Course Specifications

Course Title:	**Infection and Immunity (Block 1.2)**
Course Code:	**1000102**
Program:	**Bachelor of Medicine, Bachelor of Surgery (MBBS)**
Department:	**Biomedical Sciences**
College:	**Medicine**
Institution:	**King Faisal University**

Table of Contents

A. Course Identification

1. Credit hours: 6 hours
2. Course type **a.** University ☐ College √ Department ☐ Others ☐ **b.** Required √ Elective ☐
3. Level/year at which this course is offered: Second quarter of First year
4. Pre-requisites for this course (if any)**:** **Successfully completed Preparatory Year at KFU or Preparatory summer course at KFU.**
5. Co-requisites for this course (if any)**: None**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	128	100
2	**Blended**		
3	**E-learning**		
4	**Correspondence**		
5	**Other**		

7. Actual Learning Hours (based on academic semester)

No	Activity	Learning Hours
Contact Hours		
1	**Lecture**	70
2	**Laboratory/Studio**	26
3	**Tutorial**	32
4	**Others** (specify)	
	Total	128
Other Learning Hours*		
1	**Study**	180
2	**Assignments**	12
3	**Library**	
4	**Projects/Research Essays/Theses**	
5	**Others** (specify)	
	Total	192

* The length of time that a learner takes to complete learning activities that lead to achievement of course learning outcomes, such as study time, homework assignments, projects, preparing presentations, library times

B. Course Objectives and Learning Outcomes

1. Course Description

Learn about the important pathogens including bacteria, viruses, fungi and parasites and how the immune system deals with such pathogens. Explore the applied aspects of immunology like allergy and hypersensitivity and autoimmune diseases. Learn the Anatomy, Histology and Physiology of GIT as well as disease affecting GIT. Learn the pharmacodynamics and pharmacokinetics. Explore the Dermatological diseases.

2. Course Main Objective

Describe the components of immune system, regulation and function of each component.
Recognize the immune disorders: hypersensitivity, autoimmunity and immune deficiency.
Explain the clinical significance of different infectious agents in terms of pathogenesis, spectrum of clinical disease produced and diagnosis. Learn the global health perspective of infectious diseases.
Describe the anatomy of abdomen and recognize the histology, physiology and regulation of the gastrointestinal tract.
Recognize the principles of pharmacodynamics and pharmacokinetics.
Define the structure and functions of skin and summarize the main skin disorders.

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge:**	
1.1	Describe the structural components of immune system and their microscopic structure, the principles of activation, and response of immune system to different foreign substances and its dysregulation.	K1
1.2	Classify the different types of microbes, the causative agents of infectious diseases and the normal resident microbiota of human beings. Describe the pathogenesis, preventive strategies, diagnostic tools and treatment options of infectious diseases.	K1
1.3	Describe the anatomy of the abdomen and abdominal organs and microscopic structure of liver, spleen and gastrointestinal tract.	K1
1.4	Recite the basic biological and physiological processes and their dysregulation related to: motility and the neural control of GIT, salivary and gastric secretions, digestion and absorption of food in GIT, sympathetic and parasympathetic parts of autonomic nervous system.	K1
1.5	List the important skin disorders and their clinical significance.	K1
2	**Skills :**	
2.1	Integrate, organize and communicate both a complete and focused medical history, as appropriate. Document in writing or electronically – findings and agreement made about the patient's problem.	S2
2.2	Apply different kinds of clinical reasoning during tutor group meetings using PBL methodology in discussing different medical problems.	S1
2.3	Communicate with peers, share in groups and adopt different team roles with ensuring open and respectful communication and openness to collaboration.	S8
2.4	Employ information and communication technologies to acquire, organize and apply information for the purposes of patient and	S9

CLOs		Aligned PLOs
	population care, scholarly inquiry, self-directed learning and collaborative knowledge exchange.	
2.5	Recognize and describe the reflection methodology and demonstrate transparent and efficient reflective attitude in both academic and clinical situations.	S5
3	**Competence:**	
3.1	Perform the basic medical skills, procedure and a range of simple diagnostic, surgical and pharmacological therapies of the different disciplines including first aid lines of management in routine and casualties.	C1

