

FACULTY OF LIFE SCIENCES

Syllabus for

Bachelor of Science (Honours) (Medical Laboratory Technology)

(SEMESTER: I-II)

(Under Credit Based Continuous Evaluation Grading System)

Session: 2025-26



Kanya Maha Vidyalaya, Jalandhar (Autonomous)

The Heritage Institution

KANYA MAHAVIDYALAYA, JALANDHAR (AUTONOMOUS)

**SCHEME AND CURRICULUM OF EXAMINATIONS OF FOUR-YEAR DEGREE
PROGRAMME
Session-2025-26**

Bachelor of Science (Honours) (Medical Laboratory Technology) (Semester -I)											
Course Code	Course Title	Course Type	Total Credits (L-T-P)	Credit Hours			Total Marks	Marks			Exam Time in Hrs
				L	T	P		L	P	CA	
BMLL-1421 BMLL-1031 BMLL-1431	Punjabi (Compulsory) ¹ Basic Punjabi ² Punjab History and Culture	C	4-0-0	4	-	-	100	70	-	30	3
BMLM-1102	Communication Skills in English-I	AEC	3-0-1	3	-	2	100	50	20	30	3
BMLL-1483	Basics of Human Physiology-I	DSC	3-0-0	3	-	-	100	70	-	30	3
BMLP-1483	Basics of Human Physiology-I Lab	DSC	0-0-2	-	-	4	50	-	35	15	3
BMLL-1484	Basics of Human Anatomy -I	DSC	3-0-0	3	-	-	100	70	-	30	3
BMLP-1484	Basics of Human Anatomy –I Lab	DSC	0-0-2	-	-	4	50	-	35	15	3
BMLL-1485	Principles of Biochemistry	DSC	3-0-0	3	-	-	100	70	-	30	3
BMLP-1485	Principles of Biochemistry Lab	DSC	0-0-2	-	-	4	50	-	35	15	3
VACF-1491	*Foundation Course	VAC	2-0-0	2	-	-	50	35	-	15	1
Total Credits			25	Total marks			700				

1 Special paper in lieu of Punjabi (Compulsory).

2 Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab.

***Credits of these papers will not be added in SGPA/CGPA and only grades will be provided.**

C- Compulsory

VAC- Value Added Course

DSC- Discipline Specific Course

AEC- Ability Enhancement Course

Bachelor of Science (Honours) (Medical Laboratory Technology) (Semester -II)											
Course Code	Course Title	Course Type	Total Credits (L-T-P)	Credit Hours			Total Marks	Marks			Exam Time in Hrs
				L	T	P		L	P	C A	
BMLL-2421	Punjabi (Compulsory)	C	4-0-0	4	-	-	100	70	-	30	3
BMLL-2031	¹ Basic Punjabi										
BMLL-2431	² Punjab History and Culture										
BMLM-2102	Communication Skills in English-II	AEC	3-0-1	3	-	2	100	50	20	30	3
BMLL-2483	Hematology-I	DSC	3-0-0	3	-	-	100	70	-	30	3
BMLP-2483	Hematology-I Lab	DSC	0-0-2	-	-	4	50	-	35	15	3
BMLL-2484	Basics of Human Physiology-II	DSC	3-0-0	3	-	-	100	70	-	30	3
BMLP-2484	Basics of Human Physiology-II Lab	DSC	0-0-2	-	-	4	50	-	35	15	3
BMLL-2485	Basics of Human Anatomy-II	DSC	3-0-0	3	-	-	100	70	-	30	3
BMLP-2485	Basics of Human Anatomy-II Lab	DSC	0-0-2	-	-	4	50	-	35	15	3
BMLM-2130	Fundamentals of Data Analytics	SEC	2-0-1	2	-	2	100	40	30	30	3+3
VACD-2161	*Drug Abuse: Problem, Management and Prevention (Compulsory)	VAC	2-0-0	2	-	-	50	35	-	15	3
Total Credits			28	Total marks			800				

1 Special paper in lieu of Punjabi (Compulsory).

2 Special paper in lieu of Punjabi (Compulsory) for those students who are not domicile of Punjab.

*Credits of these papers will not be added in SGPA/CGPA and only grades will be provided.

C-Compulsory

VAC- Value Added Course

DSC- Discipline Specific Course

AEC- Ability Enhancement Course

SEC- Skill Enhancement Course

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–I
(Session 2025-26)**

Course Title: Basics of Human Physiology - I

**Course Code: BMLL-1483
(THEORY)**

Course Outcomes

After passing this course the student will be able to:

CO1: Understand various parts of brain and their transmission signals.

