



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



Academic Program for Department of aesthetic and Laser techniques

2026/2025





Concepts and terminology:

Academic Program Description: The academic program description provides a brief summary of its vision, mission and objectives, including an accurate description of the targeted learning outcomes according to specific learning strategies.

Course Description: Provides a brief summary of the most important characteristics of the course and the learning outcomes expected of the students to achieve, proving whether they have made the most of the available learning opportunities. It is derived from the program description.

Program Vision: An ambitious picture for the future of the academic program to be sophisticated, inspiring, stimulating, realistic and applicable.

Program Mission: Briefly outlines the objectives and activities necessary to achieve them and defines the program's development paths and directions.

Program Objectives: They are statements that describe what the academic program intends to achieve within a specific period of time and are measurable and observable.

Curriculum Structure: All courses / subjects included in the academic program according to the approved learning system (quarterly, annual, Bologna Process) whether it is a requirement (ministry, university, college and scientific department) with the number of credit hours.

Learning Outcomes: A compatible set of knowledge, skills and values acquired by students after the successful completion of the academic program and must determine the learning outcomes of each course in a way that achieves the objectives of the program.

Teaching and learning strategies: They are the strategies used by the faculty members to develop students' teaching and learning, and they are plans that are followed to reach the learning goals. They describe all classroom and extra-curricular activities to achieve

introduction:





The educational program is a well-planned set of courses that include procedures and experiences arranged in the form of an academic syllabus. Its main goal is to improve and build graduates' skills so they are ready for the job market. The program is reviewed and evaluated every year through internal or external audit procedures and programs like the External Examiner Program. The academic program description is a short summary of the main features of the program and its courses. It shows what skills students are working to develop based on the program's goals. This description is very important because it is the main part of getting the program accredited, and it is written by the teaching staff together under the supervision of scientific committees in the scientific departments. This guide, in its second version, includes a description of the academic program after updating the subjects and paragraphs of the previous guide in light of the updates and developments of the educational system in Iraq, which included the description of the academic program in its traditional form (annual, quarterly), as well as the adoption of the academic program description circulated according to the letter of the Department of Studies T 312906 on 31/5/2023 regarding the programs that adopt the Bologna Process as the basis for their work. In this regard, we can only emphasize the importance of writing an academic program and course description to ensure the proper functioning of the educational process.





Academic Program Description

University Name: Al-Furat Al-Awsat Technical University

College: College of Health and Medical Technologies / Kufa

Academic Department: Department of aesthetic and Laser techniques

Academic or Professional Program Name: aesthetic and Laser techniques

Study System: Semester-based

Description Preparation Date: 21/10/2025

File Completion Date: 21/10/2025

Signature

Department Head: Prof. Dr.
Hassan Ali Farman

Date: 21/10/2025

Signature

Scientific Assistant: Assist. Prof. Dr.
Ahmed Fadel ALshawhi

Date: 21.10.2025

File Verified By:

Quality Assurance and University Performance Division:

Lect. Assist. Inas Kazem Abdul Ameer

Date: 21/10/2025

Signature:

Dean Approval:

Prof. Dr. Angham Jassim Mohammed Ali



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To make the field of cosmetology a beneficial and accessible science for those in need of non-surgical cosmetic interventions under the supervision of medical personnel. Graduates of the department will support the healthcare system in preserving rejuvenated youth. The program also aims to offer psychological support—not cosmetic obsession—so that beauty remains beauty, not disfigurement.

2. Program Mission

The Department of Cosmetic and Laser Technology at the College of Health and Medical Technologies / Kufa aims to graduate a group of highly qualified technicians in cosmetic sciences. These graduates are capable of contributing to the development of the profession and can apply scientific foundations from various cosmetic fields to serve society.

The college promotes development in curriculum and scientific research, with a continuous focus on healthcare programs that meet societal needs and contribute to environmental growth.

3. Program Objectives

1. Graduate skilled cosmetic and laser technicians to meet the needs of the health sector.
2. Prepare leading scientific and leadership competencies in laser cosmetology.
3. Spread awareness of medical aesthetics using laser technologies.
4. Achieve high levels of community engagement by delivering excellent services.
5. Advance scientific knowledge and research in cosmetic laser techniques.
6. Scientifically and intellectually train students, emphasizing societal and cultural values.





7. Adopt modern international curricula and technologies.

8. Develop academic programs according to global standards.

4. Program Accreditation

A detailed study was submitted to obtain accreditation, including a self-evaluation report, improvement plan, and conformity report.

5. Other external influences

- Al-Furat Al-Awsat Technical University
- Ministry of Higher Education and Scientific Research

6. Program Structure

Program Structure	Number of Courses	Credit hours	Percentage	Reviews*
Institution Requirements	8	17	100%	
College Requirements				
Department Requirements	49	158	100%	
Summer Training	The second, third and fourth stage	Satisfied		
Other				

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

7. Program Description

Year/Level	Course Code	Course Name	Credit Hours
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FIRST Stage			Theoretical	Practical
FIRST Stage	Atu13AAL111 C M	General Chemistry	2	4
	Atu13AAL112 CM	Human Biology	2	4
	Atu13AAL113 CM	Medical Physics	2	4
	Atu13AAL114 CM	Medical Terminology	2	-
	Atu13	Human Rights	2	-
	Atu12	Computer Fundamentals	1	2
	Atu13AAL121 CM	Chemistry	2	4
	Atu13AAL122 CM	Human Anatomy	2	4
	Atu13AAL123 CM	Skin and Hair Biology	2	4
	Atu13AAL124 CM	Laser Physics	2	4
	Atu13AAL125 CM	Medical Terminology	2	-
	Atu 11	Arabic Language	2	-
Second stage	Atu13AAL211 CM	Physiology	2	4
	Atu13AAL212 CM	General Pathology	2	4
	Atu13AAL213 CM	Laser Physics and Its Medical Applications	2	4
	Atu24	Crimes of the Ba'ath Party	2	-
	Atu13AAL215 C M	Fundamentals and Techniques of Skin Care	2	4
	Atu13AAL216 CM	Pharmacology	2	2
	Atu13AAL217 CM	Nutrition I	2	4
	Atu13AAL221 CM	Dermatological Pharmacology	2	4
	Atu13AAL222CM	Disorders of Skin, Hair, and Nails	2	4
	Atu13AAL223 CM	Nutrition II	2	2
	Atu13AAL224 CM	Systemic Pathology	2	4
	Atu13AAL225 CM	Laser and Light-Based Cosmetic Technologies	2	4
	Atu13AAL226 CM	Microbiology	2	4
	Atu13AAL227 CM	First Aid	1	2
	Atu13AAL218 CM	Arabic Language II	2	-
	Atu12	Computers and Artificial Intelligence II	1	2

8. Expected learning outcomes of the program

Knowledge

Skilled healthcare professionals with knowledge in anatomy, pathology, genetics, endocrinology, cosmetic pharmaceuticals, and basic sciences (chemistry, biology, physics).

Skills

1. Training in optimal use of modern cosmetic laser technologies.
2. Competent handling of various cosmetic conditions and cases.





3. Deep understanding of course content and terminology.

Ethics

Enabling students to obtain knowledge of Aesthetic and laser methods and therapeutic devices.

Training students on the use and methods of Aesthetic and laser in treating medical conditions

9. Teaching and Learning Strategies

Theoretical lectures covering the goals and foundations of each course.

- * Small group sessions for in-depth discussion and analysis.
- * Regular quizzes and comprehensive question banks.

10. Evaluation methods

- Daily and monthly exams.
- Semester and final exams.
- Grades for homework.

11. Faculty

Faculty Members

Academic Rank	Specialization		Special Requirements /Skills (if applicable)	Number of the teaching staff	
	General	Special		Staff	Lecturer
Prof. Dr. Hassan Ali Farman	Biology	Physiology	Head of Department	yes	
Dr. Ammar Kareem Madloul	chemistry	biochemistry	Department rapporteur	yes	





Dr. Hussein Rasheed Hamoud	Medicine	Diagnostic Radiology		yes	
Lec.Dr. Fahad Dakhel Fahad	chemistry	biochemistry		yes	
Dr. Abdullah Abbas Al- Husseini	Physical Education	Sports Injuries & Rehibition		yes	
Dr.dhulfiqar nazim	Physics of lasers			yes	

Professional Development

Mentoring new faculty members

- Adherence to the work schedule
- Commitment to the timings of exams and lectures
- Encouragement of scientific research achievement
- Encouragement to complete the scientific plan through seminars, workshops, discussion sessions, and courses

Professional development of faculty members

Developing students' abilities by encouraging them to apply what they have learned and employing that in the field of work, encouraging them to visit the library weekly, and reviewing Sources, books, and magazines as a source of information.

12. Acceptance Criterion

- Central according to the acceptance of the Ministry of Higher Education and Scientific Research
- Collimated
- The distinguished ones
- Developing health staff
- Top 10%

13. The most important sources of information about the program

Refer to the college website and the university website.



14. Program Development Plan

Organize local and international conferences/workshops in cosmetic and laser fields.

- * Acquire the latest laser devices and technologies.
- * Send specialized faculty to international conferences to stay updated on the latest research.





Skills Chart Program

Required learning outcomes of the program

values						Skills				knowledge				Essential or optional	Course name	Course code	First stage
A4	Part 3	Part2	Part1	B4	B3	B2	B1	A4	A3	A2	A1						
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	General Chemistry	Atu13AAL111 C M	First stage	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	Human Biology	Atu13AAL112 CM		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	Medical Physics	Atu13AAL113 CM		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	optional	English Language	Atu13AAL114 CM		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	optional	Human Rights	Atu13	First stage	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	optional	Computer Fundamentals	Atu12		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	Chemistry	Atu13AAL121 CM		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	Human Anatomy	Atu13AAL122 CM		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	Skin and Hair Biology	Atu13AAL123 CM	First stage	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	Laser Physics	Atu13AAL124 CM		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	optional	Medical Terminology	Atu13AAL125 CM		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	General Pathology	Atu13AAL211 CM		
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	Laser Physics and Its Medical Applications	Atu13AAL212 CM	First stage	
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	essential	Crimes of the Ba'ath Party	Atu13AAL213 CM		



Atu12





Course Description Form

1. Course Name:					
Anatomy					
2. Course Code:					
Course Code: ATU13AAL122					
3. Semester:					
Semester / Year: Second Semester / First Year					
4. Description Preparation Date:					
2024					
5. Available Attendance Forms:					
6. Number of Credit Hours (Total) / Number of Units (Total)					
Credit Hours: 3/2					
7. Course administrator's name (mention all, if more than one name)					
Instructor: Hussein Hammoud Rashid					
8. Course Objectives					
Course Objectives		Learn the importance of anatomy and the location of organs in relation to the student's specialization Secondly: Skill-based Objectives			
9. Teaching and Learning Strategies					
Strategy		Lectures and practical applied			
10. Course Structure					
No.	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method





First week			- Week 1: Forearm – bones, muscles, and features		
Second week			• Week 2: Forearm – arteries, nerves, and joins		
Third week			• Week 3: Wrist – bones, joints, movements, muscles		
Fourth week			• Week 4: Hand – bones, joints, muscles		
Fifth weeks			Week 5: Pelvis – features, muscles, pelvic floor		
Sixth week			• Week 6: Hip joint – structure, muscles, nerves		
seventh week			• Week 7: Knee joint – structure,		
Ninth week			Week 8: Ankle joint – structure, muscles, nerves		
Tenth week			Week 10: Head – skull bones, cranial fossae, muscles		
Eleventh weeks			- Week 11: Neck – vertebrae, muscles		
Twelfth week			Week 12: Neck – nerves, cervical vertebrae, muscles		
thirteenth week			Week 13: Vertebral column – vertebrae, joints, movements		
Fourteenth Week			Week 14: Vertebral column – discs, ligaments, curvatures		





Fifteenth
Week

Week 15: Revision





11 Course Evaluation	
The grade of the semester (100) is distributed as follows	
12 Learning and Teaching Resources	
Required textbooks (methodology, if any)	
Key references (sources)	Human Anatomy for Students, Byas Deb Ghosh, 2013 - Atlas of Functional Neuroanatomy, Walter J. Hendelman, 2000 - Clinical Anatomy of the Spine, 2014
Recommended books and references (scientific journals, reports...)	- Gray's Anatomy for Students, 2015 - Human Anatomy Coloring Book, 1982 - Atlas of Human Anatomy, Frank H. Netter, 2006
Electronic references, websites	
Course Development Plan	• Updating scientific content: • Practical and applied training:





Course Description Form

1. Course Name:	
Human Biology	
2. Course Code:	
ATU13AAL112CM	
3. Semester:	
Year: First Semester / First Year	
4. Description Preparation Date:	
2024	
5. Available Attendance Forms:	
In-person	
6. Number of Credit Hours (Total) / Number of Units (Total)	
2/2	
7. Course administrator's name (mention all, if more than one name)	
Prof. Dr. Kazem Mohammed Saba Email: dr.kadhemajalr98@gmail.com	
8. Course Objectives	
Course Objectives	1. Understand the fundamentals of life. 2. Develop scientific thinking skills. 3. Raise awareness of biological diversity. 4. Enhance medical knowledge. 5. Gain familiarity with applied sciences.



