

**Shaheed Hasan Khan Government Medical**  
**College Nalhar, Nuh (Haryana)**  
**COMPETENCY BASED UNDERGRADUATE CURRICULUM IN PRE-CLINICAL**

**BLOCK I –BATCH 2019 – 2020**

**General Anatomy & Upper Limb, General Physiology & Musculoskeletal System & Blood, General Biochemistry, Enzymes**

Time	Day 1 02.09.19 Mon	Day 2 03.09.19 Tue	Day 3 04.09.19 Wed	Day 4 05.09.19 Thurs	Day 5 06.09.19 Fri	Day 6 07.09.19 Sat	Day 7 09.09.19 Mon	Day 8 10.09.19 Tue	Day 9 11.09.19 Wed	Day 10 12.09.19 Thurs
08-09 AM	BI1.1 Molecular and functional organization of cell and its sub cellular components (part I) (Horizontal integration with Physiology)	PY1.1 structure and functions of a mammalian cell (Part-II)	AN65.1 introduction to microscope, identify epithelium under the microscope & describe the various types that correlate to its function	BI2.1 main classes of IUBMB nomenclature (Part – I)	AN5.1-5.8 General features of the cardiovascular system	AETCOM Module 1.4	BI2.3 basic principle of enzyme activity	PY1.2 discuss the principle of homeostasis (part-II)	AN65.1 Describe the various types of epithelium	BI2.4 Enzyme inhibitor, as poisons and drugs and as therapeutic enzyme (Part –II) (Vertical integration with Pathology and Medicine)
09-10 AM	PY1.1 structure and functions of a mammalian cell (Part-I)	AN4.1-4.5 Describe different types of skin & dermatomes in body, function of skin with its appendages, Explain principle of skin incisions	PY3.1 Structure and functional of a neuron and neuralgia discuss nerve growth factor and other growth factor /cytokines (Part - I)	PY2.1 composition and functional of blood component	PY3.1 Structure and functional of a neuron and neuralgia discuss nerve growth factor and other growth factor /cytokines (Part - II) Horizontal integration with Anatomy		PY1.2 discuss the principle of homeostasis (part-I)	AN3.1-3.3 General features of muscle	PY2.2 discuss the origin, forms, variations and functions of plasma proteins Horizontal Integration with biochemistry	PY3.2 types, functions & properties of nerve fibers
10-11 AM	AN 1.1 Demonstrate normal anatomical position, various plans, relation, comparison, laterality & movement in our body	BI1.1 Molecular and functional organization of cell and its sub cellular components (part II)	PY1.1 structure and functions of a mammalian cell (Part-III)	AN4.3 - 4.5 describe superficial fascia and deep fascia with its modification, principle of skin incisions	BI2.1 Fundamental concepts o main classes of IUBMB nomenclature (Part – II)		AN6.1-6.3 General features of lymphatic system	BI2.4 Enzyme inhibitor, as poisons and drugs and as therapeutic enzyme (Part – I) (Vertical integration with Pathology and Medicine)	Physiology Tutorial	AN 2.4 Describe various types of cartilage with its structure & distribution in body

