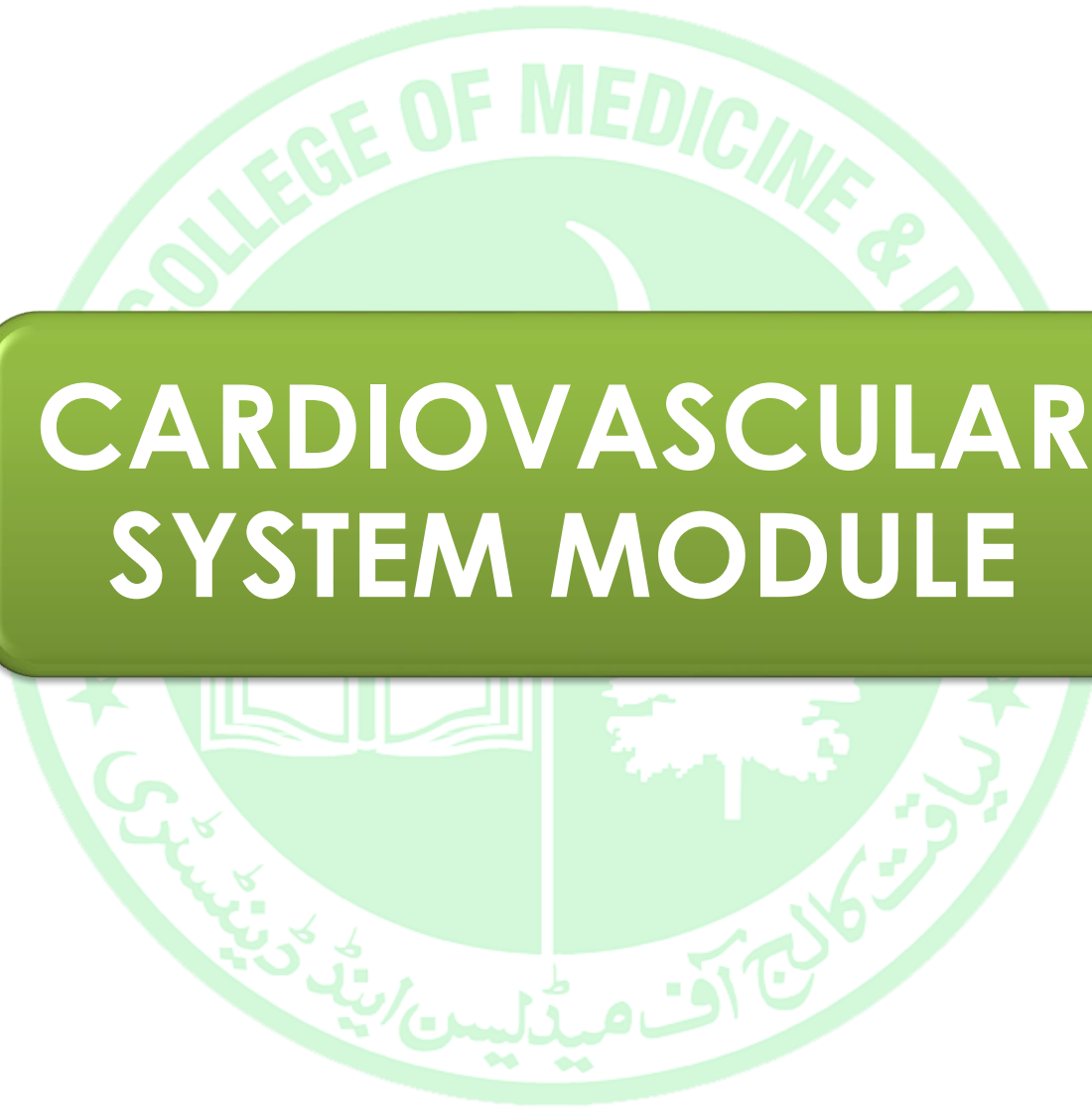




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**CARDIOVASCULAR  
SYSTEM MODULE**





