MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH
UNIVERSITY OF BABYLON
COLLEGE OF MEDICINE

COMPETENCY SUBJECT BASED CURRICULUM
2022-2023

PREFACE TO THE CURRICULUM

The Medical college is aware of its responsibilities in creation of trained students and isengaged in updating the medical curriculum for undergraduates to be in agreement withstandard of National Council for Accreditation of Medical Colleges and the changing health needs of the country

College of Medicine strives to improve health care and are committed to graduate physi-cians fulfill to the national academic standards preparing them to work in Iraq and else- where, considering medical ethics framework and continuous development of academic program and professional training to improves skills for practice when they graduated.

The college also encourages scientific research and postgraduate studies to achieve the national and international community health needs.

Competency subject based curriculum provides an effective educational outcome-based strategy where various domains of teaching and assessment form the framework of competencies.

In subject-based curriculum the Basic Biomedical Sciences (BBS) are delivered in ap-plied form i.e. incorporate the BBS into clinical sciences.

The curriculum is designed in a sequential and constructive manner that ensures consis-tency between the four subjects [BBS, behavioral and social, and clinical subjects].

The curriculum teaches the principles of scientific method, medical research methods,evidence-based medicine and concentrate on analytical and critical thinking. Over the past three years, a group of highly committed medical professionals working asMembers in the curriculum committee and scientific committees in all college depart-ments were engaged in updating this information into a document incorporating appro-priate teaching-learning strategies, tools and techniques of teaching, and modes of as-sessment which have culminated in the current competency-based curriculum.

All efforts have been made to encourage disciplines so as to achieve both horizontal and vertical integration in different stages.

We believe that this curriculum will serve the fundamental purpose to graduate safe competent doctors with lifelong learners and have a good knowledge of their duties andrights from the first day of graduation so they can continue their careers without prob- lems.

The medical college have a curriculum committee, which under the governance of the academic leadership (the dean) has the responsibility and authority with col-laboration of the scientific committees in the department for planning and implement-ing the curriculum to secure its intended educational outcomes.

The curriculum contains subject-wise outcomes that must be achieved at the end of in-struction in that subject. Learning objectives (competencies) in each subject are grouped according to topics number-wise. It is important to review the individual outcomes (competencies) in the light of the topic outcomes as a whole. For each competency out-lined - the learning domains (Knowledge, Skill, Attitude, Communication) are identified. The expected level of achievement in that subject is identified as – [knows (K), knows how (KH), shows how (SH), perform (P)]. As a rule, !perform" indicates independent performance without supervision and is required rarely in the pre-internship period.

Years of study at the College of Medicine is six years and the study system is the study of the courses where the school year consists of two courses, except for sixth stage con-sists of four courses.

The total time spent to deliver the curriculum are 5625 hours equivalent to 259 Units (Credit) delivered through six stages, these divided into 2250 theoretical hours which are equivalent to 150 Units (Credit) and 3270 practical and Clinical hours equivalent to109 Units (Credit).
Each 15 hours theory equivalent to 1 Unit (Credit)
Each 30 hours practical or clinical equivalent to 1 Unit (Credit)

The curriculum clearly identifies the Intended educational outcomes (knowledge, skills and attitude that students demonstrate at the end of a period of learning). Curriculum map or Schedule of the curriculum elements /courses is clearly identified which demonstrate the coordination between the four main subjects: Basic BiomedicalSciences (BBS), Behavioral, Social, and Clinical subjects regarding sequences and ex-tent of each element/course.

The curriculum describes the content, and sequencing of courses and include a description of the planned instructional and learning methods and assessment methods used for assessment of students based on contemporary learning principles.

Instructional/ learning methods would encompass lectures, small-group teaching, case-based learning, practical, laboratory exercises, bed-side teaching, clinical demonstrations, clinical skills laboratory training, field exercises in the communityand web-based instruction.

The curriculum includes the principles of scientific method, medical research methods,evidence-based medicine and the students conduct and participate in minor research projects.

The curriculum incorporates basic biomedical sciences (BBS) which include anatomy, biochemistry, medical physics, cell biology, genetics, physiology, immunology, microbiology (including bacteriology, parasitology and virology), molecular biology, pathology and pharmacology.
These (BBS) are delivered in applied form i.e. incorporate the BBS into clinical sciences which help students to understand and apply clinical sciences and by that achieve the vertical integration.

The curriculum incorporates social sciences which include biostatistics, epidemiology, community medicine, global health, hygiene, medical anthropology, medical sociology, public health.

The curriculum incorporates behavioral sciences which include foundation of Medicine in the first year, behavioral science in the third year and psychology in the fifth year.

The curriculum incorporates Medical ethics in its context which deals with values, rights and responsibilities related to physician behavior and decision making.
The curriculum incorporates Medical jurisprudence which deals with the laws and regu-lations of the health care delivery system, including the regulations of production and use of pharmaceuticals and medical technologies.

The behavioral and social sciences, medical ethics and medical jurisprudence providethe knowledge, concepts, methods, skills and attitudes necessary for understanding socio-economic, demographic and cultural determinants of causes, distribution and consequences of health problems as well as knowledge about the national health care system and patients' rights. This would enable analysis of health needs of the

community and society, effective communication, clinical decision making and eth-ical practices.
The curriculum incorporates Clinical skills which include history taking, physical examination, communication skills, procedures and investigations, emergency practices, and prescription and treatment practices.
The curriculum incorporates Professional skills would include patient management skills, team-work/team leadership skills and inter-professional training. The curriculum incorporates Log book for the clinical training in each subject; which should include training on clinical skills , acquisition of professional skills , health promotion and disease prevention.
The curriculum identifies and incorporate the contributions of the clinical sciences to ensure that students spend a reasonable part of the program in planned contact with patients in relevant clinical settings. The curriculum specifies the amount of time spent in training in major clinical disciplines includes clinical rotations and clerkships inthe 3rd, 4th, 5th , and 6th year grade and that include internal medicine (with subspecialties), surgery (with subspecialties), psychiatry, general practice / family medicine, gynecology & obstetrics and pediatrics. The curriculum concentrates on Patient safety which aims to prevent and reduce risks, errors and harm that occur to patients during provision of health care. It includes wide range of methods starting simply with, hand hygiene / wearing cloves , mask, maintain confidentiality of information, privacy during examination, drug dispensaries , training under supervision ,to more complicated issue.
The curriculum determines a list of clinical skills that the student must learn during the study period.