CO2: Understand autonomous nervous system

CO3: Know about physiology of muscle function

CO4: Know about circulatory system

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester-I

(Session 2025-26)

Course Title: Basics of Human Physiology - I

Course Code: BMLL-1483

(THEORY)

Credits: 3-0-0

Total Marks: 100

Time: 3 Hours

Theory: 70

CA: 30

Instructions for paper setter: Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Unit-I

Functions of Principal Parts of the Brain (brain stem, cerebellum, diencephalon, cerebrum), Action potential, resting membrane potential, Transmission of signal in nervous system, Neurotransmitters, neurotransmitter receptors

Unit -II

Autonomic nervous system, Sympathetic and Parasympathetic Divisions of the ANS, Physiology of Reflex action, Special senses – Hearing, vision, pain, touch, taste

Unit -III

Physiology of muscular system, Sliding filament mechanism of muscle contraction, The contraction cycle, The Neuromuscular Junction

Unit -IV

Physiology of circulatory system, Cardiac cycle, Heart and circulation, Blood pressure, Role of hemoglobin in regulation of respiration, Functions of blood and lymphatic system, Blood clotting.

Books Recommended

1. Guyton, A.C. and Hall, J.E. (2016). Textbook of Medical Physiology. Elsevier Publications, New York
2. Ross and Willson (2010) Anatomy and Physiology. ELBS publication
3. Tortora, G.J. and Grabowski, S.R. (2009). Principles of Anatomy and Physiology. Harper Collins College Publishers

4. Tortora, G.J and Henderson S.R. (2012) Principles of Anatomy and Physiology. Harper Collins College Publishers.

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester-I
(Session 2025-26)**

Course Title: Basics of Human Physiology - I Lab

**Course Code: BMLP- 1483
(PRACTICAL)**

Course Outcomes

After passing this course the student will be able to:

CO1: Observe joint movements

CO2: Measure blood pressure and pulse rate

CO3: Estimate bleeding time, hemoglobin content and clotting time

CO4: Use and care of micropipette.

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester-I

(Session 2025-26)

Course Title: Basics of Human Physiology-I Lab

Course Code: BMLP- 1483

(PRACTICAL)

Credits: 0-0-2

Total Marks: 50

Time: 3 Hours

Theory: 35

CA: 15

1. Movements at joints
2. Blood pressure and pulse rate estimation
3. Study of Bleeding time
4. Study of clotting time
5. Estimation of hemoglobin concentration
6. Use and care of Micropipette

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–I
(Session 2025-26)**

Course Title: Basics of Human Anatomy - I

**Course Code: BMLL-1484
(THEORY)**

Course Outcomes

After passing this course the student will be able to:

CO1: Understand anatomy of skeleton system

CO2: Understand muscular system

CO3: Know about anatomy of circulatory system

CO4: Know about respiratory system

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–I

(Session 2025-26)

Course Title: Basics of Human Anatomy - I

Course Code: BMLL-1484

(THEORY)

Credits: 3-0-0

Total Marks: 100

Time: 3 Hours

Theory: 70

CA: 30

Instructions for paper setter: Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Unit- I

Brief anatomy of Skeletal system, Types of bones, Ossification and growth of bone, Histology of bone, Fracture and repair, Classification of joints

Unit- II

Muscular system –Types of muscular tissue, properties of muscular tissue, Anatomy of smooth, cardiac, skeletal muscle, Microscopic Anatomy of a Skeletal Muscle Fiber, neuromuscular junction.

Unit- III

Brief anatomy of Circulatory system — Blood Composition, Anatomy of heart and blood vessels, Classification of blood vessels, Overview of arterial, venous system and lymphatic system.

Unit- IV

Brief anatomy of Respiratory system — Brief description of constituent parts, Microscopic anatomy of a lobule of the lungs, Structural components of an alveolus, olfactory receptors

Books Recommended

1. Drake, R., Vogl, W. and Mitchell, A. (2015). Gray's Anatomy for Students. Churchill Livingstone, USA.
2. Marieb, E.N. (2004). Human Anatomy and Physiology. Dorling Kindersley (India) Pvt.Ltd., 6th ed.
3. Ross and Willson (2010). Anatomy and Physiology. ELBS Publication.

