

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



**Academic Program and Course Description
Guide**

**Al-Kafeel University | College of Health and
Medical Technologies**

**Department of Aesthetics and Laser
Techniques Department**

Academic Year 2025 / 2026



ACADEMIC PROGRAM DESCRIPTION — OVERVIEW

Introduction

The educational program offers a structured and organized package of courses that manage the processes and experiences shaping the curriculum. These are designed to build and refine graduates' skills, qualifying them to meet labor market demands, and are subject to review and validation through internal and external mechanisms, such as the external examiner system.

The program description provides a concise summary of key specialized features, courses, and the skills targeted for development in alignment with the program's academic objectives. This description is crucial for obtaining subject-specific accreditation and is collaboratively drafted by teaching staff under the supervision of the relevant academic departments.

This initial version of the guide outlines academic programs in light of recent developments within Iraq's educational system. It covers traditional program descriptions (based on annual or semester systems) as well as the standardized program description format—circulated via the Department of Studies

memorandum (Ref. TM3/2906 dated May 31 2023)—for programs operating under the Bologna Process.

In this context we must emphasize the importance of properly drafting academic program and course descriptions to ensure the smooth and effective conduct of the educational process.

Key Concepts and Terminology

Academic Programme Description	Provides a concise summary of the programme's vision, mission, and objectives, including a precise description of the targeted learning outcomes at the level of each course.
Course Description	Provides a concise summary of the most important characteristics of the course and the learning outcomes the student is expected to achieve.
Programme Vision	An ambitious image of the academic programme's future — to be a developed, inspiring, motivating, realistic, and applicable programme.
Programme Mission	Clarifies the objectives and the activities required to achieve them, and defines the trajectories of programme development and its directions.
Programme Objectives	Statements that describe what the academic programme intends to achieve over a specified period; these must be measurable and observable.
Curriculum Structure	All courses/subjects included in the academic programme in accordance with the approved learning system, whether compulsory or elective.
Learning Outcomes	A coherent set of knowledge, skills, and values acquired by the student after successfully completing the academic programme. Learning outcomes must be specified for each course.
Teaching and Learning Strategies	Strategies used by faculty members to develop student teaching and learning; these are plans followed to achieve the learning objectives of the programme.

Academic Program Description Template

Name of the University: University of Alkafel
College: College of Health and Medical Technology

Academic Department: Aesthetics and Laser Techniques

Academic/Professional Title: Bachelor's Degree

Full Title: Bachelor in Aesthetics and Laser Techniques

Study System: Semester-based

Date of Description Preparation: 05/01/2026

Date of File Completion: 07/ 01 /2026



Signature:

A handwritten signature in blue ink, appearing to be "Siddiq Ghani Jawda".

Name of Scientific Assistant: Asst. Prof.

Dr. Siddiq Ghani Jawda

Date: 7 / 1 /2026

Signature:

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Head of Department Name: Asst. Prof.

Dr. Mohammed Zuheir Hassan

Date: 7 / 1 /2026

File reviewed by the Quality Assurance and University Performance Division

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

Assistant Lecturer Ali Najih Abbas

Date: 7 / 1 /2026

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Approval by the Dean of the College

Programme Details

Programme Vision	To achieve leadership in education and training in advanced cosmetology and laser technologies, and to graduate qualified personnel capable of operating the various devices for skin care and health, in pursuit of sustainable development goals in accordance with Islamic values.
Programme Mission	The department seeks to provide distinguished academic and training programmes in the field of cosmetology and laser technology, aimed at preparing specialised and creative professional cadres who meet the highest standards of scientific and practical competence, and who are committed to ethical, professional, and Islamic values.
Programme Objectives	1. To prepare qualified technical cadres in cosmetology and laser capable of meeting the requirements of the health and beauty labour market. 2. To update and develop the department's programme by integrating the latest technologies and devices in laser and cosmetology, in line with international progress and quality standards. 3. To promote applied scientific research in cosmetology and laser by encouraging projects and publications that contribute to developing local and global cosmetic services. 4. To build and expand professional partnerships with cosmetic clinics, health centres, and relevant laboratories to provide effective field training for students and faculty. 5. To strive for national and international programme accreditation, and to ensure the continuous updating of curricula and facilities to enhance the department's standing.
Programme Accreditation	Has the programme obtained programme accreditation? No
External Influences	Al-Kafeel University / College of Health and Medical Technologies

Expected Programme Learning Outcomes

Knowledge	A-1: Develop student knowledge through the use of advanced teaching methods. A-2: Assess student activities through reports and assignments. A-3: Equip classrooms with all educational requirements. A-4: Provide laboratories with the latest devices in line with required experiments. A-5: Monitor academic performance and be continuously prepared to resolve problems. A-6: Prepare a study plan before the start of the academic year.
Skills	B-1: Assess students through daily examinations. B-2: Encourage students to achieve full marks through continuous motivation. B-3: Foster a spirit of cooperation between instructor and student to convey information in the simplest form.

