

Course Title	Pathobiology				
Course Code	BMS424				
Course Type	Compulsory				
Level	Bachelor (1st Cycle)				
Year / Semester	4 <sup>th</sup> Year / 8 <sup>th</sup> Semester				
Teacher's Name	TBA				
ECTS	6	Lectures / week	3 Hours	Laboratories / week	None
Course Purpose and Objectives	The course of Pathobiology focuses on the molecular, and cellular basis of disease pathogenesis with emphasis given on the principles underlying the ways in which cells, tissues and organs within the human body respond and react to disturbances in the environment (exogenous and endogenous) that may be lead to disease.				
Learning Outcomes	<p>Upon successful completion of this course, the student will be able to:</p> <ul style="list-style-type: none"> <li>• explain the way in which cells, tissues and organs within the human body respond to injury that may lead to disease, as well as main repair mechanisms</li> <li>• differentiate between apoptosis and necrosis</li> <li>• describe characteristics of acute and chronic inflammation</li> <li>• define the term infectious disease, giving examples of causative agents and resulting disease states.</li> <li>• recall major characteristics, at the molecular and cellular level, of the pathogenesis of common human diseases such as Atherosclerosis, aneurysms, muscular dystrophy, diabetes, liver cirrhosis, Alzheimer's disease.</li> </ul>				
Prerequisites	BMS122, BMS123, BMS211, BMS212	Co-requisites	None		
Course Content	<ul style="list-style-type: none"> <li>• Cellular responses to stress and toxic insults: adaptation, injury, and death.</li> <li>• Mechanisms of cell injury (mitochondrial damage, oxidative stress, defects in membrane permeability, damage to DNA and proteins)</li> <li>• Necrosis (ischemic and hypoxic injury, ischemic reperfusion injury, toxic injury)</li> <li>• Apoptosis- causes, mechanisms and examples</li> <li>• Autophagy</li> <li>• Acute and chronic inflammation and repair</li> <li>• Chemical mediators and regulators of inflammation</li> <li>• Cell and tissue regeneration</li> </ul>				

	<ul style="list-style-type: none"> <li>• Role of extracellular matrix in tissue repair-scar formation</li> <li>• Infectious diseases: general principles of microbial pathogenesis, transmission and dissemination of microbes</li> <li>• Environmental and nutritional diseases: toxicity of chemical and physical agents, effects of tobacco and alcohol, injury by radiation, malnutrition, anorexia nervosa, vitamin deficiencies, obesity</li> <li>• Examples of specific disease pathogenesis (Atherosclerosis, aneurysms, muscular dystrophy, diabetes, liver cirrhosis, Alzheimer's disease)</li> </ul>										
Teaching Methodology	Face- to- face										
Bibliography	Robbins and Cotran, Pathologic Basis of Disease, 7 <sup>th</sup> Ed. Kumar, Abbas, Fausto, Elsevier, Saunders, 2005.										
Assessment	<table border="1"> <tr> <td>Mid – Term Examination</td> <td>30%</td> </tr> <tr> <td>Final Examination</td> <td>40%</td> </tr> <tr> <td>Assignments</td> <td>20%</td> </tr> <tr> <td>Class Participation</td> <td>10%</td> </tr> <tr> <td></td> <td>100%</td> </tr> </table>	Mid – Term Examination	30%	Final Examination	40%	Assignments	20%	Class Participation	10%		100%
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Language	English										