9. Teaching and Learning Strategies

Strategy

Lectures and skills

10. Course Structure

No.	Hours	Required Lea	Unit or subject name	Learning method	Evaluation
		Outcomes		method	
First week			- Introduction to Biology		
Second week			• Cell structures		
Third week			• Types and shapes of cells		
Fourth week			• Transport of materials across		
Fifth weeks			Cell division		
Sixth week			• Mitosis		
seventh week			• Meiosis		
Ninth week			Nucleic acids (DNA, RNA)		
Tenth week			Week 9: Epithelial tissues		
Eleventh weeks			Week 10: Connective tissues		
Twelfth week			Week 12: Nervous tissues		
thirteenth week			Week 13: Blood cells		



Fourteenth
Week

Week 14: Erythrocytes
and leukocytes

12. Course Evaluation	
The grade of the semester (100) is distributed as follows	
12 Learning and Teaching Resources	
Required textbooks (methodology, if any)	
Key references (sources)	The Cell: Structure and Function" by Dr. Abdul Hussein Al-Faisal
Recommended books and references (scientific journals, reports...)	Clinical Anatomy and Physiology, Thomas Colville
Course Development Plan	• Updating scientific content: • Practical and applied training:



Course Description Form

1. Course Name:	
General Chemistry	
2. Course Code:	
Course Code: ATU.13AAL11CM	
3. Semester:	
Semester / Year: First Semester / First Year	
4. Description Preparation Date:	
2024	
5. Available Attendance Forms:	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Credit Hours: 3	
7. Course administrator's name (mention all, if more than one name)	
Asst. Prof. Dr. Ammar Kareem Madloul Email: ammar.mdlool@atu.edu.iq	
8. Course Objectives	
Course Objectives	General Goal: - Provide an overview of organic and biochemical compounds. - Develop skills in performing experiments and chemical reactions.. - Understand human biochemical composition and metabolism. - Diagnose biochemical components using chemical methods. Specific Goal: - Teach students to identify chemical compounds and understand molecular processes related to human physiology



Secondly: Skill-based Objectives

9. Teaching and Learning Strategies

Strategy

Lectures and practical applied

10. Course Structure

No.	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First week			- Introduction to biochemistry and cell components		
Second week			• Physical chemistry and gas laws		
Third week			• Radioactivity and isotopes		
Fourth week			• Week 4: Solutions: types and preparation methods		
Fifth weeks			Week 5: Chemical equilibrium, acid-base balance		





Sixth week			Week 6: Buffers and physiological importance		
seventh week			Week 7: Blood composition and pH regulation		
Ninth week			Week 8: Water-electrolyte balance, osmotic pressure		
Tenth week			Week 9: Carbohydrate classification Week 10: Carbohydrate metabolism		
Eleventh weeks			Week 11: Glucose disorders (diabetes, ketone bodies)		
Twelfth week			Week 12: Lipids: types and derivatives		
thirteenth week			Week 13: Lipid metabolism and disorders		
Fourteenth Week			Week 14: Proteins: types, functions, amino acids		





Fifteenth
Week

			Week 15: Nucleic acids, replication, mutations		
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13. Course Evaluation

The grade of the semester (100) is distributed as follows

12 Learning and Teaching Resources

Required textbooks (methodology, if any)

Key references (source)	Lippincott's Illustrated Reviews: Biochemistry - Clinical Chemistry: Principles, Techniques, and Correlations
Recommended books and references (scientific journals, reports...)	<i>Biochemistry, Physical Chemistry texts</i> - <i>Scientific journals in chemistry</i>
Electronic references, websites	
Course Development Plan	• Updating scientific content: • Practical and applied training:



Course Description Form

1. Course Name:	
Principles of Computer Science	
2. Course Code:	
Course Code: ATU12	
3. Semester:	
Semester / Year: First Semester / First Year	
4. Description Preparation Date:	
2024	
5. Available Attendance Forms:	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Credit Hours: 3/2	
7. Course administrator's name (mention all, if more than one name)	
Instructor: Asst. Prof. Dr. Mohammed Abdul Mahdi Mohammed Ali Mohsen Email: Kuh.muh2@atu.edu.iq	
8. Course Objectives	
Course Objectives	Equip students with essential knowledge and practical skills in computer applications. - Train students in creating and editing office documents (Word, Excel, PowerPoint). - Teach basics of operating systems, file and folder





management.

- Strengthen understanding of digital concepts and applications in academic and practical contexts.

Secondly: Skill-based Objectives

9. Teaching and Learning Strategies

Strategy	Lectures and practical applied
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10. Course Structure

No.	Hours	Required Lear	Unit or subject name	Learning method	Evaluation
		Outcomes			method
First week			- Week 1: Introduction to computers and basic concepts		
Second week			• Week 2: Computer components, data vs. information		
Third week			• Week 3: Computer applications		
Fourth week			• Week 4: Cyber ethics, hacking, security		
Fifth weeks			Week 5: Types of computers		
Sixth week			Week 6: Hardware components		





seventh
week

			Week 7: Software components		
Ninth week			Week 8: Desktop management Week 9: MS Word basics (File menu)		
Tenth week			Week 10: Text formatting and page options		
Eleventh weeks			Week 11: Insert menu		
Twelfth week			Week 12: Internet basics		
thirteenth week			Week 13: Artificial intelligence in medicine		
Fourteenth Week			Week 14: Internet of Things (IoT)		
Fifteenth Week			Week 15: Computer networks: concepts and types		





14. Course Evaluation

The grade of the semester (100) is distributed as follows

12 Learning and Teaching Resources

Required textbooks (methodology, if any)

Key references (sources)	Principles of Computer Science, Part 1
Recommended books and references (scientific journals, reports...)	<i>Structure and Function of Skin, Hair, and Nails, JOURNAL</i> - Microsoft (Windows, Office Word) online resources
Electronic references, websites	
Course Development Plan	• Updating scientific content: • Practical and applied training:





texts in Iraq compared to international conventions.
Secondly: Skill-based Objectives

9. Teaching and Learning Strategies

Strategy Lectures

10. Course Structure

No.	Hours	Required Learning	Unit or subject name	Learning method	Evaluation
		Outcomes			method
First week			- Week 1: Development of human rights in ancient civilizations		
Second week			• Week 2: Human rights in the Middle Ages and modern era		
Third week			• Week 3: Concept of human rights (definition, importance, characteristics, types)		
Fourth week			• Week 4: Limits of rights and freedoms under normal and exceptional condition		
Fifth weeks			Week 5: Philosophical and intellectual foundations of		





			human rights		
Sixth week			Week 6: International conventions and treaties on human rights		
seventh week			Week 7: Constitutional documents in Iraq (1921–present)		
Eight week			Week 1: Development of human rights in ancient civilizations Week 2: Human rights in the Middle Ages and modern era Week 3: Concept of human rights (definition, importance, characteristics, types) Week 4: Limits of rights and freedoms under normal and exceptional conditions Week 5: Philosophical and intellectual foundations of human rights Week 6: International conventions and treaties on human rights Week 7: Constitutional documents in Iraq (1921–present) Week 8: Constitutional guarantees for human rights		





			Week 9: Judicial guarantees for rights and freedoms Week 10: P		
Ninth week			Week 1: Development of human rights in ancient civilizations Week 2: Human rights in the Middle Ages and modern era Week 3: Concept of human rights (definition, importance, characteristics, types) Week 4: Limits of rights and freedoms under normal and exceptional conditions Week 5 for human rights Week 9: Judicial guarantees for rights and freedoms Week 10: Political guarantees for rights and freedoms Week 11: Protection of the right to life Week 12: Procedural guarantees of rights Week 13: Right to		



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4. *[Faint, illegible text]*

5. *[Faint, illegible text]*

6. *[Faint, illegible text]*

7. *[Faint, illegible text]*

8. *[Faint, illegible text]*

9. *[Faint, illegible text]*

10. *[Faint, illegible text]*



			work, strike, residence, nationality Week 14: Concept of democracy Week 15: Characteristics and challenges of democracy		
Tenth weeks			Week 1: Development of human rights in ancient civilizations Week 2: Human rights in the Middle Ages and modern era Week 3: Concept of human rights (definition, importance, characteristics, types) Week 4: Limits of rights and freedoms under normal and exceptional conditions Week 5: Philosophical and intellectual foundations of human rights Week 6: International conventions and treaties on human rights Week 7: Constitutional		





			documents in Iraq (1921–present) Week 8: Constitutional guarantees for human rights Week 9: Judicial guarantees for rights and freedoms Week 10: Political guarantees for rights and freedoms Week 11: Protection of the right to life Week 12: Procedural guarantees of rights Week 13: Right to work, strike, residence, nationality Week 14: Concept of democracy Week 15: Characteristics and challenges of democracy		
Eleventh week			Week 11: Protection of the right to life		
thirteenth week			Week 13: Right to work, strike, residence, nationality		
Fourteenth Week			Week 14: Concept of democracy Week 15:		





**Fifteenth
Week**

**Week 15:
Characteristics and
challenges of
democracy**

15. Course Evaluation

The grade of the semester (100) is distributed as follows

12 Learning and Teaching Resources

Required textbooks (methodology, if any)

Key references (sources)

United Nations Charter (1945)
- Universal Declaration of Human Rights (1948)
- European Convention on Human Rights (1950)
- International Covenant on Civil and Political Rights (1966)
- International Covenant on Economic, Social and Cultural Rights (1966)
- American Convention on Human Rights (1969)
- Convention against Torture (1973)
- African Charter on Human Rights (1981)
- Iraqi Constitutions (1925-2005)

Recommended books and references
(scientific journals, reports...)

Hamid Hanoun Al-Khalidi, Human Rights, 2010
- Riyadh Aziz Hadi, Human Rights, 2011
- Hadi Naeem Al-Maliki, International Law of Human Rights, 2008
- Ammar Abbas Al-Husseini, Human Rights,



Washington, D.C.

January 1, 1954

Mr. [Name] [Address]

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	2022
Electronic references, websites	
Course Development Plan	• Updating scientific content: • Practical and applied training:

Course Description Form

1. Course Name:	
Medical Physics	
2. Course Code:	
ATU13AAL113CM	
3. Semester:	
First	
4. Description Preparation Date:	
2024-2025	
5. Available Attendance Forms:	
In-class (theoretical and practical)	
6. Number of Credit Hours (Total) / Number of Units (Total)	
30 (2 theoretical, 2 practical)	
7. Course administrator's name (mention all, if more than one name)	
Dr. Fatima Abbas Shakir	
8. Course Objectives	
Course Objectives	1. Apply principles of physics in the medical field to improve





healthcare, diagnosis, and treatment.

