

**Vikrama Simhapuri University::Nellore**  
**Board of Studies-B. Voc. Hons. With Single Major**  
**Medical Lab Technology-UG**  
**Minutes of the Meeting**

**Date: 12, 13-02-2024**

As per the directions of the Dean, CDC, the online Board of Studies (B. Voc. (Medical Lab Technology-UG) meeting was conducted on 12, 13-02-2024 from 7.00PM to 8.30PM through Google meet App by Dr. Uday Sankar Allam, Chairman of the board.

Google meet links:

12.02.2024: <https://meet.google.com/qxv-ayem-oyx>

13.02.2024: <https://meet.google.com/oig-uajb-sxb>

The following members have attended and thoroughly discussed various agenda items for the Medical Lab Technology course syllabus of B. Voc. (Medical Lab Technology).

S.No	Name	
1	Dr. UdaySankarAllam	Chairman
2	Dr.N.Anitha	Member
3	Dr. K. Siva Prasad	Member
4	Dr. MD. Maqsood Ahmad	Member

**Agenda:**

1. Approval of the Syllabi of II semester of B. Voc. (Medical Lab Technology) under Credit Based Choice System (CBCS) pattern.
2. Modifications of Syllabus if any (up to 20%).
3. Model Question papers.
4. List of Panel of Examiners.
5. Any other item with the permission of the chair.

**Resolutions:**

1. Resolved to approve the Syllabi of Medical Lab Technology (UG) under Credit Based Choice System (CBCS) pattern.

**B.VOC. Medical Laboratory Technology**

**SEMESTER- II**

**Major Course 3: Human Anatomy – I**

\*\* Units are reorganized\*\*

**1. Unit-I- Human Body as whole:**

Deleted "Cells and" in the second line

**2. Unit-II- Anatomy of Respiratory System****Deleted “PNS and Larynx” topics****Included**

“Organisation of the Respiratory system

Anatomical Organisation of the Lungs and Airways.

The trachea, Bronchi, Bronchioles, diaphragm and Respiratory unit.

Pleurae and lungs, brief knowledge of parts and position”

**3. Unit-III- Anatomy of circulatory system****Deleted**

“PRACTICAL: Demonstration to illustrate”

**4. Unit-IV- Locomotion and support****Deleted**

“Demonstration of All Bones-Showing Parts”

“Joints-X-rays of all normal bones and Joints-Excluded

**5. Anatomy of nervous system**

Deleted

“Injuries to the Spinal Cord and Brain-Excluded”

Included

“PNS”

**B.VOC. Medical Laboratory Technology****SEMESTER- II****Major Course 4: Human Physiology – I****\*\* Units are reorganized\*\*****1. UNIT –I- Modified as detailed below****General Physiology**

History, Introduction of human physiology and physiological systems. Functional organization of human body and control of the internal environment. Transport of substances through cell membranes. The body fluid compartments. Extracellular, Intracellular and Cellular transport- Passive and active. Ion channels, Ionophores, inter cellular communication.

**2. UNIT – II- Respiratory system****Modified as detailed below**

Functions of Respiratory System, stages of Respiration "Transportation of Respiratory Gases. Lung Volumes and capacities – Spirometer. Forced Expiratory Volume -1; Forced Expiratory Volume -2; Forced Expiratory Volume -3.

**3. Unit-III- Cardiovascular system**

**Modified as detailed below**

Heart -brief description of function, Blood pressure: Definition, Normal values, physiological variations, factors affecting regulation of BP, Hypotension and Hypertension, Determination of BP. Heart Sounds, Pulse : Jugular pulse, Radial pulse and ECG.