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<b>CODES</b>			
<b>Subject Name</b>		<b>Abbreviations</b>	<b>Color Codes</b>
<b>ANATOMY</b>	<b>Anatomy Lectures</b>	<b>A</b>	
	<b>General Anatomy</b>	<b>A(Gn)</b>	<b>Navy Blue</b>
	<b>Gross anatomy</b>	<b>A(Gr)</b>	<b>Black</b>
	<b>Histology</b>	<b>A(H)</b>	<b>Light Pink</b>
	<b>Neuro - Anatomy</b>	<b>A(NA)</b>	<b>Red</b>
	<b>Embryology</b>	<b>A(E)</b>	<b>Brown</b>
	<b>Histology Practical</b>	<b>A(P)</b>	<b>Light Pink</b>
<b>PHYSIOLOGY</b>	<b>Lecture</b>	<b>P</b>	<b>Green</b>
	<b>Practical</b>	<b>P(P)</b>	
<b>BIOCHEMISTRY</b>	<b>Lectures</b>	<b>B</b>	<b>Light Blue</b>
	<b>Practical</b>	<b>B(P)</b>	
<b>ORAL BIOLOGY</b>	<b>Oral Biology</b>	<b>O</b>	<b>Purple</b>
	<b>Tooth Morphology</b>	<b>T</b>	<b>Dark Pink</b>



<b>CONTENT</b>				
<b>CARDIOVASCULAR SYSTEM MODULE</b>				
<b>Subject Name</b>		<b>TOTAL NO: OF LECTURES</b>	<b>WEEK PER MODULE</b>	<b>MODE OF TEACHING</b>
<b>ANATOMY</b>	General Anatomy	<b>03</b>	<b>03 Weeks</b>	Lecture/ Tutorial
	Embryology	<b>01</b>		Lecture/ Tutorial
	Practical	<b>02</b>		Practical
<b>PHYSIOLOGY</b>	Lecture	<b>17</b>		Lecture/ Tutorial
	Practical	<b>05</b>		Practical
<b>BIOCHEMISTRY</b>	Lectures	<b>05</b>		Lecture/ Tutorial
	Practical	<b>02</b>		Practical
<b>ORAL BIOLOGY</b>	Oral Biology	<b>08</b>		Lecture
	Tooth Morphology	<b>04</b>		Lecture
<b>Total</b>		<b>47</b>		



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Topic	Lecture	CVS - Learning Objectives	Learning Strategy	KSA Competencies Knowledge/ Skill/ Attitude	Assessment Tools
<b>Gross &amp; Microscopic Features Of Heart</b>	CVS-A1(Gn1)	Discuss the gross and microscopic features of Heart.	Lecture / Practical	K	MCQ / OSPE
	CVS-A(P1)	Identify the histological features of cardiac muscle under the microscope.	Practical	KSA	MCQ / OSPE
<b>Structure of heart</b>	P1	Discuss the importance of CVS in physiology.	Interactive Lecture	Knowledge	MCQ
		Explain the physiology of cardiac muscle		Knowledge	MCQ
		Describe the structural and physiological differences between cardiac, skeletal & smooth muscle		Knowledge	MCQ
		Explain why intercalated discs are important to cardiac muscle function.		Knowledge	MCQ
<b>Types Of Circulations</b>	CVS-A2(Gn2)	Explain different types of circulation and their components.	Lecture	K	MCQ / OSPE
<b>Development Of CVS</b>	CVS-A3(E1)	<ul style="list-style-type: none"> <li>Discuss the formation of cardiovascular system.</li> </ul>	Lecture	K	MCQ
<b>Arteries, Veins &amp; Capillaries</b>	CVS-A4(Gn3)	<ul style="list-style-type: none"> <li>Discuss the functional classification of vessels.</li> <li>Describe general structure of blood vessel.</li> <li>Compare the histological features of: arteries &amp; veins; Elastic &amp; muscular arteries &amp; types of capillaries</li> </ul>	Lecture	K	MCQ / OSPE
	CVS-A(P2)	<ul style="list-style-type: none"> <li>Identify the basic layers of blood vessels.</li> <li>Differentiate artery from vein</li> </ul>	Practical	KSA	MCQ / OSPE
<b>Cardiac Muscle</b>	P2	Describe the properties of cardiac muscles	Interactive Lecture	Knowledge	MCQ
<b>Cardiac action potential</b>	P3	Discuss the phases of action potential in cardiac muscle & relate them to the contractile behavior of the heart; Discuss the plateau phase	Interactive Lecture	Knowledge	MCQ / OSPE
		Compare the action potential of heart with the action potential of skeletal muscle		Knowledge	MCQ
<b>Conducting System of heart</b>	P4	Describe the heart's electrical conduction system	Interactive Lecture/Tutorial flipped class	Knowledge	MCQ
		Explain why the SA node fires spontaneously and rhythmically;		Knowledge	MCQ
		Explain how the SA node excites		Knowledge	MCQ