4. Standring, S. (2008). Gray's Anatomy. Churchill Livingstone, USA. 40th ed.
5. Tortora, G.J. and Grabowski, S.R. (2002). Principles of Anatomy and Physiology. Harper Collins College Publishers.
6. Tortora, G.J. and Henderson, S.R. (2012). Principles of Anatomy and Physiology. Harper Collins College Publishers.

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–I
(Session 2025-26)**

Course Title: Basics of Human Anatomy-I Lab

**Course Code: BMLP- 1484
(PRACTICAL)**

Course Outcomes

After passing this course the student will be able to:

CO1: Observe positions of various parts of human body

CO2: Know about various bones

CO3: Understand bone surface markings

CO4: Understand division of skeleton system

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–I
(Session 2025-26)**

Course Title: Basics of Human Anatomy-I Lab

Course Code: BMLP- 1484

(PRACTICAL)

Credits: 0-0-2

Total Marks: 50

Time: 3 Hours

Theory: 35

CA: 15

1. Anatomical positions and terminology — Superior, Inferior, Anterior, Medial, Posterior, Lateral, Proximal, Distal, External, Internal, Parietal, Visceral, Cavities and Planes of human body
2. Parts of a bones
3. Bone surface markings
4. Division of Skeletal system

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–I
(Session 2025-26)**

Course Title: Principles of Biochemistry

Course Code: BMLL-1485

(THEORY)

Course Outcomes

After passing this course the student will be able to:

CO1: Understand basic structure and function of Carbohydrates

CO2: Understand role of lipids and nucleic acids in human body

CO3: Learn about classification, structure and function of proteins

CO4: know about role and importance of vitamins and enzymes

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester-I
(Session 2025-26)**

Course Title: Principles of Biochemistry

**Course Code: BMLL-1485
(THEORY)**

Credits: 3-0-0

Total Marks: 100

Time: 3 Hours

Theory: 70

CA: 30

Instructions for paper setter: Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Unit- I

Introduction: Principles of living organisms; Elements of living organisms; Fitness of Biomolecules.

Carbohydrates: Definition; Classification of carbohydrates; Structure and functions of various classes of carbohydrates; Monosaccharides, Disaccharides, Polysaccharides

Unit- II

Lipids: Definition; Classification of lipids; structure and functions of various classes of lipids; Triglycerides; Phosphoglycerides; Sphingolipids; Terpenes; Steroids; Eicosanoids; fatty acids and essential fatty acids.

Nucleic acids: Nitrogen bases: Purines and Pyrimidines; Nucleosides and Nucleotides, DNA Structure and its forms; RNA and its types; Differences between DNA and RNA; Biologically important nucleotides.

Unit- III

Proteins: Classification and structures of amino acid; Essential and non essential amino acids, unusual and non-protein amino acids; Important peptides and their functions; Organizational levels of protein structure; Functional and structural classification of proteins.

Unit -IV

Vitamins: Definition; chemistry and functions of water and fat edsoluble vitamins.

Enzymology: Enzyme nomenclature; Classification and characteristics of enzymes; Enzyme specificity; Cofactors; Co-enzymes and Prosthetic groups; Types of enzyme inhibition; Factors affecting enzyme activity

Books Recommended:

- Nelson DL and Cox MM. (2013) Lehninger Principles of Biochemistry, 6th Edition. Macmillan Worth Publishers, New Delhi.
- Berg JM, Tymoczko JL, Gatto GJ and Stryer L (2015) Biochemistry, 8th Edition, WH Freeman & Co., New York.
- Bender DA, Botham KM, Kennelly PJ, Rodwell VW and Weil PA (2015) Harper's Illustrated Biochemistry, 30th Edition, McGraw-Hill Medical Canada.

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–I
(Session 2025-26)**

Course Title: Principles of Biochemistry Lab

**Course Code: BMLP- 1485
(PRACTICAL)**

Course Outcomes

After passing this course the student will be able to:

CO1: Learn the preparation of solutions and their use

CO2: Understand working and use of various laboratory equipment

CO3: Learn about handling laboratory equipment in clinical labs.

