



المركز الوطني للتقويم والاعتماد الأكاديمي
National Center for Academic Accreditation and Evaluation

Immunology (BIO 430)

T6. COURSE SPECIFICATIONS (CS)

Course Specifications

Institution: University of Tabuk	Date: 13/8/1440
College/Department : Faculty of Sciences, Biology	

A. Course Identification and General Information

1. Course title and code: Immunology (BIO430)	
2. Credit hours: 3	
3. Program(s) in which the course is offered. (If general elective available in many programs indicate this rather than list programs)	
4. Name of faculty member responsible for the course	
5. Level/year at which this course is offered: Level 7	
6. Pre-requisites for this course (if any): General Microbiology (BIO231)	
7. Co-requisites for this course (if any): BIO452	
8. Location if not on main campus: N.A.	
9. Mode of Instruction (mark all that apply):	
a. traditional classroom	<input checked="" type="checkbox"/> What percentage? <input type="text" value="75"/>
b. blended (traditional and online)	<input type="checkbox"/> What percentage? <input type="text"/>
c. e-learning	<input type="checkbox"/> What percentage? <input type="text"/>
d. correspondence	<input type="checkbox"/> What percentage? <input type="text"/>
f. other(Lab work)	<input checked="" type="checkbox"/> What percentage? <input type="text" value="25"/>
Comments:	

B Objectives

<p>1. What is the main purpose for this course?</p> <ul style="list-style-type: none"> - To learn the history of immunology - To learn the structure of the immune system - To be able to distinguish between innate and acquired immunity (Humoral & Cellular). - To learn the differences between active, passive and adoptive immune vaccination. - To be familiar with the antigen processing and presentation, Complement system, Antibodies and Antigens. <p>To be familiar with hypersensitivity responses, immune deficiencies and autoimmunity.</p>

<p>2. Briefly describe any plans for developing and improving the course that are being implemented. (e.g. increased use of IT or web based reference material, changes in content as a result of new research in the field)</p> <ul style="list-style-type: none"> - Annual review of course by departmental course planning committee. - Updating the course with latest developments in the field. - Annual review and updating practical sessions with new experiments, slides and new preparations. - Updating course materials using state of the art research findings. <p>Turn-up the course contents in proportion with equivalent local and international courses.</p>
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C. Course Description (Note: General description in the form used in Bulletin or handbook)

<p>Course Description:</p> <ul style="list-style-type: none"> ▪ The course describes the basic structure of the immune system, development of the immune system, organs of the immune system, cells of the immune system, molecules of the immune system, innate immunity, acquired immunity and immune responses to bacteria and viruses.

1. Topics to be Covered		
List of Topics	No. of Weeks	Contact hours
Overview of the course and definition of immunology, Innate and acquired Immunity, Components of the immune system	1	3
Origin, development and differentiation of immune cells.	1	3
Innate immunity receptors and cytokinase secretion.	1	3
Phagocytosis and antigens recognition.	1	3
Complement activity pathways.	1	3
Immunogens and Antigens	1	3
Antibody Classes, Functions and regulation of their production	1	3
Revision and Pre Final Exam		
Mid Term Vacation		
Molecular and genetic basis for antibody diversity	1	3
MHC Molecules Variability of MHC Genes & Products	1	3

Biology of T and B cells Differentiation and their receptor.	1	3
Immunodeficiency diseases, Allergy, Transplantation and Grafts, Blood Transfusion	1	3
T Cell Receptors: Structure – Functions, Accessory Molecules	1	3
Immune responses to bacteria and virus, revision	1	3
Final Exam		

2. Course components (total contact hours and credits per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other:	Total
Contact Hours	Planned	26hr		26hr			52hr
	Actual	26hr		26hr			52hr
Credit	Planned	2		1			3
	Actual	2		1			3

3. Additional private study/learning hours expected for students per week.

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4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategy

