BoS - April Even Semester 2023-24

From
Dr. Bharathi T,
Associate Professor & HoD,
Department of Business Administration,
Indian Academy Degree College-Autonomous.

April 1

To
The Principal,
Indian Academy Degree College-Autonomous
Bengaluru - 43

Subject: BoS meeting Even semester 2024 - Department of Business Administration

Dear Madam,

I wish to seek your approval for conducting the Board of Studies meeting for the BBA program on Friday, 19th April 2024. In this regard the members have accepted our invitation and given their consent.
Date & Time: April 19th, 2024, at 2.00 PM – 4.00 PM

The BoS members list is presented below

1. Dr. Ritika Sinha, Associate Professor, Bengaluru North University representative
2. Udaya Raghunath Birje, President- The Mysore Lancers Heritage Foundation. Co-Founder and Director, Think Street Technologies Pvt Ltd. (Industry expert)
3. Dr. Bhavani M. R. Associate Professor, Dept. Business Administration, Chanakya University
4. Dr. Sendhil Kumar, Assistant Professor, Dept. Business Administration, Dayanand Sagar University
5. Sri. Surya Narayana, Chief Academic Officer, Indian Academy
6. Prajwal P J, Alumni Member
7. Faculty members: Indian Academy

I request you to kindly permit me to organize the event.

Expenditure list is enclosed

Regards,
Dr. Bharathi T
Associate Professor & HoD BBA

Head
Department of Business Administration
INDIAN ACADEMY
DEGREE COLLEGE - AUTONOMOUS
HENNUR MAIN ROAD BANGALORE-43

INDIAN ACADEMY DEGREE COLLEGE
AUTONOMOUS
HENNUR MAIN ROAD
BENGALURU - 43

Expenditure for BoS meeting

1. Sitting charges for 5 experts
2. Refreshments – Rs 800
3. Conveyance – Rs 1000

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF BUSINESS ADMINISTRATION

Board of Studies Meeting

19.04.2024

AGENDA:

1) Curriculum discussion for III & IV Semester NEP batch BBA Business Analytics
2) Course Paper swap between semesters – IV & VI for BBA General and BBA Business Analytics for the academic year 2024-2025 onwards.
3) Approval of Blue print for examination III & IV Semester NEP batch BBA Business Analytics.

Sl. No.	Name	Designation	Signature
1	Dr. Bharathi T	Chairman	T. B hi
2	Dr. Ritika Sinha	BNU Nominee	Joined online
3	Sri Udaya Raghunath Birje	Co-Founder & Director, ThinkStreet Technologies	R.U. Birje
4	Dr. Bhavani M R	Associate Professor of Management, Chanakya University	Absent
5	Dr. Sendhil Kumar	Associate Professor, Presidency College.	
6	Prof. Suryanarayana	Chief Academic Officer, IAGI	
7	Mr. Prajwal P	Alumni	
8	Ms. Mary Magadalene	Member	Mary Magadalene
9	Mr. Kesavan R	Member	
10	Ms. Deepa S	Member	S
11	Ms. Bhavani Kumari G	Member	Bhavani
12	Mr. Mohammed Ahmed	Member	
13	Ms. Rajani Singh	Member	Rajani Singh
14.	Dr. T. Srinivasa Rao	COE, IADC-A	T. Srao. 19/4/2024

INDIAN ACADEMY
Degree College - Autonomous

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7	Mr. Prajwal P	Alumni	
8	Ms. Mary Magadalene	Member	Mary Magadalene
9	Mr. Kesavan R	Member	
10	Ms. Deepa S	Member	
11	Ms. Bhavani Kumari G	Member	Bhavani
12	Mr. Mohammed Ahmed	Member	
13	Ms. Rajani Singh	Member	Rajani Singh
14	Dr. T. Srinivas Rao	COADC-A.	T. S Rao. 19/4/24

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF BUSINESS ADMINISTRATION

Board of Studies Meeting

19.04.2024

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9	Mr. Kesavan R	Member	
10	Ms. Deepa S	Member	
11	Ms. Bhavani Kumari G	Member	Bhavani
12	Mr. Mohammed Ahmed	Member	
13	Ms. Rajani Singh	Member	Rajani Singh
14. Dr. T. Srinivasa Rao	COE, IADC-A.		T.S Rao 19/4/2024