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		the myocardium	room		
<b>ECG</b>	P5	Discuss normal ECG	Interactive Lecture	Knowledge	MCQ
		Interpret different ECG waves.		Knowledge, Skills & Attitude	MCQ / OSPE
	P6+7	Define the following abnormalities in ECG Tachycardia Bradycardia Myocardial infarction/ischemia Atrial flutter, atrial fibrillation & heart block		Knowledge	MCQ
	P(P)2	Explain the interpretation of normal ECG.		Practical/ video based learning	Knowledge, Skills & Attitude
<b>Cardiac Cycle</b>	P8	Describe the events of cardiac cycle and relate them with pressure changes in the cardiac chambers, ECG and heart sounds	Interactive Lecture/ Tutorial	Knowledge	MCQ / OSPE / Google assignment
	P(P)3	Auscultate heart sounds.	Practical	Knowledge, Skills & Attitude	MCQ / OSPE
<b>Cardiac Output</b>	P9	Define cardiac output, venous return Discuss different factors regulating cardiac output and its importance	Interactive Lecture/ Tutorial	Knowledge	MCQ quiz with socrative
	P10	Discuss the nervous and chemical factor that alter heart rate, stroke volume and cardiac output	Flipped class room	Knowledge	MCQ
<b>Circulation</b>	P11	Discuss the physiological characteristics of circulation	Lecture	Knowledge	MCQ/ googleassignment
<b>Metabolism of lipids</b>	B1	Discuss the digestion & absorption of Lipids	Lecture/ Tutorial	Knowledge	Quiz / OSPE, Assignment
	B2	Describe the chemistry & metabolism of lipids	Lecture/ Tutorial	Knowledge	Quiz / OSPE, Assignment
	B3	Discuss the associated clinical disorders of lipoproteins		Knowledge	Quiz / OSPE, Assignment
	B(P)1	Estimate serum cholesterol by kit method	Practical	Skill	OSPE
	B4	Calculate the energy production by oxidation of fatty acid	Lecture/ Tutorial	Knowledge	MCQ / Assignment
	B5	Discuss the synthesis of ketone bodies	Lecture/ Tutorial	Knowledge	MCQ/ Assignment
		Discuss utilization of ketone bodies by the human body		Knowledge	Quiz / Assignment
B(P)2	Estimate total cholesterol in the	Practical	Skill	OSPE	



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		given sample			
<b>Blood Pressure</b>	P12	Define the following terms: arterial blood pressure Systolic blood pressure Diastolic blood pressure Mean arterial blood pressure Pulse pressure	Lecture	Knowledge	MCQ
		Describe short term regulation of blood pressure		Knowledge	MCQ/ Google assignment
	P13	Describe the intermediate regulation of blood pressure		Knowledge	MCQ
		Describe the long term regulation of blood pressure		Knowledge	MCQ
		Explain renin Angiotensin Aldosterone system in controlling arterial pressure		Knowledge	MCQ / OSPE
	P(P)1	Examination of arterial pulse & Calculate the pulse rate	Practical	Knowledge, Skills & Attitude	MCQ / OSPE
	P(P)4	Record blood pressure by palpatory and Auscultatory methods during different body positions such as lying, Sitting & standing.	Practical	Knowledge, Skills & Attitude	MCQ / OSPE
	P(P)5	Demonstrate refractory period.	Practical	Knowledge, Skills & Attitude	MCQ / OSPE
	P14	Discuss the local control of blood flow (microcirculation & capillary system) in response to tissue needs	Interactive Lecture	Knowledge	MCQ
		Discuss the mechanisms of blood flow control		Knowledge	MCQ
Explain the humoral control of the circulation Explain how vasomotion influence blood flow (local, hormonal and neural)		Knowledge		MCQ with socrative	
<b>Edema</b>	P15	Explain edema along with its causes and safety factors (fluid filtration across capillaries)	Interactive Lecture	Knowledge	MCQ
<b>Cardiac Failure &amp; Shock</b>	P16+17	Discuss cardiac failure & its types. Discuss the types of shock and its pathophysiology	Flipped class room	Knowledge	MCQ/ quiz assign
<b>Enamel</b>	O1-O3	Explain the components of human enamel	Lecture/ Tutorial	Knowledge	MCQ / OSPE
	O4-O5	Discuss various stages of enamel formation	Lecture/ Tutorial	Knowledge	MCQ / OSPE
	O6-O8	Identify on micrograph the various structural feature of human enamel histologically and developmentally present	Lecture/ Tutorial	Knowledge (TA BASED LEARNING)	MCQ / OSPE
	O8	Describe the clinical relevance	Lecture/	Knowledge	MCQ /