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CONTENT

University requirement subjects

University requirements subjects

1. Computer Science
2. Human Rights
3. English language Grade 1/ Course 2
4. English language Grade 2/ Course 1
5. English language Grade 3/ Course 2
6. English language Grade 4/ Course 2

Topics & learning objectives in Pre-clinical & Para-clinical subjects

Pre-Clinical and Para clinicalsubject	Number of Topics ineach course	Number of objec- tives in each course
Medical Biology / Grade 1	15	40
Foundation of Medicine / Grade 1	13	41
Histology / Grade 2 / Course 1		
Histology / Grade 2 / Course 2		
Human Anatomy Grade 1/ Course 1	1-16	85
Human Anatomy Grade 1 / Course 2	17-28	75
Human Anatomy Grade 2 / Course 1	29-49	82
Human Anatomy Grade 2 / Course 2	50-70	96
Human Anatomy / Total	**70**	**338**
Physiology Grade 1	3	40
Physiology Grade 2 / Course 1		
Physiology Grade 2 / Course 2		
Physiology / Total		
Medical Chemistry Grade 1	9	21
Biochemistry Grade 2 / Course 1		
Biochemistry Grade 2 / Course 2	5	
Biochemistry / Total		
Pharmacology Stage 3 / Course 1	1	30
Pharmacology Stage 3 / Course 2	1	28
Pharmacology / Total	2	58
Pathology Stage 3 / Course 1	1-7	29
Pathology Stage 3 / Course 2	8-13	30
Pathology Stage 4 / Course 1	14-17	28
Pathology Stage 4 / Course 2	18-25	30
Pathology / Total	**25**	**117**
Microbiology Stage 3 / Course 1	1-19	66
Microbiology Stage 3 / Course 2	20-39	79
Microbiology /Total	**39**	**145**
Parasitology Stage 3 / Course 1	1-13	48

Parasitology Stage 3 / Course 2	14-21	28
Parasitology / Total	**21**	**76**

Forensic Medicine Stage 4 / Course 1	1-6	30
Forensic Medicine Stage 4 / Course 2	7-15	30
Forensic Medicine / Total	**15**	**60**

Topics and learning objectives in Medicine and Allied subjects

Medicine and Allied subjects	Number of Topics ineach course	Number of objectives ineach course
Community Medicine Stage 3	3	15
Community Medicine Stage 4 /Course 1	4-13	44
Community Medicine Stage 4 /Course 2	14-19	29
Community Medicine / Total	**19**	**88**
Medicine Stage 3	1-19	132
Medicine Stage 4 / Course 1	20-34	182
Medicine Stage 4 / Course 2	34-44	180
Medicine Stage 5 / Course 1	45-61	133
Medicine Stage 5 / Course 2	62-67	95
Medicine/ Total	**67**	**722**
Dermatology Stage 5	**30**	**112**
Psychiatry Stage 5	**15**	**98**
Pediatric Stage 5 / Course 1	1-15	60
Pediatric Stage 5 / Course 2	16-32	188
Pediatric / Total	32	248

Topics and learning objectives in Surgery and al-lied subjects

Surgery and Allied subjects	Number of Topicsin each course	Number of objectivesin each course
General Surgery Stage 3	1-15	49
General Surgery and UrosurgeryStage 4 / Course 1	17-26	45
General Surgery and UrosurgeryStage 4 / Course 2	27-42	61
Orthopedic Surgery Stage 5 /Course 1	43-53	31
Minor Surgical Specialties Stage 5 /Course 2	54-60	55
Surgery / Total	60	241
Obstetrics Stage 4 / Course 1	1-12	29
Obstetrics Stage 4 / Course 2	13-19	23
Gynecology Stage 5	20-38	61
Obstetrics and Gynecology / To-tal	**38**	**113**
Otorhinolaryngology	**9**	**76**
Ophthalmology	**9**	**50**
Radiology	1	13

Intended educational outcome

At the end of undergraduate program, the Graduate know, be able to do and feel orbelieve or value as a health provider to people in general and patients in particular and are divided into three categories :

1. **Knowledge under the title : the doctor as a scholar and scientists.**
2. **Skills under the title : the doctor as a practitioner.**
3. **Attitude under the title: the doctor as a professional.**

Outcomes 1 − The doctor as a scholar and a scientist

A. The graduate will be able to apply to medical practice biomedical scientific princi-ples, method and knowledge relating to: anatomy, biochemistry, cell biology, genetics,immunology, microbiology, molecular biology, nutrition, pathology, pharmacology and physiology. The graduate will be able to:

1. Explain normal human structure and functions.
2. Explain the scientific bases for common disease presentations.
3. Justify the selection of appropriate investigations for common clinical cases.
4. Explain the fundamental principles underlying such investigative techniques.
5. Select appropriate forms of management for common diseases, and ways of pre-venting common diseases, and explain their modes of action and their risks fromfirst principles.
6. Demonstrate knowledge of drug actions: therapeutics and pharmacokinetics; drug side effects and interactions, including for multiple treatments, long term conditionsand non-prescribed medication; and also including effects on the population, such as the spread of antibiotic resistance.
7. Make accurate observations of clinical phenomena and appropriate critical analysisof clinical data.

B. Apply psychological principles, method and knowledge to medical practice.

1. Explain normal human behaviour at an individual level.
2. Discuss psychological concepts of health, illness and disease.
3. Apply theoretical frameworks of psychology to explain the varied responses of in-dividuals, groups and societies to disease.
4. Explain psychological factors that contribute to illness, the course of the diseaseand the success of treatment.
5. Discuss psychological aspects of behavioural change and treatment compliance.
6. Discuss adaptation to major life changes, such as bereavement; comparing and con-trasting the abnormal adjustments that might occur in these situations.
7. Identify appropriate strategies for managing patients with dependence issues andother demonstrations of self-harm.