INDIAN ACADEMY
Degree College - Autonomous

Department of Business Administration

INDIAN ACADEMY
Degree College - Autonomous

Department of Business Administration
Board of Studies Meeting – Agenda

e: 10 / 04 / 2024 **Venue:** IASMS Board Room 504

ENDA - 1:

riculum **Discussion for III/IV Semester BBA Business Analytics (NEP) 2024-25 onwards**

- Detailed Syllabus and Blueprints– for III/IV Semesters

ENDA- 2:

rse **Paper swap between semesters – IV & VI for BBA General and BBA Business Analytics** P) **2024-25 onwards**

Corporate Accounting will be offered in IV semester and Management Accounting will be offered in VI Semester for BBA and BBA Business Analytics Program

NDA- 3:

oval **of enhance BOE list**

Any other matters discussion related to academic improvement

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF BUSINESS ADMINISTRATION

Minutes of Board of Studies Meeting

te: 19 / 04 / 2024

nue: IASMS Board Room 504 **Time:** 2:00 p.m.

airperson: Dr. Bharathi T. HOD, Department of Business Administration

mbers **Present:**

Sl. No.	Name	Designation
1	Dr. Bharathi T	Chairman
2	Dr. Ritika Sinha	BNU Nominee
3	Sri Udaya Raghunath Birje	Industrial Expert
4	Dr. Sendhil Kumar	Subject Expert
5	Prof. Suryanarayana	Chief Academic Officer, IAGI
6	Dr. T. Srinivas Rao	Controller of Examination, IADC-A
7	Mr. Prajwal P J	Alumni
8	Ms. Mary Magadalane	Member
9	Mr. Kesavan R	Member
10	Ms. Deepa	Member
11	Ms. BhavaniKumari G	Member
12	Mr. Mohammed Ahmed	Member
13	Ms. Rajani Singh	Member

enda:

1. Curriculum Discussion for III/IV Semester BBA Business Analytics (NEP) 2024-25 onwards.
   - Detailed Syllabus
   - Blue Print
2. Course Paper swap between semesters – IV & VI for BBA General and BBA Business Analytics (NEP) 2024-25 onwards
3. Approval of enhance BOE list

oceedings:

airperson started the meeting by introducing the members of the Board of Studies with a welcome note. ne overview of the previous meeting was presented to the Board members. The chairperson communicated e requirement for the BOS meeting as part of the academic requirement and initiated the meeting with the endas mentioned above.

enda 1: Curriculum Discussion for III/IV Semester BBA Business Analytics (NEP) 2024-25 onwards.

Detailed Syllabus

e III and IV semester BBA Business Analytics consists of 2 Ability Enhancement Compulsory Course, 3 ciplinc specific courses [4 credits], 1 Open Elective [3 credits] and 1 Skill enhancement course- skill ed [2 credits] and 1 Skill Enhancement Course -Value Based.

liberations:

members discussed in detail the course matrix, curriculum and CO, PO mapping etc. for each subject/course.

ciplinc Specific Course:

Semester:

ganisational Behaviour: Dr. Sendhil Kumar suggested adding Big 5 Personality traits in unit 2 and removing the ues in the same unit.

atistics for Business: The content of Descriptive Statistics can be added in Unit 2 can be added to Unit 1

thon for Managers: Dr. T. Srinivas Rao and Mr. Prajwal suggested to add business functionality to the thon subject and remove the technical element in the paper. Practical component to be added was ggested.

gital Fluency II: Gen AI Concepts added to Unit 1

Semester:

ternational Business: The board suggested to remove content in Unit 4 related to marketing information stem and add Regional Economic Development.

QL for Business: Dr. T. Srinivas Rao and Mr. Prajwal suggested adding business functionality to the SQL bject and concentrating on providing business application for management students. They also suggested oviding lab hours to develop required technical skills for the subject. Practical component to be added was ggested.

Approval of Blue print for examination for III & IV Semester BBA – Business Analytics.

he board approved the blue print for III & IV Semester BBA – Business Analytics paper.

genda 2: Course Paper swap between semesters – IV & VI for BBA General and BBA Business Analytics NEP) 2024-25 onwards.

eliberations:

he board has agreed to provide Corporate Accounting in IV Semester and Management Accounting in VI emester for Business Administration students across the two programs, BBA and BBA Business nalytics.

genda 3: Approval of extended BOE list.

eliberations:

he board has approved the extended BOE list members.

onclusion: The Chairperson concluded the meeting with words of gratitude for the valuable suggestions provided y the Board members.