Teaching and Learning Strategies

Teaching Strategies	Creative Thinking Strategy Team-Work Strategy Discussion Strategy Case-Study Strategy Analytical Teaching Strategy Concept-Mapping Strategy Practical Field-Training Strategy Self-Directed Learning Strategy E-Learning Strategy
Learning Strategies	Study Strategy Deductive Reasoning Strategy Idea-Transition Strategy Example-Presentation Strategy

Assessment Methods	Daily Examinations Oral Examinations Seminars Mid-Term Examination Final Examination
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Faculty Members

Academic Rank	General Specialisation	Specific Specialisation	Permanent Staff	Lecturer
Professor	Life Sciences	—	1	—
Professor	Physics	Medical Physics	1	—
Assist. Professor	Chemical Sciences	—	1	—
Lecturer	Chemical Sciences	—	1	—
Assist. Lecturer	Life Sciences	Microbiology	3	—
Assist. Lecturer	Physical Sciences	Medical Physics	2	—
Assist. Lecturer	Computer Sciences	—	1	—
Assist. Lecturer	Islamic Jurisprudence	Arabic Language	1	—
Assist. Lecturer	Psych. & Educational Sc.	Educational Psychology	1	—
Assist. Lecturer	Environmental Sciences	Microbiology	1	—
Assist. Professor	Management & Economics	Strategic Planning	—	—

Professional Development	Orienting new faculty members toward professional development involves several steps: • Conducting weekly seminars and presentations to develop their lecturing skills and scientific research capabilities. • Encouraging participation in continuing-education courses, scientific activities, and academic workshops. • Supporting participation in conferences.
Admission Criteria	Admission criteria are continuously updated each academic year. The key criteria are: • Minimum acceptance average of 70% for morning-shift studies. • Minimum acceptance average of 65% for evening-shift studies. • Children of faculty members and martyrs' families compete through a dedicated portal. • Tuition-fee reductions for top achievers and students with high averages. • Applicants must be graduates of the scientific or biological branch of secondary school.
Key Information Sources	University Education Law. Website of the College of Health and Medical Technologies. Al-Kafeel University website. Ministry of Higher Education website. College social-media pages. Notices posted in college corridors.
Programme Development Plan	Develop and update the programme according to labour-market requirements through specialised curriculum-updating committees. Conduct periodic surveys of beneficiary parties (students, employers in hospitals and

	private clinics). Expand the use of electronic technologies in teaching. Direct student research toward applied projects that address community problems.
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PROGRAMME COURSE LIST

Year / Level	Code	Course Name	Credit Hours
Year 1 / Semester 1	AL111	General Chemistry	4
Year 1 / Semester 1	AL115	Medical Terminology I	1
Year 1 / Semester 1	AL112	Human Biology	4
Year 1 / Semester 1	AL113	Medical Physics	4
Year 1 / Semester 1	AL114	Computer Applications	2
Year 1 / Semester 1	AL116	Human Rights and Democracy	2
Year 1 / Semester 2	AL121	Organic Chemistry	4
Year 1 / Semester 2	AL122	Histology and Anatomy	3
Year 1 / Semester 2	AL123	Skin and Hair Biology	4
Year 1 / Semester 2	AL124	Laser Physics	4
Year 1 / Semester 2	AL125	Medical Terminology II	1
Year 1 / Semester 2	AL117	Arabic Language	2
Year 2 / Semester 1	—	Human Physiology	4
Year 2 / Semester 1	—	Pathology 1	4
Year 2 / Semester 1	—	Laser Physics and Medical Applications	4
Year 2 / Semester 1	—	Ba'ath Party Crimes in Iraq	4
Year 2 / Semester 1	—	Computer Principles	2
Year 2 / Semester 1	—	Pharmacology	4
Year 2 / Semester 1	—	Nutrition 1	2
Year 2 / Semester 2	—	Skin-Care Pharmacology 1	4
Year 2 / Semester 2	—	Skin, Hair and Nail Disorders	4
Year 2 / Semester 2	—	Nutrition 2	2
Year 2 / Semester 2	—	Pathology 2	4
Year 2 / Semester 2	—	Arabic Language	2
Year 2 / Semester 2	—	Microbiology	4
Year 2 / Semester 2	—	First Aid	2
Year 3 / Semester 1	—	Medical Skin-Care Preparations (2)	2
Year 3 / Semester 1	—	Medical Hair and Nail Care Preparations	4
Year 3 / Semester 1	—	Medical Oral and Dental Care Preparations	4
Year 3 / Semester 1	—	Botanical and Natural Ingredients in Cosmetics	4
Year 3 / Semester 1	—	Safety and Efficacy	2
Year 3 / Semester 1	—	Professional Ethics	2
Year 3 / Semester 2	—	Dermatopathology	4
Year 3 / Semester 2	—	Skin Care and Regulatory Affairs	4
Year 3 / Semester 2	—	Perfume and Essential Oil Preparations	4
Year 3 / Semester 2	—	Cosmetic Industry and Good Manufacturing Practices	4
Year 3 / Semester 2	—	Cosmetology Centre Management	2
Year 4 / Semester 1	—	Dermatotoxicology	4
Year 4 / Semester 1	—	Advanced Techniques in Cosmetic Dermatology	4
Year 4 / Semester 1	—	Advanced Techniques in Cosmetic Preparations	4
Year 4 / Semester 1	—	Case Studies in Skin, Hair and Nail Problems	4
Year 4 / Semester 1	—	Phototherapy and Laser for Skin Diseases	4
Year 4 / Semester 1	—	Field Training — Dermatology Clinics	4
Year 4 / Semester 2	—	Marketing and Research Methods for Cosmetic Preparations	4
Year 4 / Semester 2	—	Principles of Face and Hand Massage	4
Year 4 / Semester 2	—	Professional Ethics and Cosmetology Legislation	2
Year 4 / Semester 2	—	Alternative Medicine	2
Year 4 / Semester 2	—	Field Training — Cosmetic Factories & Warehouses	4
Year 4 / Semester 2	—	Graduation Project	4

