



Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
Approved by Government of Tamil Nadu & Accredited by NAAC with 'A++' Grade (3rd Cycle-3.64 CGPA)
Dr. N.G.P.-Kalapatti Road, Coimbatore-641 048, Tamil Nadu, India.
Website: www.drngpasc.ac.in | Email: info@drngpasc.ac.in. | Phone: +91-422-2369100

BoS

13th

MINUTES OF THE THIRTEENTH BOARD OF STUDIES MEETING

Faculty: Biosciences

Board: Microbiology

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

Name of the Body	BoS
Department	Microbiology
Meeting No.	13
Date and Time	05/08/2022 and 10.a.m.
Venue	Microbiology Department (Instrumentation Room)
Members Attended	The details are given in the ANNEXURE -I

AGENDA

1.	Discussion on UG Curriculum for AY 2022-23 and onwards adopting R4 guidelines
2.	Discussion on UG syllabi for Part III - Core Courses for first semester 2022-23 Batch
3.	Discussion on syllabus for Part III - Inter Disciplinary Course (IDC) offered by Department of Clinical Lab Technology for the Batch:2022-23
4.	Discussion on Part I (Tamil/Hindi/French/Malayalam) offered by Language department for 2022-23 Batch
5.	Discussion on Part II (English) offered by English department for 2022-23 Batch
6.	Discussion on Part IV (AECC) Environmental Studies offered by Microbiology department to first semester of all UG Programmes 2022-23 Batch
7.	Discussion on credits for Part V Extension Activity for 2022-23 Batch
8.	Discussion on PG Curriculum for AY 2022-23 and onwards adopting R4 guidelines
9.	Discussion on PG syllabi for first semester courses 2022-23 Batch
10.	Discussion on PG DSE offered by Department of Microbiology to other departments for 2022-23 Batch
11.	Discussion on Value Added Certificate Courses (VACC)
12.	Any other matter





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MINUTES OF THE THIRTEENTH BOARD OF STUDIES MEETING

Faculty: Biosciences

Board: Microbiology

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 UG Curriculum for AY 2022-23 and onwards adopting R4 guidelines
Discussion	Under regulation R4, curriculum for AY 2022-23 and onwards was presented for discussion.
Resolution	The Board unanimously approved the curriculum.
Item - 02	Discussion on syllabi for Part III - Core Courses for first semester UG - 2022-23 Batch
Discussion	<p>223MB1A1CB - Cell Biology (New Course) Dr. Vijila recommended for introducing additional core paper in first semester itself. The students will be able to have adequate knowledge about cell structure and function at earliest to have better learning and flow of subsequent courses Dr. Chitra Thangavel emphasized the following changes Unit I to be bifurcated as Unit I and Unit II since it is too heavy to learn at undergraduate level Unit III: Completely revised with focus on Cell Signaling & Cell-Cell Interaction Unit IV: Revised with Protein Sorting and Transport determination of biomolecules. Unit V Existing contents of unit II was shifted to Unit V The above revisions were made since the cell communication is trending topic in understanding the role of microbial pathogenesis so, the strategies on breaking the cell communication is going to be the key point in controlling infection related diseases in future paving way for more research.</p> <p>223MB1A1CP - Fundamentals of Microbiology and Cell Biology (New Practical Course) Dr. Vijila recommended the introduction of following experiments to create interest and to develop skill in interdisciplinary experiments where graduates will aspire to show interest and excel in interdisciplinary</p> <ul style="list-style-type: none">• Fungal staining – Lacto Phenol Cotton Blue Mount• Fungal cell observation by Stereo Microscope – (DBT Star Scheme)• Screening of PHB production-(DBT Star Scheme)• Microscopic studies of cell organelles-Plant and Animal cells <p>Observation and interpretation of permanent slide for stages of mitosis and meiosis, Algae, Fungi and Protozoa</p> <p>223MB1A1CA - Fundamentals of Microbiology Dr. Gnanadesigan suggested for incorporation of the following topics Unit I: Salmon A .Waksman, Martinus W.Beijerinck, Elie Metchnikoff, Fannie Eilshmius</p>





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	Hesse, Paul Ehrlich. Scope of Microbiology. Unit II: Confocal Microscopy. Unit III: Sterility Testing. Unit IV: Transport media (Stuart Transport Medium), Media for Anaerobes (Robert son cooked meat media) Unit V: <i>Penicillium</i> -Fungi, Protozoa – (<i>Euglena</i> and <i>Nostoc</i>) The above changes are needed since it is mandatory for a microbiology student to be aware of contributions by key scientists and understand the microscopic techniques important in pharmaceutical and diagnostic field of microbiology
Resolution	The Board unanimously approved the above said course content after detailed discussions.
Item - 03	Discussion on syllabus for Part III - Inter Disciplinary Course (IDC) offered by Department of Clinical Lab Technology for the Batch:2022-23
Discussion	223CL1A1IA – Biochemistry 223CL1A1IP – Biochemistry Practical The syllabi for the Batch:2022-23 were placed for endorsement.
Resolution	The Board members approved the above said course content.
Item - 04	Discussion on Part I (Tamil/Hindi/French/Malayalam) offered by Language department for 2022-23 Batch
Discussion	221TL1A1TA/ 221TL1A1HA /221TL1A1FA /221TL1A1MA: Part I:Tamil-I: Ikkala Illakiyam / Hindi-I:Modern Literature/French-I:Grammar, Translation and Civilization/ Malayalam – I:Modern Literature respectively The unified syllabus approved by the Board of Studies in Languages were placed for endorsement.
Resolution	The Board approved the same
Item – 05	Discussion on Part II (English) offered by English Department for 2022-23 Batch
Discussion	221EL1A1EA : Part II: Professional English I (New Course) The unified syllabus approved by the Board of Studies in English was placed for endorsement.
Resolution	The Board unanimously approved the syllabus
Item – 06	Discussion on Part IV (AECC) Environmental Studies offered by Microbiology department to first semester of all UG Programmes 2022-23 Batch
Discussion	223MB1A1AA: Environmental Studies (New Course) Dr. Vijila recommended for removal of case studies provided in the first unit for different ecosystem with emphasize that it will be too early for a first semester learner to do it. Dr. Gnanadesigan suggested that the contents provided in the units II to IV are more extensive and the learning target is not achievable in the stipulated teaching hours. So he recommended for minimizing the contents and case studies.
Resolution	The Board approved the syllabus.
Item – 07	Discussion on credits for Part V Extension Activity for 2022-23 Batch
Discussion	One credit to be awarded for participation in Extension activity like YRC/RCC//NSS/ RRC/Yoga/Sports/Clubs
Resolution	The Board members approved one credit for Extension activity





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Item – 08

Discussion on PG Curriculum for AY 2022-23 and onwards adopting R4 guidelines

Discussion

Under regulation R4, common syllabi have been designed for the mandatory core theory courses recommended by TANSCH (for all PG programmes related to Biosciences). The unified syllabus framed by designated departments will be approved by their respective BoS. The PG Curriculum for AY 2022-23 was presented for discussion.