2. Use mathematical and statistical methods to analyze medical data.

3. Establish safety standards to protect patients and medical staff from radiation exposure.

4. Understand physical functions of human body organs and their medical applications.

5. Gain practical experience in applying course content.

9. Teaching and Learning Strategies

Strategy	Lectures and practical applied
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10. Course Structure

No.	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First week			- Introduction to Medical Physics		
Second week			Physical medicine, physiotherapy, health physics, radiation physics		
Third week			Forces in the body: levers, centrifugal force		
Fourth week			Skeletal physics: bones, joints, stress-strain curves		
Fifth			Heat and cold in		



weeks			medicine, thermal therapy		
Sixth week			Heat and cold in medicine, thermal therapy		
seventh week			Cryosurgery, heat conduction		
Ninth week			Cryosurgery, heat conduction		
Tenth week			Energy, work, power in the body		
Eleventh weeks			Pressure, Boyle's law, hyperbaric oxygen therapy		
Twelfth week			Pressure, Boyle's law, hyperbaric oxygen therapy		
thirteenth week			Electricity in the body: nerves, ECG, EMG Diagnostic X-ray physics		
Fourteenth Week			Sound in medicine: ultrasound, Doppler effect		
Fifteenth Week			Light in medicine: optics, lasers, eye physiology		





16. Course Evaluation

The grade of the semester (100) is distributed as follows

12 Learning and Teaching Resources

Required textbooks (methodology, if any)

Key references (sources)	Textbook of Medical Physics by John R. Cameron
Recommended books and references (scientific journals, reports...)	Textbook of Physics of Nuclear Medicine - Scientific journals in medical physics
Electronic references, websites	
Course Development Plan	• Updating scientific content: • Practical and applied training:





Course Description Form

1. Course Name:	
Skin and Hair Biology	
2. Course Code:	
ATU13AAL123CM	
3. Semester:	
Semester / Year: Second Semester / First Year	
4. Description Preparation Date:	
2024	
5. Available Attendance Forms:	
6. Number of Credit Hours (Total) / Number of Units (Total)	
Credit Hours: 2/2	
7. Course administrator's name (mention all, if more than one name)	
Instructor: Prof. Dr. Kazem Mohammed Saba Email: dr.kadhemajalr98@gmail.com	
8. Course Objectives	
Course Objectives	General Goals: 1. Build a foundation in skin and hair biology. 2. Improve patient care and professional skills. 3. Ensure safety in cosmetic and laser procedures. 4. Prepare for careers in cosmetic and laser technology.





Specific Goals:

- Master anatomy and physiology of skin and hair..
- Implement professional protocols.
- Conduct patient consultations and treatment planning.

9. Teaching and Learning Strategies

Strategy

10. Course Structure

No.	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First week			- Week 1: Layers of skin		
Second week			• Week 2: Skin cells and their functions		
Third week			• Week 3: Skin proteins and molecules		
Fourth week			• Week 4: Hair structure introduction		
Fifth weeks			Week 5: Hair shaft components		
Sixth week			Week 6: Hair growth cycle		
seventh week			Week 7: Skin barrier function		





			Week 8: Skin hydration and TEWL (transepidermal water loss) Week 9: Aging of skin and hair		
Tenth week			Week 10: Chronological aging effects		
Eleventh weeks			Week 11: Skin types		
Twelfth week			Week 12: Common skin conditions		
thirteenth h week			Week 13: Hair disorders and irregularities		
Fourteen th Week			Week 14: Hair conditions		
Fifteenth Week			Week 15: Nutrition and skin/hair health		





17. Course Evaluation

The grade of the semester (100) is distributed as follows

12. Learning and Teaching Resources

Required textbooks (methodology, if any)

Key references (sources)	Main Reference: - Structure and Function of Skin, Hair, and Nails (JOU I LI)
Recommended books and references (scientific journals, reports...)	<i>Clinical Anatomy and Physiology, Thomas Colville</i>
Electronic references, websites	
Course Development Plan	• Updating scientific content: • Practical and applied training:





Second Year / First Semester
Second Year Courses
Course Description Form
Nutrition (1) – Second Stage

1. Course Name:	
Nutrition1	
2. Course Code:	
ATU13AAL217CM	
3. Semester / Year:	
Year: Second Semester / Academic Year 2025-2026	
4. Description Preparation Date:	
17/9/2026	
5. Available Attendance Forms:	
In presence	
6. Number of Credit Hours (Total) / Number of Units (Total)	
6 hours per week / 4 units	
7. Course administrator's name (mention all, if more than one name)	
Name: Abdullah Abbas Mohammed Email: Abdullah.mohammed@atu.edu.iq	
8. Course Objectives	
Course Objectives	Enhancing scientific understanding of the relationship between nutrition and skin and hair health through studying the impact of macro- and micronutrients on skin function, cell regeneration, and vitality. Supporting the efficiency of cosmetic and laser procedures by understanding the role of nutrition in accelerating tissue healing, reducing inflammation, and improving skin response to treatment. Contributing to the prevention of nutrition-related skin problems such



Warszawa, dnia 15 października 2014 r.

Województwo Świętokrzyskie

Urząd Marszałkowski Województwa Świętokrzyskiego

ul. Świdnicka 10, 25-001 Kielce

Telefon: 25 26 20 00 00

Faks: 25 26 20 00 01

Strona internetowa: www.wswid.gov.pl

E-mail: biuro@wswid.gov.pl

Adres e-mail: biuro@wswid.gov.pl

Adres pocztowy: 25-001 Kielce

Adres pocztowy: 25-001 Kielce

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Adres pocztowy: 25-001 Kielce



as Acne vulgaris, Melasma, and hair loss through understanding internal contributing factors.

Developing the ability to provide proper health guidance to clients within professional scope, ensuring integration between external care and internal nutritional support.

9. Teaching and Learning Strategies

Strategy

Adopting active learning strategies based on problem-solving to link theoretical concepts with professional applications in cosmetology and laser technology.

Using real case studies related to skin problems such as Acne vulgaris and Melasma to analyze the role of nutritional factors.

Enhancing cooperative learning through group activities discussing the effect of nutrients on skin health and tissue healing after cosmetic procedures.

Integrating theory with practice by preparing simplified nutritional guidelines within professional scope.

Diversifying assessment methods (quizzes, discussions, applied projects) to measure learning outcomes and ensure required knowledge and skills.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	6	Theoretical and practical knowledge	Theoretical: Introduction to Nutrition – Definition, objectives, importance in cosmetics and dermatology	In presence	Quarterly and weekly tests.
Second	6		Theoretical: Overview of Nutrients – Macronutrients and		





		micronutrients		
Third	6	Theoretical: Carbohydrates – Types, digestion, metabolism, glycemic index		
Fourth	6	Theoretical: Proteins – Amino acids, synthesis, importance for skin and tissue repair		
Fifth	6	Theoretical: Fats – Saturated, unsaturated, essential fatty acids, lipid metabolism		
Sixth	6	Theoretical: Vitamins – Types, functions, deficiency symptoms, roles in skin and hair health		
Seventh	6	Theoretical: Minerals – Calcium, zinc, iron, selenium, magnesium – cosmetic relevance		
Eighth	6	Theoretical: Water and Electrolytes – Role in hydration, skin turgor, detoxification		
Ninth	6	Nutrition and Skin Health – Acne, aging, elasticity, pigmentation		
Tenth	6	Theoretical: Nutrition and Hair Health – Hair loss, brittleness, and shine		
eleventh	6	Theoretical: Special Diets – Vegan, keto, low-carb – impact on aesthetic outcomes		





twelfth	6	Theoretical: Dietary Supplements – Common supplements used in cosmetics (collagen, biotin)		
Thirteen	6	Theoretical: Malnutrition and Obesity – Cosmetic and dermatologic impacts		
fourteen	6	Theoretical: Food Safety and Eating Behavior – Hygiene, allergens, fad diet		
fifteen	6	Theoretical: Course Review and Project Presentation – Diet plans for beauty/skin goals Learning Resources:		

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)	
Main references (sources)	<i>Understanding Nutrition</i> by Whitney & Rolfes
Recommended books and references (scientific journals, reports...)	<i>Nutrition for Healthy Skin</i> by Jean Krutmann
Electronic References, Websites	Dietary Guidelines (WHO, FAO, USDA)





Course Description Form

Nutrition (2) – Second Stage

1-Course Name:	
Nutrition2	
2-Course Code:	
ATU13AAL223CM	
3-Semester / Year:	
Year: Second Semester / Academic Year 2025-2026	
4-Description Preparation Date:	
17/2/2026	
5-Available Attendance Forms:	
In presence	
6-Number of Credit Hours (Total) / Number of Units (Total)	
hours per week / 4 units	
7-Course administrator's name (mention all, if more than one name)	
Name: Abdullah Abbas Mohammed Email: Abdullah.mohammed@atu.edu.iq	
8-Course Objectives	
Course Objectives	Enhancing scientific understanding of the relationship between nutrition and skin and hair health through studying the impact of macro- and micronutrients on skin function, cell regeneration, and vitality. Supporting the efficiency of cosmetic and laser procedures by understanding the role of nutrition in accelerating tissue healing, reducing inflammation, and improving skin response to treatment. Contributing to the prevention of nutrition-related skin problems such as Acne vulgaris, Melasma, and hair loss through understanding





internal contributing factors.

Developing the ability to provide proper health guidance to clients within professional scope, ensuring integration between external care and internal nutritional support.

9-Teaching and Learning Strategies

Strategy

Adopting active learning strategies based on problem-solving to link theoretical concepts with professional applications in cosmetology and laser technology.

Using real case studies related to skin problems such as Acne vulgaris and Melasma to analyze the role of nutritional factors.

Enhancing cooperative learning through group activities discussing the effect of nutrients on skin health and tissue healing after cosmetic procedures.

Integrating theory with practice by preparing simplified nutritional guidelines within professional scope.

Diversifying assessment methods (quizzes, discussions, applied projects) to measure learning outcomes and ensure required knowledge and skills.

10-Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	6	Theoretical and practical knowledge	Review of Basic Nutrition – Macronutrients recap and metabolic pathways	In presence	Quarterly and weekly tests.
Second	6		Advanced Micronutrients – Trace elements and their role in skin, hair, and nails		
Third	6		Nutritional Deficiencies and		





Fourth	6		Their Cosmetic Manifestations		
			Nutrition and Wound Healing – Role of vitamins, proteins, and minerals		
			Hydration and Skin/Nail Health – Importance of water and electrolytes		
			Nail Anatomy and Physiology – Structure, growth cycle		
			Common Nail Disorders – Onychomycosis, brittle nails, paronychia		
			Nutritional Influence on Nail Disorders – Causes and prevention		
			Cosmetic Nail Care Products – Ingredients and effects		
			Nail Cosmetics and Enhancements – Application and safety		
			Nail Disorders in Systemic Diseases – Diabetes, psoriasis		
			Effects of External Factors on Nails – Trauma, chemicals, environment		
Thirteenth	6		Patient Education and Counseling on Nutrition and Nail Care		





fourteen	6	Integration of Nutrition and Nail Care in Cosmetic Practice		
fifteen	6	Review and Student Presentations – Case studies and practical exam		
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)		Nutrition and Skin by Marian L. Morais and Mary L. Gavin		
Main references (sources)		Nail Disorders: Diagnosis and Management Antonella Tosti		
Recommended books and references (scientific journals, reports...)		Clinical nutrition guidelines and cosmetic nail care manuals		
Electronic References, Websites		Research articles on nutrition and nail health		





Course Description Form

Aesthetic and laser - Second Stage

1-Course Name:	
Computer and artificial intelligent	
2-Course Code:	
ATU12	
3-Semester / Year:	
Second / 2025-2026	
4-Description Preparation Date:	
20/02/2026	
5-Available Attendance Forms:	
In presence	
6-Number of Credit Hours (Total) / Number of Units (Total)	
hours per week / 2 units	
7-Course administrator's name (mention all, if more than one name)	
Name: Assest. Lec Mustafa Husham Abbas Email: mustafa.abbas@atu.edu.iq	
8-Course Objectives	
Course Objectives	The course aims to enable students to utilize the computer for fundamental tasks, understand its hardware components, and create documents and presentations. It also seeks to equip students with internet research skills and provide an introduction to Artificial Intelligence.
9-Teaching and Learning Strategies	





Strategy

- Board - Normal or Smart.
- Computers.
- Presentation software such as PowerPoint.