CO4: Perform Volumetric analysis of solutions

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester-I
(Session 2025-26)**

Course Title: Principles of Biochemistry Lab

Course Code: BMLP- 1485

(PRACTICAL)

Credits: 0-0-2

Total Marks: 50

Time: 3 Hours

Theory: 35

CA: 15

1. Introduction to Biochemistry Laboratory: General Glassware, Equipment: use of analytical balance and general safety measures.
2. Cleaning of glassware: preparation of chromic acid
3. Calibration of Laboratory equipment
4. Preparation of reagents
 - a. Preparation of distilled water
 - b. Preparation of 1N NaOH
 - c. Preparation of 1N HCl
 - d. Preparation of normal saline
5. To demonstrate the phenomenon of Dialysis
6. Use of pH meter and preparation of Buffer.
7. Use of Centrifuge with different types of Rotor
8. Use of spectrophotometer and colorimeter.
9. To find the absorption maxima of a dye.
10. To find the absorption maxima of aromatic amino acids.
11. To demonstrate Beer- Lambert's Law.
12. Volumetric analysis- acid base titration

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)
Course Title: Hematology-I
Course Code: BMLL- 2483
(THEORY)

Course Outcomes

After passing this course the student will be able to:

- CO1: Perform basic hematological laboratory testing, assess laboratory data and report findings according to laboratory protocol.
- CO2: Correlate hematological findings with those generated in other areas of the clinical Laboratory.
- CO3: Diagnose patient symptoms and clinical history
- CO4: To make appropriate and effective on-the-job professional decisions.

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)**

Course Title: Hematology-I

**Course Code: BMLL- 2483
(THEORY)**

Credits: 3-0-0

Total Marks: 100

Time: 3 Hours

Theory: 70

CA: 30

Instructions for paper setter: Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Unit- I

Introduction to Hematology: Definition and significance of hematology, Blood and its various Components.

Unit- II

Erythropoiesis, Leucopoiesis, Thrombopoiesis, Leucocytes, Development of Blood corpuscles, red blood cells in general blood circulation.

Unit- III

Hemoglobin and its various types of Hemoglobin, Iron metabolism, Hemoglobin derivatives

Unit-IV

Oxygen transport, Carbon dioxide transport, Carbon monoxide transport, oxygen dissociation curve

Books Recommended:

- Godkar, PB and Godkar, DP (2008) Text Book of Medical Laboratory Technology, 2nd edition Bhalani Publishing House, Mumbai, India.
- Martin R. Howard & Peter J Hamilton (2013) Text Book of Hematology, 4th edition, Churchill Livingstone.

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)
Course Title: Hematology-I Lab
Course Code: BMLP- 2483
(PRACTICAL)

Course Outcomes

After passing this course the student will be able to:

- CO1: Perform basic hematological laboratory testing, assess laboratory data and report findings according to laboratory protocol.
- CO2: Adapt hematology laboratory techniques and procedures when errors and discrepancies in results are obtained to effect resolution in a professional and timely manner.
- CO3: Distinguish normal and abnormal hematological laboratory findings to predict the diagnosis of hematological disorders and diseases.
- CO4: Recognize laboratory results consistent with leukemia and other white blood cell disorders.

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)

Course Title: Hematology-I Lab

Course Code: BMLP- 2483

(PRACTICAL)

Credits: 0-0-2

Total Marks: 50

Time: 3 Hours

Theory: 35

CA: 15

1. Basic requirements for Hematology laboratory
2. Glassware for Hematology
3. Equipments for Hematology
4. Anticoagulant vial preparation
5. Complete Blood Count
6. Differential Leukocyte count

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)**

Course Title: Basics in Human Physiology - II

**Course Code: BMLL- 2484
(THEORY)**

Course Outcomes

After passing this course the student will be able to:

CO1: Understand physiology of respiratory system and olfaction.

CO2: Learn about digestion and various receptors associated with digestion.

CO3: Study male and female reproductive system and their physiology.

CO4: Understand physiology of excretory system and endocrine glands.

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II

(Session 2025-26)

Course Title: Basics in Human Physiology - II

Course Code: BMLL- 2484

(THEORY)

Credits: 3-0-0

Total Marks: 100

Time: 3 Hours

Theory: 70

CA: 30

Instructions for paper setter: Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Unit-I

Physiology of respiratory system, external and internal respiration, Transport of oxygen (O₂) and carbon dioxide (CO₂) in the blood, chemical reactions that occur during gas exchange, Physiology of olfaction.

Unit-II

Physiology of digestive system, Digestive Enzymes, functions of the liver, Absorption of digested nutrients in the small intestine, faeces formation and defecation, Physiology of taste, Gustatory receptor.

Unit-III

Physiology of Male and Female Reproductive System, Hormonal control of spermatogenesis, Hormonal Regulation of the Female Reproductive Cycle, Menstruation.

Unit-IV

Physiology of excretion, functions of kidneys, urine formation, Regulation of body fluids by kidneys, Basics functions of endocrine glands.