Resolution

The Board unanimously approved the curriculum.

Item – 09

Discussion on PG syllabi for first semester courses 2022-23 Batch

Discussion

Dr. Chitra Thangavel and Dr. Gnanadesigan suggested to introduce the following new courses.

223MB2A1CB - Microbial Physiology and Bacterial Diversity (New Course)

Dr. Gnanadesigan recommended for introduction of this course to have enhanced learning and understanding of adaptive and diverse nutritional and metabolic pathways exhibited by microbes which can be explored in future during their career of research

223MB2A1CC - Mycology, Phycology and Lichenology (New Course)

Since it is essential for identification and providing taxonomical ranks while pursuing bioprospecting research in Microbiology

Dr. Vijila signified the importance of strong knowledge required on dimensions of algae, fungi and lichens to a microbiologist and recommended for offering this new course

223MB2A1CA - Fundamentals of Microbiology (New Course)

The following revisions were suggested by Dr. Chitra Thangavel and Dr. Vijila

Unit I: Lederberg and Zinder, Lwoff, Arber and Smith, Temin and Baltimore. Scope of microbiology was added on par with recent opportunities.

Unit II: Incorporation of Phenol coefficient test-Cultivation of Bacteria, Fungi, Actinomycetes, NRMCF and NFCCI.

Unit V: Rearrangement and addition of topics with relevance to Protozoa and Virology was carried out

Distribution, Nutrition, Morphology, Encystment and Excystment, Reproduction of Protozoa

General Properties, Classification, Life cycle of Viruses: Animal (Pox virus) and Plant virus (TMV). Cultivation of Viruses: Animal inoculation, Embryonated egg inoculation and Cell Culture, Plant tissue cultures. Characterization and Enumeration of Viruses - Quantitative assay was added.

With the intent of covering all microbiological dimensions along with bacteria aspects on viruses were included

223MB2A1CD - Comprehensive Biology (New Course)

The student representative member Ms. Mohanapriya of II M. Sc. Microbiology and Dr. Chitra Thangavel suggested to minimize the contents which are repetitive and to remove the topics which are heavy to learn for learner

Unit I: Enzyme and analysis is removed which is repetitive in Microbial Physiology course

Unit II: Plant cell multiplication and embryo formation are removed as it was not relevant to





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	<p>the unit.</p> <p>223MB2A1SA - Bio-analytical Techniques Dr. Vijila recommended for following topics in view of obtaining skills sets required in pharmaceutical companies, food industries, diagnostics labs and research activities. Unit I: LCMS Unit IV: DNA and Immunosensors Unit V: Quantitative determination of biomolecules. The specific techniques were given as follows: Carbohydrates (DNSA and Anthrone method), Lipids (Gravimetric), Protein (Lowry and Bradford method). Determination of Molecular weight of protein (MS and SDS-PAGE) and DNA (Agarose gel).</p> <p>223MB2A1CP - Basic Techniques in Microbiology Dr. Gnanadesigan suggested for introducing the following practical Experiment : 12. Microscopic observation of Algae and Lichen thallus to have hands on learning experience with orientation towards theory course introduced</p>
Resolution	The Board unanimously approved the above listed course contents.
Item – 10	Discussion on PG DSE offered by Department of Microbiology to other departments for 2022-23 Batch
Discussion	<p>223MB2A1DA - Microbial Technology Dr. Chitra Thangavel suggested for addition of following topics Unit II: N₂ fixing, Phosphate Solubilizing, Phosphate Mobilizing, Plant Growth Promoting Rhizobacteria (PGPR) Unit III: Welan- succinoglucon- Curdlan- Chitosan Unit V: Incubation centers For being more familiarized with microbes and their role in the residue free agriculture to improve the crop yield in green way method. It is need of the hour to become agricultural entrepreneur and inspires to involve the learner in agricultural research</p>
Resolution	The Board members approved the above said course content.
Item – 11	Discussion on Value Added Certificate Courses (VACC)
Discussion	<p>The following Value Added Certificate Course is to be offered in the first semester by internal faculty for interested students belonging to all batches from our department and across disciplines</p> <p>Bio-fertilizer Production and its field trial To become a skilled person with entrepreneurship qualities</p>
Resolution	The Board unanimously approved the above value added course.
Item – 12	Any other matter
Discussion	Board members recommended the committee of Panel of Experts for examination purpose.





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Resolution

The BoS accepted to execute with suggested 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: 05/08/2022


(Dr. J. RENGARAMANUJAM)





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Syllabus Revision

Faculty: Biosciences

Board: Microbiology

Course Code/ Name: 223MB1A1CA/ Fundamentals of Microbiology

Semester: I

Unit	Existing	Changes
I	Unit-I History of Microbiology History and Scope of Microbiology – Spontaneous generation theory and its disproval–Contribution of Leuwenhoek, Louis Pasteur, Robert Koch, Edward Jenner, Joseph Lister and John Tyndall.	Unit-I History of Microbiology Salmon A .Waksman, Martinus W. Beijerinck, Elie Metchnikoff, Fannie Eilshmius Hesse, Paul Ehrlich. Scope of Microbiology.
II	Unit II Microscopy and Staining Microscopy – Principles and application–Bright field, Darkfield, Phasecontrast, Fluorescence, SEM&TEM. Stains – Staining reactions–Types of staining – Simple, Differential (Gram's, Spore, AFB), Capsule staining, fungal staining.	Unit II Confocal Microscope
III	UnitIII Methods of Sterilization Sterilization and Disinfection-Principles- Methods of Sterilization – Physical methods: Dry Heat, Moist heat, Filtration and Radiation. Chemical methods - Formaldehyde, Alcohol, Phenol and Gaseous sterilizing agents.	UnitIII Sterility Testing.
IV	UnitIV Culture Methods Culture Media – Types of Media–Enriched, Selective, Differential and Special Purpose Media–Pure culture techniques – Maintenance and Preservation of microbial culture,	UnitIV Culture Methods Transport media (Stuart Transport Medium), Media for Anaerobes (Robert son cooked meat media)
V	UnitV General characteristics of Fungi, Algae. Morphology, General Characteristics, and economic importance of Fungi (<i>Aspergillus</i> , <i>Saccharomyces</i>) - Algae (<i>Anabena</i> , and <i>Spirogyra</i>)	Unit V General Fungi (<i>Aspergillus</i> , <i>Penicillium</i>) - Protozoa – (<i>Euglena</i> and <i>Nostoc</i>)