10-Course Structure

Week	Hou rs	Require d Learnin g Outcom es	Unit or subject name	Learning method	Evaluati on method
First	3	Theoreti cal and practical knowled ge	Security and Networking: What is a network? Types of networks. Basic network components.	In presence	Quarterly and weekly tests.
Secon d	3		Security and Networking (Cont.): Network Security Basics. Understanding network threats.		
Third	3		E-Commerce: Concepts of Electronic banking services this include online banking: ATM and debit card services, Phone banking, SMS banking, electronic alert, Mobile banking.		
Fourt h	3		Computer Troubleshooting: Identifying and solving common hardware and software problems that computer users encounter.		
Fifth	3		Computer Troubleshooting (Cont.): Basic troubleshooting techniques and tools for		





		diagnosing and resolving issues.		
Sixth	3	• Introduction to AI: Definition of AI, History of AI, AI Techniques and Approaches.		
Seventh	3	• Introduction to AI (Cont.): Key Characteristics of AI, Benefits of AI, Challenges and Ethical considerations.		
Eighth	3	The Role of AI in Modern Smartphones: AI-Driven Mobile Technologies, Virtual Assistants (Siri, Google Assistant, Alexa).		
Ninth	3	• The Role of AI in Modern Smartphones (Cont.): Adaptive Learning, Real-Time Translation Services.		
Tenth	3	Applications and Tools of AI: Overview of AI Applications in Various Industries, Education and Healthcare.		
eleventh	3	• Applications and Tools of AI (Cont.): Transportation, Marketing and Advertising.		
twelfth	3	• Applications and Tools of AI (Cont.): Finance, Robotics and Automation Technologies.		





Thirteen	3	• AI and Society: How AI affects social, AI and international relations, AI and the future of humanity.		
fourteen	3	• Ethical Challenges in AI: AI ethics, privacy and surveillance, the impact of AI on the job market.		
fifteen	3	• The Future of AI: Future.		

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)	Graham Brown, David Watson, "Cambridge IGCSE Information and Communication Technology", 3rd Edition (2020).
Main references (sources)	Alan Evans, Kendall Martin, Mary Anne Poat "Technology In Action Complete", 16 Edition (2020).
Recommended books and references (scientific journals, reports...)	Ahmed Banafa, "Introduction to Artificial Intelligence (AI)", 1st Edition (2024).
Electronic References, Websites	Microsoft Office 2019 Step by Step 1st Edition by Curtis Frye & Joan Lambert. الخضر علي الخضر بحاث، "أساسيات الحاسوب" 2016 الدكتور عادل عبدالنور، "مدخل إلى عالم الذكاء الاصطناعي" 2005





Description of the General Pathology

❖ Course Name
General Pathology
❖ Course Code
ATU13AAL212CM
❖ Semester / Year
First Semester / 2025-2026
❖ The history of preparation of this description
3/6/2026
❖ Available Attendance Forms
Came
❖ Number of Credit Hours (Total) / Number of Units (Total)
6/4
❖ Course administrator's name (if more than one name)
Name: Dr. Sajjad M. Alfadhel
Email:sajjad.alfadhel@atu.edu.iq
❖ Course Objectives





General Objective :

It provides the foundation for understanding the morphological, biochemical, and functional changes in tissues and organs that underlie disease processes. The

Special Objective :

- Understand the causes and mechanisms of diseases (etiology and pathogenesis) -
- Recognize microscopic and macroscopic disease features - Correlate pathological findings with clinical symptoms - Develop laboratory diagnostic skills including histopathology and molecular pathology

❖ Teaching and Learning Strategies

✓ Cooperative education strategy. ✓ Brainstorming education strategy. ✓ Education strategy collaborative concept planning. ✓ Real-time feedback education strategy ✓ Education Strategy Notes Series. ✓ The strategy of education by exchanging views and discussing. ✓ Education strategy by presenting information. ✓ Education strategy by training and presentation of scientific developments.	Strategy
--	----------

❖ Course Structure

Evaluation method	Learning method	Theoretical vocabulary titles	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports,	Theoretical	Introduction to Pathology:		2	1





discussions.		Definitions, Divisions			
Daily, oral and written exams, reports, discussions.	Theoretical	Cell Injury and Cell Death		2	2
Daily, oral and written exams, reports, discussions.	Theoretical	Inflammation I – Acute		2	3
Daily, oral and written exams, reports, discussions.	Theoretical	Inflammation II – Chronic & Granulomatous		2	4
Daily, oral and written exams, reports, discussions.	Theoretical	Tissue Repair: Regeneration & Healing		2	5
Daily, oral and written exams, reports, discussions.	Theoretical	Hemodynamic Disorders I		2	6
Daily, oral and written exams, reports, discussions.	Theoretical	Hemodynamic Disorders II		2	7
Daily, oral and written exams, reports, discussions.	Theoretical	Shock & Clinical Correlates		2	8





Daily, oral and written exams, reports, discussions.	Theoretical	Immune-Mediated Diseases		2	9
Daily, oral and written exams, reports, discussions.	Theoretical	Neoplasia I		2	10
Daily, oral and written exams, reports, discussions.	Theoretical	Neoplasia II		2	11
Daily, oral and written exams, reports, discussions.	Theoretical	Genetic Disorders		2	12
Daily, oral and written exams, reports, discussions.	Theoretical	Review of General Pathology		2	13
Daily, oral and written exams, reports, discussions.	Theoretical	Environmental and Nutritional Diseases		2	14
Daily, oral and written exams, reports, discussions.	Theoretical	Final Exam		2	15
Evaluation method	Learning method	Practical vocabulary titles	Required Learning	Hours	The week





			Outcomes		
Daily, oral and written exams, reports, discussions.	practical	Lab safety, microscopy, tissue handling		4	1
Daily, oral and written exams, reports, discussions.	practical	Reversible vs irreversible cell injury slides		4	2
Daily, oral and written exams, reports, discussions.	practical	Slides of acute inflammation		4	3
Daily, oral and written exams, reports, discussions.	practical	TB and granuloma slides		4	4
Daily, oral and written exams, reports, discussions.	practical	Wound healing stages		4	5
Daily, oral and written exams, reports, discussions.	practical	Edema, thrombosis slides		4	6
Daily, oral and written exams, reports, discussions.	practical	Infarcted organs		4	7
Daily, oral and written exams, reports, discussions.	practical	Shock pathology		4	8
Daily, oral and written exams, reports,	practical	Lupus, RA histology		4	9





discussions					
Daily, oral and written exams, reports, discussions.	practical	Benign vs malignant tumors		4	10
Daily, oral and written exams, reports, discussions.	practical	Tumor markers, IHC		4	11
Daily, oral and written exams, reports, discussions.	practical	Lead, alcohol effects		4	12
Daily, oral and written exams, reports, discussions.	practical	Karyotyping, congenital syndromes		4	13
Daily, oral and written exams, reports, discussions.	practical	Case-based discussion		4	14
		Lab & theory exam		4	15
❖ Course Evaluation					
Quest: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25					
❖ Learning and Teaching Resources					
			Required textbooks (methodology)		
1. Kumar, V., Abbas, A.K., Aster, J.C. (2020). Robbins and Cotran Pathologic Basis of Disease, 10th Edition. Elsevier. 2. Kumar, V., Abbas, A.K., Aster, J.C. (2017). Robbins Basic Pathology, 10th Edition. Elsevier. 3. Damjanov, I. (2014). Pathology for the Health Professions, 5th Edition. Elsevier.			Main references (sources)		





4. 4. Wheater's Functional Histology: A Text and Colour Atlas, 6th Edition (Young, Lowe, Stevens & Heath). 5. 5. Rosai and Ackerman's Surgical Pathology, 11th Edition. 6. 6. Color Atlas of Pathology: Pathologic Principles, Associated Diseases, and Differential Diagnoses by Ursus-Nikolaus Riede & Martin Werner. Anatomy and Physiology for Therapists and Healthcare Professionals ,Ruth Hull, Greta Couldridge, Vicki Slegg, , 2009.	
	Recommended supporting books and references (Scientific journals, reports...)
	Electronic References, Websites

Description of the Systemic Pathology

❖ Course Name
Systemic Pathology
❖ Course Code





ATU13AAL224CM

Semester / Year

Second Semester / 2025-2026

❖ The history of preparation of this description

3/6/2026

❖ Available Attendance Forms

Came

❖ Number of Credit Hours (Total) / Number of Units (Total)

6/4

❖ Course administrator's name (if more than one name)

Name: Dr. Sajjad M. Alfadhel

Email:sajjad.alfadhel@atu.edu.iq

❖ Course Objectives

General Objective :

It provides the foundation for understanding the morphological, biochemical, and functional changes in tissues and organs that underlie disease processes. The

Special Objective :

- Understand the causes and mechanisms of diseases (etiology and pathogenesis) - Recognize microscopic and macroscopic disease features - Correlate pathological findings with clinical symptoms - Develop laboratory diagnostic skills including histopathology and molecular pathology

❖ Teaching and Learning Strategies





✓ Cooperative education strategy.

✓ Brainstorming education strategy.

Education strategy collaborative concept planning.

✓ Real-time feedback education strategy

✓ Education Strategy Notes Series.

✓ The strategy of education by exchanging views and discussing.

✓ Education strategy by presenting information.

✓ Education strategy by training and presentation of scientific developments.

Strategy

❖ Course Structure

Evaluation method	Learning method	Theoretical vocabulary titles	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	Theoretical	Introduction to Systemic Pathology		2	1
Daily, oral and written exams, reports, discussions.	Theoretical	Cardiovascular I: Atherosclerosis, HTN		2	2
Daily, oral and written exams, reports, discussions.	Theoretical	Cardiovascular II: Ischemic Heart Disease		2	3
Daily, oral and written exams, reports, discussions.	Theoretical	Respiratory I: Pneumonia, TB		2	4
Daily, oral and written exams, reports, discussions.	Theoretical	Respiratory II: COPD, Lung Cancer		2	5





Daily, oral and written exams, reports, discussions.	Theoretical	GI I: Esophagus & Stomach		2	6
Daily, oral and written exams, reports, discussions.	Theoretical	GI II: Liver, Pancreas, Intestine		2	7
Daily, oral and written exams, reports, discussions.	Theoretical	Renal Pathology		2	8
Daily, oral and written exams, reports, discussions.	Theoretical	Hematopoietic I: Anemia, Leukemia		2	9
Daily, oral and written exams, reports, discussions.	Theoretical	Hematopoietic II: Lymphomas		2	10
Daily, oral and written exams, reports, discussions.	Theoretical	Endocrine Pathology		2	11
Daily, oral and written exams, reports, discussions.	Theoretical	Breast Pathology		2	12
Daily, oral and written exams, reports, discussions.	Theoretical	Genital Tract Pathology		2	13
Daily, oral and written exams, reports, discussions.	Theoretical	CNS Pathology		2	14





Daily, oral and written exams, reports, discussions.	Theoretical	Final Exam		2	15
Evaluation method	Learning method	Practical vocabulary titles	Required Learning Outcomes	Hours	The week
Daily, oral and written exams, reports, discussions.	practical	Normal tissue architecture review		4	1
Daily, oral and written exams, reports, discussions.	practical	Atherosclerosis, MI gross		4	2
Daily, oral and written exams, reports, discussions.	practical	MI histology		4	3
Daily, oral and written exams, reports, discussions.	practical	Granulomas, pneumonia		4	4
Daily, oral and written exams, reports, discussions.	practical	Lung cancer slides		4	5
Daily, oral and written exams, reports, discussions.	practical	Ulcers, gastric carcinoma		4	6
Daily, oral and written exams, reports, discussions.	practical	Cirrhosis, hepatitis		4	7