11 AM - 01 PM	PY2.11a to study the compound microscope (vertical integration with pathology)/BI 11.1 Commonly used lab equipments, safety, waste disposal	AN1.1 – DOAP Session of Demonstrate normal anatomical position, various planes, relation, comparison, laterality & movement in our body	CM1.1 Concepts of health (part – I)	AN4.1-4.4 DOAP Session of skin and fascia	BI 11.2 preparation of buffers and estimation of pH/ PY2.11b study of different blood diluting pipettes and diluting fluids(vertical integration with pathology)		BI11.3 Chemical component of normal urine/ PY2.11c study of neubauer chamber Vertical integration with pathology	AN8.1 DOAP Session of Identify the given bone, its side, important features & keep it in anatomical position	CM1.1 Concepts of health (part – II)	AN8.1 DOAP Session of Identify the given bone, its side, important features & keep it in anatomical position
02-04 PM	AN1.1 – DOAP Session of Demonstrate normal anatomical position, various planes, relation, comparison, laterality & movement in our body	BI 11.1 Commonly used lab equipments, safety, waste disposal/ PY2.11a to study the compound microscope (vertical integration with pathology)	AN 65.1 Demonstrate parts of microscope	BI 11.2 preparation of buffers and estimation of pH/ PY2.11b study of different blood diluting pipettes and diluting fluids(vertical integration with pathology) Vertical integration with pathology	AN8.1 - DOAP Session of Identify the given bone, its side, important features & keep it in anatomical position	CM1.1 Concepts of health	AN8.1 DOAP Session of Identify the given bone, its side, important features & keep it in anatomical position	BI11.3 Chemical component of normal urine/PY2.11c study of neubauer chamber Vertical integration with pathology	AN65.1 – Identify the slides of simple epithelium	BI11.4 perform urine analysis to estimate and determine normal and abnormal constituents/ PY2.11d filling of pipettes and charging of chamber Vertical integration with pathology

**Shaheed Hasan Khan Government Medical**  
**College Nalhar, Nuh (Haryana)**

**COMPETENCY BASED UNDERGRADUATE CURRICULUM IN PRE-CLINICAL**

Time	Day 11 13.09.19 Fri	Day 12 14.09.19 Sat	Day 13 15.09.19 Mon	Day 14 16.09.19 Tue	Day 15 18.09.19 Wed	Day 16 19.09.19 Thurs	Day 17 20.09.19 Fri	Day 18 21.09.19 Sat	Day 19 24.09.19 Tue	Day 20 25.09.19 Wed
08-09 AM	AN2.1 Describe parts, blood and nerve supply of as long bone	AETCOM 1.4 Part -II	BI2.6 use of enzyme in laboratory investigations (enzyme based assays) (Vertical integration with Pathology and Medicine)	PY3.3 describe the degeneration and regeneration in peripheral never Vertical integration with Medicine	AN65.2 Describe the ultra structure of epithelium (stratified)	BI3.1 differentiate monosaccharide, disaccharides and polysaccharides giving examples of main carbohydrates as energy fuel, structural element and storage in the human body (Part-I)	AN7.1-7.3 Introduction to nervous system	ECE - Hospital Visit	PY3.4 Describe the structure of neuro muscular junction and transmission of impulses (Part-I) Vertical integration with anesthesiology	AN66.1-66.2 connective tissue histology
09-10 AM	PY1.3 Intercellular communication PY1.4 Describe apoptosis – programmed cell death Vertical integration with Pathology		PY2.3 discusses the synthesis and functions of hemoglobin and explains its breakdown. Variant of hemoglobin Horizontal Integration with Biochemistry	AN2.5 Describe various joints with subtypes and example	PY1.5 Describe and discuss transport mechanism across cell membrane (Part-I)	PY1.5 Describe and discuss transport mechanism across cell membrane (Part-II)	PY2.4Describe RCB formation (granuloposis) and its regulation (Part-I)		AN7.4-7.6 Describe the typical spinal nerve, sensory motor innervations	PY2.4 Describe RCB formation (granuloposis) and its regulation (Part-II)
10-11 AM	BI2.5 clinical utility of various serum enzyme as markers of pathological conditions(Vertical integration with Pathology and Medicine)		AN2.2 Enumerate laws of ossification, AN2.3 Enumerate special features of a sesamoid bone	BI2.7 interpret laboratory results of enzyme activities & describe the clinical utility of various enzyme as markers of pathological conditions(Vertical integration with Pathology and Medicine)	Physiology Tutorial	AN 2.6 Explain the concept of nerve supply of joints & Hiltons law	BI3.1 differentiate monosaccharide, disaccharides and polysaccharides giving examples of main carbohydrates as energy fuel, structural element and storage in the human body (Part-II)		BI3.2 Processes involved in digestion and assimilation of carbohydrate and storage	PY1.6, describe the fluid compartments of the body, its ionic composition & measurement – PY 1.7 describe the concept of pH and buffers systems in the body Vertical integration with Biochemistry