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		and age changes in human enamel	Tutorial		OSPE
<b>Maxillary Central Incisors</b>	T1	Describe the morphology of maxillary central incisors on pictures and models of teeth.		Knowledge	MCQ / OSPE
		Enumerate the labial, palatal, mesial, distal, and incisal aspects of maxillary central incisors		Knowledge	MCQ / OSPE
<b>Maxillary Lateral Incisors</b>	T2	Relate the morphology of maxillary lateral incisors on pictures and models of teeth	Lecture/ Tutorial	Knowledge, Skill	Google Classroom Quiz
		Differentiate between maxillary central and lateral incisors on the basis of their morphology		Knowledge, Skill	Tooth Models Google Classroom Quiz
<b>Mandibular Central Incisors</b>	T3	Relate the morphology of mandibular central incisors on pictures and models of teeth		Knowledge	Tooth Models Google Classroom Quiz
		Describe the aspects of mandibular central incisors		Knowledge	Tooth Models Google Classroom Quiz
<b>Mandibular Lateral Incisors</b>	T4	Describe morphology and aspects of mandibular lateral incisors		Knowledge	Tooth Models Google Classroom Quiz
		Differentiate between mandibular central and lateral incisors on the basis of their morphology		Knowledge	Quiz Assignment



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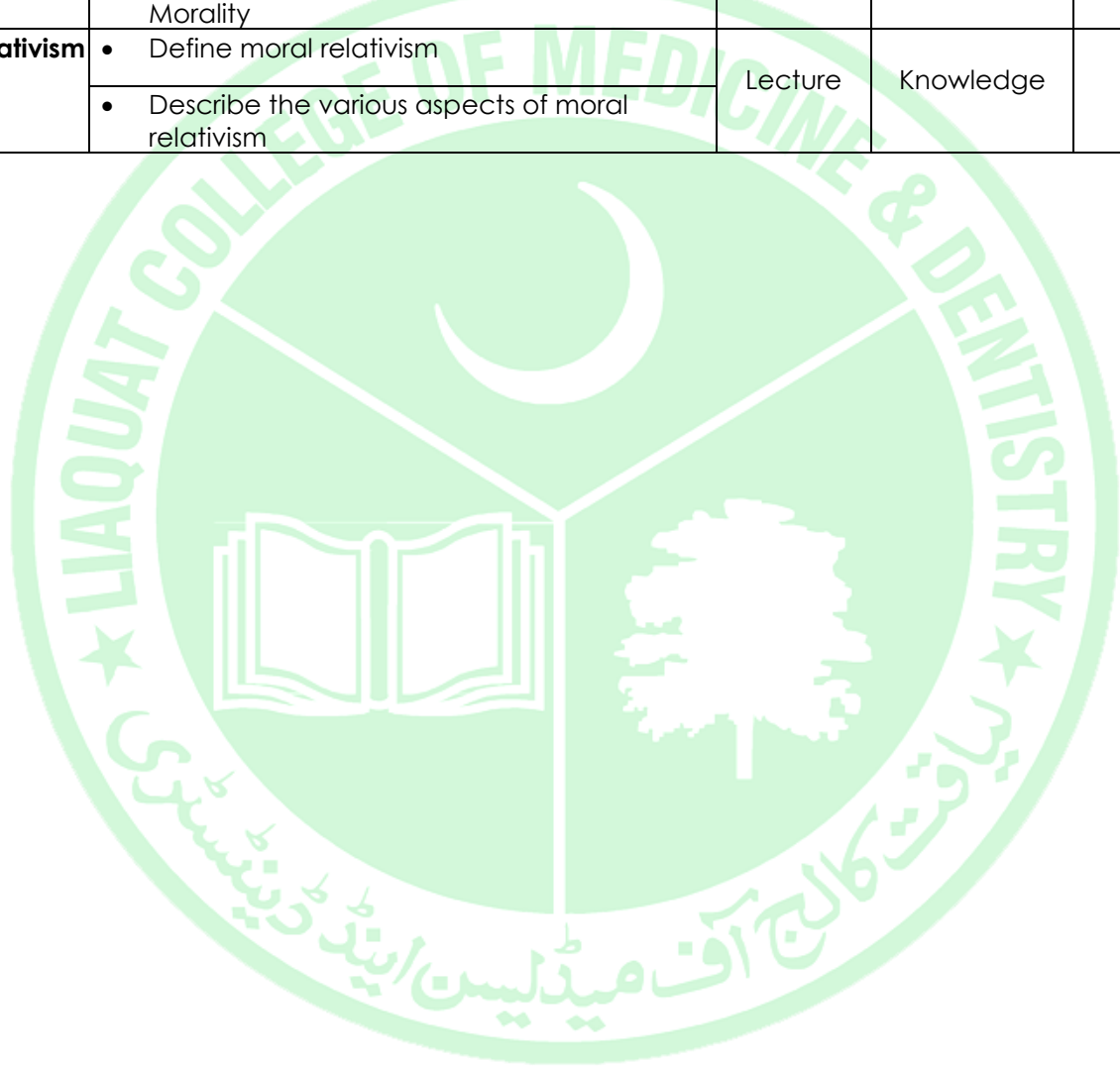
ISLAMIC STUDIES				
Topic	Objectives	Mode of Teaching	KSA Competencies Knowledge/Skill/ Attitude	Assessment Tools
		Lecture/Tutorials		
<b>INTRODUCTION TO THE HOLY QURAN</b>				
<b>Introduction To The Holy Quran</b>	<ul style="list-style-type: none"> <li>Discuss the importance of the Quran in our daily lives</li> </ul>	Lecture	Knowledge	MCQs
	<ul style="list-style-type: none"> <li>Describe briefly the history of revelation of the Quran (Prediction of Warqa bin Naufal, 1st Revelation etc).</li> </ul>	Lecture		
	<ul style="list-style-type: none"> <li>Explain how the Quran is the greatest miracle of Rasool-ullah (S.A.W).</li> </ul>			
	<ul style="list-style-type: none"> <li>Explain how the Quran was compiled in different ways in the era of:                             <ul style="list-style-type: none"> <li>Rasool-ullah (S.A.W)</li> <li>Abu Bakar ( R.A.)</li> <li>Usman Ghani (R.A.)</li> </ul> </li> </ul>			
	<ul style="list-style-type: none"> <li>Discuss the Quranic Sciences (Uloom ul Quran):                             <ul style="list-style-type: none"> <li>Definition and differences between Makkan and Madinah verses or chapters.</li> <li>Explain the Shan e Nuzool / reasons for the revelation (Two examples)</li> </ul> </li> </ul>			
	<ul style="list-style-type: none"> <li>Differentiate between the Abrogator &amp; Abrogated verses (Nasikh &amp; Mansookh) (Two examples)</li> </ul>			