Daily, oral and written exams, reports, discussions.	practical	Glomerulonephritis variants		4	8
Daily, oral and written exams, reports, discussions.	practical	Blood smear, marrow		4	9
Daily, oral and written exams, reports, discussions.	practical	Hodgkin vs non-Hodgkin		4	10
Daily, oral and written exams, reports, discussions.	practical	Thyroid & adrenal diseases		4	11
Daily, oral and written exams, reports, discussions.	practical	Fibroadenoma, carcinoma		4	12
Daily, oral and written exams, reports, discussions.	practical	Cervical & prostate pathology		4	13
Daily, oral and written exams, reports, discussions.	practical	Meningitis, glioblastoma		4	14
		Lab + theoretical case exam		4	15
❖ Course Evaluation					
Quest: Theoretical: 25 Practical: 15/ Final: Theoretical: 35 Practical: 25					
❖ Learning and Teaching Resources					
			Required textbooks (methodology)		





1. Kumar, V., Abbas, A.K., Aster, J.C. (2020). Robbins and Cotran Pathologic Basis of Disease, 10th Edition. Elsevier. 2. Kumar, V., Abbas, A.K., Aster, J.C. (2017). Robbins Basic Pathology, 10th Edition. Elsevier. 3. Damjanov, I. (2014). Pathology for the Health Professions, 5th Edition. Elsevier. 4. Wheater's Functional Histology: A Text and Colour Atlas, 6th Edition (Young, Lowe, Stevens & Heath). 5. Rosai and Ackerman's Surgical Pathology, 11th Edition. 6. Color Atlas of Pathology: Pathologic Principles, Associated Diseases, and Differential Diagnoses by Ursus-Nikolaus Riede & Martin Werner. Anatomy and Physiology for Therapists and Healthcare Professionals ,Ruth Hull, Greta Couldridge, Vicki Slegg, , 2009.	Main references (sources)
	Recommended supporting books and references (Scientific journals, reports...)
	Electronic References, Websites





Course Description

Microbiology (Microbiology) Theoretical / Practical - Second II

1. Course Name:

Medical Microbiology

2. Course Code:

ATU13AAL226CM

3. Semester / Year:

2 nd / 2025-2026

4. Description Preparation Date:

06-03-2026

5. Available Attendance Forms:

In presence- Online

6. Number of Credit Hours (Total) / Number of Units (Total)

6 hours per week / 4 units

7. Course administrator's name (mention all, if more than one name)

Name: **Prof. Dr. Oday Mitib Hadi**

Email: kuh.aud@atu.edu.iq

8. Course Objectives

Course Objectives

By the end of this course, students will be able to:

- ☐ Understand the fundamental concepts of microbiology relevant to aesthetic and laser technology.
- ☐ Identify major groups of microorganisms, including bacteria, viruses, fungi, and parasites.
- ☐ Recognize the role of microbes in skin health, infections, and cosmetic procedures.
- ☐ Apply laboratory techniques for microbial identification and infection control in clinical practice.

9. Teaching and Learning Strategies





1. Brainstorming
2. Collaborative learning
3. Role-playing
4. Flipped classroom
5. Case study
6. Open discussion

10. Course Structure

Week	Hou rs	Required Learning Outcome s	Unit or Topic Name Week - Theory/Practical	Learning method	Evaluation method
First	6	By the end of the semester, the student will be able to: 1. Define microbiology, including microorganisms, virulence, antibiotic resistance, bacterial colonies, culture media, microbial flora, pathogen	1. Introduction to Microbiology – History, Scope, and Importance in Cosmetology Practice / Introduction to Microscopy and Laboratory Safety Protocols 2. Structure and Classification of Microorganisms – Bacteria, Viruses, Fungi, Parasites / Microscopic Examination of Prepared Slides 3. Bacterial Morphology and Function / Staining Techniques: Gram Staining 4. Growth and Nutrition of Microorganisms / Culture Methods: Planning Technique 5. Viruses – Structure, Replication, and Role in Skin Infections / Fundamentals and Identification of Virus Culture Techniques 6. Fungi – Dermatophytes, Yeasts, and Molds Related to Skin Diseases / Fungal Culture and Preparation of KOH	In-person - online (interactive lecture, brainstorming, discussion, case study, individual and group activities)	Theory tests + practical tests + reports
Second	6				
Third	6				
Fourth	6				
Fifth	6				
Sixth	6				
Seventh	6				
Eighth	6				
Ninth	6				
Tenth	6				
eleventh	6				





Twelfth	6	ic bacteria, etc.	7. Parasites and Their Role in Skin Disorders / Identification of Common Parasites Affecting the Skin		
Thirteen	6	2. List the most important microbes, bacterial hosts, and bacterial genera associated with the skin.	8. Microbial Genetics and Antibiotic Resistance Testing / Antibiotic Susceptibility (Kirby-Bauer Method)		
fourteen	6		9. Infection and Immunity – Host Defenses and Microbial Pathogens / Fundamentals of Immunology and Serological Tests		
fifteen	6	3. Differentiate between microbial flora and bacteria that invade tissue, primary pathogens, secondary pathogens, etc.	10. Skin Microbiome – Normal Flora and Their Importance in Skin Health / Sampling Techniques and Identification of Microorganisms		
		4. Demonstrate the	11. Common Skin Infections – Bacterial, viral, and fungal infections / Diagnosis and laboratory testing of skin infections		
			12 Sterilization and disinfection – principles and methods / Practical sterilization techniques and disinfectant testing		
			13 Infection control in aesthetic and laser settings / Design of infection control protocols		
			14 Case study of antibiotics and antimicrobial agents in aesthetics / Practice on antimicrobial use and resistance		
			15 Review and integration – Case presentations and practical exam / Comprehensive assessment of practical skills		





	most important characteristics of bacteria (bacteria, viruses, parasites, fungi) associated with skin infections . 5. Briefly explain the role of microbial flora in the immune process and the effects of microbial imbalance. 6. Classify bacteria according to Gram staining, morphology, arrangement, and		
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	geographical location on the skin.			
	7. Explain the effect of (areas) (moist, dry, oily) on the distribution of microbes on the skin.			

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)	
Main references (sources)	Learning Resources ☐ Medical Microbiology by Jawetz, Melnick & Adelberg ☐ Microbiology: An Introduction by Tortora, Funke & Case ☐ Laboratory manuals for microbiology techniques ☐ Current guidelines on infection control and antimicrobial stewardship
Recommended books and references (scientific journals, reports...)	- https://scispace.com/pdf/the-human-skin-microbiome-znvh6yxg29.pdf - https://link.springer.com/book/10.1007/978-1-4612-5868-1





Skin, Hair, and Nail Disorders

Skin, Hair, and Nail Disorders	
1. Course Name:	
Skin, Hair, and Nail Disorders	
2. Course Code	
ATU13AAL215CM	
3. Semester / Academic Year	
Second Academic Year – 2 nd course	
4. Date of Preparation	
24-2-2026	
5. Available Attendance Forms	
In Present	
6. Total Study Hours / Total Units	
6 Hours / 8 Units	
7. Course Coordinator	
Dr. Hussein Hamood Rasheed Email: husein.Rasheed@atu.edu.iq	
8. Course Objectives	
General Objective: The student will be able to know skin, hair & nail disorders and its causes. Special Objective: The student will be able to: 1. Identify common and significant skin, hair, and nail disorders relevant to cosmetic and laser treatments 2. Understand the pathophysiology, clinical features, and diagnosis of these	Course Objective



disorders	
3. Recognize appropriate treatment options, including laser and cosmetic interventions	
4. Apply practical skills in examination, diagnosis, and management planning of such disorders.	

9. Teaching and Learning Strategies

Cooperative Learning Strategy	Strategies
- Brainstorming Strategy	
- Cooperative Concept Mapping Strategy	
- Real-Time Feedback Strategy	
- Observation Chain Strategy	
- Discussion and Opinion Exchange Strategy	
- Information Presentation Strategy	
- Training and Scientific Updates Strategy	

First: Course Structure (Theoretical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (Theory)	Week
Daily, oral, written exams, reports, discussions	Cooperative learning strategy. Brainstorming learning strategy. Collaborative concept	Introduction to Skin, Hair, and Nail Anatomy and Physiology	1. Enhancing students' motivation to learn in its various forms: intrinsic motivation, social motivation, and achievement motivation. 2. Encouraging self-directed and	2	1





Planning learning strategy. Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate learning strategy. Information presentation learning strategy. Training and presentation of scientific advancements learning strategy.		independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 3. Creating opportunities to implement a collaborative curriculum planning approach and to promote cooperation among faculty members in identifying gaps and redundancies. 4. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded. 5. Promoting a philosophy of follow-up and continuous improvement. 6. Supporting students in reinforcing accountability and ensuring the quality of academic		
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			programs.		
=	=	Common Skin Disorders – Eczema, Psoriasis, Dermatitis	=	2	2
=	=	Infectious Skin Diseases – Bacterial, Viral, Fungal infections	=	2	3
=	=	Pigmentary Disorders – Vitiligo, Melasma, Hyperpigmentation	=	2	4
=	=	Acne Vulgaris – Pathogenesis, types, and clinical features	=	2	5
=	=	Hair Disorders I – Alopecia Areata, Androgenic Alopecia	=	2	6
=	=	Hair Disorders II – Hirsutism, Telogen Effluvium	=	2	7
=	=	Nail Disorders – Onychomycosis, Paronychia, Nail psoriasis	=	2	8
=	=	Benign and Malignant Skin Lesions – Moles, Warts, Basal Cell Carcinoma	=	2	9
=	=	Photosensitivity and Photodermatoses	=	2	10
=	=	Cosmetic Implications of Skin Disorders	=	2	11





=	=	Laser Therapy in Skin, Hair, and Nail Disorders	=	2	12
	=	Complications and Side Effects of Treatments	=	2	13
=	=	Patient Counseling and Management Planning	=	2	14
		Course Review and Case Presentation			15

Second: Course Structure (Practical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (practical)	Week
Daily, oral, written exams, reports, discussions	Cooperative learning strategy. Brainstorming learning strategy. Collaborative concept planning learning strategy. Real-time feedback learning strategy. Observation chain learning	Clinical examination techniques and patient history taking	1. Enhancing students' motivation to learn in its various forms: intrinsic motivation, social motivation, and achievement motivation. 2. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 3. Creating opportunities to implement a collaborative	4	1



	strategy. Discussion and debate learning strategy. Information presentation learning strategy. Training and presentation of scientific advancements learning strategy.		curriculum planning approach and to promote cooperation among faculty members in identifying gaps and redundancies. 4. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded. 5. Promoting a philosophy of follow-up and continuous improvement. 6. Supporting students in reinforcing accountability and ensuring the quality of academic programs.		
=	=	Identification and assessment of skin lesions on models and patients	=	4	2
=	=	Microscopic identification and hygiene protocols	=	4	3
=	=	Diagnosis and documentation of	=	4	4





		pigment changes			
=	=	Case studies and treatment planning	=	4	5
	=	Scalp examination and hair pull test demonstration	=	4	6
=	=	Patient evaluation and treatment options	=	4	7
=	=	Nail examination and sample collection techniques	=	4	8
=	=	Dermoscopy basics and lesion documentation	=	4	9
=	=	Assessment of sun damage and patient education	=	4	10
=	=	Case discussions on cosmetic management and laser options	=	4	11
=	=	Demonstration of laser parameters and safety in treatment	=	4	12
=	=	Recognition and management of adverse effects	=	4	13
=	=	Role-playing patient consultations and care plans	=	4	14
=	=	Practical exam and discussion of complex cases	=	4	15

. Course Evaluation

Grades (100%) distributed according to daily preparation, oral exams, written exams, monthly exams, reports, and discussions





