COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Al-Kindy college of Medicine
2. University Department/Centre	University of Baghdad
3. Course title/code	Preparatory (P I)/ 101PIMP
4. Programme(s) to which it contributes	Medical Physics
5. Modes of Attendance offered	Lectures, practical, Seminar, tutorial, ECE & SDL
6. Semester/Year	1st year/ 1st semester
7. Number of hours tuition (total)	40 theory/ 30 practical
8. Date of production/revision of this specification	10/10/2016
9. Aims of the Course	
The overall aim of the module that the student will be a familiar with the further pursuit of knowledge of theoretical and practical aspects of medical Physics and computer skills which are dealt with in greater detail in the following years of the Medicine degree program.	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

At the end of the module, the student shall be able to:

A1: Familiar with the physical principles needed to understand how the body works.

A2: Understand the types of loads that are applied to biomechanical structures and the principal characteristics of a deformable material;

A3: Understand the basic structure of bone and tissue and have a feel for their respective strengths and stiffness's;

A4: Understanding of the theory and practice of monitoring techniques in physiology and medicine and covers most of the commonly used methods in medical practice with the exception of those derived from imaging and radionuclide methods.

A5: The types of equipment which are directly connected to patients

A6: Interaction of infrared, visible and ultraviolet radiation with biological material; spectroscopy and other optical techniques as physiological sensors; endoscopy; laser systems for diagnosis, therapy and surgery; visual optics and optometry.

A7: Ultrasound, topics covered includes the generation and propagation of ultrasound beams, resolution limits, artifacts, Doppler flow measurement and ultrasound system design and signal processing

A8: Uses and application of treatment using ionizing radiation including radiation dosimetry; radiobiological basis of treatment; dose distribution and radiotherapy treatment; radiation protection.

A9: Have a general understanding of the physical principles, construction and function of a CT scanner and have an appreciation of image reconstruction using Commuted tomography and relating safety aspects.

B. Subject-specific skills

B1. Recognize the fundamental fluid dynamic parameters of pressure and velocity, and the role of viscosity in fluid flow;

B2. The image construction and defects source within human eye and vision

B3. Appreciate the difference between ionizing and non-ionizing electromagnetic radiation

B4. Be aware of methods of detecting ionizing and non-ionizing radiation and How it interacts with matter

B5. Identify the breathing process and lung function

B6. Identify the blood pressure and exercise effect

B7. Identify and Develop Computer skills especially with windows applications

B8. Applications include biomedical amplifiers and signal recording (e.g. ECG), and electrical

stimulators.

B9. Improve his main skills with Computer software and application

Teaching and Learning Methods

1-Lectures
2-Practical
3-Seminars
4-Tutorial
5-Early clinical exposure/ ECE
6-Self directory learning / SDL
7. General and Transferable Skills (other skills relevant to employability and personal development)

8. To equip themselves for teamwork.

9. Develop communication skills and etiquette with sense of responsibility

Assessment methods

1-End module Written Exam
2-OSPE
3-attendance, logbook, end module test, final year test, examination

C. Thinking Skills

C1. To equip themselves for teamwork.

C2. Develop communication skills and etiquette with sense of responsibility.

Teaching and Learning Methods

- Lectures
- Small group discussion
- Practical

Seminars , Tutorial

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1.Ethics and values

D2.Communication skills

D3.Health promotion packages

.