Closing Time: 4 P.M.

Resolutions:

1. The Chairpersons proposed NEP based curriculum along with the detailed syllabus and blue prints for the III and IV semester BBA Business Analytics program offered by the Department which was accepted and approved by the members and the changes proposed are incorporated in the syllabus.
2. Course paper swap between semesters – IV and VI for BBA general and BBA Business Analytics (NEP) 2024-25 onwards.
3. The syllabus was revised for upto 20 % in Business Analytics according BOS members and 10 % in BBA program.
4. Approval of extended BOE list.

Head
Department of Business Administration
INDIAN ACADEMY
DEGREE COLLEGE - AUTONOMOUS
HENNUR MAIN

NEP- Curriculum Framework

B.B.A (Business Analytics)- Matrix for I Semester (w.e.f. 2023-24 onwards)

I Semester

Code	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 1.1/ M21HN 1.1/ M21AE 1.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE 1.1	Language II (Generic English)	60	3	1	-	3
DSC	T23DC 1.1	Management Principles & Practice	60	4	-	-	4
DSC	T23DC 1.2	Fundamentals of Business Accounting	60	4	-	-	4
DSC	T23DC 1.3	Fundamentals Business Analytics	60	4	-	-	4
OE-1	M21OE 1.1	Business Organisation	45	3	-	-	3
SEC- SB	21SBC 1.1	Digital Fluency - I	30	1	-	2	2
SEC-VB	21VBC 1.1	Health and Well-being	30	-	-	2	1
SEC-VB	21VBC 1.2	Yoga	30	-	-	2	1
Total							**25**

Note 1:

AECC- Ability Enhancement Compulsory Course

DSC - Discipline-Specific Course

OE- Open elective (course offered by the department to students of other stream)

SEC - VB Skill Enhancement Course -Value Based

SEC - SB Skill Enhancement Course -Skill Based

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

NEP- Curriculum Framework

B.B.A (Business Analytics)- Matrix for II Semester (w.e.f. 2023-24 onwards)

II Semester							
Code	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 2.1/ M21HN 2.1/ M21AE 2.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE 2.1	Language II (Generic English)	60	3	1	-	3
DSC	T23DC 2.1	Business Environment	60	4	-	-	4
DSC	T23DC 2.2	Power Business Intelligence	60	3	-	2	4
DSC	T23DC 2.3	Business Mathematics	60	4	-	-	4
OE-2	M21OE 2.1	People Management	45	3	-	-	3
AECC	21SBC 2.1	Environmental Studies	30	2	-	-	2
SEC-VB	21VBC 2.1	NCC/NSS/Cultural	30	-	-	2	1
SEC-VB	21VBC 2.2	Sports	30	-	-	2	1
Total							25

Note 1:

AECC *- Ability Enhancement Compulsory Course*

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Continuous Internal Assessment – Scheme of EvaluationFor Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

NEP- Curriculum Framework

B.B.A (Business Analytics)- Matrix for IV Semester (w.e.f. 2023-24 onwards)

IV Semester							
Code	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 4.1/ M21HN 4.1/ M21AE 4.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE 4.1	Language II (English)	60	3	1	-	3
DSC	T23DC 4.1	International Business	60	4	-	-	4
DSC	T23DC 4.2	Corporate Accounting	60	4	-	-	4
DSC	T23DC 4.3	SQL for Business	60	3	-	2	4
OE-4	M21OE 4.1	Event Management	45	3	-	-	3
AECC	21SBC 4 .1	Constitution of India	45	2	1	-	3
SEC-VB	21VBC 4.1	Sports	30	-	-	2	1
SEC-VB	21VBC 4.2	NCC/NSS/R&R/Cultural	30	-	-	2	1
Total							26

Note 1:
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SEC - SB Skill Enhancement Course -Skill Based

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams / charts / Classwork / Casestudy / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

NEP- Curriculum Framework

B.B.A (Business Analytics) - Matrix for III Semester (w.e.f. 2023-24 onwards)