1. Learning and teaching resources

	Required textbooks (methodology, if applicable)
Dermatology by Jean L. Bologna Fitzpatrick's Dermatology in General Medicine Clinical manuals on hair and nail disorders Laser treatment guidelines for dermatologic conditions	Main references (sources)
Rook's Textbook of Dermatology Dermatology Secrets Plus Habif's Clinical Dermatology Dermatology Essentials for General Practice (2026)	Recommended supporting books and references (scientific journals, reports...)
https://www.aad.org/public https://www.mayoclinic.org/departments-centers/dermatology https://medlineplus.gov/skinhairandnails.html https://www.nhs.uk/conditions/	Electronic references, websites



Arabic Language (2)

1. Course Name: Arabic Language (2)	
2. Course Code: Atu13AAL218 CM	
3. Semester/Year: Second Semester/Academic Year 2025-2026	
4. Date of Preparation of this Description: 15/02/2026	
5. Available Attendance Forms: In-person	
6. Total Study Hours/Total Units: 2 hours per week/2 units	
7. Name of Course Instructor (if more than one, please specify): Name: Hussein Attia Saleh Email: husseinfo@gmail.com	
1. Course Name: Arabic Language (2)	
2. Course Code: autuchm_vs228	
3. Semester/Year: Second Semester/Academic Year 2025-2026	
4. Date of Preparation of this Description: 20/02/2026	
5. Available Attendance Forms: In-person	
6. Total Study Hours/Total Units: 2 hours per week/2 units	
7. Name of Course Instructor (if more than one, please specify): Name: Hussein Attia Saleh Email: hussein.salehckm@atu.edu.iq	
7. Course Objectives:	
This course aims to develop students' skills in understanding literary and scientific texts, enhance their linguistic abilities in reading and writing, and develop their skills in drafting official applications in correct language free of errors.	Course Objectives:
8. Teaching and learning strategies	
.1Explanatory Lectures: The instructor explains the various aspects of Arabic rhetoric (semantics, eloquence, and figures of speech) and helps students develop their ability to write essays in correct and organized language. This is accompanied by presentations and illustrative images.	strategy



2 Practical Demonstrations: The instructor uses illustrative images to highlight common errors.

3 Workshops: Students are divided into small groups and trained on how to write official applications and literary texts in a clear and professional style, free of spelling, morphological, and grammatical errors, under the supervision of the instructor.

9. Course Structure

Assessment Method	Learning Method	Unit or Topic Name	Required Learning Outcomes	Hours	Week
Theory tests + practical tests + reports	My presence	The rhetoric of medicine – the optimal use of the Arabic language to deal with patients.	Understanding the lecture	2	First
		Pragmatics – Discourse Strategies:		2	Second
		a. Functions of language.			
		b. Elements of discourse.			
		c. Discourse strategies.			
		Cultural Study of Ancient Poetic Texts – Selections from Abbasid Poetry		2	Third
		An introduction to Arabic rhetoric and its importance		2	Fourth
		The informative style, its definition and types.		2	Fifth
		Simile, its elements and types, applications on selected texts (Quranic verses - poetry).		2	Sixth
		Metaphor and metonymy (applications).		2	Seventh





	Contemporary Arabic Language Issues – Classical and Colloquial Arabic.		2	Eighth
	How to be eloquent, developing language skills – oratory and poetry – public speaking skills		2	Ninth
	Exercises on writing a complete essay.		2	Tenth
	The difference between ظ and ض		2	Eleventh
	Quranic expression: selected examples		2	Twelfth
	Common mistakes		2	Thirteenth
	Say this, but don't say that.		2	Fourteenth
	review		2	Fifteenth

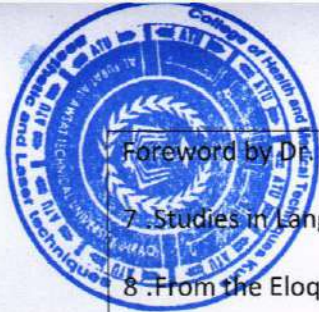
10. Course Evaluation

The grade out of 100 is distributed according to the tasks assigned to the student, such as daily preparation, daily, oral, monthly, and written exams, reports, etc.

11. Learning and teaching resources

Curriculum of the College of Health and Medical Technologies - Kufa	Required textbooks (methodology, if applicable)
Grammatical Meanings. Dr. Fadhil Saleh Al-Samarrai	Main references (sources)
1 .Say and Don't Say. Dr. Mustafa Jawad. 2 .Cultural Criticism: A Study of Arab Cultural Patterns. Dr. Abdullah Al-Ghadhami. 3 .On Linguistic Sounds: A Study of Arabic Vowel Sounds. Dr. Ghalib Fadil Al-Mutalibi. 4 .The Detailed History of the Arabs Before Islam. Dr. Jawad Mustafa. 5 .Discourse Strategies (A Pragmatic Linguistic Approach). Dr. Abdul-Hadi bin Dhafer Al-Shahri. 6 .How to Be Eloquent. Dr. Abu Malik Sameh Abdul-Hamid.	Recommended supporting books and references (scientific journals, reports...)





Foreword by Dr. Yasser Barhami.

7 .Studies in Language. Dr. Ibrahim Al-Samarrai.

8 .From the Eloquence of the Qur'an. Dr. Ahmed Ahmed Badawi.

9 .The Foundation of Eloquence. Jar Allah Al-Zamakhshari.

10 .The Meanings of Grammar. Dr. Fadhil Saleh Al-Samarrai.

11 -Al-Bayan wa Al-Tabyeen, by Abu Amr Al-Jahiz.

12 -Dala'il Al-I'jaz, by Abd Al-Qahir Al-Jurjani.

13 -Neurolinguistics: Language in the Brain (Symbolic – Neural – Cognitive), by Dr. Atiya Suleiman Ahmed.

14 -Neurolinguistics, by José Baggio, translated by Abd Al-Fattah Abdullah.

15 -Rhetoric and Application, by Ahmed Matloub.

16 -Simplified Rhetoric, by Dr. Abdul Aziz bin Ali Al-Harbi.

Electronic references, websites





Course Description Form

1. Course Name:	
Physiology	
2. Course Code	
Atu13AAL211 CM	
3. Semester / Academic Year	
First Academic Year	
4. Date of Preparation	
14-2-2026	
5. Available Attendance Forms	
6.Total Study Hours / Total Units	
7 Hours / 8 Units	
7.Course Coordinator	
Prof. Dr. Hassan Ali Farman Email: kuh.hsn@atu.edu.iq	
8. Course Objectives	
General Objective: Enable students to understand the main functions of cells, systems, and organs of the human body. Specific Objectives: 1. Identify the functions and components of body systems (digestive, nervous, respiratory, lymphatic, etc.). 2. Recognize the factors affecting the physiology of body systems and organs.	Course Objective
9. Teaching and Learning Strategies	
Cooperative Learning Strategy - Brainstorming Strategy	Strategies



- Cooperative Concept Mapping Strategy
- Real-Time Feedback Strategy
- Observation Chain Strategy
- Discussion and Opinion Exchange Strategy
- Information Presentation Strategy
- Training and Scientific Updates Strategy

First: Course Structure (Theoretical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (Theory)	Week
Daily, oral, written exams, reports, discussions	Cooperative learning strategy. Brainstorming learning strategy. Collaborative concept planning learning strategy. Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate	Introduction: cell physiology, cell membrane function, components of cell environment (water, ions, carbohydrate, protein, lipids, movement across membrane, osmosis), cell division, mitosis, spermatogenesis, oogenesis	7. Enhancing students' motivation to learn in its various forms: intrinsic motivation, social motivation, and achievement motivation. 8. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 9. Creating opportunities to implement a collaborative curriculum planning approach and to promote	2	1-2





	learning strategy. Information presentation learning strategy. Training and presentation of scientific advancements learning strategy.		cooperation among faculty members in identifying gaps and redundancies. 10. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded. 11. Promoting a philosophy of follow-up and continuous improvement. 12. Supporting students in reinforcing accountability and ensuring the quality of academic programs.		
=	=	The muscular system: types of muscles, mechanism of contraction, comparisons between muscle types The nervous system: structure of neurons, characters of neurons, classification of neurons due to structure and functions	=	2	3-4



	=	Central nervous system: sensory receptors, receptors, classification by stimulus, location and structures, peripheral nervous system, regeneration of nerve fibers, cranial nerves and spinal nerves The synapse: kind of functional synapses, classification of synapses, reflexes, reflex arc, muscle spindles, cerebrospinal fluid, function of CSF	=	2	5-6
=	=	The digestive system: oral cavity, esophagus, layers of GIT, mouth, structure, saliva, saliva enzymes, functions, esophageal events, mechanical digestion Stomach: (epithelia, secretion, and regulation of secretion), absorption, propulsion, mechanical digestion cephalic phase, Small intestine: (types of cells, secretion, absorption, absorption of water-carbohydrates-lipids-amino acids-and calcium, Large intestine: (absorption, propulsion, intestinal	=	2	7-13



		motility Liver: (microanatomy, blood supply, metabolic functions), Pancreas: (pancreatic enzymes and juice), Gall bladder: (function, neurological control) The circulatory system: definition, functions, properties of blood, elements of blood, blood cell production Blood vascular system: cardiovascular system, artery, vein, capillary, RBC, plasma, WBC, Lymph vascular system: lymphatic system Platelets: blood clotting, coagulation pathway, steps of hemostasis, anticoagulant, hemopoiesis The heart: definition, layers, chambers, valves, cardiac muscles, cardiac cycle, electrocardiogram, structure of the heart, differences between Skeletal and Cardiac Muscle Contraction, cardiac sound, blood flow, atria, blood pressure The skeletal system: bone, cartilage, joints,		
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		axial skeleton, function, limbs			
	=	The skin-nail-hair: glands of skin, sensory apparatus, function of skin, pigmentary system, sweat glands, sebaceous glands	=	2	14
=	=	Body temperature: heat loss, regulation of body temperature, normal body temperature, the balance between heat loss and heat production, temperature regulation centers, peripheral receptors for detection of heat, temperature regulation mechanism, hyperthermia, hypothermia	=	2	15
=	=	Respiratory system: structures, nose function, parts of pharynx and larynx, nasopharynx, trachea, larynx, bronchi, lungs, function of lung gas exchange, external respiration, muscles of inspiration, control of respiration, mechanic of breathing	=	2	16-19
=	=	Lymphoid organs: lymph nodes structure, function of lymph nodes	=	2	20





=	=	Tonsils, thymus, spleen: function of tonsils, thymus, and spleen	=	2	21
=	=	The endocrine system: function, thyroid gland-function	=	2	22-23
=	=	, parathyroid gland-function, adrenal gland-definition and function	=	2	24-25
=	=	Female reproductive system: ovary, ovulation, fallopian tubes, uterus, cervix, mammary glands	=	2	26-27
=	=	Male reproductive system: testes, seminiferous tubules, male genital ducts, seminal ducts, spermatogenesis	=	2	28-29
=	=	Sensory system types: touch, pressure pain, heat, cold, senses, special senses, mechanoreceptors, organs of sensory pathway, skin receptors, adaptation, somatic nervous system	=	2	30

Second: Course Structure (Practical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (practical)	Week
Daily, oral, written exams, reports,	Cooperative learning strategy.	The microscope: type, parts and how to use it	7. Enhancing students' motivation to learn in its	4	1





	discussions Brainstorming learning strategy. Collaborative concept planning learning strategy. Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate learning strategy. Information presentation learning strategy. Training and presentation of scientific advancements learning strategy.		various forms: intrinsic motivation, social motivation, and achievement motivation. 8. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 9. Creating opportunities to implement a collaborative curriculum planning approach and to promote cooperation among faculty members in identifying gaps and redundancies. 10. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded. 11. Promoting a philosophy of follow-up and		
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			continuous improvement. 12. Supporting students in reinforcing accountability and ensuring the quality of academic programs		
=	=	Hematology, collection of blood, capillary blood, venous blood, plasma and serum	=	4	2
=	=	Hemoglobin estimation by Cyanamithaemoglobin method (photometer method), and by acid hematic Sali method	=	4	3-4
=	=	Packed cell volume (PCV)	=	4	5
=	=	Red blood cells count: repeat in two weeks	=	4	6-7
=	=	Total leukocyte: repeat in two weeks	=	4	8-9
=	=	Blood smear, staining	=	4	10
=	=	Differential leukocyte count (type of WBC): repeat	=	4	11-12
=	=	Scientific movies showing blood structures	=	4	13
=	=	ESR by westergreem method and by wintrob method	=	4	14-15
=	=	ABO blood type: slide	=	4	16



		method, true method			
=	=	Rh factor: slide method, tube method	=	4	17
	=	Cross match test	=	4	18
=	=	Blood coagulation test,	=	4	19-20
=	=	platelets count-repeat	=	4	21
=	=	Bleeding time (Ducks method; ivy's method)	=	4	22
=	=	Clotting time: capillary tube method, slide method, Lee and while method	=	4	23
=	=	Scientific movies showing bleeding and blood transfusion	=	4	24
=	=	Fragility test (RBC fragility test)-repeat	=	4	26-29
=	=	Examination of the urine; urine collection physical examination	=	4	27
=	=	The chemical examination of urine; urine creatinine	=	4	28
=	=	The microscopic examination of urine-repeat	=	4	30-29