PERCENTAGE OF SYLLABUS REVISED: 28

COURSE FOCUS ON:

<input checked="" type="checkbox"/> Skill Development	<input type="checkbox"/> Entrepreneurial Development
<input checked="" type="checkbox"/> Employability	<input checked="" type="checkbox"/> Innovation
<input type="checkbox"/> Intellectual Property Right (IPR)	





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Syllabus Revision

Faculty: Bioscience

Board: Microbiology

Semester: I

Course Code/ Name: 223MB1A1CB-Cell Biology

Unit	Existing	Changes
I	Prokaryotes & Eukaryotes Structure of Prokaryotes - Cell wall - Nuclear material - Flagella - Pili - Endospore formation - Structure of Eukaryotes - Cell wall - Nucleus - organization of genetic material - Mitochondria - Endoplasmic reticulum - Ribosomes	Definition - Shape, arrangement and Size - Cell Organization - Structure and function - Cell wall- Gram positive and Gram negative - Cell membrane - Nuclear material - plasmids - ribosomes - inclusion bodies- Flagella - Pili - Capsule - Slime - Endospore formation
II	Cell Division Binary fission in Bacteria - Eukaryotic Cell Division and Cell Cycle - Mitosis: Mitotic Spindle - Centromere - Centrioles (Prophase - Metaphase - Anaphase-Telophase). Meiosis: Stages and Synapsis (Crossing Over)	Eukaryotic Cell Organization - Structure and Function of - Cell wall - Cell membrane - Nucleus (organization of genetic material) - Mitochondria - Endoplasmic reticulum - Ribosomes - Golgi Apparatus -Lysosomes - Extra cellular matrix - Chloroplast & Cytoskeleton - actin filaments, intermediate filaments, microtubules - flagella - cilia
III	Archaeaebacteria: -Introduction - Cell wall - Lipids and Membranes - Metabolism - Archaeobacterial taxonomy - Methanogens - Archaeobacterial sulfate reducers - Halophiles - Thermophiles - Thermoacidophiles	Cell Signaling & Cell-Cell Interaction Cell-cell interactions in eukaryotes - adhesion junctions, tight junctions, gap junctions, and plasmodesmata - Quorum sensing (in prokaryotes) Cell Signaling - Signalling molecules and their receptors Function of cell surface receptors, Cyclic AMP pathway
IV	Microbial Taxonomy- -Taxonomic ranks - Major characteristics used in taxonomy - morphology, physiology, ecology, genetic and molecular characteristics - Classification systems - Natural, Phenetic & Bergey's manual (9th Edition) - its importance, phylogenetic classification - Numerical taxonomy	Protein Sorting and Transport Extracellular protein transport - targeting and insertion of proteins in the ER, export of proteins to Golgi apparatus, Protein sorting and export from Golgi apparatus to Lysosomes
V	Fungi and Algae: Kingdoms of organisms - Whittaker's - Carl Woese - Fungi - Alexopolus classification - Algae - Fritsch classification of Algae - Molecular classification - phylogentic tree and importance.	Cell Division Prokaryotes - Binary fission in Bacteria - Eukaryotic Cell cycle and Cell division - Mitosis: Mitotic Spindle - Centromere - Centrioles (Prophase - Metaphase - Anaphase- Telophase). Meiosis: Stages and Synapsis (Crossing Over)

PERCENTAGE OF SYLLABUS REVISED: 80

COURSE FOCUS ON:

<input checked="" type="checkbox"/> Skill Development	<input type="checkbox"/> Entrepreneurial Development
<input type="checkbox"/> Employability	<input type="checkbox"/> Innovation
<input type="checkbox"/> Intellectual Property Right (IPR)	





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Syllabus Revision

Faculty: Bioscience

Board: Microbiology

Semester: I

Course Code/ Name: 223MB1A1CP - CORE PRACTICAL: FUNDAMENTALS OF MICROBIOLOGY AND CELL BIOLOGY

Exp. No.	Existing	Changes
1.	Laboratory precautions	Preparation of cleaning solutions - Chromic acid
2.	Preparation of cleaning solutions - Chromic acid	Media preparation – Nutrient Broth, Nutrient Agar (Plate, Deep, Slant and semisolid media), Differential and Selective medium
3.	Culture media preparation – Nutrient Broth and Nutrient Agar (Plate, Deep, Slant)	Decimal Dilution Technique
4.	Differential medium and Selective medium	Pure culture techniques- Streak plate, Pour plate and Spread plate method.
5.	Sterility testing of Autoclave	Isolation and Enumeration of bacteria, fungi and actinomycetes from soil
6.	Sterility testing of Hot air Oven	Bacterial staining Techniques - Simple & Differential staining-Gram's , Acid Fast, Capsule and Spore staining
7.	Decimal Dilution Technique	Fungal staining – Lacto phenol Cotton Blue Mount
8.	Pure culture techniques – Streak plate method, Pour plate method, Spread plate method	Slide culture Technique (DBT Star Scheme)
9.	Isolation and Enumeration of bacteria from soil	Fungal Cell Observation by Stereo Microscope - Under DBT Star Scheme
10.	Isolation of fungi from soil	Screening of PHB production-(DBT Star Scheme)
11.	Isolation of Actinomycetes from soil	Microscopic studies of cell organelles-Plant and Animal cells
12.	Bacterial staining - Simple Staining & Gram Staining	Observation of permanent slide for stages of mitosis and meiosis, Algae, Fungi and Protozoa
13.	Slide culture Technique (DBT Star Scheme)	
14.	Preservation of bacterial cultures – Mineral oil overlay method(DBT Star Scheme)	

Note: End Semester Practical Examination requires completion of 10 experiments out of 12.