III Semester							
Code	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 3.1/ M21HN 3.1/ M21AE 3.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE 3.1	Language II (English)	60	3	1	-	3
DSC	T23DC 3.1	Organizational Behaviour	60	4	-	-	4
DSC	T23DC 3.2	Statistics for Business	60	4	-	-	4
DSC	T23DC 3.3	Python for Managers	60	3	-	2	4
OE-3	M21OE 3.1	Financial Literacy	45	3	-	-	3
SBC	21SBC 3 .1	Digital Fluency II	30	1	-	2	2
SEC-VB	21VBC 3.1	NCC/NSS/Cultural	30	-	-	2	1
SEC-VB	21VBC 3.2	Sports	30	-	-	2	1
Total							25

Note 1:
AECC *- Ability Enhancement Compulsory Course*
DSC *- Discipline-Specific Course*
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Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses
End Semester Examination: 60%
Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

NEP- Curriculum Framework

B.B.A - Matrix for I Semester (w.e.f. 2021-22 onwards)

I Semester							
Code	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 1.1/ M21HN 1.1/ M21AE 1.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE 1.1	Language II (Generic English)	60	3	1	-	3
DSC	M21DC 1.1	Management Principles & Practice	60	4	-	-	4
DSC	M21DC 1.2	Fundamentals of Business Accounting	60	4	-	-	4
DSC	M21DC 1.3	Business Economics	60	4	-	-	4
OE-1	M21OE 1.1	Business Organisation	45	3	-	-	3
SEC- SB	21SBC 1.1	Digital Fluency - I	30	1	-	2	2
SEC-VB	21VBC 1.1	Health and Well-being	30	-	-	2	1
SEC-VB	21VBC 1.2	Yoga	30	-	-	2	1
		• **Total**					**25**

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T. Srinivasa Rao.
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i. Writing	10		
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iii. Classroom participation	05		
Total			40

NEP- Curriculum Framework

B.B.A - Matrix for II Semester (w.e.f. 2021-22 onwards)

II Semester							
Code	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 2.1/ M21HN 2.1/ M21AE 2.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE 2.1	Language II (Generic English)	60	3	1	-	3
DSC	M21DC 2.1	Functions of Management	60	4	-	-	4
DSC	M21DC 2.2	Cost Accounting	60	4	-	-	4
DSC	M21DC 2.3	Business Mathematics	60	4	-	-	4
OE-2	M21OE 2.1	People Management	45	3	-	-	3
AECC	21SBC 2.1	Environmental Studies	30	2	-	-	2
SEC-VB	21VBC 2.1	NCC/NSS/Cultural	30	-	-	2	1
SEC-VB	21VBC 2.2	Sports	30	-	-	2	1
Total							25

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Continuous Internal Assessment – Scheme of Evaluation

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	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams / charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

NEP- Curriculum Framework

B.B.A - Matrix for IV Semester (w.e.f. 2021-22 onwards)

IV Semester							
Code	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 1.1/ M21HN1.1/ M21AE 1.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE1.1	Language II (Generic English)	60	3	1	-	3
DSC	M21DC 4.1	International Business	60	4	-	-	4
DSC	M21DC 4.2	Production and Operations Management	60	4	-	-	4
DSC	M21DC 4.3	Management Accounting	60	4	-	-	4
OE-4	M21OE 4.1	Event Management	45	3	-	-	3
AEC	21SBC 4 .1	Constitution of India	45	2	1	-	3
SEC-VB	21VBC 4.1	Sports	30	-	-	2	1
SEC-VB	21VBC 4.2	NCC/NSS/R&R/Cultural	30	-	-	2	1
	Total						25

Note 1:

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For Theory Courses

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Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams / charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

NEP- Curriculum Framework

B.B.A - Matrix for V Semester (w.e.f. 2021-22 onwards)

V Semester							
Code	Course Code	Course	Teaching hours	Course Components			Credits
				L	T	P	
DSC	M21DC 5.1	Banking and Insurance	60	4	-	-	4
DSC	M21DC 5.2	Income Tax	60	4	-	-	4
DSC	M21DC 5.3	Business Policy and Strategy	60	4	-	-	4
DSE	M21DEF 5.4 M21DEH 5.4 M21DEM 5.4	Finance-Financial Market and Service Human Resource-Employee Welfare and Industrial Relations Marketing- Advertising and Sales Promotion	45+45	3+3	-	-	3+3
Vocational -1	21VOC 5.1	Information Technology for Managers	4	4	-	-	4
SEC-SB	21SEC 5.1	Soft Skills for Business	2				2
		Total					**24**

Note 1:

AECC- *Ability Enhancement Compulsory Course*

DSC - *Discipline-Specific Course*

OE- *Open elective (course offered by the department to students of other streams)*

VOC - *VB Skill Enhancement Course -Vocational Based*

SEC - *SB Skill Enhancement Course -Skill Based*

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Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

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Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams / charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

NEP- Curriculum Framework

B.B.A - Matrix for VI Semester (w.e.f. 2021-22 onwards)

VI Semester							
Code	Course Code	Course	Teaching hours	Course Components			Credits
				L	T	P	
DSC	M21DC 6.1	Entrepreneurship & Start-up Management	60	4	-	-	4
DSC	M21DC 6.2	Business Analytics	60	4	-	-	4
DSC	M21DC 6.3	Corporate Accounting	60	4	-	-	4
DSE	M21DEF 6.4	Finance -International Finance	45+45	3+3	-	-	3+3
	M21DEH 6.4	Human Resource- Human Resource Development					
	M21DEM 6.4	Marketing -Consumer Behaviour					
Vocational-2	21VOC 6.1	Digital Marketing	60	3	-	2	4
I-1	21SEC 6.1	Internship	4 weeks	-	-	-	2
Total							24

Note 1:

AECC- Ability Enhancement Compulsory Course

DSC - Discipline-Specific Course

OE- Open elective (course offered by the department to students of other streams)

VOC - VB Skill Enhancement Course -Vocational Based

SEC - SB Skill Enhancement Course -Skill Based

T. Srinivasa Rao.
CONTROLLER OF EXAMINATIONS
Indian Academy Degree College
Autonomous
Hennur Cross, Kalyan Nagar
Bangalore - 560043

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams / charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

III & IV Syllabus
BBA - Business Analytics

INDIAN ACADEMY
Degree College - Autonomous

MATRIX AND SYLLABUS

For the Programme BBA - Business Analytics

NEP Based Curriculum (2023 onwards)

III & IV Semester

NEP- Curriculum Framework for Approval

B.B.A (Business Analytics) - Matrix for III Semester (w.e.f. 2023-24 onwards)

III Semester							
Code	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 3.1/ M21HN 3.1/ M21AE 3.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE 3.1	Language II (English)	60	3	1	-	3
DSC	T23DC 3.1	Organizational Behaviour	60	4	-	-	4
DSC	T23DC 3.2	Statistics for Business	60	4	-	-	4
DSC	T23DC 3.3	Python for Managers	60	3	-	2	4
OEC	M21OE 3.1	Financial Literacy	45	3	-	-	3
SBC	21SBC 3 .1	Digital Fluency II	30	1	-	2	2
SEC-VB	21VBC 3.1	NCC/NSS/Cultural	30	-	-	2	1
SEC-VB	21VBC 3.2	Sports	30	-	-	2	1
Total							25

Note 1:
***AECC**- Ability Enhancement Compulsory Course*
***DSC** - Discipline-Specific Course*
***OE**- Open elective (course offered by the department to students of other stream)*
***SEC** - VB Skill Enhancement Course -Value Based*
***SEC** - SB Skill Enhancement Course -Skill Based*

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses
End Semester Examination: 60%
Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

T23DC 3.1: ORGANISATIONAL BEHAVIOUR

Total Teaching Hours: 60
No. of Hours / Week: 04
(04 credit)

CObj	Course Objectives
CObj_1	To enable the students to understand the organisational behaviour and organizational change and dynamics of group.
CObj_2	To enable the students to understand the importance of attitude and personality
CObj_3	To enable the students to understand the principles of learning.

CO	Course Outcomes After completion of this module, students should be able to:
CO1	Identify behavioral issues in an Organization
CO2	Apply the concept of Perception, attitudes and personality tounderstand the behavior of people in the organization.
CO3	Analyze different types of learning followed by each individual.
CO4	Design different types of groups in an organization and howit influences the behavior of the individuals.
CO5	Demonstrates the resistance for change, its causes and how to overcome.

