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		14 th

MINUTES OF THE FOURTEENTH BOARD OF STUDIES MEETING

Faculty: Biosciences

Board: Clinical Laboratory Technology

The Meeting of Board of Studies (BoS) was held as given below:

Name of the Body	BoS
Department	Clinical Laboratory Technology
Meeting No.	14
Date and Time	06.12.2022, 10.30 a.m.
Venue	Innovation Centre
Members Attended	The details are given in the ANNEXURE -I

AGENDA	
1.	Discussion on syllabi in second semester for 2022-23 batch and onwards
2.	Discussion on syllabus for Part III - Inter Disciplinary Course (IDC) offered by Department of Information Technology for 2022-23 batch and onwards
3.	Discussion on Part I (Tamil/Hindi/French/Malayalam) offered by Language departments for 2022-23 batch and onwards
4.	Discussion on Part II (English) offered by English department for 2022-23 batch and onwards
5.	Discussion on Part IV (AECC) Basic Tamil/Advance Tamil/ Human Rights and Women's Rights offered by Tamil Department and Department of Commerce with Corporate Secretaryship (CA) respectively for 2022-23 batch and onwards
6.	Discussion on credits for Part V Extension Activity for 2022-23 batch and onwards
7.	Discussion on PG Diploma programme offered to other departments for 2022-23 batch and onwards
8.	Discussion on Value Added Certificate Course (VACC)
9.	Any other matter





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MINUTES OF THE FOURTEENTH BOARD OF STUDIES MEETING

Faculty: Biosciences

Board: Clinical Laboratory Technology

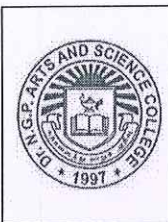
The Chairman of BoS welcomed all the Panel members for the meeting. The items listed in the agenda were taken for discussion.

The following are the minutes of the meeting:

Item - 01	Discussion on syllabi in second semester for 2022-23 batch and onwards
Discussion	<p>223CL1A2CA: Bioanalytical Techniques</p> <ul style="list-style-type: none">• Dr.Muthusami suggested to include the topics Acidic buffer and basic buffer in Unit I• Dr.Gayathri Devi suggested to include High performance thin layer chromatography- Principle, Instrumentation and Application in Unit II and Immunoassay in Unit III• Dr.Karthikeyan suggested to include Types of filters, Difference between colorimeter and spectrophotometer , Basic maintenance of instruments, Quality control and Calibration of instruments in Unit IV• Mr.Vasanth Kumar suggested to include Rotor- types of rotors- fixed angle, swinging bucket and vertical rotors and functions of rotors in Unit V <p>223CL1A2CB: Intermediary Metabolism and Metabolic Disorders</p> <ul style="list-style-type: none">• Dr.Muthusami recommended to include Anabolism, catabolism and amphibolism in Unit I• Dr.Gayathri Devi suggested to include Odd numbered fatty acid- propionic acid, Even numbered fatty acid- palmitic acid in Unit II and Overall reaction and energetics in Unit III• Dr.Karthikeyan suggested to include salvage pathway and denova synthesis in Unit IV and high energy compounds, Synthesis of ATP and components of ETC in Unit V. He also recommended to add Tietz Textbook of Clinical Chemistry and Molecular Diagnosis under reference books. <p>223CL1A2CP: Core Practical -Clinical Biochemistry-I</p> <p>Dr.Karthikeyan suggested to introduce the following experiments:</p> <ul style="list-style-type: none">• Urine collection and preservation• Quantitative analysis of calcium in urine
Resolution	The Board unanimously approved the syllabi.

Cont...