PERCENTAGE OF SYLLABUS REVISED: 46

COURSE FOCUS ON:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Skill Development | <input type="checkbox"/> Entrepreneurial Development |
| <input type="checkbox"/> Employability | <input type="checkbox"/> Innovation |
| <input type="checkbox"/> Intellectual Property Right (IPR) | |





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Syllabus Revision

Faculty: Biosciences
Semester: I

Board: Microbiology

Course Code/ Name: 221TL1A1TA / PART - I - TAMIL - I: IKKALA ILAKKIYAM

Unit	Existing	Changes
I	1. உயிர்-பெற்ற தழிழர்-பாட்டு - பாரதியார் 2. படி - பாரதிதாசன் 3. போராட்டப் புறப்பட்டு - தழிழ்-ஒளி 4. தமிழ்க் கொலை புரியாதீர் - புலவர் குழந்தை 5. திரைத்தமிழ்: அ)சும்மா கிடந்த நிலத்தை - எனத் தொடங்கும் பாடல் - பட்டுக்கோட்டை கல்யாண சுந்தரனார். ஆ) சமரசம் உலாவும் இடமுமே - எனத் தொடங்கும் பாடல் - மருதகாசி. இ) உன்னை அறிந்தால் - எனத் தொடங்கும் பாடல் - கண்ணதாசன்.	இலக்கிய வரலாறு - மறுமலர்ச்சி கவிஞர்களின் தமிழ்ப்பணிகள் பாரததேசம் - பாரதியார் தமிழரின் பெருமை - நாமக்கல் கவிஞர் திரைத் தமிழ் : விஞ்ஞானத்த வளர்க்கப் போறண்டி - உடுமலை நாயகனாகவி
II	1. கடமையைச் செய் - மீரா 2. அம்மாவின் பொய்கள் - ஞானக்கடத்தன் 3. செஞ்செட்டி - ஒருபேட்டி - மு.மேத்தா 4. சிங்கவால் ஞான்கின் மரணம் - சிற்பி 5. கடல்சோள்-2004 - முத்தமிழ்-விசும்பி 6. கரிகிறது தாய்ப்பால் - ஆரூர் தமிழ்நாடன் 7. ஐந்தாம் வகுப்பு 'அ' பிரிவு - நா. முத்துக்குமார் 8. ஹைகூ. கவிதைகள் - 15 கவிதைகள்	இலக்கிய வரலாறு - புதுக்கவிதையின் தோற்றமும் வளர்ச்சியும் ஒப்பிலாத சமுதாயம் - அப்துல் ரகுமான் கன்னிமாடம் - மு.மேத்தா மலையாளக் காற்று - சிற்பி
III	1. ஒரு கதையும் கொஞ்சம்-கள்ளிப்பாலும் - தாமரை 2. நீரில் அலையும் முகம் - அ. வெண்ணிலா 3. தொட்டிச் செடி - இளம்பிறை 4. ஏறிந்த வித்தியாசங்கள் - மல்லிகா	தொலைந்து போனேன் - தாமரை தற்காத்தல் - பொன்மணி வைரமுத்து புதையுண்ட வாழ்க்கை - சுசந்தி சுப்ரமணியன்
IV	1. வேப்பமரம் - ந.சிச்சமுத்தி 2. அகல்யை - புதுமைப்பித்தன் 3. ஒருபிடி-சோறு - ஜெயகாந்தன் 4. காய்ச்சமரம் - கி.ராஜநாராயணன் 5. நிசாசை - பாசா 6. குறிவை-மசால் நாத்தா - சு.வேணுகோபால்	இலக்கிய வரலாறு - சிறுகதையின் தோற்றமும் வளர்ச்சியும் கனகாம்பரம் - கு.ப.ராஜகோபால் ஆற்றங்கரைப் பிள்ளையார் - புதுமைப்பித்தன் பெயர்மை - ஜெயகாந்தன் காட்டில் ஒரு மான் - அம்பை வேட்கை - சூர்யகாந்தன்
V	அ. இலக்கியவரலாறு 1. மறுமலர்ச்சி கவிஞர்களின் தமிழ்ப்பணிகள் 2. புதுக்கவிதையின் தோற்றமும் வளர்ச்சியும் 3. சிறுகதையின் தோற்றமும் வளர்ச்சியும் ஆ.இலக்கணம்:1.வல்லினம் மிகும், மிகா இடங்கள் (ஒற்றுப்பிழை நீக்கி எழுதுதல்) 2. ர,ற,ல,ழ, ள,ண, ந,ன வேறுபாடு (ஒலிப்பு நெறி, சொற்பொருள் வேறுபாடு அறிதல்) இ. படைப்பாக்கப் பயிற்சி 1. கவிதை, சிறுகதை எழுதுதல்	இலக்கிய வரலாற்றுப் பகுதி அந்தந்த அலகுகளுக்குத் தகுந்தாற் போல் மாற்றி அமைக்கப்பட்டுள்ளது.

PERCENTAGE OF SYLLABUS REVISED:
COURSE FOCUS ON:

44 %

<input checked="" type="checkbox"/> Skill Development	<input checked="" type="checkbox"/> Entrepreneurial Development
<input checked="" type="checkbox"/> Employability	<input checked="" type="checkbox"/> Innovation
<input type="checkbox"/> Intellectual Property Right (IPR)	



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BoS

13th

Syllabus Revision

Faculty: Biosciences

Board: Microbiology

Semester : I

Course Code/ Name: 221TL1A1HA/ PART - I - HINDI - I : MODERN LITERATURE

Unit	Existing	Changes
I	गद्य - नूतन गद्य संग्रह (जय प्रकाश) पाठ 1- रजिया पाठ 2- मक्रील पाठ 3- बहता पानी निर्मला पाठ 4- राष्ट्रपिता महात्मा गाँधी	-
II	कहानी कुंज- डॉ वी.पी. 'अमिताभ'(पाठ 1-4)	-
III	व्याकरण : शब्द विचार (संज्ञा, सर्वनाम, कर्मक, विशेषण)	व्याकरण : शब्द विचार (संज्ञा, सर्वनाम, विशेषण)
IV	अनुच्छेद लेखन	-
V	अनुवाद अभ्यास-III (केवल अंग्रेजी से हिन्दी में) (पाठ 1 to 10)	-

PERCENTAGE OF SYLLABUS REVISED: 25 %

COURSE FOCUS ON:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Skill Development | <input checked="" type="checkbox"/> Entrepreneurial Development |
| <input checked="" type="checkbox"/> Employability | <input checked="" type="checkbox"/> Innovation |

Intellectual Property Right (IPR)





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13th

Syllabus Revision

Faculty: Biosciences

Board: Microbiology

Semester : I

Course Code/ Name: 221TL1A1FA / PART - I - FRENCH - I : Grammar, Translation and Civilization