YEAR ONE — COURSE DESCRIPTIONS

1. General Chemistry

Course Name	General Chemistry
Course Code	AL111
Semester / Year	2025/2026 — Semester 1 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	90 hours / 4 credit units
Course Responsible	Name: Lect. Dr. Mohammed Zuhair Hassan Email: —

Course Objectives	General Objective: To familiarise the student with the chemistry laboratory in general, to understand how organic chemical reactions are carried out and how to prepare standard solutions and concentrations, to comprehend the basic principles of chemistry and their applications, and to know how to handle chemical materials safely in the laboratory. Specific Objectives: • To understand the scope of biochemistry in health and disease. • To apply gas laws (Boyle's Law, Graham's Law, Dalton's Law) and understand the international system of units. • To study solutions, pH, acid-base balance, buffer systems, carbohydrates, lipids, proteins, and nucleic acids.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — General Chemistry

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Scope of Biochemistry in Health and Disease; Cell and Cell Constituents	Lecture	Oral & Written Exam
2	4		Physical Chemistry: Gas Laws — Boyle's Law, Graham's Law of Diffusion, Dalton's Law of Partial Pressure; General Gas Equation; International System of Units	Lecture	Oral & Written Exam
3	4		Radioactivity and Radioactive Isotopes	Lecture	Oral & Written Exam
4	4		Solutions and Methods of Expressing Concentrations; Colloidal Solutions	Lecture	Oral & Written Exam
5	4		The pH Concept, Acid-Base Balance, Chemical Equilibrium, Common Ion Effect	Lecture	Oral & Written Exam
6	4		Buffer Systems and Buffer Systems of Physiological Importance in Living Systems	Lecture	Oral & Written Exam

7	4		Blood, Blood Constituents, Body Fluids; Regulation of Blood pH and Body Fluids	Lecture	Oral & Written Exam
8	4		Water and Electrolyte Balance; Osmotic Pressure of Body Fluids; Control of Total Electrolytes and Body Fluids	Lecture	Oral & Written Exam
9-10	4		Carbohydrates: Classification, Reactions, Main Carbohydrates in the Human Body; Metabolism of Carbohydrates; Blood Glucose Factors Controlling Glucose Level	Lecture	Oral & Written Exam
11	4		Glucose Abnormalities: Diabetes Mellitus, Ketosis, Glycosuria, Glucose Tolerance Curve	Lecture	Oral & Written Exam
12	4		Lipids: Classification, Derived Lipids, Compound Lipids	Lecture	Oral & Written Exam
13-14	4		Lipid Metabolism and Lipid Abnormalities; Proteins: Classification, Functions, Peptide Bonds, Amino Acids, Chemical Reactions	Lecture	Oral & Written Exam
15	4		Nucleic Acids and Their Expression; DNA Replication; RNA Topology	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (40 marks) — Theoretical (25) and Practical (15), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (60 marks): Theoretical (35) and Practical (25).
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Required Textbooks (if available)	
Main References (Sources)	Chemistry: The Central Science General Chemistry: Principles and Modern Applications
Supporting References	
Electronic References & Websites	

2. Human Biology

Course Name	Human Biology
Course Code	AL112
Semester / Year	2025/2026 — Semester 1 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	90 hours / 4 credit units
Course Responsible	Name: Prof. Dr. Atheer Sayeb Naji Email: —

Course Objectives	General Objective: Medical Biology is one of the foundational sciences essential for students of medical colleges and related disciplines. Biology studies the many different forms of life, their interrelationships with the surrounding environment, and their connections to other sciences. It provides a clear picture of living organisms through an understanding of their structure and functions. Today, biology focuses on analysing the structure and function of genes, enzyme and protein synthesis, the ultra-microscopic structure of cells and their contents, cell-differentiation mechanisms, and molecular biology. Specific Objectives: • To understand cell structure (prokaryotic and eukaryotic), organelles, and functions. • To study movement in and out of cells: diffusion, osmosis, and active transport. • To understand cell division (amitosis, mitosis, and meiosis), nucleic acids, and protein biosynthesis. • To identify human body tissues: epithelial, muscular, nervous, and connective tissues.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Human Biology

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Introduction to Biology; Cells: Prokaryotic and Eukaryotic Cells; Animal and Plant Cells	Lecture	Oral & Written Exam
2-3	4		Structure of Cells: Types, Shape and Size	Lecture	Oral & Written Exam
4-5	4		Movement In and Out of Cells: Diffusion, Osmosis, Active Transport	Lecture	Oral & Written Exam
6	4		Cell Division: Amitosis, Mitosis and Meiosis	Lecture	Oral & Written Exam
7-8	4		Nucleic Acids: DNA and RNA; DNA Replication	Lecture	Oral & Written Exam
9	4		Protein Biosynthesis	Lecture	Oral & Written Exam