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	1		Terminology, Modeling and Measurements	Lecture	Quiz , attendance
	1		Forces on and in the body		
	1		Application of Forces on the body		
	1		Physics of the skeleton		
	1		Physics of the lung and breathing		
	1		Physics of Gases exchange in the lungs		
	1		Light utilization in medicine		
	1		Defective vision and Optical illusions		
	1		Skeleton design and bone strength and Lubrication of bone joints		
	1		Conservation of energy in the body and its Energy changes		
	2		Use of Boyles law and the atmospheric pressure	Medical Physics lab	Reports , attendance & quiz
	2		Determine The focal length of a concave mirror		
	2		Determine The focal length of convex lens using concave mirror		
	2		Calculate The wave length of sodium light		
2	1		Physics of Eyes and Vision	Lecture	Quiz , attendance
	1		BMR Changes in the body		
	1		Work and power		
	1		Physics of gases exchange in the lungs		
	1		Physics of the alveoli, work & resistance of breathing		
	1		Electromagnetic waves in medicine		
	1		Physics of Diagnostic X-ray		

	1		Heat and cold in medicine		
	1		Thermometry and thermograph		
	1		Physics of Nuclear Medicine		
	2		Ultrasound diagnosis	Seminar	Presentation, attendance
	2		UV & IR therapy		
	2		Megavoltage Therapy, Short-Distance Radiotherapy or Brachytherapy,		
	1		Electromagnetic wave and its properties	Tutorial	Discussion , attendance
3	1		Nuclear Therapy	Lecture	Quiz , attendance
	1		Radiation detection and measurements		
	1		Sound in medicine		
	1		Ultrasound in medicine and therapy		
	1		Boyle's law: (hyperbaric oxygen therapy).		
	1		The physics of the cardiovascular system		
	1		The velocity of blood flow, Blood flow ,		
	1		Radiation and nuclear safety		
	1		Environmental pollution and its sources		
	1		The physics of some cardiovascular diseases, other functions of the blood		
	2		CT Scan	Seminar	Presentation, attndance
	2		Cardiovascular system diagnostic systems		
	2		MRI		
	2		Investigation The velocity of sound	dic al Ph ysi cs lab	Reports ,

	2		Flow rate of fluid through a capillary tube		attendance & quiz
	2		Hooks law to verify the tension and compression		
	2		Paint applications		
	1		Application of ultraviolet and infrared in medicine.	Tutorial	Discussion , attendance
4	1		Physics of the ear and hearing	Lecture	Quiz , attendance
	1		Electricity within the human body		
	1		Heat therapy (heating methods)		
	1		Cryogenic and medical application		
	1		Shortwave& microwave diathermy		
	1		Cardiovascular instrumentation		
	1		Electrical signal from the brain (The electroencephalogram) ,		
	1		Electrical signals from the eye		
	1		Electrical potential of nerves, electrical signals from muscles (ECG, EEG)		
	1		Pollution effect on health		
	2		Isotopes utilization in medicine	Seminar	
	2		Nanomedicine		
	2		Lung Function measurement	Medical Physics lab	
	2		ECG		
	2		Cardio- respiratory Effects of Exercise		
5	1		Applications of electricity and magnetism in medicine	Tutorial	Discussion , attendance
	2		Workbook management		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1. Medical physics by J.R. Cameron 2. Physics in biology and medicine, by Paul Davidovits 3. Review of Radiologic Physics, by Walter Huda
Special requirements (include for example workshops, periodicals, IT software, websites)	all
Community-based facilities (include for example, guest Lectures , internship , field studies)	all

13. Admissions	
Pre-requisites	Increase no. of laboratory instruments .
Minimum number of students	60
Maximum number of students	150

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Alkindy college of medicine
2. University Department/Centre	University of Baghdad
3. Course title/code	Preparatory (PI)/ Human rights/102PIHR
4. Programme(s) to which it contributes	First year training program of medical students
5. Modes of Attendance offered	Mandatory attendance in all theory
6. Semester/Year	1st year/ 1st semester
7. Number of hours tuition (total)	8 hours
8. Date of production/revision of this specification	10/10/2016
9. Aims of the Course	
Equip the students for teamwork. The overall aim of the module that the student will be a familiar with the further pursuit of knowledge of Human rights skills	

10· Learning Outcomes, Teaching ,Learning and Assessment Method

A- Knowledge and Understanding

. Understand the roles of health care teams (doctors, nurses, attendants, pharmacists, physiotherapist, and radiographer) with respect to the basic needs of the patients, and apply the principle of Human rights within which doctors provide curative and preventive care.