C. Apply social science principles, method and knowledge to medical practice.

1. Explain normal human behavior at a societal level.
2. Discuss sociological concepts of health, illness and disease.
3. Apply theoretical frameworks of sociology to explain the varied responses of indi-viduals, groups and societies to disease.
4. Explain sociological factors that contribute to illness, the course of the disease andthe success of treatment − including issues relating to health inequalities, the linksbetween occupation and health and the effects of poverty and affluence.
5. Discuss sociological aspects of behavioroural changes and treatment compliance.

D. Apply to medical practice the principles, method and knowledge of populationhealth and the improvement of health and healthcare.

1. Discuss basic principles of health improvement, including the wider determinantsof health, health inequalities, health risks and disease surveillance.
2. Assess how health behaviours and outcomes are affected by the diversity of the pa-tient population.
3. Describe measurement methods relevant to the improvement of clinical effective-ness and care.
4. Discuss the principles underlying the development of health and health service pol-icy, including issues relating to health economics and equity, and clinical guide- lines.
5. Explain and apply the basic principles of communicable disease control in hospitaland community settings.
6. Evaluate and apply epidemiological data in managing healthcare for the individualand the community.
7. Recognise the role of environmental and occupational hazards in ill-health and dis-cuss ways to mitigate their effects.
8. Discuss the role of nutrition in health.
9. Discuss the principles and application of primary, secondary and tertiary preventionof disease.
10. Discuss from a global perspective the determinants of health and disease and varia-tions in healthcare delivery and medical practice.

E. Apply scientific method and approaches to medical research.

1. Critically appraise the results of relevant diagnostic, prognostic and treatment trials and other qualitative and quantitative studies as reported in the medical and scientif-ic literature.
2. Formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to ad-dress the questions.
3. Apply findings from the literature to answer questions raised by specific clinicalproblems.
4. Understand the ethical and governance issues involved in medical research.

Outcomes 2- The doctor as a practitioner

A. The graduate will be able to carry out a consultation with a patient:

1. Take and record a patient's medical history, including family and social history, talking to relatives or other carers where appropriate.
2. Elicit patients' questions, their understanding of their condition and treatment op-tions, and take their opinions into consideration.
3. Perform a full physical examination.
4. Perform a mental-state examination.
5. Assess a patient's capacity to make a particular decision that does not contradictlegal requirements.
6. Determine the extent to which patients want to participate in deciding managementoptions with their health care providers.
7. Provide explanation, advice, reassurance and support.

B. Diagnose and manage clinical presentations.

1. Interpret findings from the history, physical examination and mental-state exami-nation, appreciating the importance of clinical, psychological, social and cultural factors.
2. Make an initial assessment of a patient's problems and a differential diagnosis. Un-derstand the processes by which doctors make and test a differential diagnosis.
3. Formulate a plan of investigation in partnership with the patient, obtaining informedconsent as an essential part of this process.
4. Interpret the results of investigations, and the results of the diagnostic procedures in Appendix 1.
5. Synthesize a full assessment of the patient's problems and define the likely diagno-sis or diagnoses.
6. Make clinical judgments and decisions, based on the available evidence, in con-junction with colleagues and as appropriate. This may include situations of uncer-tainty.
7. Formulate a plan for treatment, management and discharge according to best evi-dence in partnership with the patients, their families and other health professionalswith consideration to patients' concerns and preferences.
8. Support patients in caring for themselves.
9. Identify the signs that suggest children or other vulnerable people may be suffering from abuse or neglect and know what action to take to safeguard their welfare.
10. Contribute to the care of terminal patients and their families, including management of symptoms, practical issues of law and certification, and effective communicationand team working.

C. Communicate effectively with patients, their families and colleagues in a medicalcontext.

1. Communicate clearly, sensitively and effectively with patients, their relatives or other carvers, and colleagues from the medical and other professions, by listening,sharing and responding.
2. Communicate clearly, sensitively and effectively with individuals and groups re-gardless of their age, social, cultural or ethnic backgrounds or their disabilities, inappropriate language.
3. Communicate by spoken, written and electronic methods including medical recordsand be aware of other non-verbal methods of communication used by patients like body language and facial expression.

4. Communicate appropriately in difficult circumstances, such as when breaking bad news, and when discussing sensitive issues, such as alcohol consumption, smokingor obesity.
5. Communicate appropriately with difficult, angry, or violent patients.
6. Communicate appropriately with people with mental illness.
7. Communicate appropriately with vulnerable patients.
8. Communicate effectively in various roles, for example, as patient advocate, teacher,manager or improvement leader.

D. Provide immediate care in all medical emergencies

1. Assess and recognize the severity of a clinical presentation and a need for immedi-ate emergency care
2. Diagnose and manage acute medical emergencies.
3. Provide basic first aid.
4. Provide immediate life support.
5. Provide cardio-pulmonary resuscitation or direct other team members to carry outresuscitation.

E. Prescribe drugs safely, effectively and economically.

1. Establish an accurate drug history, covering both prescribed and other medication.
2. Plan appropriate drug therapy for common indications, including pain and distress.
3. Provide a safe and legal prescription, with emphasis on pregnancy, lactation, chil-dren, organ transplant, allergy, and elderly.
4. Calculate appropriate drug doses and record the outcome accurately.
5. Provide patients with appropriate information about their medicines.
6. Access reliable information about medicines according to need.
7. Detect and report adverse drug reactions.
8. Demonstrate awareness about the existence of a range of alternative therapies usedby patients and awareness about possible effects on or interaction with other treat- ments taken by patients.

F. Carry out practical procedures safely and effectively.

1. Be able to perform a range of diagnostic procedures and measure and record thefindings.
2. Be able to perform a range of therapeutic procedures.
3. Be able to demonstrate correct practice in general aspects of practical procedures.

G. Use information effectively in a medical context.

1. Keep accurate, legible and complete clinical records.
2. Make effective use of computers and other information systems, including storingand retrieving information.
3. Keep to the requirements of confidentiality and data protection legislation andcodes of practice in all dealings with information.
4. Access information sources and use the information in relation to patient care, health promotion, giving advice and information to patients, and research and education.
5. Apply the principles, method and knowledge of health informatics to medical prac-tice.