**4. Unit-IV- Bone physiology and muscle Contraction**

**No Major Changes**

**5. Unit-V- Nervous system**

**No Major Changes**

**List of Practical (SKILL COMPONENT)**

**Included the following practicals**

1. Determination of Breath Holding Time
2. Experiments on student physiography
3. Pulmonary function test
4. Lung capacities

**B.VOC. Medical Laboratory Technology****SEMESTER-II****Minor Course 1: Clinical Laboratory Practices**

**No changes are required, and the given syllabus is approved as is.**

**VIKRAMA SIMHAPURI UNIVERSITY :: NELLORE**

B.Voc. Honours with Single Major

**Medical Laboratory Technology**

Semester	Major	Hrs	Credits	Minor	Hrs	Credits	Skill Enhancement	Hrs	Credits
I	1. Fundamentals of medical sciences	5	4				1. Fundamentals of medical sciences	3	4
	2. Introduction to Medical Lab Technology	5	4				2. MLT	3	4
II	3. Human anatomy - I	5	4	1. Clinical laboratory practices	3+2	4	3. Clinical laboratory practices	3	4
	4. Human physiology - I	5	4				4. Anatomy and physiology	3	4
III	5. Human anatomy - II	3+2	4	2. Medical bacteriology and mycology	3+2	4	5. Biochemistry and microbiology	2	2
	6. Human physiology - II	3+2	4						
	7. Fundamentals of biochemistry	3+2	4						
	8. Fundamentals of microbiology	3+2	4						
IV	9. Biochemical metabolism	3+2	4	3. Parasitology	3+2	4	6. Hematology and parasitology	2	2
	10. Microbiology - II	3+2	4	4. Hematology	3+2	4			
	11. General pathology	3+2	4						
V	12	3+2	4	5. Clinical laboratory operations and laboratory ethics	3+2	4			
	12A. Immunology			6. Advanced biochemical testing techniques	3+2	4			
	13	3+2	4						
	13A. Histopathology 13B. Cytopathology								
	14. Clinical biochemistry	3+2	4						
15. Pathology - II	3+2	4							
VI	Semester Internship/Apprenticeship/OJT wit 12 credits								
VII	16	3+2	4				7.	3+2	4
	16A. Molecular biology 16B.						8.	3+2	4
	17	3+2	4						
	17A. 17B.								
18	3+2	4							
18A. 18B.									
VIII	19	3+2	4				9.	3+2	4
	19A. 19B.						10.	3+2	4
	20	3+2	4						
	20A. Molecular diagnostics 20B.								
	21	3+2	4						
21A. Food and industrial toxicology 22B.									
Total	29 Major papers			6 Minor papers			10 Skill enhancement papers		

**VIKRAMA SIMHAPURI UNIVERSITY, NELLORE**  
**Final Approved Syllabus of 2 Major and One Minor Courses**  
**B.VOC. Medical Laboratory Technology**  
**SEMESTER- II**  
**Major Course 3: Human Anatomy - I**

**UNIT - I**

**Human Body as whole:**

Definitions, sub-divisions of Anatomy – terms of location and positions, fundamental planes, vertebrate structure of man and organization of the body tissues.

**UNIT -II**

**Anatomy of Respiratory System**

Organisation of the Respiratory system

Anatomical Organisation of the Lungs and Airways.

The trachea, Bronchi, Bronchioles, diaphragm and Respiratory unit.

Pleurae and lungs, brief knowledge of parts and position.

**UNIT -III**

**Anatomy of circulatory system**

Heart size, location, coverings, chambers, blood supply, Blood vessels, General plan of circulation, Cardiac cycle, pulmonary circuit - Names of arteries and veins and their positions Only histology of lymphatic system.

**UNIT -IV**

**Locomotion and support**

The skeletal system - Types of bones, structure of bone, divisions of the skeleton, Appendicular skeleton, Axial skeleton - names of all the bones and their parts; joints - classification, types of movements with examples.

**UNIT -V**

**Anatomy of nervous system**

Anatomy, functions of Central nervous system - Spinal cord; PNS, reflex actions, Meninges, Main and Fundamental parts of Brain: Hind Brain, Midbrain - Forebrain - Brain, location, functions, coverings of brain.

**List of Practical (SKILL COMPONENT)**

Demonstration of

1. Study of Human skeleton parts with skeletal models' .
2. Study with charts and models of all organ systems mentioned above.
3. Microscopic slides examination of elementary human tissues, cells.
- 4 . Major organs through models and permanent slides
5. Parts of circulatory system from models.
6. Parts of respiratory system from models.