10-11	4		Human Body Tissues: Epithelial Tissues	Lecture	Oral & Written Exam
12-13	4		Muscular and Nervous Tissues	Lecture	Oral & Written Exam
14	4		Connective Tissues: Bone and Cartilage	Lecture	Oral & Written Exam
15	4		Blood (RBCs and WBCs) and Lymph	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (40 marks) — Theoretical (25) and Practical (15), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (60 marks): Theoretical (35) and Practical (25).
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Required Textbooks (if available)	
Main References (Sources)	Gonsalves, Biology 25: Human Biology, Los Angeles City College — Loosely Based on Mader's Human Biology, 7th edition.
Supporting References	
Electronic References & Websites	

3. Medical Physics

Course Name	Medical Physics
Course Code	AL113
Semester / Year	2025/2026 — Semester 1 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	90 hours / 4 credit units
Course Responsible	Name: Prof. Dr. Ali Khalaf Hassan Email: —

Course Objectives	General Objective: To familiarise students with the physical phenomena of the five physical states encountered in matter, and to connect them with the natural phenomena the student observes in everyday life, such as blood flow, the heartbeat, body temperature, pressures, and related phenomena. Specific Objectives: • To understand the physics of the skeleton, pressure, energy, work, and power of the body. • To study heat and cold in medicine, specific heat, heat capacity, latent heat, thermometers, and heat transfer by conduction, convection and radiation. • To apply Boyle's Law, the physics of the lung and breathing, evaporation, vapour pressure, humidity, and laminar and turbulent flow in liquids.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Medical Physics

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1-2	4		Physics of the Skeleton and Pressure	Lecture	Oral & Written Exam
3-5	4		Energy, Work and Power of the Body	Lecture	Oral & Written Exam
6-7	4		Heat and Cold in Medicine	Lecture	Oral & Written Exam
8-9	4		Specific Heat, Heat Capacity, Latent Heat, Thermometers and Their Types; Heat Transfer by Conduction, Convection and Radiation; Regulation of Heat Through the Human Body	Lecture	Oral & Written Exam
10	4		Boyle's Law; Diffusion and Mixing of Gases	Lecture	Oral & Written Exam
11-12	4		Physics of the Lung and Breathing	Lecture	Oral & Written Exam
13-15	4		Evaporation of Liquids, Vapour Pressure and Boiling Point; Humidity; Laminar and Turbulent Flow in Liquids	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (40 marks) — Theoretical (25) and Practical (15), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (60 marks): Theoretical (35) and Practical (25).
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Required Textbooks (if available)	
Main References (Sources)	Khan's The Physics of Radiation Therapy. The Essential Physics of Medical Imaging. Radiation Oncology Physics: A Handbook for Teachers and Students.
Supporting References	
Electronic References & Websites	

4. Computer Applications

Course Name	Computer Applications
Course Code	AL114
Semester / Year	2025/2026 — Semester 1 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	60 hours / 6 credit units
Course Responsible	Name: Assist. Lect. Hussein Ali Hussein Email: —

Course Objectives	General Objective: To enable the student to enrich their knowledge with fundamental concepts and important topics in the world of computing and technology. Specific Objectives: • To enable the student to use Microsoft Office applications, including Excel. • To enable the student to analyse and handle medical data and obtain results. • To develop practical skills in working with software.
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Teaching & Learning Strategies	1. Interactive lectures using presentation software. 2. Brain-storming by posing thought-provoking questions. 3. Involving students through seminars on current topics related to the course. 4. Practical group training. 5. Providing printed lecture materials.
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Course Structure — Computer Applications

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1-2	4		Introduction to the Excel Interface; Opening and Closing a Document with Saving	Lecture	Oral & Written Exam
3-4	4		AutoFit — Column Width and Row Height; Creating and Formatting Practical Tables	Lecture	Oral & Written Exam
5	4		Introduction to Main Screen Tools	Lecture	Oral & Written Exam
6-7	4		Alignment, Text Rotation, Merge and Centre; Working with Cell Contents	Lecture	Oral & Written Exam
8	4		Inserting, Deleting, Hiding and Showing Columns and Rows	Lecture	Oral & Written Exam
9	4		Searching for Specific Content; Find and Replace; Formatting Replacement Text; Inserting Comments; Ascending and Descending Sorting	Lecture	Oral & Written Exam
10-11	4		Working with Worksheets; Conditional Formatting	Lecture	Oral & Written Exam
12	4		Arithmetic Functions: SUM, AVERAGE, MAX, MIN	Lecture	Oral & Written Exam
13-15	4		Count, COUNTIF, COUNTA; Conditional Functions: IF, IF AND, IF OR; Practical Exercises	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (40 marks) — Theoretical (25) and Practical (15), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (60 marks): Theoretical (35) and Practical (25).
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Required Textbooks (if available)	
Main References (Sources)	
Supporting References	
Electronic References & Websites	

5. Medical Terminology I

Course Name	Medical Terminology I
Course Code	AL115
Semester / Year	2025/2026 — Semester 1 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	15 hours / 1 credit unit
Course Responsible	Name: Assist. Lect. Mais Mohammed Abd Al-Sada Email: —

Course Objectives	General Objective: To familiarise students with medical terminology as a cornerstone for understanding clinical sciences in their field of specialisation. Specific Objectives: • To study the important medical terminology relevant to the student's area of specialisation. • To build medical words correctly using roots, suffixes, and prefixes.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Medical Terminology I