Books Recommended:

1. Guyton, A.C. and Hall, J.E. (2016). Textbook of Medical Physiology. Elsevier Publications, New York.

2. Ross and Willson (2010) Anatomy and Physiology. ELBS publication.
3. Tortora, G.J. and Grabowski, S.R. (2009). Principles of Anatomy and Physiology. Harper Collins College Publishers.
4. Tortora, G.J and Henderson S.R. (2012) Principles of Anatomy and Physiology. Harper Collins College Publishers.

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)**

Course Title: Basics of Human Physiology – II Lab

**Course Code: BMLP- 2484
(PRACTICAL)**

Course Outcomes

After passing this course the student will be able to:

CO1: Know and use of microscope

CO2: Calculate leukocyte count

CO3: Determine Differential leukocyte

CO4: Learn about osmotic fragility of RBC

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)

Course Title: Basics of Human Physiology – II Lab

Course Code: BMLP- 2484

(PRACTICAL)

Credits: 0-0-2

Total Marks: 50

Time: 3 Hours

Theory: 35

CA: 15

1. Study the parts of Microscope
2. Use and care of Microscope
3. To determine Total leucocyte count
4. To determine Differential leucocyte count using Leishman's stain
5. Osmotic fragility of RBC

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)

Course Title: Basics of Human Anatomy-II

Course Code: BMLL- 2485
(THEORY)

Course Outcomes

After passing this course the student will be able to:

CO1: Understand anatomy of nervous system.

CO2: Learn about Integumentary system.

CO3: Study anatomy of digestive and urinary system.

CO4: Understand anatomy of reproductive.

**Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)**

Course Title: Basics of Human Anatomy-II

**Course Code: BMLL- 2485
(THEORY)**

Credits: 3-0-0

Total Marks: 100

Time: 3 Hours

Theory: 70

CA: 30

Instructions for paper setter: Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

Unit-I

Brief anatomy of Nervous system — Structure of brain and spinal cord, Parts of a Neuron, Neuroglia, Ion channels, Ascending and descending tracts of neurons, Autonomic nervous system, Special senses - Eye, ear.

Unit-II

Integumentary system - Skin, hair, nail, touch receptors, Types of cells in the epidermis, Layers of the epidermis, Endocrine system – Brief anatomy of endocrine glands, Glands and their hormones (Hypothalamus, Pituitary, Thyroid, Parathyroid, Adrenal, Pancreatic Islets, Thymus, Pineal Gland, Ovaries and Testes).

Unit-III

Brief anatomy of Digestive system, Histology of stomach, Liver, Gallbladder, pancreas, small intestine, large intestine, Urinary system — Anatomical and histological description of kidneys, structure of nephrons.

Unit-IV

Brief anatomy of Reproductive system - Brief anatomical description of male and female reproductive organs, Female Reproductive Cycle, Birth Control Methods and Abortion

Books Recommended

1. Drake, R., Vogl, W. and Mitchell, A. (2015). Gray's Anatomy for Students. Churchill Livingstone, USA.
2. Marieb, E.N. (2004). Human Anatomy and Physiology. Dorling Kindersley (India) Pvt.Ltd., 6th ed.
3. Ross and Willson (2010). Anatomy and Physiology. ELBS Publication.
4. Standring, S. (2008). Gray's Anatomy. Churchill Livingstone, USA. 40th ed.
5. Tortora, G.J. and Grabowski, S.R. (2002). Principles of Anatomy and Physiology. Harper Collins College Publishers.
6. Tortora, G.J. and Henderson, S.R. (2012). Principles of Anatomy and Physiology. Harper Collins College Publishers.

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)

Course Title: Basics of Human Anatomy-II Lab

Course Code: BMLP- 2485

(PRACTICAL)

Course Outcomes

After passing this course the student will be able to:

CO1: To impart basic knowledge about human bones

CO2: Understand Sex differentiation in Skull

CO3: Study different types of vertebrae

CO4: Learn about pectoral and pelvic girdles

Bachelor of Science (Honours) (Medical Laboratory Technology) Semester–II
(Session 2025-26)

Course Title: Basics of Human Anatomy – II Lab

Course Code: BMLP- 2485
(PRACTICAL)

Credits: 0-0-2

Total Marks: 50

Time: 3 Hours

Theory: 35

CA: 15

1. Classification of bones, Skull – different views
2. Sex differentiation in skull
3. Study of different types of Vertebrae, Sternum, Scapula
4. Bones of upper and lower limbs, Pectoral girdle, pelvic girdle, Clavicle, Ribs, sacrum