B. Subject-specific skills

B1. Recognize the role of Human rights professional in the care of patients

B2 Be humanistic and develop ethical components of health care

B3 Translate ethical and Human rights into clinical reasoning and practice

Teaching and Learning Methods

1. Lectures
2. Sdl/museum/cal

Assessment methods

-Attendance

-Quiz

- log book

C. Thinking Skills

C1. Have the ability to properly deal with human rights by knowing the proper rules of human rights in all countries of the world

C2.have the ability of critical thinking & problem solving

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1.addaptation of team work
D2. Acquiring communication skills

Lectures

Sdl/museum/cal

Assessment methods

-Attendance
- Problem solving exam paper
- log book

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
١	2	-Knowledge -Attitude	**ماهي حقوق الانسان و خصائص و تصنيف** حقوق الانسان	Lectures. , tutorials,	Theory : end module exam - Practical: Log book
٢	2	-Knowledge -Attitude	**تصنيف حقوق الانسان و الاعلان العالمي لحقوق** الانسان	Lectures. tutorials,	Theory : end module exam - Log book
3	2	Knowledge -Attitude	**ما هو تعليم حقوق الانسان و استكشاف بيئة حقوق** الانسان	Lectures. tutorials	Theory : end module exam Log book
4	2	Knowledge -Attitude	**: كيف يمكن لحقوق الانسان ان تكون جزءا من المنهاج الدراسي و: حقوق الانسان في الجامعات**	Lectures. tutorials	Theory : end module exam Log book

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	تقارير وبحوث حول حقوق الانسان ,والنت
Special requirements (include for example workshops, periodicals, IT software, websites)	all
Community-based facilities (include for example, guest Lectures , internship , field studies)	all

13. Admissions	
Pre-requisites	As part of regulation of attendance to Alkindy medical college
Minimum number of students	60
Maximum number of students	150

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Al-Kindy college of Medicine
2. University Department/Centre	University of Baghdad
3. Course title/code	Preparatory (P II)/ 103PIIB/104PIIF
4. Programme(s) to which it contributes	Biology ,Foundation of Medicine, Genetics
5. Modes of Attendance offered	Lectures, , Seminar, SDL ,Tutorials,OSPE
6. Semester/Year	1st year/ 1st semester
7. Number of hours tuition (total)	37 theory ,10seminars , Practical 12 Tutorial 2
8. Date of production/revision of this specification	2015-2016
9. Aims of the Course	
1- This Module is a principle and preliminary module in understanding human biology, Genetics , medical terminology and learning English Language. 2- It will also graduate doctors who have a strong foundation of relevant and necessary knowledge, skills and attitudes, which will enable them to undergo postgraduate in any one of the many fields of medicine. 3- Our graduates will be committed to the ethos of medicine, personal development and life-long learning.	

10· Learning Outcomes, Teaching ,Learning and Assessment Method

A- Knowledge and Understanding

At the end of the module, the student shall be able to:

- Knowledge of language: this will include a broad knowledge of the history and development of the English language.
- Knowledge and understanding of the distinctive character of texts written and of other kinds of writing and communication.
- Experience of English.
- Knowledge of useful and precise terminology.
- Understand cell structure and function
- Understand hard and software of computer.
- Learning the structure of amino acids.

B. Subject-specific skill

1- Develop the skills of identifying, describing and using concepts, ideas and information, and then analysing and evaluating them, usually in relation to specific examples or situations.

2-Sensitivity to the power of language and its role in creating meaning: an ability to go beyond the surface level of words and to discover hidden or intended meanings.

3-A broad vocabulary and ability to use critical terminology appropriately

4-Skills in the accurate and appropriate presentation of academic work

5-Practice how to use the light microscope. Recognize the cells type and sub cellular structures.

6-Learning how to use computer.