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Introduction: Defining Medical Terminology, Techniques of Medical Word Building, Word Elements — Root, Suffixes, Prefixes	Lecture	Oral & Written Exam
2	4		Common Prefixes and Suffixes; Body Structure Key Terms; Levels of Organisation: Cell, Tissue, Organ, System	Lecture	Oral & Written Exam
3	4		Pathology and Abnormal Conditions: Tumours, Infection and Inflammation, Symptoms, Disease and Diagnosis	Lecture	Oral & Written Exam
4	4		Integumentary (Skin) System	Lecture	Oral & Written Exam
5	4		Musculoskeletal System	Lecture	Oral & Written Exam
6	4		Digestive System and Cardiovascular System	Lecture	Oral & Written Exam
7	4		Blood, Lymph and Immune System	Lecture	Oral & Written Exam
8	4		Respiratory System	Lecture	Oral & Written Exam
9	4		Nervous System and Special Senses	Lecture	Oral & Written Exam

10	4		Endocrine System	Lecture	Oral & Written Exam
11	4		Urinary System and Reproductive System	Lecture	Oral & Written Exam
12	4		Gynaecology, Pregnancy, Embryology and Childbirth	Lecture	Oral & Written Exam
13	4		Childhood, Growth and Development	Lecture	Oral & Written Exam
14	4		Medical Record Activity and Writing a Diagnostic Report	Lecture	Oral & Written Exam
15	4		Revision	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (30 marks) — Theoretical (30), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (70 marks): Theoretical.
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Required Textbooks (if available)	
Main References (Sources)	Nath, Judi Lindsley; Lindsley, Kelsey P. A Short Course in Medical Terminology. Wolters Kluwer Health, 2018.
Supporting References	
Electronic References & Websites	

6. Human Rights and Democracy

Course Name	Human Rights and Democracy
Course Code	AL116
Semester / Year	2025/2026 — Semester 1 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	15 hours / 2 credit units
Course Responsible	Name: Assist. Lect. Ghasaq Abd Al-Razzaq Email: —

Course Objectives	General Objective: To introduce the student to the historical development of human rights and democracy, and the types of public freedoms. Specific Objectives: • To understand human rights in ancient civilisations, divine revelations, and contemporary international law. • To distinguish civil, political, economic, social, and cultural rights. • To understand the concept of democracy, its types, and the protection of public freedoms.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Human Rights and Democracy

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Human Rights: Definition and Objectives; Human Rights in Ancient Civilisations, Especially Mesopotamia	Lecture	Oral & Written Exam
2	4		Human Rights in Divine Revelations, Focusing on Human Rights in Islam; Human Rights in Contemporary and Modern History: International Recognition from WWI and the League of Nations / United Nations	Lecture	Oral & Written Exam
3	4		Regional Recognition of Human Rights: European Convention 1952; American Convention 1969; African Charter 1981; Arab Charter 1994; NGOs and Human Rights (ICRC, Amnesty International, Human Rights Watch, National Organisations)	Lecture	Oral & Written Exam
4	4		Human Rights in Iraqi Constitutions: Theory vs. Reality; The Relationship between Human Rights and Public Freedoms — in the Universal Declaration and in Regional Charters and National Constitutions	Lecture	Oral & Written Exam
5	4		Economic, Social, Cultural, Civil and Political Human Rights	Lecture	Oral & Written Exam
6	4		Modern Human Rights: Right to Development, Right to a Clean Environment, Right to Solidarity, Right to Religion	Lecture	Oral & Written Exam

7	4		Guarantees for Respecting and Protecting Human Rights at the National Level: Constitutional and Legal Guarantees; The Rule-of-Law Principle	Lecture	Oral & Written Exam
8	4		Constitutional Oversight Guarantees; Freedom of the Press and Public Opinion; Role of Governmental Organisations in Protecting Human Rights	Lecture	Oral & Written Exam
9	4		General Theory of Freedoms: Origin of Rights and Freedoms; Legal Framework; Organising Public Freedoms by Public Authorities	Lecture	Oral & Written Exam
10	4		Equality: Historical Development of the Concept; Modern Developments — Equality Between the Sexes; Equality Among Individuals Regardless of Belief or Ethnicity	Lecture	Oral & Written Exam
11	4		Democracy: Definition and Types; Concepts of Democracy; Democracy in the Third World	Lecture	Oral & Written Exam
12	4		Democratic Systems in the World; Classification of Public Freedoms: Fundamental, Intellectual, Economic and Social Freedoms	Lecture	Oral & Written Exam
13	4		Freedom of Security; Freedom of Movement; Freedom of Education; Freedom of the Press; Freedom of Assembly; Freedom of Association; Freedom of Work	Lecture	Oral & Written Exam
14	4		Freedom of Property; Freedom of Commerce and Industry; Women's Rights	Lecture	Oral & Written Exam
15	4		Political Parties and Public Freedoms; Scientific and Technological Progress and Public Freedoms; Future of Public Freedoms	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (30 marks) — Theoretical (30), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (70 marks): Theoretical.
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Required Textbooks (if available)	
Main References (Sources)	
Supporting References	
Electronic References & Websites	

7. Arabic Language

Course Name	Arabic Language
Course Code	AL117
Semester / Year	2025/2026 — Semester 1 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	30 hours / 2 credit units
Course Responsible	Name: Assist. Lect. Heba Abd Al-Jalil Email: —