11 AM - 01 PM	BI11.4 perform urine analysis to estimate and determine normal and abnormal constituents/ PY2.11d filling of pipettes and charging of chamber Vertical integration with pathology	CM1.2 Concepts of disease	BI11.5 Screening of urine for inborn errors & describe the use of paper chromatography/ PY2.11e collection of blood sample and study of anticoagulants used in the lab Vertical integration with pathology	AN2.5 DOAP Session of various types of joints	Community medicine tutorials	AN2.5 DOAP Session of various types of joints and its movements	BI11.principle of colorimetry/ PY2.11f determination of total RBC count (I) Vertical integration with pathology		AN8.1 DOAP Session of Identify the given bone, its side, important features & keep it in anatomical position	Community medicine tutorials
02-04 PM	AN2.1 Describe parts of a long bone	Community medicine tutorials	AN2.5 DOAP Session of various types of bones	BI11.5 Screening of urine for inborn errors & describe the use of paper chromatography/ PY2.11e collection of blood sample and study of anticoagulants Vertical integration with pathology	AN65.2 – Identify the slides of stratified epithelium	BI11.principle of colorimetry/ PY2.11f determination of total RBC count (I) Vertical integration with pathology	AN8.1 DOAP Session of Identify the given bone, its side, important features & keep it in anatomical position	Physiology Tutorial PY1.1-1.7, PY2.1-2.4, PY3.1-3.4,	PY2.11f determination of total RBC count (II) Vertical integration with pathology	AN4.3-4.4 DOAP session of demonstration of slides pertaining to connective tissue

**Shaheed Hasan Khan Government Medical**  
**College Nalhar, Nuh (Haryana)**

**COMPETENCY BASED UNDERGRADUATE CURRICULUM IN PRE-CLINICAL**

<b>Time</b>	<b>Day 21 26.09.19 Thurs</b>	<b>Day 22 27.09.19 Fri</b>	<b>Day 23 28.09.19 Sat</b>	<b>Day 24 30.09.19 Mon</b>	<b>Day 25 01.10.19 Tue</b>	<b>Day 29 03.10.19 Thurs</b>	<b>Day 30 04.10.19 Fri</b>	<b>Day 31 05.10.19 Sat</b>	<b>Day 32 07.10.19 Mon</b>	<b>Day 33 09.10.19 Wed</b>
08-09 AM	BI3.3 Digestion and assimilation of carbohydrates from food	AN75.1-75.2 Principle of genetics, chromosomal aberrations	AETCOM Module 1.1	BI3.4 Pathways of carbohydrate metabolism (Glycolysis, gluconeogenesis, glycogen metabolism, HMP shunt Part- II) (Vertical integration with Medicine)	PY3.5 Discuss the action of neuro muscular blocking agent Vertical integration with anesthesiology and pharmacology	BI3.4 Pathways of carbohydrate metabolism (Glycolysis, gluconeogenesis, glycogen metabolism, HMP shunt Part- IV) (Vertical integration with Medicine)	AN77.1-77.2 ovarian and menstrual cycle	AETCOM Module 1.1 exploratory session	BI 3.5 Reregulation, functions and integration of carbohydrate along with associate diseases/disorder (Part- II) (Vertical integration with Medicine)	AN67.1-67.3 Muscle histology
09-10 AM	PY3.4 Describe the structure of neuro muscular junction and transmission of impulses (Part-II)	PY1.8 describe and discuss the molecular basis of resting membrane potential and action potential in excitable tissue (Part-I)		PY1.8 describe and discuss the molecular basis of resting membrane potential and action potential in excitable tissue (Part-II)	AN76.1-76.2 Introduction to embryology	PY1.9 Demonstrate the ability to describe and discuss the methods used to demonstrate the functions of the cells and its products, its communication and their applications in clinical care and research (Part – I)	PY1.9 Demonstrate the ability to describe and discuss the methods used to demonstrate the functions of the cells and its products, its communication and their applications in clinical care and research (Part – II) <b>Test</b>		PY2.5 Describe different types if anemia's & jaundice Horizontal integration with Biochemistry and Vertical Integration with Pathology	PY2.6 Describe WBC formation (granuloposis) and its regulation
10-11 AM	AN7.7-7.8 various type of synapse	BI3.4 Pathways of carbohydrate metabolism (Glycolysis, gluconeogenesis, glycogen metabolism, HMP shunt Part- I) (Vertical integration with Medicine)		AN75.3-75.5 Clinical Genetics	BI3.4 Pathways of carbohydrate metabolism (Glycolysis, gluconeogenesis, glycogen metabolism, HMP shunt Part- III) (Vertical integration with Medicine)	AN77.3-77. 6 Gametogenesis and fertilization	BI 3.5 regulation, functions and integration of carbohydrate along with associate diseases/disorder (Part- I) (Vertical integration with Medicine)		AN78.1-78.5 Second week of development	Physiology Tutorial