Unit	Existing			Changes		
I	Objectifs de Communication	Tâche	Activités de réception et de production orale			
	<ul style="list-style-type: none"> Saluer Enter en contact avec quelqu'un. Se présenter. S'excuser 	En cours de cuisine, premiers contacts avec les membres d'un groupe	<ul style="list-style-type: none"> Comprendre des personnes qui se saluent. Échanger pour entrer en contact, se présenter, saluer, s'excuser. Communiquer avec tu ou vous. Comprendre les consignes de classe Épeler son nom et son prénom. Compter jusqu'à 10. 			
II	Objectifs de Communication	Tâche	Activités de réception et de production orale			
	<ul style="list-style-type: none"> Demander de se présenter. Présenter quelqu'un. 	Dans la classe de français, se présenter et remplir une fiche pour le professeur.	<ul style="list-style-type: none"> Comprendre les informations essentielles dans un échange en milieu professionnel. Échanger pour se présenter et présenter quelqu'un. 			
III	Objectifs de Communication	Tâche	Activités de réception et de production orale			
	<ul style="list-style-type: none"> Exprimer ses goûts. 	Dans un café, participer à une soirée de rencontres rapides et remplir de tâches d'appréciation.	<ul style="list-style-type: none"> Dans une soirée de rencontres rapid comprendre des personnes qui échantent sur elles et sur leurs goût Comprendre une personne qui parler des goûts de quelqu'un d'autre. 			
IV	Objectifs de Communication	Tâche	Activités de réception et de production orale	Demander à quelqu'un de faire quelque chose. Demander poliment. Parler d'actions passées.	Organiser un programme d'activités pour accueillir une personne importante.	Comprendre une personne demande un service à quelqu'un. Demander à quelqu'un de faire quelque chose. Imaginer et raconter au passé à partir de situations dessinées.
	<ul style="list-style-type: none"> Présenter quelqu'un 	Dans un café, participer à une soirée de rencontres rapides et remplir de tâches d'appréciation	<ul style="list-style-type: none"> Exprimer ses goûts. Comprendre une demande laissée sur un répondeur téléphonique. Parler de ses projets de week-end. 			
Autoévaluation du module I Page 40 – Préparation au DELF A1 page 42						
Tu veux bien? Page 46						
V	Demander à quelqu'un de faire quelque chose. Demander poliment. Parler d'actions passées.	Organiser un programme d'activités pour accueillir une personne importante.	Comprendre une personne demande un service à quelqu'un. Demander à quelqu'un de faire quelque chose. Imaginer et raconter au passé à partir de situations dessinées.	Make in Own Sentences		
	Tu veux bien? Page 46					

PERCENTAGE OF SYLLABUS REVISED: 25%

COURSE FOCUS ON:

<input checked="" type="checkbox"/> Skill Development	<input checked="" type="checkbox"/> Entrepreneurial Development
<input checked="" type="checkbox"/> Employability	<input checked="" type="checkbox"/> Innovation
<input type="checkbox"/> Intellectual Property Right (IPR)	





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13th

Syllabus Revision

Faculty: Biosciences

Board: Microbiology

Semester : I

Course Code/ Name: 221TL1A1MA / PART - I - MALAYALAM - I : MODERN LITERATURE

Unit	Existing	Changes
I	Novel : Alahayude penmakka	Novel : Pathummayude Adu
II	Novel : Alahayude penmakka	Novel : Pathummayude Adu
III	Short Story : Nalinakanthi	-
IV	Short Story : Nalinakanthi	-
V	Composition & Translation	Expansion of ideas, General Essay and Translation

PERCENTAGE OF SYLLABUS REVISED: 50%

COURSE FOCUS ON:

- | | |
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| <input checked="" type="checkbox"/> Skill Development | <input checked="" type="checkbox"/> Entrepreneurial Development |
| <input checked="" type="checkbox"/> Employability | <input checked="" type="checkbox"/> Innovation |
| <input type="checkbox"/> Intellectual Property Right (IPR) | |





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Faculty: Biosciences

Board: Microbiology

Semester: I

Course Code/ Name: 221EL1A1EA- Core Course: Professional English I

PERCENTAGE OF SYLLABUS REVISED: 100%

COURSE FOCUS ON:



Skill Development



Entrepreneurial Development



Employability



Innovation



Intellectual Property Rights (IPR)





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Syllabus Revision

Faculty: Bioscience

Board: Microbiology

Semester: I

Course Code/ Name: 223MB1A1AA –Environmental studies

Unit	Existing	Changes
I	Introduction to Environmental studies& Ecosystems: Multidisciplinary nature of environmental studies; components of environment – atmosphere, hydrosphere, lithosphere and biosphere. Scope and importance; Concept of sustainability and sustainable development. Ecosystem - Structure and function of ecosystem; Energy flow in an ecosystem: food chain, food web and ecological succession. Case studies of the following ecosystems: Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries).	
II	Natural Resources: Renewable and Non-renewable Resources: Land Resources and land use change; Land degradation, soil erosion and desertification. Deforestation: Causes and impacts due to mining, dam building on environment, forests, biodiversity and tribal populations. Water: Use and overexploitation of surface and ground water, floods, droughts, conflicts over water (international & inter-state). Heating of earth and circulation of air; air mass formation and precipitation. Energy resources: Renewable and non-renewable energy sources, use of alternate energy sources, growing energy needs, case studies.	
III	Biodiversity and Conservation: Levels of biological diversity: genetic, species and ecosystem diversity; Biogeography zones of India; Biodiversity patterns and global biodiversity hot spots. India as a mega-biodiversity nation; Endangered and endemic species of India. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts, biological invasions; Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity. Ecosystem and biodiversity services: Ecological, economic, social, ethical, aesthetic and Informational value.	
IV	Environmental Pollution, Environmental Policies & Practices: Environmental pollution: types, causes, effects and controls; Air, water, soil, chemical and noise pollution. Nuclear hazards and human health risks. Solid waste management: Control measures of urban and industrial waste. Pollution case studies. Climate change, global warming, ozone layer depletion, acid rain and impacts on human communities and agriculture. Environment Laws: Environment Protection Act; Prevention & Control of Pollution Act – Air & Water. Wildlife Protection Act; Forest Conservation Act; International agreements; Montreal and Kyoto protocols and conservation on Biological Diversity (CBD). The Chemical Weapons Convention (CWC). Nature reserves, tribal population and rights, and human wildlife conflicts in Indian context.	
V	Human Communities and the Environment& Field Work : Human population and growth: Impacts on environment, human health and welfares. Carbon foot print. Resettlement and rehabilitation of project affected persons; case studies. Disaster management: floods, earthquakes, cyclones and landslides. Environmental movements: Chipko, Silent valley, Bishnis of Rajasthan. Environmental ethics: Role of Indian and other religions and cultures in environmental conservation. Environmental communication and public awareness case studies (e.g., CNG vehicles in Delhi). Visit to an area to document environmental assets; river/forest/flora/fauna, etc. Visit to a local polluted site Urban/Rural/Industrial/Agricultural. Study of common plants, insects, birds and basic principles of identification. Study of simple ecosystems pond, river, Delhi Ridge, etc.	Population explosion – Family Welfare Programmes. Role of Information Technology in Environment and human health. Role of the Colleges, Teachers and Students in village adoption towards clean, green and make in villages in various aspects.