Course Objectives	General Objective: To familiarise the student with the principles and grammatical rules of the Arabic language and to raise the student's level of comprehension in the field of language. Specific Objectives: • To understand and correctly apply the rules of Arabic orthography, including hamza writing, punctuation, and common linguistic errors. • To distinguish nouns, verbs, and particles; understand numbers; and identify the formal aspects of official Arabic correspondence.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Arabic Language

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Introduction to Common Linguistic Errors — Elongated Tā', Bound Tā', and Open Tā'	Lecture	Oral & Written Exam
2	4		Rules for Writing the Extended Alif and the Short Alif; Solar and Lunar Letters	Lecture	Oral & Written Exam
3	4		The Letters Dād and Zā'	Lecture	Oral & Written Exam
4	4		Writing the Hamza (Glottal Stop)	Lecture	Oral & Written Exam
5	4		Punctuation Marks	Lecture	Oral & Written Exam
6	4		Nouns, Verbs, and Particles — Distinguishing Between Them	Lecture	Oral & Written Exam
7	4		Complements (Al-Mafā'il)	Lecture	Oral & Written Exam
8	4		Numerals	Lecture	Oral & Written Exam

9	4		Applications of Common Linguistic Errors	Lecture	Oral & Written Exam
10	4		Writing Numerals (in Words)	Lecture	Oral & Written Exam
11	4		Nūn and Nunation; Meanings of Prepositions	Lecture	Oral & Written Exam
12	4		Formal Aspects of Official Correspondence	Lecture	Oral & Written Exam
13	4		The Language of Official Correspondence	Lecture	Oral & Written Exam
14	4		The Language of Official Correspondence (continued)	Lecture	Oral & Written Exam
15	4		Models of Official Correspondence	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (30 marks) — Theoretical (30), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (70 marks): Theoretical.
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Required Textbooks (if available)	
Main References (Sources)	
Supporting References	
Electronic References & Websites	

8. Organic Chemistry

Course Name	Organic Chemistry
Course Code	AL121
Semester / Year	2025/2026 — Semester 2 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	90 hours / 4 credit units
Course Responsible	Name: Assoc. Prof. Dr. Zaman Abd Al-Hussein Abadi Email: —

Course Objectives	General Objective: To familiarise the student with the organic chemistry laboratory in general; to understand how organic chemical reactions are carried out and how to prepare standard solutions and concentrations; and to know how to handle chemical and organic materials safely in the laboratory. Specific Objectives: • To study hydrocarbons (alkanes, alkenes, alkynes), alcohols, aldehydes, ketones, carboxylic acids, amines, and aromatic compounds. • To understand an introduction to biochemistry (carbohydrates, amino acids, proteins) and polymer chemistry (classification, properties, reactions, natural polymers). • To apply concepts of mechanics of elastic solids, stress-strain curves, and green chemistry.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Organic Chemistry

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1-2	4		Introduction to Organic Chemistry (Hydrocarbons): Alkanes, Alkenes, Alkynes	Lecture	Oral & Written Exam
3-4	4		Alcohols: Classification, Properties and Reactions; Aldehydes and Ketones: Properties and Reactions	Lecture	Oral & Written Exam
5-6	4		Carboxylic Acids: Properties and Reactions; Amines; Aromatic Hydrocarbons and Polynuclear Aromatic Compounds	Lecture	Oral & Written Exam
7	4		Introduction to Biochemistry: Carbohydrates	Lecture	Oral & Written Exam
8	4		Amino Acids and Proteins	Lecture	Oral & Written Exam
9-10	4		Introduction to Polymer Chemistry; Polymers: Classification and Properties	Lecture	Oral & Written Exam
11	4		Reactions of Polymers	Lecture	Oral & Written Exam

12	4		Natural Polymers and Their Uses	Lecture	Oral & Written Exam
13	4		Mechanics of Elastic Solids	Lecture	Oral & Written Exam
14	4		Stress-Strain Curve	Lecture	Oral & Written Exam
15	4		Green Chemistry	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (40 marks) — Theoretical (25) and Practical (15), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (60 marks): Theoretical (35) and Practical (25).
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Required Textbooks (if available)	
Main References (Sources)	Organic Chemistry — Jonathan Clayden, Nick Greeves, Stuart Warren. Organic Chemistry (AS). Practical Biochemistry — Babylon University College of Pharmacy.
Supporting References	
Electronic References & Websites	

9. Histology and Anatomy

Course Name	Histology and Anatomy
Course Code	AL122
Semester / Year	2025/2026 — Semester 2 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	45 hours / 3 credit units
Course Responsible	Name: Prof. Dr. Atheer Sayeb Naji Email: —

Course Objectives	General Objective: To familiarise students with the basic medical knowledge of anatomy as a cornerstone for understanding clinical sciences in their field of specialisation. Specific Objectives: • To study the fundamental principles of anatomy and to identify the structure and organisation of the human body, its organs and systems. • To apply histological knowledge to skin anatomy, head and neck, breast, upper and lower limbs, thorax, abdomen, and pelvic organs.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Histology and Anatomy