CO-PO Mapping

	PO_1	PO_2	PO_3	PO_4	PO_5
CO_1	*				
CO_2		*			
CO_3	*			*	
CO_4		*			*
CO_5		*		*	

Course Content

Unit/chapter title	Course Content	Number of hours	Skills Developed
Unit- I Organizational Behaviour	Organization Behavior– Definition, Scope and Application in Management, Contributions of other disciplines to OB, Emerging issues in Organizational Behavior.	08 Hrs	Cognitive Skills
Unit- II Personality, Perception and Attitudes	Personality: Meaning-Determinants of Personality, Personality attributes influencing OB, Big Five Personality Traits, Interactive Behaviour and Interpersonal Conflict - Case study Perception: Meaning – Need, Perceptual Process, Perceptual Mechanism, and Factors influencing perception. Attitude: Meaning of Attitude, Characteristics of Attitude, Components of Attitude, Attitude and Behaviour, Attitude formation, change in attitude and barriers to attitude.	14 Hrs	Cognitive Skills
Unit- III Group Dynamics	Meaning - Types of Groups, Functions of small groups, Formation of Groups, Group Size Status, Managerial Implications, Group Behaviour - Group Norms, Cohesiveness, Group Think, Decision Making in Groups	12 Hrs	Leadership Skills
Unit- IV Organizational Conflict, Change And Development	Conflict: Meaning – Process-causes- types of conflict-consequences of conflict, conflict resolution strategies. Organizational Change: Meaning - Nature of work change, Pressure for change, Change process, Types of change, Factors influencing change, Resistance to change, Overcoming resistance. Organizational Development – Meaning and different types of OD interventions. Case Study.	14 Hrs	Cognitive Skills & Analytical Skills
Unit- V Organization culture	Culture, Definition, Culture's function, need and importance of Cross Cultural management, Stress and its Management. Remote Work culture, Hybrid Work Culture, Diversity, Equity, and Inclusion (DEI) Culture, Purpose-Driven Culture, Agile Culture, Digital Culture, Wellness Culture, Learning Culture - Meaning and concepts discussion only.	12 Hrs	Cognitive Skills

Books for Reference:

1. Aswathappa, K. (2017). Organizational Behaviour. HPH.
2. Appanniah &, Management and Behavioural Process, HPH.
3. Rekha, & Vibha. (2022). Organizational Behavioural. Vision Book House.
4. Robbins, S. P. (2005). Organizational Behaviour. International Book House.
5. Newstrom, J. W., & Davis, K. (1993). Organizational Behaviour. 11th ed. McGraw Hill.
6. Aquinas, P. G. (2013). Organizational Behavior. Excel Books.
7. Luthans, F. (1998). Organizational Behavior. 8th ed. McGraw Hill.

Web Resources:

1. https://saylordotorg.github.io/text_organizational-behavior-v1.1/
2. https://opentextbc.ca/organizationalbehavioropenstax/chapter/content-theories-of- motivation/
3. https://www.sscasc.in/wp-content/uploads/downloads/BBM/Organizational-Behaviour.pdf
4. https://old.mu.ac.in/wp-content/uploads/2014/04/Management-PAPER-II-Organizational-Behavior-final-book.pdf

Journals:

1. Albert, S. (1992). The algebra of change. Research in Organizational Behavior, 14, 179–229.
2. Kilduff, M., & Brass, D. J. (2010). Organizational social network research: Core ideas andkey debates. Academy of Management Annals, 4, 317–357.
3. Kilduff, M., & Lee, J. W. (2020). The integration of people and networks. Annual Review of Organizational Psychology and Organizational Behavior, 7, 8.1–8.25.
4. Kilduff, M., Tsai, W., & Hanke, R. (2006). A paradigm too far? A dynamic stability reconsideration of the social network research paradigm. Academy of Management Review, 31, 1031–1048

T23DC 3.2: STATISTICS FOR BUSINESS

Total Teaching Hours: 60 Hours

No. of Hours / Week: 04

(04 credit)

CObj	Course Objectives
CObj_1	To develop the students ability to deal with numerical and quantitative issues in business
CObj_2	To enable the use of statistical, graphical and algebraic techniques wherever relevant.
CObj_3	To have a proper understanding of Statistical applications in Economics and Management.