**B.VOC . Medical Laboratory Technology**  
**SEMESTER - II**  
**Major Course 4: Human Physiology - I**

UNIT –I

**General Physiology**

History, Introduction of human physiology and physiological systems.  
 Functional organization of human body and control of the internal environment.  
 Transport of substances through cell membranes .  
 The body fluid compartments. Extracellular, Intracellular and Cellular transport-Passive and active. Ion channels, Ionophores , inter cellular communication.

UNIT – II

**Respiratory system**

Functions of Respiratory System, stages of Respiration Transportation of Respiratory Gases.  
 Lung Volumes and capacities – Spirometer. Forced Expiratory Volume -1; Forced Expiratory Volume -2; Forced Expiratory Volume -3.

Unit III

**Cardiovascular system**

Heart -brief description of function, Blood pressure: Definition, Normal values, physiological variations, factors affecting regulation of BP, Hypotension and Hypertension, Determination of BP. Heart Sounds, Pulse : Jugular pulse, Radial pulse and ECG.

Unit IV:

**Bone physiology and muscle Contraction**

Bones - types and functions, unit of bone (osteocyte), fine structure and its physiology.  
 Physiology of bone formation, bone metabolism and remodeling  
 Muscle types, structures and functions. Muscle contraction mechanism and muscle fatigue.

Unit V:

**Nervous system**

Functions of Nervous System in brief: of all parts of CNS, Structure of neuron, resting membrane potential, origin and propagation of impulse along the axon, synapse and myoneuronal junction. EEG, CSF: Formation, Circulation, properties, compositions and functions ; lumbar puncture.

**List of Practical (Skill component)**

1. To measure Pulse rate .
2. To measure blood Pressure .
3. To measure temperature .

4. Measurement of the Vital capacity .
5. Artificial respiration .
6. Calculation of Blood Indices .
7. Determination of Bleeding Time, clotting time .
- 8.** Demonstration of ECG
9. Determination of Breath Holding Time
10. Experiments on student physiography
11. Pulmonary function test
12. Lung capacities



**2. Resolved to approve the modified syllabus (up to 20%)-accepted by all the members Unanimously.**

**3. Resolved to approve the Model Question papers of all the subjects as mentioned below**

Model Question Papers: Theory Time: 3hrs. Marks:75

It is resolved to change the Questions for I to VI Semesters .i.e

Section A; Short Answer Questions.5X5 = 25 Marks

Q.No. 1 to 8 Short Answer questions, students should write any FIVE out of EIGHT.

Section B; Essay type Questions. 5X10=50 Marks

Q. No. 9 to 13 Essay type questions, students should write all FIVE with internal choice.

**Internal Marks:** 25 Marks it may be 25 objective questions/ short answer question as per the faculty and principal convenient.

**Model Question Papers: Practicals.**

Time: 3hrs.

Marks:50M

**I. Major Practicals**

**1X20=20M**

1.

**II. Minor Practicals**

**1X10=10M**

1.

**III. Spotters**

**5X2=10M**

1.

2.

2.

5.


**IV. Record**

**05 M**

**V. Viva**

**05 M**

S.No	Name	Signature
1.	Dr. N. Anitha	N. Anitha
2.	Dr. K. Siva Prasad	K. Siva Prasad
3.	Dr. MD. Maqsood Ahmad	Dr. MD. Maqsood Ahmad
4.	Dr. P. Vijaya Kumar	Not Attended (on Medical Leave)

  
Dr. Uday Sankar Allam  
Chairman, BOS (B. Voc. (Medical Lab Technology))

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VIKRAMA SIMHAPURI UNIVERSITY: NELLORE – 524 324.

4 Year UG Honors Programme with Single Majors  
COMMON MODEL QUESTION PAPER for B.VOC HONORS MEDICAL LAB TECHNOLOGY  
(w.e.f. 2023 – 24)

Time : 3 Hours

Max. Marks:75

SECTION – A

Answer any FIVE of the following  
(5 x 5 = 25 marks)

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8

SECTION – B

Answer any FIVE of the following  
(5 x 10 = 50 marks)

UNIT - I

9. (a)  
or  
(b)

UNIT - II

10. (a)  
Or  
(b)

UNIT - III

11. (a)  
Or  
(b)

UNIT - IV

12. (a)  
Or  
(b)

UNIT - V

13. (a)  
Or  
(b)