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Introduction; Anatomical Terms	Lecture	Oral & Written Exam
2	4		Cells and Tissues; Bones and Joints	Lecture	Oral & Written Exam
3	4		Skin Anatomy and Its Functions	Lecture	Oral & Written Exam
4-6	4		Anatomy and Histology of the Head and Neck: Face, Scalp, Skull and Neck Bones; Muscles of the Face; Upper Respiratory Tract, Ear, Orbit and Neck	Lecture	Oral & Written Exam
7	4		Anatomy and Histology of the Breast	Lecture	Oral & Written Exam
8	4		Anatomy and Histology of the Upper Limb: Surface Anatomy, Bones, Muscles, Joints and Nerves	Lecture	Oral & Written Exam
9	4		Anatomy and Histology of the Lower Limb: Surface Anatomy, Bones, Muscles, Joints and Nerves	Lecture	Oral & Written Exam
10	4		Anatomy and Histology of the Vertebral Column	Lecture	Oral & Written Exam

11	4		Anatomy and Histology of the Thorax: Lungs and Pleura; Heart and Great Vessels; Diaphragm	Lecture	Oral & Written Exam
12-13	4		Anatomy and Histology of the Abdomen: Digestive Tract, Liver, Gallbladder and Pancreas; Kidneys, Ureters and Urinary Bladder	Lecture	Oral & Written Exam
14-15	4		Anatomy and Histology of the Pelvic Organs: Surface Anatomy, Bones, Muscles; Male and Female Genital Tracts	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (40 marks) — Theoretical (25) and Practical (15), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (60 marks): Theoretical (35) and Practical (25).
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Required Textbooks (if available)	
Main References (Sources)	Gray's Anatomy Netter Atlas Medical Terminology
Supporting References	
Electronic References & Websites	

10. Skin and Hair Biology

Course Name	Skin and Hair Biology
Course Code	AL123
Semester / Year	2025/2026 — Semester 2 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	90 hours / 4 credit units
Course Responsible	Name: Assist. Lect. Haider Abd Al-Khudur Kadhim Email: —

Course Objectives	General Objective: By the end of the academic year, the student will be able to: 1. Build a solid foundation in skin and hair biology. 2. Enhance patient care and professional competence. 3. Ensure safety and efficacy in laser and cosmetic procedures. 4. Prepare for a successful career in cosmetology and laser technology. Specific Objectives: • Master the anatomy and physiology of skin and hair. • Identify and address common skin and hair disorders. • Apply knowledge of cosmetic ingredients and their effects. • Safely perform microdermabrasion, chemical peels, and laser treatments. • Develop competence in laser and light-based hair-removal techniques. • Apply safety standards and professional protocols. • Conduct effective patient consultations and treatment planning.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Skin and Hair Biology

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Epidermis, Dermis, Hypodermis	Lecture	Oral & Written Exam
2	4		Keratinocytes, Melanocytes, Fibroblasts	Lecture	Oral & Written Exam
3	4		Collagen, Elastin, Hyaluronic Acid	Lecture	Oral & Written Exam
4	4		Hair Follicle, Sebaceous Gland, Hair Shaft	Lecture	Oral & Written Exam
5	4		Cuticle, Cortex, Medulla	Lecture	Oral & Written Exam
6	4		Hair Growth Cycle: Anagen, Catagen, Telogen Phases	Lecture	Oral & Written Exam

7	4		Acid Mantle, pH, Lipid Matrix	Lecture	Oral & Written Exam
8	4		Hydration and Transepidermal Water Loss (TEWL)	Lecture	Oral & Written Exam
9	4		Oxidative Stress, Free Radicals, Glycation, Photoaging	Lecture	Oral & Written Exam
10	4		Chronological Ageing, Hair Thinning, Hair Greying	Lecture	Oral & Written Exam
11	4		Skin Types: Oily, Dry, Combination, Sensitive, Normal	Lecture	Oral & Written Exam
12	4		Common Skin Disorders: Acne, Rosacea, Eczema, Psoriasis, Dermatitis	Lecture	Oral & Written Exam
13	4		Hair Disorders: Alopecia, Dandruff, Seborrheic Dermatitis	Lecture	Oral & Written Exam
14	4		Hair and Scalp Conditions: Folliculitis, Hirsutism, Trichotillomania	Lecture	Oral & Written Exam
15	4		Nutritional Support: Antioxidants, Vitamins A, C, E, B-Complex, Omega-3, Biotin, Zinc	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (40 marks) — Theoretical (25) and Practical (15), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (60 marks): Theoretical (35) and Practical (25).
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Required Textbooks (if available)	
Main References (Sources)	
Supporting References	
Electronic References & Websites	

11. Laser Physics

Course Name	Laser Physics
Course Code	AL124
Semester / Year	2025/2026 — Semester 2 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	90 hours / 4 credit units
Course Responsible	Name: Prof. Dr. Ali Khalaf Hassan Email: —

Course Objectives	General Objective: By the end of the academic year, the student will be able to: 1. Understand the nature of electromagnetic radiation, refraction, and the properties of laser. 2. Learn laser processes, including photon interactions, population inversion, and amplification. 3. Distinguish between laser types (e.g. gas lasers) and their excitation mechanisms. 4. Analyse laser system components, operating principles, and methods of controlling radiation. 5. Apply laser physics in cosmetic and medical treatments while ensuring safe use. Specific Objectives: • To understand electromagnetic radiation in vacuum and in matter, and Snell's Law of refraction. • To identify laser properties: monochromaticity, directionality, coherence, brightness. • To study lasing processes: Bohr model, photons, population inversion, stimulated emission, amplification. • To compare three-level and four-level laser systems. • To analyse the laser system: active medium, excitation mechanism, feedback mechanism, output coupler.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Laser Physics