Course Evaluation

Grades (100%) distributed according to daily preparation, oral exams, written exams, monthly exams, reports, and discussions

1. Learning and teaching resources

	Required textbooks (methodology, if applicable)
1. Guyton AC, Hall JE. Textbook of Medical Physiology. 13th ed. Philadelphia, PA: Elsevier; 2016. 2. Tortora GJ, Derrickson B. Principles of Anatomy and Physiology. 15th ed. Hoboken, NJ: John Wiley & Sons; 2017.	Main references (sources)



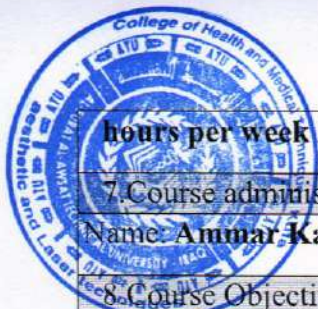
2017. 3. Moore KL, Dalley AF, Agur AMR. Clinically Oriented Anatomy. 7th ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2014. 4. Saladin KS. Anatomy & Physiology: The Unity of Form and Function. 8th ed. New York, NY: McGraw-Hill Education; 2018. 5. Marieb EN, Hoehn K. Human Anatomy & Physiology. 10th ed. Boston, MA: Pearson; 2015. 6. Netter FH, Hansen JT (Eds). Atlas of Human Anatomy (Netter Basic Science). 7th ed. Philadelphia, PA: Elsevier; 2018. 7. Standring S (Ed). Gray's Anatomy: The Anatomical Basis of Clinical Practice. 41st ed. London: Elsevier; 2012. 8. Drake RL, Vogl AW, Mitchell AWM (Eds). Gray's Anatomy of Anatomy (Gray's Anatomy for Students). 12th ed. Philadelphia, PA: Elsevier; 2015. 9. Moore KL, Agur AMR, Dalley AF. Essential Clinical Anatomy. Fifth Edition. Lippincott Williams & Wilkins; 2020 10. Snell RS. Clinical Neuroanatomy. Eighth Edition. Lippincott Williams & Wilkins; 2020	
1. "Guyton and Hall Textbook of Medical Physiology" by John E. Hall 2. "Berne & Levy Physiology" by Bruce M. Koeppen and Bruce A. Stanton 3. "Medical Physiology" by Walter F. Boron and Emile L. Boulpaep 4. "Essentials of Human Anatomy & Physiology" by Elaine N. Marieb and Katja Hoehn 5. "Physiology" journal published by the American Physiological Society 6. "Journal of Physiology" published by the Physiological Society 7. "Annual Review of Physiology" 8. "The Journal of Clinical Investigation" 9. "Physiological Reviews" 10. "American Journal of Physiology - Cell Physiology"	Recommended supporting books and references (scientific journals, reports...)
1. MedlinePlus: https://medlineplus.gov/ 2. Mayo Clinic: https://www.mayoclinic.org/ 3. WebMD: https://www.webmd.com/ 4. National Institutes of Health (NIH): https://www.nih.gov/ 5. American Heart Association: https://www.heart.org/en 6. American Cancer Society: https://www.cancer.org/ 7. National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK): https://www.niddk.nih.gov/ 8. American Lung Association: https://www.lung.org/ 9. Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/ 10. World Health Organization (WHO): https://www.who.int/	Electronic references, websites





Course Description Form

Skin Care Pharmaceuticals
1.Course Name:
Skin Care Pharmaceuticals
2.Course Code:
Atu13AAL221 CM
3.Semester / Year:
2nd / 2025-2026
4.Description Preparation Date:
16/2/2026
5.Available Attendance Forms:
In presence
6.Number of Credit Hours (Total) / Number of Units (Total)



hours per week / 4 units

7. Course administrator's name (mention all, if more than one name)

Name: **Ammar Kareem Madlool**

Email: ammar.mdloolckm@atu.edu.iq

8. Course Objectives

Course Objectives

It aims to equip students with a deep understanding of how topical products—ranging from cosmetics and cosmeceuticals to dermatological drugs—interact with the skin to maintain health, correct appearance, and treat disease.

9. Teaching and Learning Strategies

Strategy

1. Explanatory lectures: The Lecture explains the types of Skin Care Pharmaceuticals theoretically, accompanied by presentations and illustrative images.
2. Practical presentations: The lecture takes illustrative images to identify products of skin care Pharmaceuticals and explains how to the application for disease.
3. Workshops: Students are divided into small groups and trained in how to identify the products using in the skin care pharmaceuticals under the supervision of the lecture.
4. Clinical case studies: Clinical cases of patients with various diseases are presented, and students are asked to analyze the case and conclude the type of diseases associated with the patient's skin and the appropriate treatment.
5. Use of modern technologies: such as augmented reality or virtual reality to simulate various disease cases and train students to diagnose them in an interactive manner.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
First	6	Theoretical and practical knowledge	Introduction to Skin Care Pharmaceuticals – Definitions, scope, and importance	In presence	Quarterly and weekly tests.
Second	6		Types of Skin Care Products – Emollients, moisturizers, cleansers, sunscreens		
Third	6		Topical Anti-inflammatory Agents – Corticosteroids and non-steroidal agents		
Fourth	6		Keratolytic Agents – Salicylic acid,		



		urea, alpha and beta hydroxy acids		
	6	Skin Lightening Agents – Hydroquinone, kojic acid, azelaic acid		
Sixth	6	Sunscreens – Types (chemical vs physical), SPF, broad-spectrum protection		
Seventh	6	Antimicrobial Agents in Skin Care – Antibiotics, antifungals, antiseptics		
Eighth	6	Vitamins in Skin Care – Vitamin A (retinoids), C, E, and others		
Ninth	6	Anti-aging Pharmaceuticals – Peptides, antioxidants, growth factors		
Tenth	6	Acne Pharmaceuticals – Benzoyl peroxide, retinoids, antibiotics		
eleventh	6	Moisturizers and Barrier Repair Agents – Ceramides, lipids		
twelfth	6	Cosmeceuticals vs Pharmaceuticals – Regulatory and functional differences		
Thirteenth	6	Adverse Reactions and Safety – Allergies, irritations, photosensitivity		
fourteen	6	Prescription vs Over-the-counter Skin Care Products		
fifteen	6	Review and Integration – Latest trends and innovations in skin pharmaceuticals		

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.

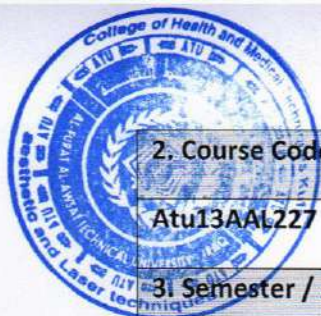
12. Learning and Teaching Resources

Required textbooks (curricular books, if any)	College of Health and Medical Techniques/ Baghdad
Main references (sources)	Dermatologic Pharmacology by Kenneth A. Arndt and Jeffrey M. Sobell
Recommended books and references (scientific journals, reports...)	Cosmetic Dermatology: Products and Procedures by Zoe Diana
Electronic References, Websites	Research articles on skin pharmacology Product monographs and clinical guidelines

Course Description Form

1. Course Name:

First aid



2. Course Code

Atu13AAL227 CM

3. Semester / Academic Year

second Academic Year – 2nd course

4. Date of Preparation

14-2-2026

5. Available Attendance Forms

6. Total Study Hours / Total Units

6 Hours / 8 Units

7. Course Coordinator

Dr. Fahad Dakhil Fahad

Email: fahad.fahad@atu.edu.iq

8. Course Objectives

General Objective:

The student will be able to know the emergency cases, their types and causes

Special Objective: The student will be able to:

1. Diagnose each type of emergency that the individual is exposed to
2. Immediate Ways to Deal with Every Emergency -

Course Objectives

9. Teaching and Learning Strategies

Cooperative Learning Strategy

- Brainstorming Strategy
- Cooperative Concept Mapping Strategy
- Real-Time Feedback Strategy
- Observation Chain Strategy

Strategies





- Discussion and Opinion Exchange Strategy

- Information Presentation Strategy

- Training and Scientific Updates Strategy

First: Course Structure (Theoretical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (Theory)	Week
Daily, oral, written exams, reports, discussions	Cooperative learning strategy. Brainstorming learning strategy. Collaborative concept planning learning strategy. Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate learning strategy. Information presentation learning	Introduction to First Aid – Definition, goals, legal and ethical considerations	1. Enhancing students' motivation to learn in its various forms: intrinsic motivation, social motivation, and achievement motivation. 2. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 3. Creating opportunities to implement a collaborative curriculum planning approach and to promote	2	1



	strategy. Training and presentation of scientific advancements learning strategy.		cooperation among faculty members in identifying gaps and redundancies. 4. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded. 5. Promoting a philosophy of follow-up and continuous improvement..		
=	=	Cardiopulmonary Resuscitation (CPR) – Adult CPR steps and guidelines	=	2	2
=	=	Automated External Defibrillator (AED) – Use and safety	=	2	3
=	=	Airway Management – Clearing airway obstruction, choking management	=	2	4
=	=	Bleeding Control – Types of bleeding, wound care, and bandaging	=	2	5
=	=	Shock – Recognition, types, and	=	2	6





=	=	management	=		
=	=	Burns – Classification, treatment, and prevention	=	2	7
=	=	Fractures and Sprains – Identification and immobilization	=	2	8
=	=	Poisoning – Types, symptoms, first aid measures	=	2	9
=	=	Heat and Cold-Related Emergencies – Heatstroke, hypothermia	=	2	10
=	=	Medical Emergencies – Diabetic emergencies, seizures, allergic reactions	=	2	11
=	=	Eye Injuries – Types, first aid treatment	=	2	12
=	=	Basic Patient Assessment and Vital Signs	=	2	13
=	=	Emergency Action Plans in Cosmetic and Laser Settings	=	2	14

Second: Course Structure (Practical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (practical)	Week
Daily, oral, written exams, reports,	Cooperative learning strategy. Brainstorming	Basic assessment of consciousness and breathing	1. Enhancing students' motivation to learn in its various forms:	4	1



discussions	learning strategy. Collaborative concept planning learning strategy Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate learning strategy. Information presentation learning strategy. Training and presentation of scientific advancements learning strategy.		intrinsic motivation, social motivation, and achievement motivation. 2. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 3. Creating opportunities to implement a collaborative curriculum planning approach and to promote cooperation among faculty members in ide		
=	=	CPR practice on mannequins	=	4	2
=	=	AED demonstration and hands-on training	=	4	3
=	=	Heimlich maneuver and airway clearing techniques	=	4	4





		Practice on dressing wounds and applying pressure	=	4	5
		Simulation of shock management scenarios	=	4	6
=	=	Practical dressing of different burn types	=	4	7
=	=	Splinting techniques and practical application	=	4	8
=	=	Case studies and emergency response planning	=	4	9
=	=	Practical management of thermal injuries	=	4	10
=	=	Role-playing emergency response scenarios	=	4	11
=	=	Demonstration of eye irrigation and protection	=	4	12
=	=	Measuring pulse, respiration, and blood pressure	=	4	13
=	=	Designing emergency response protocols	=	4	14
=	=	Comprehensive practical skills assessment	=	4	15