Diagnostic procedures

1. Measuring body temperature using an appropriate recording device.
2. Measuring pulse rate and blood pressure using manual techniques and automaticelectronic devices.
3. Transcutaneous monitoring of oxygen saturation, applying, and taking readings from, an electronic device which measures the amount of oxygen in the patient'sblood.
4. Venepuncture, inserting a needle into a patient's vein to take a sample of blood for testing, or to give an injection into the vein.
5. Managing blood samples correctly: Making sure that blood samples are placed in the correct containers, and that these are labelled correctly and sent to the laboratorypromptly and in the correct way. Taking measures to prevent spilling and contami- nation.
6. Taking blood cultures: Taking samples of venous blood to test for the growth of in-fectious organisms in the blood. Requires special blood containers and laboratory procedures.
7. Measuring blood glucose: Measuring the concentration of glucose in the patient'sblood at the bedside, using appropriate equipment and interpreting the results.
8. Managing an electrocardiograph (ECG) monitor: Setting up a continuous recordingof the electrical activity of the heart. Ensuring the recorder is functioning correctly,and interpreting the tracing.
9. Performing and interpreting a 12-lead electrocardiograph (ECG): Recording a full, detailed tracing of the electrical activity of the heart, using a machine recorder (electrocardiograph). Interpreting the recording for signs of heart disease.
10. Basic respiratory function tests: Carrying out basic tests to see how well the patient's lungs are working (for example, how much air they can breathe out in onesecond).
11. Urine multi dipstick test: Testing a sample of urine for abnormal contents, such as blood or protein. The urine is applied to a plastic strip with chemicals which changecolour in response to specific abnormalities.
12. Advising patients on how to collect a mid-stream urine specimen: Obtaining a sample of urine from a patient, usually to check for the presence of infection, usinga method which reduces the risk of contamination by skin bacteria.
13. Taking nose, throat and skin swabs: Using the correct technique to apply sterileswabs to the nose, throat and skin.
14. Nutritional assessment: Making an assessment of the patient's state of nutrition. This includes an evaluation of their diet; their general physical condition; and mea-surement of height, weight and body mass index.
15. Pregnancy testing: Performing a test of the urine to detect hormones which indicatethat the patient is pregnant.

Therapeutic procedure

1. Administering oxygen Allowing the patient to breathe a higher concentration ofoxygen than normal, via a face mask or other equipment.
2. Establishing peripheral intravenous access and setting up an infusion; use of infusion devices. Puncturing a patient's vein in order to insert an indwelling plastic tube(known as a 'cannula'), to allow fluids to be infused into the vein (a 'drip'). Con- necting the tube to a source of fluid. Appropriate choice of fluids and their doses. Correct use of electronic devices which drive and regulate the rate of fluid adminis-tration.
3. Making up drugs for parenteral administration: Preparing medicines in a form suit-able for injection into the patient's vein. May involve adding the drug to a

volume of fluid to make up the correct concentration for injection.

4. Dosage and administration of insulin and use of sliding scales: Calculating how many units of insulin a patient requires, what strength of insulin solution to use, andhow it should be given (for example, into the skin, or into a vein). Use of a ‘sliding scale’ which links the number of units to the patient’s blood glucose measurement atthe time.
5. Subcutaneous and intramuscular injections, Giving injections beneath the skin andinto muscle.
6. Blood transfusion Following the correct procedures to give a transfusion of blood into the vein of a patient (including correct identification of the patient and checking blood groups). Observation for possible reactions to the transfusion, and actionsif they occur.
7. Male and female urinary catheterization Passing a tube into the urinary bladder topermit drainage of urine, in male and female patients.
8. Instructing patients in the use of devices for inhaled medication: Providing instruc-tions for patients about how to use inhalers correctly, for example, to treat asthma.
9. Use of local anesthetics Using drugs which produce numbness and prevent pain,either applied directly to the skin or injected into skin or body tissues.
10. Skin suturing Repairing defects in the skin by inserting stitches (normally includesuse of local anesthetic).
11. Wound care and basic wound dressing Providing basic care of surgical or traumaticwounds and applying dressings appropriately.
12. Correct techniques for ‘moving and handling’, including patients: Using, or direct-ing other team members to use, approved methods for moving, lifting and handlingpeople or objects, in the context of clinical care, using methods that avoid injury topatients, colleagues, or oneself.

General aspects of practical procedures

1. Giving information about the procedure, obtaining and recording consent, and ensuring appropriate aftercare: Making sure that the patient is fully informed, agrees to the procedure being performed, and is cared for and watched appropriate-ly after the procedure.
2. Hand washing (including surgical ‘scrubbing up’): Following approved processesfor cleaning hands before procedures or surgical operations.
3. Use of personal protective equipment (gloves, gowns, masks): Making correct useof equipment designed to prevent the spread of body fluids or cross-infection be- tween the operator and the patient.
4. Infection control in relation to procedures: Taking all steps necessary to prevent the spread of infection before, during or after a procedure.
5. Safe disposal of clinical waste, needles and other ‘sharps’: Ensuring that these materials are handled carefully and placed in a suitable container for disposal.

Outcome 3 - the doctor as a professional (Attitudes)

A. Professional and ethical responsibilities

1. Newly qualified doctors must behave according to ethical and professional princi-ples.

They must be able to:

a. Demonstrate the clinical responsibilities and role of the doctor.
b. Demonstrate compassionate professional behavior and their professional responsi-bilities in making sure the fundamental needs of patients are addressed.
c. Summarise the current ethical dilemmas in medical science and healthcare practice;the ethical issues that can arise in everyday clinical decision-making; and apply eth-ical reasoning to situations which may be encountered in the first years after gradu- ation.
d. Maintain confidentiality and respect patients' dignity and privacy.
e. Act with integrity, be polite, considerate, trustworthy and honest.
f. Take personal and professional responsibility for their actions.
g. Manage their time and prioritize effectively.
h. Recognize and acknowledge their own personal and professional limits and seek help from colleagues and supervisors when necessary, including when they feel thatpatient safety may be compromised.
i. Protect patients from any risk posed by their own health including:
    - the risks to their health and to patient safety posed by self-prescribing med-ication and substance misuse
    - the risks to their health and to patient safety posed by fatigue – they mustapply strategies to limit the impact of fatigue on their health.
j. Recognize the potential impact of their attitudes, values, beliefs, perceptions and personal biases (which may be unconscious) on individuals and groups and identifypersonal strategies to address this.
k. Demonstrate the principles of person-centered care and include patients and, where appropriate, their relatives, carers or other advocates in decisions about their health-care needs.
l. Explain and demonstrate the importance of:
    - seeking patient consent, or the consent of the person who has parental re-sponsibility in the case of children and young people, or the consent of thosewith lasting power of attorney or independent mental capacity advocates if appropriate
    - providing information about options for investigations, treatment and care ina way that enables patients to make decisions about their own care
    - assessing the mental capacity of a patient to make a particular decision, in-cluding when the lack of capacity is temporary, and knowing when and howto take action.
m. Act appropriately, with an inclusive approach, towards patients and colleagues.
n. Respect patient's wishes about whether they wish to participate in the education oflearners.
o. Access and analyse reliable sources of current clinical evidence and guidance andhave established methods for making sure their practice is consistent with these.
p. Explain and demonstrate the importance of engagement with revalidation, includingmaintaining a professional development portfolio which includes evidence of re- flection, achievements, learning needs and feedback from patients and colleagues.
q. Engage in their induction and orientation activities, learn from experience and

feed-back, and respond constructively to the outcomes of appraisals, performance re- views and assessments.

2. Newly qualified doctors must demonstrate awareness of the importance of their personal physical and mental wellbeing and incorporate compassionate self-care into their personal and professional life.

They must demonstrate awareness of the need to:

a) Self-monitor, self-care and seek appropriate advice and support, including by beingregistered with a GP and engaging with them to maintain their own physical and mental health
b) Manage the personal and emotional challenges of coping with work and workload,uncertainty and change
c) Develop a range of coping strategies, such as reflection, debriefing, handing over toanother colleague, peer support and asking for help, to recover from challenges andset-backs.

B. Legal responsibilities

Newly qualified doctors must demonstrate knowledge of the principles of the legal framework in which medicine is practiced in the jurisdiction in which they are practicing, and have awareness of where further information on relevant legislation can befound.8

C- Patient safety and quality improvement

Newly qualified doctors must demonstrate that they can practice safely. They must participate in and promote activity to improve the quality and safety of patient care and clinical outcomes. They must be able to:

a) Place patients' needs and safety at the centre of the care process.
b) Promote and maintain health and safety in all care settings and escalate concerns tocolleagues where appropriate, including when providing treatment and advice remotely.
c) Recognize how errors can happen in practice and that errors should be shared open-ly and be able to learn from their own and others' errors to promote a culture of safety.
d) Apply measures to prevent the spread of infection, and apply the principles of infec-tion prevention and control.
e) Describe the principles of quality assurance, quality improvement, quality planning and quality control, and in which contexts these approaches should be used to main-tain and improve quality and safety.
f) Describe basic human factors principles and practice at individual, team, organiza-tional and system levels and recognize and respond to opportunities for improve- ment to manage or mitigate risks.
g) Apply the principles and methods of quality improvement to improve practice (for example, plan, do, study, act or action research), including seeking ways to continu-ally improve the use and prioritization of resources.
h) Describe the value of national surveys and audits for measuring the quality of care.

D- Dealing with complexity and uncertainty

The nature of illness is complex and therefore the health and care of many patients is complicated and uncertain. Newly qualified doctors must be able to recognize complexity and uncertainty. And, through the process of seeking support and help from colleagues, learn to develop confidence in managing these situations and

respondingto change. They must be able to:

a) Recognize the complex medical needs, goals and priorities of patients, the factorsthat can affect a patient's health and wellbeing and how these interact. These include psychological and sociological considerations that can also affect patients'health
b) Identify the need to adapt management proposals and strategies for dealing with health problems to take into consideration patients' preferences, social needs, mul-tiple morbidities, frailty and long-term physical and mental conditions
c) Demonstrate working collaboratively with patients, their relatives, carers or other advocates, in planning their care, negotiating and sharing information appropriatelyand supporting patient self-care
d) Demonstrate working collaboratively with other health and care professionals and organizations when working with patients, particularly those with multiple morbidi-ties, frailty and long-term physical and mental conditions

F. Dealing with complexity and uncertainty

The nature of illness is complex and therefore the health and care of many patients is complicated and uncertain. Newly qualified doctors must be able to recognize com-plexity and uncertainty. And, through the process of seeking support and help from colleagues, learn to develop confidence in managing these situations and respondingto change. They must be able to:

a) Recognize how treatment and care can place an additional burden on patients and make decisions to reduce this burden where appropriate, particularly where patientshave multiple conditions or are approaching the end of life
b) Manage the uncertainty of diagnosis and treatment success or failure and communi-cate this openly and sensitively with patients, their relatives, carers or other advo- cates
c) Evaluate the clinical complexities, uncertainties and emotional challenges involved in caring for patients who are approaching the end of their lives and demonstrate therelevant communication techniques and strategies that can be used with the patient, their relatives, carers or other advocates.

E. Safeguarding vulnerable patients

Newly qualified doctors must be able to recognise and identify factors that suggest pa-tient vulnerability and take action in response. They must be able to:

a) Identify signs and symptoms of abuse or neglect and be able to safeguard children, young people, adults and older people, using appropriate systems for sharing infor- mation, recording and raising concerns, obtaining advice, making referrals and tak-ing action
b) Take a history that includes consideration of the patient's autonomy, views and any associated vulnerability, and reflect this in the care plan and referrals
c) Assess the needs of and support required for children, young people and adults andolder people who are the victims of domestic, sexual or other abuse
d) Assess the needs of, and support required, for people with a learning disability
e) Assess the needs of, and support required, for people with mental health conditions.
f) Adhere to the professional responsibilities in relation to procedures performed for non-medical reasons, such as female genital mutilation and cosmetic interventions.
g) Explain the application of health legislation that may result in the deprivation ofliberty to protect the safety of individuals and society.
h) Recognize where addiction (to drugs, alcohol, smoking or other substances), poor

nutrition, self-neglect, environmental exposure, or financial or social deprivation are contributing to ill health. And take action by seeking advice from colleagues andmaking appropriate referrals.

i) Describe the principles of equality legislation in the context of patient care.