PERCENTAGE OF SYLLABUS REVISED: 50 %

COURSE FOCUS ON:

- Skill Development Entrepreneurial Development
- Employability Innovation
- Intellectual Property Right (IPR)



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13th

Syllabus Revision

Faculty: Biosciences

Board: Microbiology

Semester: I

Course Code/ Name: 223MB2A1CA/ Fundamentals of Microbiology

Unit	Existing	Changes
I	Unit I :History The historic foundations and development of Microbiology - Spontaneous generation- Germ theory of diseases – Cell theory – Contributions of Antony van Leuwenhoek – Joseph Lister – Robert Koch – Louis Pasteur – Edward Jenner – John Tyndall – Sergei N. Winogradsky – Salmon A. Waksman – Alexander Flemming - Paul Erlich – Fannie Hessie – Elie Metchnikoff..	Lederberg and Zinder, Lwoff, Arber and Smith, Temin and Baltimore. Scope of microbiology.
II	Unit II Sterilization Sterilization and disinfection - Physical and chemical control of microorganisms Culturing of Bacteria – Isolation, purification and Cultivation of different types of Microorganisms -Aerobes and Anaerobes - Culture maintenance and Preservation - Culture Collection centres -ATCC, MTCC and NFMCC.	Dry and Moist heat, Filtration, Radiation, Gaseous agents – Phenol coefficient test, serial dilution, pour plate, spread plate and streak plate method Cultivation of Bacteria, Fungi, Actinomycetes. NRMCC-F and NFCCI.
III	Unit III Microscopy and staining Principles of Microscopy- Light microscope, Inverted microscope, Electron microscope – TEM and SEM, Polarization microscope, Confocal, Perifocal, Atomic force microscope. Stains and staining principles: Simple, Gram staining, Negative staining, Capsule staining, Spore staining, Flagellar staining and Acid fast staining.	NIL
IV	Unit IV Prokaryotic Cell Structure Characteristics of Prokaryotic cells – Basic cell types: Prokaryotic cells – Size, shape and Arrangement – Overview of structure – Cell membrane. Internal membrane structure – Cytoplasm - Nucleoid – Inclusions - chlorosomes – carboxysomes - magnetosomes - phycobilisomes - Endospores. External structure – Cell Wall - Flagella and its function – Glycocalyx – Slime layer.	NIL
V	Unit V Eukaryotic cell Structure Characteristics of Eukaryotic cells – Overview of structure – Plasma membrane - Cytoplasm – Cell nucleus – Mitochondria and Chloroplast – Endoplasmic reticulum – Golgi Apparatus – Lysosomes. External structures – Flagella – Cilia. General characters and Cell wall structure of Algae, Fungi and Protozoa.	Distribution, Nutrition, Morphology, Encystment and Excystment, Reproduction of Protozoa - Classification of Protozoa – General characteristics: Paramecium sp and Chlamydomonas sp.. General Properties, Classification, Life cycle of Viruses: Animal (Pox virus) and Plant virus (TMV). Cultivation of Viruses: Animal inoculation, Embryonated egg inoculation and Cell Culture, Plant tissue cultures. Characterization and Enumeration of Viruses - Quantitative assay.

PERCENTAGE OF SYLLABUS REVISED:60

COURSE FOCUS ON:

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| <input checked="" type="checkbox"/> Skill Development | <input type="checkbox"/> Entrepreneurial Development |
| <input type="checkbox"/> Employability | <input checked="" type="checkbox"/> Innovation |
| <input type="checkbox"/> Intellectual Property Right (IPR) | |





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BoS

13th

Syllabus Revision - New Course

Faculty: Bioscience

Board: Microbiology

Semester: I

Course Code/ Name: 223MB2A1CB / Microbial Physiology and Bacterial Diversity

PERCENTAGE OF SYLLABUS REVISED: 100%

COURSE FOCUS ON:

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| <input checked="" type="checkbox"/> Skill Development | <input type="checkbox"/> Entrepreneurial Development |
| <input checked="" type="checkbox"/> Employability | <input type="checkbox"/> Innovation |
| <input type="checkbox"/> Intellectual Property Right (IPR) | |





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13th

Syllabus Revision - New Course

Faculty: Bioscience

Board: Microbiology

Semester: I

Course Code/ Name: 223MB2A1CC / Mycology, Phycology and Lichenology

PERCENTAGE OF SYLLABUS REVISED: 100%

COURSE FOCUS ON:

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| <input checked="" type="checkbox"/> Skill Development | <input type="checkbox"/> Entrepreneurial Development |
| <input checked="" type="checkbox"/> Employability | <input type="checkbox"/> Innovation |
| <input checked="" type="checkbox"/> Intellectual Property Right (IPR) | |





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13th

Syllabus Revision

Faculty: Bioscience

Semester: I

Board: Microbiology

Course Code/ Name: 223MB2A1CD -Comprehensive Biology (PG)

Unit	Existing	Changes
I	Composition, structure and function of biomolecules (carbohydrates, lipids, proteins, nucleic acids and vitamins). Interactions (Van der Waals, electrostatic, hydrogen bonding, hydrophobic interaction, etc.). Principles of biophysical chemistry (pH, buffer, reaction kinetics, thermodynamics, colligative properties). Principles of catalysis, enzymes and enzyme kinetics, enzyme regulation, mechanism of enzyme catalysis, isozymes. Conformation of proteins (Ramachandran plot, secondary structure, domains, motif and folds). Conformation of nucleic acids (helix (A, B, Z), t-RNA, micro-RNA). Stability of proteins and nucleic acids.	
II	Potency, commitment, specification, induction, competence, determination and differentiation; morphogenetic gradients; cell fate and cell lineages; stem cells; genomic equivalence and the cytoplasmic determinants; imprinting; mutants and transgenes in analysis of development. Gametogenesis, fertilization and early development: Production of gametes, cell surface molecules in sperm-egg recognition in animals; embryo sac development and double fertilization in plants; zygote formation, cleavage, blastula formation, embryonic fields, gastrulation and formation of germ layers in animals; embryogenesis, establishment of symmetry in plants; seed formation and germination.	
III	Blood and circulation - Blood corpuscles, haemopoiesis and formed elements, plasma function, blood volume, blood volume regulation, blood groups, haemoglobin, immunity, haemostasis. Cardiovascular System: Comparative anatomy of heart structure, myogenic heart, specialized tissue, ECG - its principle and significance, cardiac cycle, heart as a pump, blood pressure, neural and chemical regulation of all above. Nervous system - Neurons, action potential, gross neuroanatomy of the brain and spinal cord, central and peripheral nervous system, neural control of muscle tone and posture. Sense organs - Vision, hearing and tactile response.	Cell signaling - Hormones and their receptors, cell surface receptor, signaling through G-protein coupled receptors, signal transduction pathways, second messengers, regulation of signaling pathways, bacterial and plant two component systems, light signaling in plants, bacterial chemotaxis and quorum sensing.
IV	Gene mapping methods: Linkage maps, tetrad analysis, mapping with molecular markers, mapping by using somatic cell hybrids, development of mapping population in plants. Extra chromosomal inheritance: Inheritance of Mitochondrial and chloroplast genes, maternal inheritance. Human genetics: Pedigree analysis, lod score for linkage testing, karyotypes, genetic disorders. Quantitative genetics: Polygenic inheritance, heritability and its measurements, QTL mapping.	
V	Emergence of evolutionary thoughts Lamarck; Darwin-concepts of variation, adaptation, struggle, fitness and natural selection; Mendelism; Spontaneity of mutations; The evolutionary synthesis. Origin of cells and unicellular evolution: Origin of basic biological molecules; Abiotic synthesis of organic monomers and polymers; Concept of Oparin and Haldane; Experiment of Miller (1953); The first cell; Evolution of prokaryotes; Origin of eukaryotic cells; Evolution of unicellular eukaryotes; Anaerobic metabolism; photosynthesis and aerobic metabolism. Paleontology and Evolutionary History: The evolutionary time scale; Eras, periods and epoch; Major events in the evolutionary time scale; Origins of unicellular and multi-cellular organisms; Major groups of plants and animals; Stages in primate evolution including Homo. Molecular Evolution: Concepts of neutral evolution, molecular divergence and molecular clocks; Molecular tools in phylogeny, classification and identification; Protein and nucleotide sequence analysis; origin of new genes and proteins; Gene duplication and divergence.	