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Item - 02	Discussion on syllabus for Part III - Inter Disciplinary Course (IDC) offered by Department of Information Technology for 2022-23 batch and onwards
Discussion	224IT1A2IP - Computer Applications in Clinical Laboratory The syllabus approved by the Board of Studies in Information Technology was placed for endorsement.
Resolution	The Board unanimously approved the above syllabus.
Item - 03	Discussion on Part I (Tamil/Hindi/French/Malayalam) offered by Language departments for 2022-23 batch and onwards
Discussion	Part I: 221TL1A2TA: Tamil-II Ara Ilakkiyam 221TL1A2HA: Hindi-II Modern Literature 221TL1A2MA: Malayalam – II Modern Literature 221TL1A2FA: French-II Grammar, Translation and Civilization respectively The unified syllabi approved by the Board of Studies in Languages were placed for endorsement.
Resolution	The Board unanimously approved the syllabi.
Item - 04	Discussion on Part II (English) offered by English department for 2022-23 batch and onwards
Discussion	221EL1A2EA : Part II: Professional English II The unified syllabus approved by the Board of Studies in English was placed for endorsement.
Resolution	The Board unanimously approved the syllabus.
Item - 05	Discussion on Part IV (AECC) Basic Tamil/Advanced Tamil/ Human Rights and Women's Rights offered by Tamil Department and Department of Commerce with Corporate Secretaryship (CA) respectively for 2022-23 batch and onwards.
Discussion	221TL1A2AA/ 221TL1A2AB: Basic Tamil/Advanced Tamil The unified syllabi approved by the Board of Studies in Tamil were placed for endorsement 225CR1A2AA: Human Rights and Women's Rights The unified syllabus approved by the Board of Studies in Commerce with Corporate Secretaryship (CA) was placed for endorsement.
Resolution	The Board unanimously approved the syllabi.
Item - 06	Discussion on credits for Part V Extension Activity for 2022-23 batch and onwards
Discussion	One credit to be awarded for each Extension activity like YRC/NCC/NSS/ RRC/Yoga/Sports/ Clubs
Resolution	The Board members approved one credit for Extension activity.

Cont...





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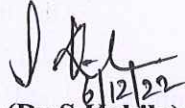
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Item - 07	Discussion on PG Diploma programme offered to other departments for 2022-23 batch and onwards
Discussion	Board members suggested to retain the same syllabi and include Internal assessment for 2022-23 batch and onwards
Resolution	The Board members unanimously approved the same.
Item - 08	Discussion on Value Added Certificate Course (VACC)
Discussion	The certificate courses on Lab Quality Control and Record Management offered by internal faculty and Medical coding offered by Industry were discussed
Resolution	The Board unanimously approved the same.
Item - 09	Any other matter – Finalizing the Panel of Examiners
Discussion	Board members recommended the Panel of Examiners
Resolution	The Board members approved the same. (Encl. -Panel of Examiners)


The Chairman of Board of Studies (BoS) thanked all the members for their active participation and cordially invited them for the next meeting.

Date: 06.12.2022


06/12/22
(Dr.S.Kokila)

BoS Chairman/HoD
Department of Clinical Laboratory Technology
Dr N. G. P. Arts and Science College
Coimbatore – 641 048



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Syllabus Revision

Faculty : Biosciences

Board : Clinical Laboratory Technology

Course Code/ Name : 223CL1A2CA - Bioanalytical Techniques

Semester : II

Unit	Existing	Changes
I	Buffers: pH meter-principle, instrumentation. pH scale, Henderson-Hasselbalch equation, Buffer solutions, Buffer systems of blood-Hb, Protein and Phosphate buffer system. Various ways of expressing the solute and solvent concentrations - molality, molarity, normality, mole fraction - Definitions only.	Acidic buffer and basic buffers
II	Chromatographic Techniques: Paper chromatography-principle, materials, methods and applications. Thin Layer chromatography- principle, Technique and applications. Gas liquid chromatography- principle and applications. Ion-exchange chromatography, Affinity chromatography and Molecular sieve chromatography- Principle and applications. HPLC, FPLC, GC-MS [principles only].	High performance thin layer chromatography (HPTLC)- principle, instrumentation and applications
III	Electrophoretic Techniques: Principles and applications of paper electrophoresis, Gel electrophoresis- Agarose gel, and SDS-PAGE. Immuno electrophoresis- principle and technique, applications of Immuno electrophoresis. Principles and applications of Immunoassays- Radio immuno Assay, Isoelectric focusing Enzyme Linked Immuno Sorbent Assay.	Immunoassays
IV	Photometry: Colorimetry- Principle- Beer - Lambert's Law. Instrumentation and applications of colorimeter. Spectrophotometer-principle, Components of spectrophotometer and its applications. Difference between Colorimeter and spectrophotometer Spectrofluorimeter- components. Applications of spectrofluorimetry. Flame photometry- principle, basic components of flame photometry. Types- Emission flame photometry, Atomic absorption spectrophotometry.	Types of filters, Difference between colorimeter and spectrophotometer. Basic maintenance of instruments, Quality control and Calibration of Instruments
V	Centrifugation: Principle of Centrifugation. Centrifuges - Bench top, high speed, Ultra centrifuge, analytical centrifuge - Principles and applications. Determination of Molecular weight by Sedimentation velocity method. Differential centrifugation - principle, Separation of Cell Organelles by differential centrifugation.	Rotor and types- fixed angle, swinging bucket, vertical rotors. Functions of rotors