F. Leadership and team working

Newly qualified doctors must recognise the role of doctors in contributing to the management and leadership of the health service. They must be able to:

a) Describe the principles of how to build teams and maintain effective team work andinterpersonal relationships with a clear shared purpose
b) Undertake various team roles including, where appropriate, demonstrating leader-ship and the ability to accept and support leadership by others.
c) Identify the impact of their behaviour on others.
d) Describe theoretical models of leadership and management that may be applied topractice.

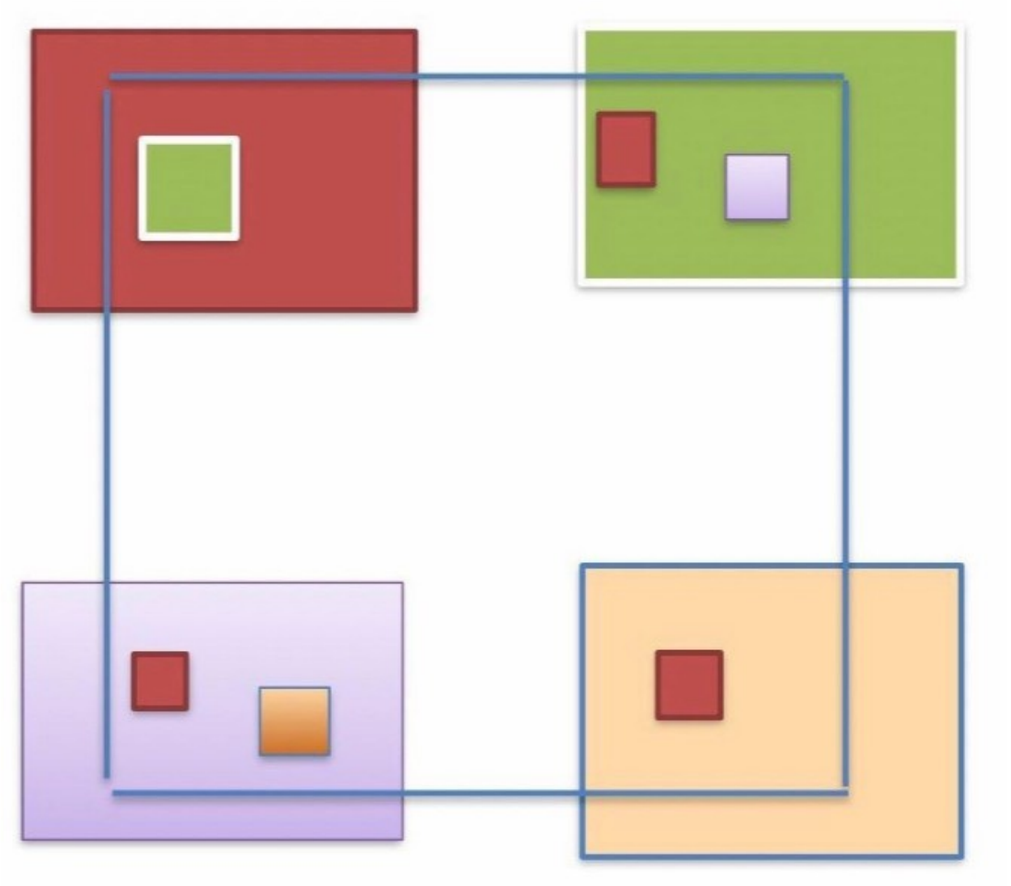
G. Newly qualified doctors must learn and work effectively within a multi-professional and multi-disciplinary team and across multiple care settings. This includes working face to face and through written and electronic means, and in a range of settings where patients receive care, including community, primary, secondary, mental health, specialist tertiary and social care settings and in patients' homes. They must be able to:

a) Demonstrate their contribution to effective interdisciplinary team working with doc-tors from all care settings and specialties, and with other health and social care pro- fessionals for the provision of safe and high-quality care.
b) Work effectively with colleagues in ways that best serve the interests of patients.This includes:
    - safely passing on information using clear and appropriate spoken, written and electronic communication.
    - at handover in a hospital setting and when handing over and maintainingcontinuity of care in primary, community and social care settings.
    - when referring to colleagues for investigations or advice.
    - when things go wrong, for example when errors happen.
    - questioning colleagues during handover where appropriate.
    - working collaboratively and supportively with colleagues to share expe-riences and challenges that encourage learning.
    - responding appropriately to requests from colleagues to attend patients.
    - applying flexibility, adaptability and a problem-solving approach toshared decision making with colleagues.
c) Recognize and show respect for the roles and expertise of other health and social care professionals and doctors from all specialties and care settings in the context ofworking and learning as a multi-professional team.

The concept of integration

Integration is a learning experience that allows the learner to perceive relationships from blocks of knowledge and develop a unified view of its basis and its application.
The integration session most preferred will be a case-based discussion in an appropriate format.
It must be emphasized that integration does not necessarily require multiple teachers in each class. Experts from each subject may be involved in the lesson planning but not it inits delivery unless deemed necessary.
Assessment will continue to be subject based. However, efforts must be made to ensure if the learner has internalized and integrated the concept and its application.

Nesting Integration: It's a teacher targets, within a subject base course, skills related to other subjects



DEFINITION AND HOW TO USE THE MANUAL

Competency: The habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit ofthe individual and community being served. In other words: What should you have? or What should have changed?

Objective: Statement of what a learner should be able to do at the end of a specific learn-ing experience. In other words: What the Iraqi Medical Graduate should know, do, or be-have.

Knowledge	Skill	Attitude/communicate
Enumerate	Identify	Counsel
List	Demonstrate	Inform
Describe	Perform under supervision	Demonstrate understanding of
Discuss	Perform independently	
Differentiate	Document	
Define	Present	
Classify	Record	
Choose	Interpret	
Elicit		
Report		

Note:

1. Specified essential competencies only will be required to be performed indepen-dently at the end of the final year of the college.
2. The word ‘performs’ or ‘do’ is used ONLY if the task has to be done on patients or in laboratory practical in the pre/para- clinical phases.
3. Most tasks that require performance during undergraduate years will be performedunder supervision.