PERCENTAGE OF SYLLABUS REVISED: 68.47 %
COURSE FOCUS ON:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Skill Development | <input type="checkbox"/> Entrepreneurial Development |
| <input type="checkbox"/> Employability | <input checked="" type="checkbox"/> Innovation |
| <input type="checkbox"/> Intellectual Property Right (IPR) | |





Dr. N.G.P. ARTS AND SCIENCE COLLEGE

(An Autonomous Institution, Affiliated to Bharathiar University, Coimbatore)
Approved by Government of Tamil Nadu & Accredited by NAAC with 'A++' Grade (3rd Cycle-3.64 CGPA)
Dr. N.G.P.-Kalapatti Road, Coimbatore-641 048, Tamil Nadu, India.
Website: www.drngpasc.ac.in | Email: info@drngpasc.ac.in. | Phone: +91-422-2369100

BoS

13th

Syllabus Revision

Faculty: Bioscience

Board: Microbiology

Semester: I

Course Code/ Name: 223MB2A1SA - Bio analytical Techniques

Unit	Existing	Changes
I	Centrifugation, Analytical Ultra Centrifugation – Determination of Molecular weight and purity of macromolecules. Chromatography: Instrumentation, detection methods and Applications of TLC, Column, Gas, Ion Exchange, HPLC, Gel Filtration and GCMS.	LCMS.
II	Colorimetry: Instrumentation, Application and Analysis – Qualitative and Quantitative. Spectrophotometry: Instrumentation and Applications of UV, Visible, IR, NMR, FTIR, Atomic absorption, Mass Spectroscopy and MALDI – TOF. Instrumentation and Applications of Spectrofluorometry and Flame Photometry.	
III	Electrophoresis: Electrophoresis of Proteins – SDS – PAGE, Native Gel, Gradient Gel, Iso Electric Focusing, 2D Page, Cellulose Acetate Electrophoresis, Western Blotting - Detection, Estimation and Recovery of Proteins in gel. Electrophoresis of Nucleic acids – Agarose Gel Electrophoresis – staining and destaining, Analysis of Electrophoresis Results - Electrophoresis of RNA – Capillary Electrophoresis – Microchip Electrophoresis.	
IV	Detection and Measurement of Radioactivity –Detection based on gas ionization - Autoradiography and its applications– Scintillation Counting- Safety Aspects – Biosensors and its applications	Biosensors and its applications (DNA and Immunosensors).
V	Separation and Quantitative determination of Macromolecules: Carbohydrates, Lipids, Amino acids - Isolation and Characterization of Microbial pigments: Chlorophylls and Carotenoids. Determination of Protein structure. Determination of Molecular weight of proteins.	Quantitative determination of Macromolecules: Carbohydrates (DNSA and Anthrone method), Lipids (Gravimetric), Protein (Lowry and Bradford method). Determination of Molecular weight of protein (MS and SDS-PAGE) and DNA (Agarose gel). Estimation of Microbial pigments: Chlorophylls and Carotenoids.

PERCENTAGE OF SYLLABUS REVISED: 18%

COURSE FOCUS ON:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Skill Development | <input type="checkbox"/> Entrepreneurial Development |
| <input type="checkbox"/> Employability | <input checked="" type="checkbox"/> Innovation |
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13th

Syllabus Revision

Faculty: Bioscience

Semester: I

Board: Microbiology

Course Code/ Name: 223MB2A1CP - CORE PRACTICAL: BASIC TECHNIQUES IN MICROBIOLOGY

Exp. No.	Existing	Changes
1.	Bacterial Staining techniques Gram, b. Acid-fast, c. Spore d. Capsule and e. Negative staining.	Bacterial Staining techniques Gram, b. Acid-fast, c. Spore d. Capsule and e. Negative staining.
2.	Morphological observation of Fungi – Slide culture, LPCB Mount. Culturing and Morphological identification of Algae	Morphological observation of Fungi – Slide culture, LPCB Mount.
3.	Micrometry – Measurement of microorganisms.	Micrometry – Measurement of microorganisms.
4.	Motility determination- Hanging drop and soft agar inoculation.	Motility determination- Hanging drop and soft agar inoculation.
5.	Enumeration of Microorganisms from soil: Bacteria, Fungi and Actinomycetes.	Enumeration of Microorganisms from soil: Bacteria, Fungi and Actinomycetes.
6.	Determination of bacterial generation time - Direct microscopic method and turbidity method	Determination of bacterial generation time - Direct microscopic method and turbidity method
7.	Effect of various intrinsic factors on the growth of bacterium and fungi – pH, Temperature	Effect of various intrinsic factors on the growth of bacterium and fungi – pH, Temperature
8.	IMViC test, Hydrogen sulphide test, Oxidase test, Calalase test, Urease test	IMViC test, Hydrogen sulphide test, Oxidase test, Calalase test, Urease test
9.	Preferential utilization of sugar - Carbohydrate fermentation & TSI Polymer degradation – Starch, Gelatin, Casein	Preferential utilization of sugar - Carbohydrate fermentation & TSI Polymer degradation – Starch, Casein
10.	Quantitative determination of Sugar by DNSA method Quantitative determination of Protein by Lowy et al method	Quantitative determination of Sugar by DNSA method Quantitative determination of Protein by Lowy et al method
11.	Separation techniques: Chromatography- Paper, TLC and Column.	Separation techniques: Chromatography- TLC and Column.
12.	Isolation and Quantification of Pigments from Algae.	Microscopic observation of Algae and Lichen thallus

Note: End Semester Practical Examination requires completion of 10 experiments out of 12.