PERCENTAGE OF SYLLABUS REVISED: 23 %

COURSE FOCUSES ON:

<input checked="" type="checkbox"/> Skill Development	<input checked="" type="checkbox"/> Entrepreneurial Development
<input checked="" type="checkbox"/> Employability	<input checked="" type="checkbox"/> Innovations
<input checked="" type="checkbox"/> Intellectual Property Rights	<input type="checkbox"/> Gender Sensitization
<input type="checkbox"/> Social Awareness/ Environment	<input type="checkbox"/> Constitutional Rights/ Human Values/ Ethics





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Syllabus Revision

Faculty : Biosciences

Board : Clinical Laboratory Technology

Course Code/ Name : 223CL1A2CB – Intermediary Metabolism and Metabolic Disorders

Semester : II

Unit	Existing	Changes
I	Carbohydrate metabolism and metabolic disorders: Introduction to metabolism: Types of metabolic reactions. Carbohydrate metabolism: Glycolysis, Tri Carboxylic Acid (TCA) cycle, Glycogenesis and Glycogenolysis. Alternative pathways: Hexose Monophosphate (HMP) Shunt, gluconeogenesis (Structures not needed). Disorders of carbohydrate metabolism: Hypoglycemia, Hyperglycemia- Diabetes mellitus- Introduction , types of diabetes mellitus , clinical m and diagnosis. Galactosemia, and Glycogen storage diseases.	Anabolism, catabolism and amphibolism.
II	Lipid metabolism and metabolic disorders: Lipid metabolism: Fatty acid oxidation – α , β oxidation, ω oxidation. Biosynthesis of saturated and unsaturated fatty acids. Biosynthesis of cholesterol (Structures not needed). Disorders of Lipid Metabolism: Hyperlipoproteinemia and Hypolipoproteinemia. Lipid storage diseases: Artherosclerosis, Fatty liver , TaySach's disease and Niemann - Pick disease.	odd numbered fatty acid- propionic acid, even numbered chain fatty acid- palmitic acid
III	Protein metabolism and metabolic disorders: Protein metabolism: general breakdown of protein- Deamination, Transamination, Decarboxylation and Urea cycle (Structures not needed). Disorders of amino acid metabolism and its clinical manifestation: Phenylketonuria, Maple syrup disease, Alkaptonuria and Hartnup's disease.	Overall reaction and energetics
IV	Nucleic acid metabolism and metabolic disorders: Nucleic acid metabolism: Biosynthesis and degradation of purine and pyrimidine nucleotides (Structures not needed) Disorders of purine metabolism: Hyperuricemia and Gout, Hypouricemia, Xanthinuria, Von Gierke diseases. Disorders of Pyrimidine metabolism: Orotic aciduria.	Salvage pathway and denova synthesis
V	Biological oxidation: Mitochondrial electron transport chain (ETC): electron carriers, sites of ATP production , inhibitors of ETC, Oxidative phosphorylation, inhibitors of oxidative phosphorylation, Mitochondrial shuttle system.	High energy compounds, Synthesis of ATP, components of ETC

PERCENTAGE OF SYLLABUS REVISED: 26%

COURSE FOCUSES ON:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Skill Development | <input checked="" type="checkbox"/> Entrepreneurial Development |
| <input checked="" type="checkbox"/> Employability | <input checked="" type="checkbox"/> Innovations |
| <input checked="" type="checkbox"/> Intellectual Property Rights | <input type="checkbox"/> Gender Sensitization |
| <input type="checkbox"/> Social Awareness/ Environment | <input type="checkbox"/> Constitutional Rights/ Human Values/ Ethics |





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Syllabus Revision- Practical