Teaching and Learning Methods

1-Lectures
2-Seminars
3-Self directory learning / SDL
4-Tutorials
5-OSPE

Assessment methods

1-End module Written Exam

2-Attendance.

3-Logbook, end module test, final year test and examination .

C. Thinking Skills

1-The student will make reasoned judgments that are logical and well thought out.

2-Enable the student to integrate each new experience into the schema that they are constructing of "how things are". It is apparent that better thinking will help them to learn more from their experience and to make better use of their intelligence.

3-It will also equip them for life, enabling them to realize their own potential and to contribute to the development of society.

Teaching and Learning Methods

D. General and Transferable Skills (other skills relevant to employability and personal development).

- Oral and written skills in effective communication and argument
- The ability to analyse and critically examine diverse forms of communication
- The ability to plan, negotiate and carry out individual and group projects and presentations and to do so to deadlines
- The capacity for independent thought, reflection and judgement
- The ability to comprehend and develop intricate ideas, apply a variety of theoretical positions and weigh the importance of alternative perspectives
- Research skills, including the ability to gather, sift and organise quantities of diverse material and evaluate its significance

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	1		Introduction to biology	Lecture	Quiz , attendance
	1		General English		
	1		Introduction to amino acid 1		
	1		From molecules to cell 1		
	1		From molecules to cell 2		
	1		General English		
	1		Genetics		
	1		General English		
	2		Compound light microscope with special reference to electron microscopy	Biology & computer lab	Reports , attendance & quiz
	4		Genetics		
2	1		Molecular organization of plasma membrance	Lecture	Quiz , attendance
	1		History & Evolution of Medicine		
	1		Introduction to Medical Terminology		
	1		Functional aspects f plasma membrance1		
	1		Genetics		
	1		Functional aspects f plasma membrance 2		
	1		Amino acid 2		
	1		Cell organelles (cytoplasm ,RER,SER,Lysome)		
	1		Medical Terminology: Prefix, Root and		

			Suffix.		
	1		Cell organelles (Golgi apparatus, mitochondria,Microfilament,centerioles)		
	2		Hippocrates	Seminar	Presentation, attendance
	2				
	2				
	2		Types of cells according to the origin & shape	Biology & computer lab	
	4		Genetics		
3	1		Medical Terminology : suffix	Lecture	Quiz , attendance
	1		Molecular biology of the nucleus		
	1		Cellular differentiation 1		
	1		Medical Terminology:Purpose of Directional Terms & Anatomic planes		
	1		Medical Terminology : Human body		
	1		Cellular specialization & molecular biology of specialized cells 2		
	1		Medical Terminology : Duties & Responsibilities of Doctors		
	1		Medical Terminology:Physician career		
	1		Cellular activity		
	1				
	1				
	2		Medicine in Ancient Rome	Seminar	Presentation, attendance
	2				
	2				
	2		Cell types	Biology & computer lab	Reports , attendance & quiz
	2		Plasma membrane and their function		

	4		Genetics		
	2				
	1		Cellular activity	Tutorial	Discussion , attendance
4	1		Cell cycle (Mitosis) 1	Lecture	Quiz , attendance
	1		Medical Terminology : Internet in Medicine		
	1		Cell cycle (Mitosis) 2		
	1		Cellular aging		
	1				
	1				
	1				
	1				
	1				
	1				
	2		Anatomic planes		
	2		Adult and embryo Stem cell	Seminar	
	2		Negative &positive feedback		
	2		Cell organelles	Biology & computer lab	
	6		Genetics		
	2				
	1		Defect in some cell's organelles	Tutorial	Discussion , attendance
5			Revision & End Module Exam		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1. **BIOLOGY Sylvia** 2. **Basic-Histology L.Carlos Junqueira et al** 3. **Animated picture& video** 4. **Biology Soloman &Cell biology pollard et al** 5. **A course in General English** 6. **English Idiom**
Special requirements (include for example workshops, periodicals, IT software, websites)	all
Community-based facilities (include for example, guest Lectures , internship , field studies)	all