11 AM - 01 PM	AN8.1 DOAP Session of Identify the given bone, its side, important features & keep it in anatomical position	BI11.7 Estimation of serum creatinine and creatinine clearance (part – I)/ PY2.11g determination of total WBC count (Part-I) Vertical integration with pathology		BI11.7 Estimation of serum creatinine and creatinine clearance (part – II)/ PY2.11g determination of total WBC count (Part-I) Vertical integration with pathology	AN76.1-76.2 Introduction to embryology. Visit to embryology lab of anatomy	AN77.3-77. 6 Gametogenesis and fertilization. Vertical integration with OBG and demonstration of embryology models	BI11.8 demonstrate estimation of serum proteins, albumin and AG Ratio/ PY2.11h estimation of hemoglobin content of blood Vertical integration with pathology		PY2.11h estimation of hemoglobin content of blood Vertical integration with pathology	Community Medicine
02-04 PM	BI11.7 Estimation of serum creatinine and creatinine clearance (part – I)/ PY PY2.11f determination of total RBC count (II) integration with pathology	AN75.1-75.2 Principle of genetics, chromosomal aberrations. Vertical integration with pediatrics	Hospital Visit	AN75.3-75.5 Clinical Genetics vertical integration of pediatric/OBG	BI11.7 Estimation of serum creatinine and creatinine clearance (part – II)/ PY2.11g determination of total WBC count (Part-II) Vertical integration with pathology	BI11.8 demonstrate estimation of serum proteins, albumin and AG Ratio/ PY2.11g determination of total WBC count (Part-II) Vertical integration with pathology	AN77.3-77. 6 Gametogenesis and fertilization. Vertical integration with OBG and demonstration of embryology models	Physiology Seminar PY1.8-1.9, PY3.5	AN78.1-78. 5 Vertical integration with OBG and demonstration of embryology models	AN67.1-67.3 DOAP session of demonstration of slides pertaining to Muscle tissue