Faculty : Biosciences

Board: Clinical Laboratory Technology

Course Code/Name: 223CL1A2CP: Core practical- Clinical Biochemistry I

Semester : II

Existing	Changes
<ol style="list-style-type: none">1. Preparation of buffers2. Measurement and adjustment of pH3. Quantitative analysis of urea in urine4. Quantitative analysis of uric acid in urine5. Quantitative analysis of creatinine in urine6. Quantitative analysis of phosphorus in urine7. Quantitative analysis of protein in urine8. Quantitative analysis of sodium and potassium in urine9. Separation of amino acids by paper chromatography10. Separation of sugars by thin layer chromatography11. Separation of serum proteins by SDS -PAGE12. Strip test method for pregnancy- Demonstration	<ol style="list-style-type: none">13. Urine collection and preservation14. Quantitative analysis of Calcium in urine

Note: End Semester Practical Examination requires completion of 12 experiments out of 14.

PERCENTAGE OF SYLLABUS REVISED: 25%

COURSE FOCUSES ON:

<input checked="" type="checkbox"/> Skill Development	<input checked="" type="checkbox"/> Entrepreneurial Development
<input checked="" type="checkbox"/> Employability	<input checked="" type="checkbox"/> Innovations
<input checked="" type="checkbox"/> Intellectual Property Rights	<input type="checkbox"/> Gender Sensitization
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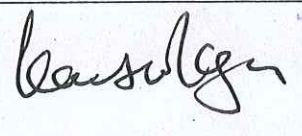
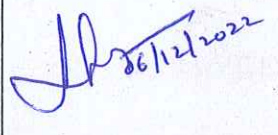

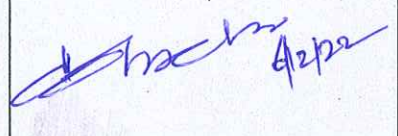
APPROVAL

AY 2022-23

ATTENDANCE OF THE FOURTEENTH BOARD OF STUDIES MEETING

Faculty: Biosciences

Board: Clinical Laboratory Technology

S. No.	Name	Position	Signature
1	Dr.S.Kokila Assistant Professor & Head Department of Clinical Lab Technology Dr. N. G. P. Arts and Science College, Coimbatore	Chairman	 6/12/22
2	Dr.K.R.Muthusami Chief Biochemist, Deptment of Biochemistry KMCH Institute of Laboratory Medicine KMCH, Coimbatore - 641 048.	Member (Subject Expert) VC Nominee	
3	Dr. T.M. Kartikeyan Professor, Department of Pathology KMCH Institute of Health Sciences & Research, Coimbatore - 641 014.	Member (Subject Expert)	
4	Dr. S.Gayathri Devi Professor, Department of Biochemistry Biotechnology & Bioinformatics Avinashilingam University Coimbatore - 641043	Member (Subject Expert)	 06/12/2022
5	Dr.R.Ragunathan Director, Centre for Bioscience and Nanoscience Research Coimbatore - 641021	Member (Industry Expert)	ABSENT
6	M. Vasanth Kumar Assistant Professor, Department of Criminology, CMS College of Science and Commerce ,Coimbatore .	Alumni	
7	Dr.A. Adhiselvam Associate Professor & Head i/c Department of Information Technology Dr. N. G. P. Arts and Science College, Coimbatore	Co-opted Member	 6/12/22

8	Ms.M. Vinitha III B.Sc. CLT Dr.N.G.P. Arts and science College	Student Representatives	<i>M. Vinitha</i>
9	Dr.C.Hemalatha Assistant Professor Dept of CLT Dr.N.G.P.Arts and science College	Member	<i>Hemalatha 6/12/22</i>
10	Dr.M.Thiruselvi Assistant Professor Dept of CLT Dr.N.G.P.Arts and science College	Member	<i>Thiruselvi 6/12/22</i>
11	Dr.S.Sasikala Assistant Professor Dept of CLT Dr.N.G.P.Arts and science College	Member	<i>Sasikala 6/12/22</i>
12	Dr.K.Anbalagan Assistant Professor Dept of CLT Dr.N.G.P.Arts and science College	Member	<i>Anbalagan 6/12/22</i>
13	Ms. S. Mavuniq Assistant Professor Dept of CLT Dr.N.G.P.Arts and science College	Member	<i>Mavuniq 6/12/22</i>

06.12.2022

[Signature]
06/12/22
Board Chairman

(Dr.S.Kokila)

BoS Chairman/HoD
Department of Clinical Laboratory Technology
Dr N. G. P. Arts and Science College
Coimbatore - 641 048