C. Course Content

No	List of Topics	Contact Hours
1	Bacterial Structure, Genetics, Pathogenicity, Ecology and Treatment of Bacterial infections	24
2	Structure and Function of Immune System and Abnormal Immune Response	22
3	Viral structure, Replication, Pathogenicity and Treatment of Viral Infections	9
4	Diagnostics concerning Infectious Diseases	12
4	Parasite Classification, Pathogenicity, Common Parasitic Infections and Treatment of Parasitic infections	8
5	Fungal Structure, Classification and Treatment of fungal infections	2
6	Anatomy of Abdomen including Anterior abdominal wall, Peritoneum and Peritoneal and Extraperitoneal organs.	8
7	Histology of Gastrointestinal Tract	4
8	Physiology of Gastrointestinal Tract with its applied aspects	9
9	Pharmacodynamics and Pharmacokinetics	6
10	Global Health Perspective of Infections and Treatment of Infectious Diseases	10
11	Structure of skin and Dermatological disorders associated with hypersensitivity and autoimmunity	14
Total		128

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.0	**Knowledge**		
1.1	Describe the structural components of immune system and their microscopic structure, the principles of activation, and response of immune system to different foreign substances and its dysregulation.	Lectures Practical Workshops	Written Assessment Practical Workshop Assessment

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
1.2	Classify the different types of microbes, the causative agents of infectious diseases and the normal resident microbiota of human beings. Describe the pathogenesis, preventive strategies, diagnostic tools and treatment options of infectious diseases.	Lectures Practical Tutor sessions	Written Assessment OSPE-Infectious Diseases Tutor groups assignments
1.3	Describe the anatomy of the abdomen and abdominal organs and microscopic structure of liver, spleen and gastrointestinal tract.	Lectures Practical	Written Assessment OSPE-Anatomy
1.4	Recite the basic biological and physiological processes and their dysregulation related to: motility and the neural control of GIT, salivary and gastric secretions, digestion and absorption of food in GIT, sympathetic and parasympathetic parts of autonomic nervous system.	Lectures Tutor sessions	Written Assessment, Tutor Group Assessment
1.5	List the important skin disorders and their clinical significance.	Lectures Tutor sessions	Written Assessment, Tutor Group Assessment
2.0	**Skills**		
2.1	Integrate, organize and communicate both a complete and focused medical history, as appropriate. Document in writing or electronically – findings and agreement made about the patient's problem.	Tutor sessions	Tutor Group Assessment
2.2	Apply different kinds of clinical reasoning during tutor group meetings using PBL methodology in discussing different medical problems.	Tutor sessions	Tutor Group Assessment
2.3	Communicate with peers, share in groups and adopt different team roles with ensuring open and respectful communication and openness to collaboration.	Tutor sessions Workshop	Tutor Group Assessment Practical Workshop Assessment
2.4	Employ information and communication technologies to acquire, organize and apply information for the purposes of patient and population care, scholarly inquiry, self-directed learning and collaborative knowledge exchange.	Tutor sessions	Tutor Group Assessment
2.5	Recognize and describe the reflection	Tutor sessions	Tutor Group

Code	Course Learning Outcomes	Teaching Strategies	Assessment Methods
	methodology and demonstrate transparent and efficient reflective attitude in both academic and clinical situations.		Assessment
3.0	**Competence**		
3.1	Perform the basic medical skills, procedure and a range of simple diagnostic, surgical and pharmacological therapies of the different disciplines including first aid lines of management in routine and casualties.	Practical	OSPE

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	**Tutor group assignments: Preparation of a power point presentation of the Tutor Case and presentation in the Group Meeting. Preparation and presentation of the Patient Report and Group Dynamic Assessment**	Each week (1-8)	15
2	**Workshops**	1-7	11
3	**Assignment Infectious Diseases**	3-5	3
4	**Midblock Written (and final) exam**	5	17
5	**OSPE Anatomy and Histology**	8	6
6	**OSPE Infectious Disease**	8	10
7	**Final Written Exam**	9	38

***Assessment task** (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice :

Students in need of academic accommodations may consult the faculty during office hours and are required to give reasonable notice prior to requesting an accommodation.