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INTRODUCTION TO ETHICS				
Topic	Objectives	Mode of Teaching	KSA Competencies Knowledge/ Skill/ Attitude	Assessment Tools
		Lecture/ Tutorials		
<b>Religion and Morality</b>	<ul style="list-style-type: none"><li>Compare the Concerns, Pre-Occupations and Constituent Elements of Religion and Morality</li></ul>	Lecture	Knowledge	MCQs
<b>Moral Relativism</b>	<ul style="list-style-type: none"><li>Define moral relativism</li></ul>	Lecture	Knowledge	MCQs
	<ul style="list-style-type: none"><li>Describe the various aspects of moral relativism</li></ul>			





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RESEARCH				
Topic	Objectives	Learning Strategy	KSA Competencies Knowledge/ Skill/ Attitude	Assessment Tools
<b>Experimental studies: Quasi experimental study</b>	<ul style="list-style-type: none"><li>Discuss the importance of these research designs in health care provision</li></ul>	Lecture	KSA	Formative Group project
<b>Estimating sample size</b>	<ul style="list-style-type: none"><li>Calculate sample size based on prescribed guidelines</li><li>Justify sample size for their research project Demonstrate the use of Appropriate software for</li></ul>	Lecture	KSA	Formative Group project
<b>Sampling Techniques</b>	<ul style="list-style-type: none"><li>Classify sampling techniques</li><li>Appropriately choose sampling technique according to study design</li></ul>	Lecture	KSA	Formative Group project



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LEADERSHIP, PROFESSIONALISM & ETHICS (LeaPE)				
Topic	Objectives	Mode of Teaching	KSA Competencies	Assessment Tools
		Lecture/ Tutorials	Knowledge/ Skill/ Attitude	
<b>LEADERSHIP</b>				
<b>Working effectively in teams</b>	<ul style="list-style-type: none"> <li>Define team</li> </ul>	Lecture /role play/ Small group discussion	KSA	MCQs/OSPE
	<ul style="list-style-type: none"> <li>Discuss the functions and advantages of working in teams, with</li> </ul>			
	<ul style="list-style-type: none"> <li>Define the concept of a team and teamwork.</li> <li>Explain the characteristics of effective teams.</li> <li>Discuss the functions, benefits, and challenges of working in teams.</li> <li>Apply teamwork strategies in a healthcare setting.</li> </ul>			