PERCENTAGE OF SYLLABUS REVISED:07

COURSE FOCUS ON:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Skill Development | <input type="checkbox"/> Entrepreneurial Development |
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13th

Syllabus Revision

Faculty: Biosciences

Board: Microbiology

Semester: I

Course Code/ Name: 223MB2A1DA/ MICROBIAL TECHNOLOGY

Unit	Existing	Changes
I	Single Cell Protein and its Economic Aspects: Bacterial, Yeast, Fungal and Algal Proteins – Brewer's and Baker's yeast – Food and Fodder yeast – Mushroom (Agaricus, Oyster) and Products from Higher fungi (Ganoderma lucidum).	NIL
II	Production, Methods and Uses of Bioethanol (S cerevisiae) – Biodiesel (Chlorella) – Biohydrogen (Chlamydomonas) – Biogas (Methanobacteria). Biofertilizer -Types, Mass production and Applications - Skill development to Entrepreneurial abilities - Government Incubation Facilities available - Role of Incubation facilities in India.	Biofertilizer - N2 fixing, Phosphate Solubilizing, Phosphate Mobilizing, Plant Growth Promoting Rhizobacteria -Mass production and Applications.
III	Production and Uses of Polyhydroxybutyrate (PHB) – Xanthan – Alginate – Cellulose – Cyanophycin – Levan - Melanin -Adhesive Protein - Rubber - Polyhydroxyalkanoates - Hyaluronic acid.	Welan- succinoglucon- Curdlan- Chitosan
IV	Cells – Surface attachment of cells – Entrapment-Hydrogel method, Preformed support materials – Containment behind a barrier: Microencapsulation, Immobilization using membranes – Self aggregation of cells –Methods for Enzyme immobilization – Carrier binding method, Intermolecular cross linking – Applications of Immobilized cells and Enzymes	NIL
V	Vaccines – Steps of Manufacturing – Growing the microbes and separation – Preparation of Live and killed vaccine – Standardization of vaccine – Preparation of Toxoid and uses – BCG Vaccine – Cholera vaccine – Rabies vaccine – Diphtheria toxoid. Establishment of a Pharmaceutical industry – certification & accreditation required – Funding available – Government funds, Venture capital, NGOs, crowd funding etc.,	Bioentrepreneurship opportunities and Funding sources - Government funds, Venture capital, NGOs, crowd funding and Incubation centers.

PERCENTAGE OF SYLLABUS REVISED: 19

COURSE FOCUS ON:

- | | |
|--|---|
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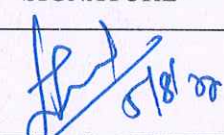
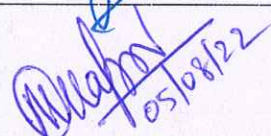
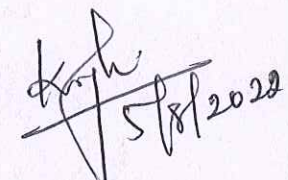
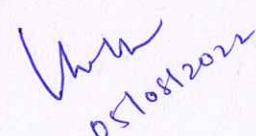
BoS

13th

FACULTY OF BIOSCIENCES DEPARTMENT OF MICROBIOLOGY BOARD OF STUDIES MEETING

VENUE : INSTRUMENTATION ROOM
DATE : 05.08.2022
TIME : 10:00 AM

ATTENDANCE OF THE THIRTEENTH BOARD OF STUDIES MEETING

S.NO.	NAME	POSITION	SIGNATURE
1.	Dr.J.Renga Ramanujam Professor and Head	Chairman	 5/8/22
2.	Dr. M. Gnanadesigan Assistant Professor Department of Microbial Biotechnology Bharathiar University Coimbatore - 641 046	Member (Subject Expert) (Nominated by Vice Chancellor)	 10/5/22
3.	Dr. K. Vijila Professor Department of Agricultural Microbiology Tamil Nadu Agricultural University Coimbatore- 641 003	Member (Subject Expert)	 5/8/2022
4.	Dr. S. Murugan Associate Professor Karunya University Coimbatore - 641114	Member (Subject Expert)	ABSENT.
5.	Dr. Chitra Thangavel, M.Sc., Ph.D Research and Development Ganga Research Centre Coimbatore Tamil Nadu - 641030	Member (Industrial Expert)	 05/08/2022
6.	Durgadevi . S Quality Control of Microbiologist Amway India Enterprises Pvt. Lmt Sipcot Industry Road, Pallapati	Alumini	ABSENT



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	Dhindugal - 62420		
7.	Varssha.K (UG)	Student Representatives	<i>[Signature]</i> 5/8/22
	Mohana Priya. P (PG)		<i>[Signature]</i> 5/8/22
8.	<i>Dr. N. Kupiduchamy</i> Part I (Four Semester Language)	Co-opted Member	<i>[Signature]</i> 5/8/22
9.	<i>Dr. R. Vithya Prabha</i> Part II (Four Semester Language)		<i>R.V - PC</i> 5/8/22
10.	<i>Dr. S. Kokila</i> Allied		<i>[Signature]</i> 5/8/22
11.	Dr. S. S. Sudha Professor	Member	-
12.	Dr. N. Vidhya Professor	Member	<i>[Signature]</i> 5/8/22
13.	Dr. S. Senthil Prabhu Associate Professor	Member	<i>[Signature]</i> 5/8/22
14.	Dr. A. M. Ramachandran Associate Professor	Member	<i>[Signature]</i> 5/8/22
15.	Mrs. C. Sasikala Assistant Professor	Member	<i>[Signature]</i> 5/8/22
16.	Dr. S. Karthik Sundaram Assistant Professor	Member	<i>[Signature]</i> 5/8/22
17.	Dr. R. Mahenthiran Assistant Professor	Member	<i>[Signature]</i> 5/8/22
18.	Prof. M.Nivethitha Assistant Professor	Member	<i>[Signature]</i> 5/8/22
19.	Dr. J.Devakumar Assistant Professor	Member	<i>[Signature]</i> 5/8/22



Dr. NGPASC
 COIMBATORE | INDIA



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[Signature]
 BoS Chairman/HoD
 Department of Microbiology
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