F. Learning Resources and Facilities

1. Learning Resources

Required Textbooks	1. **Abbas: Basic Immunology** A Abbas, A Litchman Basic Immunology updated edition, 4th and 5th Editions 9781416055693, Elseveir Health 2. **Alberts: Essential Cell Biology** B Alberts, D Bray, K Hopkin, A Johnson, J Lewis, M Raff, K Roberts, P Walter

	Garland Science/ISBN 9780815341307/ 3rd and 4th edition/ 2010. 3. **BNF : British National Formulary** Royal Pharmaceutical Society Pharmaceutical Press, 2013-14 4. **Gilroy : Atlas of Anatomy** AM Gilroy, BR MacPherson, JM Ross, M Schenke, E Schulte, U Schmacher Thieme Medical Publisher Inc/ISBN 9781604067453/ 2ND Edition 2012 5. **Guyton: Textbook of Medical Physiology** AC Guyton, JE Hall Elsevier Saunders/ ISBN 9781416045748/ 12th and 13th Editions 6. **Junquiera: Basic Histology** A Mescher McGraw-Hill Publishing Co/ ISBN 978007127190/ 13th edition 7. **Robbins: Basic Pathology** V Kumar, A Abbas, J C Aster Elsevier Saunders/ ISBN 9780808924326/ 9th edition 2012 8. **Murray: Medical Microbiology** PR Murray, MA Pfaller, KS Rosenthal Elsevier Mosby/ ISBN 9780323054706/ 7th and 8th editions 9. **Rang and Dale' Pharmacology** HR Rang, MM Dale, JM Ritter, RJ Flower, GJ Henderson Elsevier Churchill Livingstone/ ISBN 139781437719338/ 7th and 8th editions
Essential References Materials	- **Butler, Cholera tightens grip on Haiti. Nature, 2001.** - **Dowell et al, Public health in Haiti – Challenges and progress, NEJM, 2011.** - **Walton et al., Responding to Cholera in Post-earthquake Haiti, NEJM, 2011.** - **Ryan, The Cholera Pandemic, Still with us after half a century: Time to rethink. PloS, 2011.** - **Hogerzeil, The concept of Essential Medicines: Lessons for rich countries. BMJ, 2004.** - **WHO; The selection of Essential Medicines.** - **Pemphigus: Introduction, Access Medicine from The McGraw-Hill.** - **The mucosal immune system and its integration with the mammary glands. Per Brandtzaeg, PhD.**
Electronic Materials	
Other Learning Materials	- **Student manual.** - **Tutor manual.** - **Practical manual**.

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)	**Auditorium: For conducting Patient and Theme lectures for all Male students at the same time.** **Lecture Hall No 1: For conducting Patient and Theme lectures for all Female students at the same time.** These are equipped with computer and data show and all requirements for lecturing. **Well-equipped laboratories are available to conduct Practical and Workshops.**
Technology Resources (AV, data show, Smart Board, software, etc.)	**Small rooms in male section for male students and in female section for female students are available. These rooms are fully equipped to conduct small group (PBL) meetings.**
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Course Objectives, Content and Learning Outcomes	Curriculum Committee	Course Review Course Report
Effectiveness of teaching	Students	Course Evaluation Survey (QMS Annex B)
Achievement of course learning outcomes	Course Faculty	Moderation (QMS Annex G and Annex H)
Assessment	Course Faculty	Verification
Learning Resources and Facilities	Students Faculty	Course Evaluation Survey Course Report
Student Academic Counseling and Support	Students	Course Evaluation Survey
Course Quality Management	Program Coordinator	Course Report Review

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	College Council
Reference No.	2
Date	September 24, 2019