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Electromagnetic Radiation: In Vacuum and in Matter	Lecture	Oral & Written Exam
2	4		Refraction of a Light Beam — Snell's Law	Lecture	Oral & Written Exam
3	4		Properties of Laser Radiation: Monochromaticity, Directionality, Coherence	Lecture	Oral & Written Exam
4	4		Low Divergence Angle; Brightness	Lecture	Oral & Written Exam
5	4		Lasing Processes: Bohr Model of the Atom; Photons and Energy Diagrams	Lecture	Oral & Written Exam

6-7	4		Absorption of Electromagnetic Radiation; Spontaneous Emission, Decay Rate, Thermodynamic Equilibrium; Population Inversion; Stimulated Emission; Amplification	Lecture	Oral & Written Exam
8	4		Three-Level Laser; Four-Level Laser	Lecture	Oral & Written Exam
9	4		The Laser System: Active Medium; Excitation Mechanism; Collision with Atoms; Feedback Mechanism; Output Coupler	Lecture	Oral & Written Exam
10	4		Operation of a Laser System — Interactive Applets: Laser Gain; Fluorescence Line Shape; Fluorescence Linewidth	Lecture	Oral & Written Exam
11	4		Laser Gain Curve; Broadening the Fluorescence Line; Loop Gain; Calculating Loop Gain (GL) Without and With Losses	Lecture	Oral & Written Exam
12	4		Calculating Gain Threshold (GL) _{th} ; Saturation Gain in a Continuous-Wave Laser; Pulsed Laser	Lecture	Oral & Written Exam
13	4		Different Laser Types and Their Characteristics; Gas Lasers; Excitation of a Gas Laser; Groups of Gas Lasers; Controlling Laser Radiation Properties; Common Laser Resonators; Selective Coating on Cavity Mirrors	Lecture	Oral & Written Exam
14	4		Controlling Laser Radiation Properties; Common Laser Resonators; Selective Coating on Cavity Mirrors	Lecture	Oral & Written Exam
15	4		Second Semester Examination / Revision	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (40 marks) — Theoretical (25) and Practical (15), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (60 marks): Theoretical (35) and Practical (25).
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Required Textbooks (if available)	
Main References (Sources)	Principles of Lasers — O. Svelto. Laser Fundamentals — W.T. Silvast. Optoelectronics and Photonics: Principles and Practices — S.O. Kasap.
Supporting References	
Electronic References & Websites	

12. Medical Terminology II

Course Name	Medical Terminology II
Course Code	AL125
Semester / Year	2025/2026 — Semester 2 / First Year
Description Date	5/01/2026
Attendance Mode	In-Person (Face-to-Face)
Total Hours / Units	15 hours / 1 credit unit
Course Responsible	Name: Assoc. Prof. Dr. Akram Jalal Karim Email: —

Course Objectives	General Objective: To deepen students' knowledge of medical terminology as a cornerstone for understanding clinical sciences in their field of specialisation. Specific Objectives: • To study the important medical terminology relevant to the student's area of specialisation. • To build and decode medical terms correctly using roots, suffixes, and prefixes across all body systems.
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Teaching & Learning Strategies	• Creative thinking strategy • Team-work strategy • Discussion and debate strategy • Case-study strategy • Analytical teaching strategy • Concept-mapping strategy • Practical field-training strategy • Self-directed learning strategy • E-learning strategy
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Course Structure — Medical Terminology II

Week	Hours	Learning Outcomes	Topic / Unit	Learning Method	Assessment
1	4		Introduction: Defining Medical Terminology, Techniques of Medical Word Building, Word Elements — Root, Suffixes, Prefixes	Lecture	Oral & Written Exam
2	4		Common Prefixes and Suffixes; Body Structure Key Terms; Levels of Organisation: Cell, Tissue, Organ, System	Lecture	Oral & Written Exam
3	4		Pathology and Abnormal Conditions: Tumours, Infection and Inflammation, Symptoms, Disease and Diagnosis	Lecture	Oral & Written Exam
4	4		Integumentary (Skin) System	Lecture	Oral & Written Exam
5	4		Musculoskeletal System	Lecture	Oral & Written Exam
6	4		Digestive System and Cardiovascular System	Lecture	Oral & Written Exam
7	4		Blood, Lymph and Immune System	Lecture	Oral & Written Exam
8	4		Respiratory System	Lecture	Oral & Written Exam

9	4		Nervous System and Special Senses	Lecture	Oral & Written Exam
10	4		Endocrine System	Lecture	Oral & Written Exam
11	4		Urinary System and Reproductive System	Lecture	Oral & Written Exam
12	4		Gynaecology, Pregnancy, Embryology and Childbirth	Lecture	Oral & Written Exam
13	4		Childhood, Growth and Development	Lecture	Oral & Written Exam
14	4		Medical Record Activity and Writing a Diagnostic Report	Lecture	Oral & Written Exam
15	4		Revision	Lecture	Oral & Written Exam

Course Assessment	Grade distribution out of 100: Continuous assessment (30 marks) — Theoretical (30), including 10 marks for activities (reports, attendance, daily and oral quizzes). Final examination (70 marks): Theoretical.
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Required Textbooks (if available)	
Main References (Sources)	Nath, Judi Lindsley; Lindsley, Kelsey P. A Short Course in Medical Terminology. Wolters Kluwer Health, 2018.
Supporting References	
Electronic References & Websites	