13. Admissions	
Pre-requisites	
Minimum number of students	60
Maximum number of students	150

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Al-Kindy college of Medicine
2. University Department/Centre	University of Baghdad
3. Course title/code	General Module (GI)/ 107 G I
4. Programme(s) to which it contributes	General Module (GI
5. Modes of Attendance offered	Lectures, practical, Seminar, tutorial, ECE & SDL
6. Semester/Year	1st year/ 2nd semester
7. Number of hours tuition (total)	62theory/40practical /20seminar/4Tutorial
8. Date of production/revision of this specification	2015-2016
9. Aims of the Course	
The overall aim of the module that the student will be a familiar with the further pursuit of knowledge of theoretical and practical aspects of Functional organization of human body skills and Intro. To human genetics which are dealt with in greater detail in the following years of the Medicine degree program	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

1-Lectures
2-Practical
3-Seminars
4-Tutorial
5-Early clinical exposure/ ECE
6-Self directory learning / SDL

.

B. Subject-specific skills

B1. Intro. To human genetics
B2. Physiology of nerve
B3. Introduction to embryology

Teaching and Learning Methods

1-Lectures
2-Practical
3-Seminars

Assessment methods

1-End module Written Exam
2-OSPE
3-attendance, logbook, end module test, final year test, examination

C. Thinking Skills

C1. To equip themselves for teamwork.

C2. Develop communication skills and etiquette with sense of responsibility.

.

Teaching and Learning Methods

- Lectures
- Small group discussion
- Practical

Seminars , Tutorial

Assessment methods
1-End module Written Exam 2-OSPE 3-attendance, logbook, end module test, final year test, examination

D. General and Transferable Skills (other skills relevant to employability and personal development)
D1.Communication skills D2.Health promotion packages .

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
١	١		Enzymes &co-enzymes	**Lecture**	Reports , attendance & quiz
1	1		Hinari program		
1	1		Gametogensis		
1	1		Functional organization of human body		
1	1		Bilaminar germ disc		
1	1		Nervous system		
1	1		Factors affecting enzumes		
1	1		Intro. To human genetics		
1	1		Physiology of nerve		
1	1		Epithelial covering		
1	1		Introduction To carbohydrates		
2	1		Carbohydrates part 1		
2	1		Trilaminar germ disc		
2	1		Carbohydrates part 2		
2	1		Properties of action potential		
2	1		Structure of human gene		
2	1		Antibody and immune response		
2	1		Control system of the body		
2	1		Carbohydrates part 3		
2	1		Introduction to lipids		
3	1		Glandular epithelium		
3	1		Lipid metabolism part 1		
3	1		Introduction to embryology		
3	1		Innate and adaptive immunity		
3	1		Mutation		
3	1		Virtual library		
4	1		Connective tissue proper		
4	1		ovulation		
4	1		Lipid metabolism part 3		
4	1		Repair system		
4	1		Body fluid compartment		
4	1		Glandular tissue		
4	1		Regulation of fluid exchange		
4	1		Organization of the heart		
5	1		DNA synthesis		
5	1		Connective tissue cells		
5	1		Embryonic period		

5	1		Fetus and placenta		Reports , attendance & quiz
5	1		AD and AR inheritence		
5	1		Shoulder girdle		
5	1		DNA synthesis part 2		
5	1		Axilla & brachial plexus		
6	1		Birth defects		
6	1		Gene expression		
6	1		Arm & cubital fossa		
6	1		Forearm		
6	1		Hand part 1		
6	1		Hand part 2		
7	1		Lipid metabolism part3		
7	1		Introduction to hormones		
7	1		Sympathetic&junctional transmission		
7	1		Classification of hormones part1		
7	1		Classification of hormones part2		
7	1		Complement system		
7	1		Gluteal region		
7	1		Lumbosacral plexus&anterior thigh		
7	1		Posterior and medial compartment of thigh		
7	1		Popliteal fossa and leg		
8	1		Basics of respiratory system		
8	1		Classification of hormones part 3		
8	1		foot		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1. Gyton Textbook of physiology 2. Ganong Textbook of Physiology References: 3. Lippincott Illustrative review in pharmacology, 2012. 4. Bennett Clinical pharmacology, 2011. 5. Katzung: Basic and clinical pharmacology, 2012.
Special requirements (include for example workshops, periodicals, IT software, websites)	all
Community-based facilities (include for example, guest Lectures , internship , field studies)	all