Time	Day 34 10.10.19 Thurs	Day 35 11.10.19 Fri	Day 36 12.10.19 Sat	Day 37 14.10.19 Mon	Day 38 15.10.19 Tue	Day 39 16.10.19 Wed	Day 40 17.10.19 Thurs	Day 41 18.10.19 Fri	Day 42 19.10.19 Sat	Day 43 21.10.19 Mon	Day 44 22.10.19 Tue
08-09 AM	BI3.6 Concept of TCA cycle as a amphibole pathways and its regulation	AN80.1-80.3 fetal membrane and umbilical cord	AETCOM Module 1.2	BI3.8 interpret laboratory results of analytes associated with metabolism of carbohydrates (Vertical integration with Pathology and Medicine)	PY3.7 Describe the different types of muscle fibers and their structure	AN71.1-71.2 Bone and cartilage Histology	BI3.10 interpret the result of blood glucose level and other laboratory investigations related to disorders of carbohydrate metabolism (Vertical integration with Medicine)	AN9.2-9.3 Breast	Physiology Lecture PY3.1-3.8	BI4.1 main classes of lipids (Part-II) (Vertical integration with Medicine)	PY3.9 describe the molecular basis of muscle contraction in skeletal and in smooth muscle
09-10 AM	PY3.6 Describe the path physiology of myasthenia gravis Vertical integration with pathology	PY2.7 Describe the formation of platelets, functions and variations		PY2.8 Describe the physiological basis of hemostasis and anticoagulants. Describe bleeding & clotting disorder (hemophilia purpura) (Part-I) Vertical integration with pathology	AN73.1-73.3, AN74.1-74.4 chromosomes and patterns of inheritance	PY2.8 Describe the physiological basis of hemostasis and anticoagulants. Describe bleeding & clotting disorder (hemophilia purpura) (Part-II) Vertical integration with pathology	PY3.8 Describe action potential and its properties in different muscle types (skeletal & smooth)	PY2.9 Describe different blood groups and discuss the clinical importance of blood grouping, blood banking and transfusion Vertical integration with pathology	AN8.1-8.3 Feature of individual bones (upper limb)	PY2.10 Define and classify different types of immunity, describe the development of immunity and its regulation	AN10.3-10.7 Brachial Plexus
10-11 AM	AN 79.1-79.6 3 <sup>rd</sup> to 8 <sup>th</sup> Week of development	BI3.7 Common poisons that inhibit crucial enzyme of carbohydrate metabolism (e.g., Fluoride, arsenate) (Horizontal Integration with Physiology)		AN80.4-80.7 twins, 81.1-81.3 prenatal diagnosis	BI3.9 Mechanism and significance of blood glucose regulation in health and disease (Vertical integration with Medicine)	Physiology tutorial	AN9.1 introduction to upper limb – pectoral region	BI4.1 main classes of lipids ((Part-I) (Vertical integration with Medicine)		AN10.1-10.2 Axilla	BI4.2 Processes involved in digestion and absorption of dietary lipids and also the key features of their metabolism (Vertical integration with Medicine)

11 AM -01 PM	AN 79.1-79.6 3 <sup>rd</sup> to 8 <sup>th</sup> Week of development – vertical integration with OBG and demonstration of embryology models	BI11.9 Estimation of serum total cholesterol and HDL- cholesterol/ PY2.11i determination of bleeding time and clotting time Vertical integration with pathology		BI11.10 demonstrate the estimation of triglycerides/ PY2.11j determination of blood group Vertical integration with pathology	AN73.1-73.3, AN74.1-74.4 chromosomes and patterns of inheritance vertical integration with general medicine & pediatrics	Community Medicine Tutorial	AN9.1 Marking of skin incision and reflection of skin and fascia	BI11.11 estimation of calcium and phosphorous/ PY2.11k preparation of peripheral blood smear integration with pathology		BI11.12 estimation of serum bilirubin/ PY2.11 l Deferential Leucocyte count Vertical integration with pathology	AN10.3-10.7, Dissection and demonstration with vertical integration of general surgery
02-04 PM	BI11.9 Estimation of serum total cholesterol and HDL- cholesterol/ PY2.11i determination of bleeding time and clotting time integration with pathology	AN80.1-80.3 fetal membrane and umbilical cord – vertical integration with OBG and demonstration of embryology models	Physiology Tutorial PY1.1-1.8 PY2.1-2.9	AN80.4-80.7 twins, 81.1-81.3 prenatal diagnosis - vertical integration with OBG and demonstration of embryology models	BI11.10 demonstrate the estimation of triglycerides/ PY2.11j determination of blood group integration with pathology	AN71.1-71.2 DOAP session of demonstration of slides pertaining to Bone and cartilage Histology	BI11.11 estimation of calcium and phosphorous/ PY2.11k preparation of peripheral blood smear Vertical integration with pathology	AN9.2-9.3 Breast – Dissection and demonstration with vertical integration of general surgery	Hospital visit	AN10.1-10.2 Axilla - practical & DOAP session	BI11.12 estimation of serum bilirubin/ PY2.11 l Deferential Leucocyte count Vertical integration with pathology