Explanation of terms used in the curriculum

Lecture	Any instructional large group method including tradi-tional lecture and interactive lecture
Small group discussion	Any instructional method involving small groupsof students in an appropriate learning context
DOAP (Demonstration-Observation - As-sistance - Performance)	A practical session that allows the student to ob-serve a demonstration, assist the performer, performin a simulated environment, perform under supervi-sion or perform independently
Skill assessment	A session that assesses the skill of the student in- cluding those in the practical laboratory, skills lab,skills station that uses mannequins/ paper case/ simulated patients/real patients as the context de- mands

Domains of learning

K	Knowledge
S	Skill
A	Attitude
C	Communication

Levels of competency

K	Knows	A knowledge attribute - Usually enumerates or de-scribes
KH	Knows how	A higher level of knowledge - is able to discuss oranalyze
S	Shows	A skill attribute: is able to identify or demonstratethe steps
SH	Shows how	A skill attribute: is able to interpret/ demonstrate acomplex procedure requiring thought, knowledge and behavior
P	Performs (under su- pervision or indepen-dently)	Mastery for the level of competence - When done independently under supervision a pre-specified number of times - certification or ca-pacity to perform independently results

Note:
In the table of competency - the highest level of competency acquired is specified and im-plies that the lower levels have been acquired already. Therefore, when a student is able to SH - Show how - an informed consent is obtained - it is presumed that the preceding steps - the knowledge, the analytical skills, the skill of communicating have all been obtained.

It may also be noted that attainment of the highest level of competency may be obtained

through steps spread over several subjects and not necessarily in the subject in which thecompetency has been-identified.

Framework of the curriculum of the college of medicine University of Babylon 2021-2022

1st year 1st Course	2nd year 1st course	3rd year 1st course	4th year 1st course	5th year 1st course	6th year courses
Anatomy 1 4 (2+2)	Anatomy 1 5 (3+2)	Medicine 5 (4+1)	Medicine 1 6 (4+2)	Medicine 1 5 (3+2)	Medicine 12
			Surgery 1 4 (3+1)		
Medical Physics 4 (3+1)	Biochemistry1 4 (3+1)	Pathology 1 3 (2+1)	Obstetrics 1 3 (2+1)	Surgery 1 4 (3+1)	
		Microbiology 1 4 (3+1)	Pathology 1 3 (2+1)	Pediatric 1 3 (2+1)	
Medical Biology 4 (3+1)	Histology 1 3 (2+1)	Pharmacology 1 4 (3+1)	Forensic Medicine 1 3(2+1)	Gynecology 6 (4+2)	
Computer science 3 (2+1)	Physiology 1 4 (3+1)	Behavioral science 2	Community Medicine 1 5(3+2)	Ophthalmology 3 (2+1)	Surgery 12
Foundation of Medicine 2	English language 2	Parasitology 1 3 (2+1)	Medical ethics 2	Radiology 3 (2+1)	
17	18	21	26	24	
1st year 2nd Course	2nd year 2nd course	3rd year 2nd course	4th year 2nd course	5th year 2nd course	Pediatric 10
Anatomy 2 4 (2+2)	Anatomy 2 5 (3+2)	Surgery 3 (2+1)	Medicine 2 6 (4+2)	Medicine 2 5 (3+2)	
		Community medicine 3 (2+1)	Surgery 2 5 (3+2)	Surgery 2 5 (3+2)	
Physiology 4 (3+1)	Biochemistry 2 4 (3+1)	Pathology 2 3 (2+1)	Obstetrics 2 4 (2+2)		Obstetrics and Gynecology 10
Medical Chemistry 5 (4+1)		Microbiology 2 4 (3+1)	Pathology 2 3 (2+1)	Pediatric 2 3 (2+1)	
	Histology 2 3 (1+2)	Pharmacology 2 4 (3+1)	Forensic medicine 2 3 (2+1)	Psychiatry 5 (4+1)	
English language 2	Physiology 2 4 (3+1)	Parasitology 2 3 (2+1)	Community medicine 2 5 (3+2)	E.N.T 3 (2+1)	
Human rights 2	Embryology 2	English language 2	English language 2	Dermatology 3 (2+1)	
17	18	22	28	24	
17+17=34	18+18=36	21+22=43	26+28=54	24+24=48	12+12+10+10=44
Clinical Sciences	Basic Biomedical Sciences	Social Sciences	University requirements subjects	Medical ethics	Behavioral sciences
				Medical Jurisprudence	

Grade 1 / Course 1 / subjects and details of the-oretical and practical hour

Subject	Abbreviation	Page Number	Theory Credit Hours/ course Credit/ course	Practical sessions and small group discussions Credit Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Anatomy 1	AN		30 hours = 2 credit	60 hours = 2 credit	90 hours (2 + 2) = 4
Medical Physics	MP		45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Medical Biology	BO		45 hours = 3 credit	30 hours = 1 credit	60 hours (3+1) = 4
Computer science	CS		30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Foundation of medicine	FM		30 hours = 2 credit		30 hours = 2 credit
Total hours and Credit / course			180 hour =12 Credit	150 hours = 5 Credit	330 hours = 17 Credit

Grade 1 / Course 2 / subjects and details of theoretical and prac-tical hours

Subject	Abbreviation	Theory Credit Hours / course Credit / course	Practical ses-sions and smallgroup discus- sions Credit Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Anatomy 2	AN	30 hours = 2 credits	60 hours = 2 credits	90 hours (2 + 2) = 4
Physiology	PY	45 hours = 3 credits	30 hours = 1 credit	75 hours (3+1) = 4
Medical Chemistry	BI	60 hours = 4 credits	30 hours = 1 credit	90 hours (4+1) = 5
English language	EL	30 hours = 2 credits		30 hours = 2 credits
Human rights	HR	30 hours = 2 credits		30 hours = 2 credits
Total hours andCredit / course		195 hours = 13Credit	120 hours = 4Credit	315 hours = 17 Credit

Grade 2 / Course 1 / subjects and details of theoretical and practical hours

Subject	Abbreviation	Theory Credit Hours / course Credit / course	Practical sessions and smallgroup discus- sions Credit Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Anatomy 1	AN	45 hours = 3 credit	60 hours = 2 credit	90 hours (3 + 2) = 5
Biochemistry1	BI	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Histology 1	HI	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Physiology 1	PY	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
English language	EL	30 hours = 2 credit		30 hours = 2 credit
Total hours andCredit / course		**195 hours = 13Credit**	**150 hours = 5credit**	**345 hours = 18 Credit**