.10. Course Evaluation

Grades (100%) distributed according to daily preparation, oral exams, written exams, monthly exams, reports, and discussions



11. Learning and teaching resources	
	Required textbooks (methodology, if applicable)
• Practical guides and simulation videos • First Aid Manual by St John Ambulance • Local emergency protocols and legal considerations • American Heart Association (AHA) CPR and First Aid Guidelines	Main references (sources)
•	Recommended supporting books and references (scientific journals, reports...)
	Electronic references, websites

Course Description Form

1. Course Name:
Laser and Light-Based Aesthetic Technologies



2. Course Code	
Atu13AAL225 CM	
3. Semester / Academic Year	
First Academic Year	
4. Date of Preparation	
16-2-2026	
5. Available Attendance Forms	
6.Total Study Hours / Total Units	
6 Hours / 8 Units	
7 Course Coordinator	
Dr.Thulfiqar Nadhim Jihad Email: zulfikarsgu@mail.ru	
8. Course Objectives	
- Understand the physics of lasers and light interaction with skin. - Identify different types of lasers and their clinical indications. - Apply laser safety protocols in practical settings. - Perform basic aesthetic treatments using light-based technologies. - Analyze treatment outcomes and complications. Integrate ethical and clinical considerations into laser practice	Course Objectives
9. Teaching and Learning Strategies	
Cooperative Learning Strategy - Brainstorming Strategy - Cooperative Concept Mapping Strategy - Real-Time Feedback Strategy	Strategies



- Observation Chain Strategy
- Discussion and Opinion Exchange Strategy
- Information Presentation Strategy
- Training and Scientific Updates Strategy

First: Course Structure (Theoretical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (Theory)	Week
Daily, oral, written exams, reports, discussions	Cooperative learning strategy. Brainstorming learning strategy. Colaborative concept planning learning strategy. Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate learning strategy. Information presentation learning	Introduction to Laser Physics	6. Enhancing students' motivation to learn in its various forms: intrinsic motivation, social motivation, and achievement motivation. 7. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 8. Creating opportunities to implement a collaborative curriculum planning	2	1



	strategy. Training and presentation of scientific advancements learning strategy.		approach and to promote cooperation among faculty members in identifying gaps and redundancies. 9. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded. 10. Promoting a philosophy of follow-up and continuous improvement. 11. Supporting students in reinforcing accountability and ensuring the quality of academic programs.		
=	=	Skin Anatomy Related to Laser Applications	=	2	2
=	=	Laser-Tissue Interaction	=	2	3
=	=	Types of Lasers: Ablative and Non-Ablative	=	2	4
=	=	Laser Safety Standards	=	2	5



		and Protocols			
=	=	Hair Removal with Laser	=	2	6
=	=	Vascular and Pigmented Lesion Treatment	=	2	7
=	=	Fractional Laser Technology	=	2	8
=	=	Intense Pulsed Light (IPL) Technology	=	2	9
=	=	LED Light Therapy: Red, Blue, and Infrared	=	2	10
=	=	Complications and Risk Management	=	2	11
=	=	Client Consultation and Skin Prep	=	2	12
=	=	Ethical and Legal Aspects in Laser Practice	=	2	13
=	=	Review of Combined Modalities (Laser + Other Techniques)	=	2	14
				2	15
=	=	Final Presentations and Case Studies	=		

Second: Course Structure (Practical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (practical)	Week
Daily, oral, written exams, reports, discussions	Cooperative learning strategy. Brainstorming learning	Laser equipment demonstration	4. Enhancing students' motivation to learn in its various forms: intrinsic motivation,	4	1



	strategy. Collaborative concept planning learning strategy. Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate learning strategy. Information presentation learning strategy. Training and presentation of scientific advancements learning strategy.		social motivation, and achievement motivation. 5. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 6. Creating opportunities to implement a collaborative curriculum planning approach and to promote cooperation among faculty members in identifying gaps and redundancies. 7. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded.		
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			8. Promoting a philosophy of follow-up and continuous improvement. 9. Supporting students in reinforcing accountability and ensuring the quality of academic programs.		
=	=	Skin typing and laser response	=	4	2
=	=	Simulating tissue response on training models	=	4	3
=	=	Device handling and comparison	=	4	4
=	=	Safety gear, signage, room setup	=	4	5
=	=	Performing test patches and simulated procedures	=	4	6
=	=	Laser settings and hands-on simulation	=	4	7
=	=	Review of fractional resurfacing protocols	=	4	8
=	=	Hands-on IPL treatment demo	=	4	9



=	=	Performing facial with LED mask	=	4	10
=	=	Case reviews and response protocols	=	4	11
=	=	Role-play: client interview and consent	=	4	12
=	=	Review professional standards and regulations	=	4	13
=	=	Mock multi-modality treatment session	=	4	14
=	=	Student-led demonstrations and feedback	=	4	15

.10. Course Evaluation

Grades (100%) distributed according to daily preparation, oral exams, written exams, monthly exams, reports, and discussions

11. Learning and teaching resources

	Required textbooks (methodology, if applicable)
• Laser devices (Nd:YAG, Diode, Alexandrite) • IPL systems • LED therapy masks • Laser training pads/models • Protective eyewear and safety equipment	Main references (sources)
• Goldberg, D. J. (2017). *Laser Dermatology (3rd ed.).* Springer. • Dover, J.S., Arndt, K.A., & Alam, M. (2014). *Manual of Dermatologic Therapeutics.* Wolters Kluwer. • Sadick, N.S. (2018). *Aesthetic	Recommended supporting books and references (scientific journals, reports...)



Dermatology: Current Perspectives.*
Springer.

- Nouri, K. (2011). *Lasers in Dermatology and Medicine.* Springer.
- Ross, E.V., & McKinlay, J.R. (2019). *Laser and Light Source Treatments for the Skin.* CRC Press.
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Course Description Form

1. Course Name:
Basics and Techniques of Skin Care
2. Course Code
Atu13AAL215 C M
3. Semester / Academic Year





Second Academic Year – 1st course

4. Date of Preparation

24-2-2026

5. Available Attendance Forms

In Present

8. Total Study Hours / Total Units

7 Hours / 8 Units

9. Course Coordinator

Dr. Hussein Hamood Rasheed

Email: hussein.Rasheed@atu.edu.iq

8. Course Objectives

General Objective:

The student will be able to know the Basics of Skin Cares Techniques.

Special Objective: The student will be able to:

1. Understand basic skin anatomy and functions.
2. Recognize common skin conditions.
3. Perform basic and advanced skin care techniques.
4. Understand the principles of PRP and medical injection in aesthetics.
5. Apply ethical standards in skin care practice.
6. Develop a foundation in dermatological research and business skill

Course Objectives

9. Teaching and Learning Strategies

Cooperative Learning Strategy

- Brainstorming Strategy
- Cooperative Concept Mapping Strategy
- Real-Time Feedback Strategy

Strategies



- Observation Chain Strategy
- Discussion and Opinion Exchange Strategy
- Information Presentation Strategy
- Training and Scientific Updates Strategy

First: Course Structure (Theoretical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (Theory)	Week
Daily, oral, written exams, reports, discussions	Cooperative learning strategy. Brainstorming learning strategy. Collaborative concept planning learning strategy. Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate learning strategy. Information presentation learning	Introduction to Dermatology: Skin anatomy & physiology	12. Enhancing students' motivation to learn in its various forms: intrinsic motivation, social motivation, and achievement motivation. 13. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 14. Creating opportunities to implement a collaborative curriculum	2	1



	strategy. Training and presentation of scientific advancements learning strategy.		planning approach and to promote cooperation among faculty members in identifying gaps and redundancies. 15. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded. 16. Promoting a philosophy of follow-up and continuous improvement. 17. Supporting students in reinforcing accountability and ensuring the quality of academic programs.		
=	=	Basic Skin Care Principles: Cleansing, moisturizing, protection	=	2	2





=		Skin Assessment Techniques	=	2	3
	=	Common Dermatological Conditions: Acne, pigmentation, dryness	=	2	4
=	=	Cosmetic Science: Active ingredients in skin care products	=	2	5
=	=	Therapeutic Techniques I: Exfoliation & peels	=	2	6
=	=	Therapeutic Techniques II: Microdermabrasion, masks	=	2	7
=	=	Introduction to Medical Injection Techniques	=	2	8
=	=	PRP (Platelet-Rich Plasma): Theory and uses in Cosmetics	=	2	9
=	=	Injection Materials: Fillers, Botox (overview)	=	2	10
=	=	Advanced Skin Care Devices: Laser, RF, ultrasound (overview)	=	2	11
=	=	Ethics in Skin Care Practice	=	2	12
=	=	Research in Dermatology: Basics of scientific method	=	2	13
=	=	Business in Skin Care: Client interaction,	=	2	14





	management basics			
	Final Case Study Presentation & Review	=	2	15

Second: Course Structure (Practical)

Assessment Method	Teaching Method	Unit / Topic	Learning Outcomes	Hours (practical)	Week
Daily, oral, written exams, reports, discussions	Cooperative learning strategy. Brainstorming learning strategy. Collaborative concept planning learning strategy. Real-time feedback learning strategy. Observation chain learning strategy. Discussion and debate learning strategy. Information presentation learning strategy. Training and presentation	Skin structure identification (models, diagrams)	10. Enhancing students' motivation to learn in its various forms: intrinsic motivation, social motivation, and achievement motivation. 11. Encouraging self-directed and independent learning, enabling students to take responsibility for their studies and develop the ability to measure their academic progress. 12. Creating opportunities to implement a collaborative curriculum planning	4	1





of scientific
advancements
learning
strategy.

			approach and to promote cooperation among faculty members in identifying gaps and redundancies. 13. Assisting students in ensuring that decisions related to curricula and the educational environment are sound and well-founded. 14. Promoting a philosophy of follow-up and continuous improvement. 15. Supporting students in reinforcing accountability and ensuring the quality of academic programs.		
=	=	Facial cleansing steps & product selection	=	4	2
=	=	Skin analysis: Wood's lamp, magnifying lamp	=	4	3
=	=	Case-based discussion & basic diagnosis skills	=	4	4





=		Product label reading & formulation basics	=	4	5
		Superficial chemical peeling demonstration	=	4	6
=	=	Hands-on facial mask application & microderm	=	4	7
=	=	Injection tools and materials: demo and handling	=	4	8
=	=	PRP preparation steps (simulation)	=	4	9
=	=	Practice on models with sterile injection technique	=	4	10
=	=	Device demonstration and safety handling	=	4	11
=	=	Role-play: Ethical dilemmas in aesthetic practice	=	4	12
=	=	Review and discussion of a sample journal article	=	4	13
=	=	Drafting a mini business plan for a skin care clinic	=	4	14
=	=	Student presentations: Diagnosis + treatment plan	=	4	15

. Course Evaluation

Grades (100%) distributed according to daily preparation, oral exams, written exams, monthly exams, reports, and discussions

1. Learning and teaching resources





	Required textbooks (methodology, if applicable)
-Bologna, F.L., Schaffer, J.V., & Cerroni, L. (2017). *Dermatology (4th ed.). * Elsevier. -Draelos, Z.D. (2015). *Cosmetic Dermatology: Products and Procedures (2nd ed.). * Wiley-Blackwell. -Baumann, L. (2009). *Cosmetic Dermatology: Principles and Practice. * McGraw-Hill. -Sadick, N.S. (2018). *PRP and Microneedling in Aesthetic Medicine. * Springer. -Thibodeau, G.A., & Patton, K.T. (2018). *Anatomy & Physiology (9th ed.). * Elsevier.	Main references (sources)
-Cosmetic Science: Formulation and Technologies -Skin Moisturization -Dermatology Secrets Plus -Cosmetic Formulation of Skin Care Products	Recommended supporting books and references (scientific journals, reports...)

