

Course Specifications

University	Beni-Suef
Faculty	Pharmacy
Dept.	Microbiology and Immunology

1-Course Info.		Course Name: Cell Biology
Code No.	Academic year/ Level: First year, First semester - MD102	
Credit hours: Lecture	(1) hour	+ Practical (1) hour
2-Overall Aim of the Course	<ul style="list-style-type: none"> - Provide concise information about the cell, from the structure and function of its components to complex life processes such as cell division and programmed cell death. - Give detailed information about how cells communicate with one another and form tissues, organs and ultimately whole organisms. - Prepare students for further study of advanced courses in the field of clinical pharmacy that need cell biology as prerequisite. 	
3-Intended Learning Outcomes of the course (ILOs)		
a. Knowledge and understanding	<ul style="list-style-type: none"> - Fundamentals of cell concept & biochemical phenomena. - Importance of the cell theory as applicable basis for the modern cell biology. - Importance of biochemical features that distinguish prokaryotes from eukaryotes and plants from animals and biological and material Analysis. - Basis of biochemical mechanisms processes and an appreciation of the breadth of modern cell biology. - Relation of biochemistry to cell structure and function. - Principles of genetics underlie much of the basis of modern molecular biology. - Mechanisms of the key metabolic reactions involved in the biochemical processes and the relation of biochemistry to cellular and organismal processes. - A range of critical, analytical and transferable skills applicable to further study and to suitable career paths. - Practical skills by applying laboratory and/or field-based methods and techniques to complement and support subject-based theoretical knowledge. - An ability to integrate theoretical knowledge and practical skills. 	
b. Intellectual Skills	<ul style="list-style-type: none"> - Knowing to apply subject-specific theories. - Knowing how to integrate several lines of subject-specific evidence & to formulate and test hypotheses. - Knowing how to integrate the theory with practical work. 	
c. Professional and Practical Skills	<ul style="list-style-type: none"> - Safe handling of chemical/pharmaceutical materials. - Plan, conduct, evaluate and report the results of investigations. - Apply appropriate practical techniques to the solution of biochemical development and processing problems. - Plan and conduct various forms of research for essays and projects involving sustained independent enquiry. 	
d. General and Transferable Skills	<ul style="list-style-type: none"> - Prepare, process and interpretation the data, using appropriate qualitative and quantitative techniques. - Take responsibility for self-managed learning and personal/professional development. - Apply numerical and statistical problem-solving skills. 	

	- Recognize the applicability of biochemistry to the careers to which they will be progressing																																								
4-Course Contents	<table border="1"> <thead> <tr> <th>Topic</th> <th>No. of hours</th> <th>Lecture</th> <th>Tutorial/ Practical</th> </tr> </thead> <tbody> <tr> <td>- Cell biology.</td> <td>1</td> <td>1</td> <td>-</td> </tr> <tr> <td>- Chemistry of the cell.</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>- Cell components.</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>- Membranes.</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>- Genetic materials.</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>- Metabolism.</td> <td>3</td> <td>3</td> <td>2</td> </tr> <tr> <td>- Cell communication.</td> <td>1</td> <td>1</td> <td>-</td> </tr> <tr> <td>- Cell cycle.</td> <td>2</td> <td>2</td> <td>1</td> </tr> <tr> <td>- Cancer/cell death (apoptosis).</td> <td>2</td> <td>2</td> <td>1</td> </tr> </tbody> </table>	Topic	No. of hours	Lecture	Tutorial/ Practical	- Cell biology.	1	1	-	- Chemistry of the cell.	1	1	1	- Cell components.	1	1	1	- Membranes.	2	2	2	- Genetic materials.	1	1	1	- Metabolism.	3	3	2	- Cell communication.	1	1	-	- Cell cycle.	2	2	1	- Cancer/cell death (apoptosis).	2	2	1
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5- Teaching and learning Methods	-Lectures -Practical and tutorial periods -Office hours																																								
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7- Student Assessment Methods																																									
a-Methods	- Sheet Exam. to assess progress of students - Practical Exam. to assess ability for distinguishing - Final written & oral Exam. to assess overall understanding of the course																																								
b- Assessment Schedule	- Assessment 1... Pre and post lab quizzes.. Every week. - Assessment 2... Sheet exams..... Week 5 and 8 - Assessment 3.... Practical exam..... Week 13 - Assessment 4....Final exam.....Week 14																																								
c- Weighting of Assessment Marks	- Mid-term examination 10 % - Final-term examination 65% - Practical examination 15% - Semester work 10% — Total 100%																																								
8-List of References																																									
a.Notes	Lecture notes in Cell Biology and practical manual by staff members.																																								
b.Mandatory Books	Molecular cell biology 4 th ed.																																								
c.Suggested Books	Molecular biology of the cell 4 th ed.																																								
d.Journals	http://micro.magnet.fsu.edu/cells.html http://risscience.blogspot.com/2009/09/grade-6-cell.html																																								

Course Coordinators: Sameh AbdelGhani

Head of department:

Date: