiments	2
3	Molecular Genetics	2
4	Cell Biology	2
5	English Course	2
6	Periodicals	

2nd Term/ Animal

No.	Subjects	Units
1	Advance Reproduction Physiology	3
2	Advance Embryology	3
3	Advance Immunobiology	3
4	Advance Animal Behavior	2
5	Advance Parasitology Comparative Endocrinology	3
6	English Course	2
6	Seminar	1

2nd Term/ Ecology

No.	Subjects	Units
1	Biodiversity	3
2	Advanced Ecotoxicology	2
3	Advanced Limnology	2
4	Optional Subject	3
5	Environmental Pollution	2
6	English Course	2
7	Seminar	1

2nd Term/ Microbiology

No.	Subjects	Units
1	Advanced Immunobiology	2
2	Microbial Ecology	3
3	Diagnostic Microbiology	3
4	Virology	2
5	Microbial Physiology	2
6	English Course	2
7	Seminar	1

2nd Term/ Botany

No.	Subjects	Units
1	Advanced Growth and Development	2
2	Advanced Plant Nutrition	
3	Plant Hybridization and Breeding	2
4	Plant Ecophysiology	2
5	Ageing Physiology	2
6	English Course	2
7	Seminar	2

Second Year: Research project. The minimum period of research and submitting a dissertation is at least three years

Department of Physics -Master Degree

First Year 1st term

No.	Subjects	Theo.	Units
1	Quantum Mechanics	2	2
2	Classical Mechanics	2	2
3	Mathematical Physics	2	2
4	Physics	2	2
5	Advanced Optics	2	2
6	English Course (1)	2	2
7	Research Procedures	2	2

2nd Term

No.	Subjects	Thero.	Units
1	Statistical Physics	2	2
2	Nuclear Physics	2	2
3	English Course (2)	2	2
4	Research Project	1	1
5	Nonlinear Optics	2	2
6	Advanced Laser	2	2
7	Composite Materials	2	2
8	Physics of Semiconductors	2	2
9	Image Processing	2	2
10	Astrophysics	2	2
11	Quantum Dots	2	2
12	Computational Physics	2	2
13	Biophysics	2	2

Second Year: Research project and submitting a dissertation.