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and intended learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy ought to reasonably fit and flow together as an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	Knowledge		
1.1	Define and describe the immune system Functional anatomy of lymphoid tissues Cardinal features of immune responses	Able to memorize the terminology	In class short MCQs quizzes (orally and written) Major and final exam
1.2	Describe the vaccines Recognize the different	Able to tell and write	Web site and

	immune cells, Clonal selection hypothesis and programmed cell death	their own ideas about the vaccines	computer assisted learning
1.3	Outline about the mononuclear phagocytes, Lymphocyte development and heterogeneity, Antigen recognition, presentation and molecular structure of antibody, Leucocyte receptors for antibodies	In-class lecturing where the previous knowledge is linked to the current and future topics Weekly Tutorial and discussions	
2.0	Cognitive Skills		
2.1	Explain and identify the immune cells and their interaction with vaccinology.	Encouraging student to discuss, summarize and plan what they learned and able to explain	In class short MCQs Diagram representation and quizzes
2.2	Appraise and evaluate the difference between immune cells Ability of the student to understand prospect of humoral and cellular immune response. Suggestion of other methods for diagnosis.	Oral Quiz in each lecture Problem solving in the lecture	Major and final exams, Checking the problems solved in the lecture
2.3	Improve students skill to differentiate passive and innate immunity.	Oral Quiz in each lecture Problem solving in the lecture	Major and final exams, Checking the problems solved in the lecture
3.0	Interpersonal Skills & Responsibility		
3.1	Demonstrate and develop interpersonal skill Improve student acceptance skill from other during discussion. Work independently and as part of a team.	Analyze through discussion skill tutorial sessions	Evaluate through oral and written questions quiz
3.2	Manage and calculate resources, time and other members of the group Write results of work to others	Analyze through group experiments and writing group reports	
4.0	Communication, Information Technology, Numerical		
4.1	Demonstration and use of internet and specifically MS office	Demonstrate the use and operation of computer in the course requirements	In class short MCQs quizzes (orally and written)
4.2	Illustrate the use of new tools in technology Use the computer for following up the latest in immunology and research	Interpretation of new research in the area.	Asses through major and final exams
5.0	Psychomotor		
5.1	NOT APPLICABLE		

5.2			
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5. Schedule of Assessment Tasks for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Quiz	5	10%
2	Mid-term lab Exam	8	10%
3	Final lab Exam	15	15%
4	Mid term Theory Exam	8	25%
5	Final Theory Exam	16	40%

D. Student Academic Counseling and Support

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| <p>1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)</p> <ul style="list-style-type: none"> - Office hours 10 hr/week - help sessions 1hr/week aided by two faculty members |
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E Learning Resources

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| <p>1. List Required Textbooks</p> <ul style="list-style-type: none"> - Abbas AK, Lichtman AH Cellular and Molecular Immunology. 6th edition. J Malley, H Krehling (eds), Saunders, Philadelphia. - Immunology at a Glance. 7th edition. J.H.L. PLAYFAIR and B.M. CHAIN. Blackwell Science Ltd. |
| <p>2. List Essential References Materials (Journals, Reports, etc.): None</p> |
| <p>3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.</p> <p>Immunology at a Glance. 7th edition. J.H.L. PLAYFAIR and B.M. CHAIN. Blackwell Science Ltd.</p> |
| <p>4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.</p> <ul style="list-style-type: none"> - Websites on the internet that are relevant to the topics of the course |
| <p>5. Other learning material such as computer-based programs/CD, professional standards or regulations and software.</p> <ul style="list-style-type: none"> - Multi-media associated with the text book and the relevant websites |

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

Lecture room with at least 30 seats

2. Technology resources (AV, data show, Smart Board, software, etc.): Power point, Videos related to the subject.

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) : None

G Course Evaluation and Improvement Processes

<p>1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching</p> <ul style="list-style-type: none"> - Course evaluation by student <p>Students-faculty meetings</p>
<p>2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department</p> <ul style="list-style-type: none"> - Peer consultation on teaching - Departmental council discussions <p>Discussions within the group of faculty teaching the course</p>
<p>3. Processes for Improvement of Teaching</p> <ul style="list-style-type: none"> - Conducting workshops given by experts on the teaching and learning methodologies - Periodical departmental revisions of its methods of teaching <p>Monitoring of teaching activates by senior faculty members</p>
<p>4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)</p> <ul style="list-style-type: none"> - Providing samples of all kind of assessment in the departmental course portfolio of each course <p>Assigning group of faculty members teaching the same course to grade same questions for various students. Faculty from other institutions are invited to review the accuracy of the grading policy</p>
<p>5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.</p> <ul style="list-style-type: none"> - The course material and learning outcomes are periodically reviewed and the changes to be taken are approved in the departmental and higher councils. <p>The head of department and faculty take the responsibility of implementing the proposed changes</p>

Name of Course Instructor: Dr. Subrata Trivedi

Signature: *Subrata Trivedi* Date Specification Completed: 13/8/1440

Program Coordinator: **Dr. Omar Salem Obeid Bahattab**

Signature: *Omar Bahattab* Date Received: 16/8/1440