13. Admissions	
Pre-requisites	
Minimum number of students	50
Maximum number of students	150

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Al-Kindy college of Medicine
2. University Department/Centre	University of Baghdad
3. Course title/code	General Module (GII)/ 108 G II
4. Programme(s) to which it contributes	General Module (GII)
5. Modes of Attendance offered	Lectures, practical, Seminar, tutorial & SDL
6. Semester/Year	1st year/ 2nd semester
7. Number of hours tuition (total)	22theory/14 practical /6 seminar/2Tutorial
8. Date of production/revision of this specification	2015-2016
9. Aims of the Course	
The overall aim of the module that the student will be a familiar with the further pursuit of knowledge of theoretical and practical aspects of abnormal general basic knowledge of microbiology, pharmacology and pathology which are essential core topics for the future medical study dealt with in greater detail in the following years of the Medicine degree program	

10· Learning Outcomes, Teaching ,Learning and Assessment Methode

A- Knowledge and Understanding

1-Lectures
2-Practical
3-Seminars
4-Tutorial
6-Self directory learning / SDL

.

B. Subject-specific skills

B1. bacterial slide staining
B2. bacterial culture
B3. introduction to routes of drug administration

Teaching and Learning Methods

1-Lectures
2-Practical
3-Seminars

Assessment methods

1-End module Written Exam
2-OSPE
3-attendance, logbook, end module test, final year test, examination

C. Thinking Skills

C1. To equip themselves for teamwork.

C2. Develop communication skills and etiquette with sense of responsibility.

.

Teaching and Learning Methods

- Lectures
- Small group discussion
- Practical

Seminars , Tutorial

Assessment methods
1-End module Written Exam 2-OSPE 3-attendance, logbook, end module test, final year test, examination

D. General and Transferable Skills (other skills relevant to employability and personal development) D1.Communication skills D2.Health promotion packages .

11. Course Structure					
Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
١	١		Introduction to Parasitology	**Lecture**	
1	1		Causes of cell injury and cell death,		
1	1		Routes of drug administration		
1	1		Irreversible cell injury, (necrosis & apoptosis		
1	1		Absorption of drugs		
1	1		Drug binding to plasma proteins		
1	1		Causes, typesof inflammation,		
2	1		Classification of parasites		
2	1		Introduction to microbiology		
2	1		Drug distribution		
2	1		Chronic inflammation,		
2	1		Dose-response curve		
2	1		Drug metabolism		
2	1		Tissue repair		
2	1		Bacterial nutrition		
3	1		Introduction to phytotherapy		
3	1		Viral pathogenesis		
3	1		Classification of viruses		
3	1		Hemostasis and thrombosis		
3	1		Bacterial genetics		
4	1		Embolism &infarction		
4	1		Granulomatous inflammation		

12. Infrastructure	
Required reading: · CORE TEXTS · COURSE MATERIALS · OTHER	1. Muir's textbook of pathology 2. Lippincott Illustrative review in pharmacology, 2012. 3. Bennett Clinical pharmacology, 2011. 4. Katzung: Basic and clinical pharmacology, 2012. 5. medical microbiology, Cidric Mims, 3rd. ed., 2004.
Special requirements (include for example workshops, periodicals, IT software, websites)	All

Community-based facilities (include for example, guest Lectures , internship , field studies)	All

13. Admissions	
Pre-requisites	
Minimum number of students	50
Maximum number of students	150