Grade 2 / Course 2 / subjects and details of theoretical and practical hours

Subject	Abbreviation	Theory Credit Hours / course Credit / course	Practical sessions and smallgroup discus- sions Credit Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Anatomy 2	AN	45 hours = 3 credits	60 hours = 2 credit	105 hours (3 + 2) = 5
Biochemistry 2	BI	45 hours = 3 credits	30 hours = 1 credit	75 hours (3+1) = 4
Histology 2	HI	15 hours = 1 credits	60 hours = 2 credit	75 hours (1+2) = 3
Physiology 2	PY	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Embryology	EM	30 hours = 2 credit		30 hours = 2 credit
Total hours and Credit / course		**180 hours =12 Credit**	**180 hours = 6Credit**	**360 hours = 18Credit**

Grade 3 / Course 1 / subjects and details of theoretical , practi-cal and clinical hours

Subject	Abbreviation	Theory Credit Hours / course Credit / course	Practical ses-sions and small group discussions Credit Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Medicine5 (4+1)	IM	60 hours = 4 credit	30 hours = 1 credit	90 hours (4+1) = 5
Pathology 1 3 (2+1)	PA	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Microbiology 1 4 (3+1)	MI	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Pharmacology 1 4 (3+1)	PH	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Behavioral sci-ence 2	BS	30 hours = 2 credit		30 hours = 2 credit
Parasitology 1 3 (2+1)	PO	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Total hours andCredit / course		**240 hours = 16 Credit**	**150 hours = 5 Credit**	**390 hours =21 Credit**

Grade 3 / Course 2 / subjects and details of theoret-ical and practical hours

Subject	Abbreviation	Theory Credit Hours / course Credit / course	Practical sessions and smallgroup discus- sions Credit Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Surgery	SU	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Community medicine	CM	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Pathology 2	PA	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Microbiology 2	MI	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Pharmacology 2	PH	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Parasitology 2	PO	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
English language	EL	30 hours = 2 credit		30 hours = 2 credit
Total hours andCredit / course		**240 hours = 16Credit**	**180 hours =6 Credit**	**420 hours = 22 Credit**

Grade 4 / Course 1 / Subjects and details of Theo-retical , Practical and Clinical hours

Subject	Abbreviation	Theory Credit Hours/ course Credit/ course	Practical sessions and small group discussions CreditHours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Medicine 1	IM	60 hours = 4 credit	60 hours = 2 credit	120 hours (4+2) = 6
Surgery 1	SU	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Obstetrics 1	OG	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Pathology 1	PH	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Forensic medicine 1	FM	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Community medicine 1	CM	60 hours = 4 credit	60 hours = 2 credit	120 hours (4+2) = 6
Medical ethics	**ME**	30 hours = 2 credit		30 hours = 2 credit
Total hours and Credit /course		**285 hours = 19Credit**	**240 hours = 8Credit**	**525 hours = 27Credit**

Grade 4 / Course2 / subjects and details of theoretical , practicaland clinical hours

Subject	Abbreviation	Theory Credit Hours / course Credit / course	Practical sessions and smallgroup discus- sions Credit Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Medicine 2	IM	60 hours = 4 credit	60 hours = 2 credit	120 hours (4+2) = 6
Surgery 2	SU	45 hours = 3 credit	60 hours = 2 credit	105 hours (3+2) = 5
Obstetrics 2	OG	30 hours = 2 credit	60 hours = 2 credit	90 hours (2+2) = 4
Pathology 2	PH	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Forensic medi-cine 2	FM	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Community medicine 2	CM	45 hours = 3 credit	60 hours = 2 credit	105 hours (3+2) = 5
English language	EL	30 hours = 2 credit		30 hours = 2 credit
Total hours andCredit / course		**270 hours = 18Credit**	**300 hours = 10Credit**	**570 hours =28 Credit**

Grade 5 / Course 1 / subjects and details of theoretical and clinical hours

Subject	Abbreviation	Theory Credit Hours / course Credit / course	Clinical sessions and smallgroup discussions Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Medicine 1	IM	45 hours = 3 credit	60 hours = 2 credit	105 hours (3+2) = 5
Surgery (Orthope-dic)	SU	45 hours = 3 credit	30 hours = 1 credit	75 hours (3+1) = 4
Pediatric 1	PE	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Gynecology	OG	60 hours = 4 credit	60 hours = 2 credit	120 hours (4+2) = 6
Ophthalmology	OP	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Radiology	RD	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Total hours andcourse / Credit		**240 hours =16 Credit**	**240 hours = 8 Credit**	**480 hours = 24 Credit**

Stage 5 / Course 2 / subjects and details of theoretical and clini-cal hours

Subject	Abbrev ia- tion	Theory Credit Hours / course Credit / course	Clinical sessions and small group discus-sions Hours/ course Credit/ course	Total Credit Hours/ course Credit/ course
Medicine 2	IM	45 hours = 3 credit	60 hours = 2 credit	105 hours (3+2) = 5
Surgery 2	SU	45 hours = 3 credit	60 hours = 2 credit	105 hours (3+2) = 5
Pediatric 2	PE	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Psychiatry	PS	60 hours = 4 credit	30 hours = 1 credit	90 hours (4+1) = 5
E.N.T	EN	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Dermatology	DR	30 hours = 2 credit	30 hours = 1 credit	60 hours (2+1) = 3
Total hours and Credit /course		240 hours =16 Cred-it	240 hours = 8 Credit	480 hours = 24 Cred-it

Grade 6 / Subjects and details of clinical hours

Subject	Abbreviati on	Clinical sessions and small group discussionsCredit	Total Credit
Medicine	IM	360 hours = 12 Credit	360 hours = 12 Cred-it
Surgery	SU	360 hours = 12 Credit	360 hours = 12 Cred-it
Pediatric	PE	300 hours = 10 credit	300 hours = 10 credit
Obstetrics and Gynecol-ogy	OG	300 hours = 10 credit	300 hours = 10 credit
Total hours and Credit /year		1320 hours = 44	1320 hours = 44