CO	Course Outcomes After completion of this module, students should be able to:
CO1	Acquire the conceptual skill and working knowledge of tabulation of data and different types of samples
CO2	Apply methods of solving problems on central tendency, measures of dispersion, skewness and kurtosis.
CO3	Develop the knowledge of correlation and Regression analysis and interpretation of results.
CO4	Solve and interpret application problems in business.
CO5	Interpret the statistical tools to perform analysis of data through descriptive methods

CO-PO Mapping

	PO_1	PO_2	PO_3	PO_4	PO_5
CO_1		*			
CO_2				*	
CO_3		*			*
CO_4		*			
CO_5			*		

Course Content

	Unit/chapter title	Course Content	Number of hours	Skills Developed
	Unit- I Introduction to Statistics & Descriptive Statistics I	Background and Basic concepts introduction, definition of statistics Functions- scope- limitations, classifications and Tabulations of Data Average-Mean, Median and Mode [individual, discrete and continuous series] Weighted Average Measures o Dispersion, Range, Co- efficient of Range.	14 Hrs	Analytical Skills
	Unit- II Descriptive Statistics II	Quartiles, Inter-Quartile Range and Quartile Deviation, Coefficient of Quartile Deviation, Standard Deviation, Coefficient of Variation, Skewness and Kurtosis; Measures of Skewness: Absolute and Relative; Co-efficient of Skewness: Karl Pearson's and Bowley's.	14 Hrs	Cognitive and Analytical Skills
	Unit- III Inferential Statistics	Introduction to Correlation, Co-efficient of Correlation, Correlation through Scatter diagrams, Interpretation of Correlation Co- efficient. Regression-Spearmen's Rank Correlation- Karl Pearson Co-efficient of Correlation- Co-efficient of determination.	10 Hrs	Analytical Skills
4	Unit- IV Probability	Sample space and Events, Simple and Compound Events, Probability and Probability distributions: Normal Distribution, Binomial and Poisson distribution- Bayes Theorem	12 Hrs	Cognitive and Analytical Skills
5	Unit- V Index Number	Meaning and Definition- Uses Classification Construction of Index Numbers Methods of constructing Index Numbers Simple Aggregate Method Simple Average of Price Relative Method Weighted Index numbers, Fishers ideal Index (including Time and Factor Reversal tests) Consumer Price Index Problems	10 Hrs	Cognitive and Analytical Skills

Books for Reference:

1. Kirk, R. E. (2008). Statistics: An Introduction (5th ed.). Thomson-Wadsworth.
2. McClave, J. T., Benson, P. G., & Sincich, T. (2005). Statistics for Business and Economics (11th ed.). Pearson Prentice Hall.
3. Levin, J., & Fox, J. A. (2014). Elementary Statistics in Social Research. Pearson Education.
4. Gupta, S.P. (2021). Statistical Methods. S. Chand Publication.
5. Chikkodi, C. M. (2017). Quantitative Methods For Business-II. Himalaya Publishing House.
6. Anderson, D. R. (2015). Quantitative Methods For Business. 13th edition. Cengage Learning.
7. Sweeney, D. J., & Anderson, D. R. (2012). Quantitative Methods For Business. Thomson.

Web Resources:

1. https://www.investopedia.com/ask/answers/032515/what-does-it-mean-if-correlation-coefficient-positive-negative-or-zero.asp
2. https://byjus.com/maths/probability/
3. https://www.economicsdiscussion.net/price/index-number/index-numbers-characteristics-formula-examples-types-importance-and-limitations/31211
4. https://byjus.com/maths/central-tendency/

Journals:

1. De Vos, I., and Everaert, G. (2019), "Bias-Corrected Common Correlated Effects Pooled Estimation in Homogeneous Dynamic Panels," *Journal of Business & Economic Statistics*
2. Everaert, G., and De Groote, T. (2016), "Common Correlated Effects Estimation of Dynamic Panels With Cross-Sectional Dependence," *Econometric Reviews*, 35, 428–463.
3. Gagliardini, P., and Gouriéroux, C. (2017), "Double Instrumental Variable Estimation of Interaction Models With Big Data," *Journal of Econometrics*, 201, 176–197.
4. Hayakawa, K. (2016), "Identification Problem of GMM Estimators for Short Panel Data Models With Interactive Fixed Effects," *Economics Letters*, 139, 22–26.

T23DC 3.3: PYTHON FOR MANAGERS

Total Teaching Hours: 60

No. of Hours / Week: 04

(4 Credits)

CObj	Course Objectives
CObj_1	To provide basic knowledge of Python and its application in handlingdata.
CObj_2	To make students equipped with the data manipulation and data visualization.
CObj_3	To demonstrate how Python can be used to automate repetitive tasks, streamline processes, and improve workflow efficiency within departments or organizations.

CO	Course Outcomes After completion of this module, students should be able to:
CO1	Understands the basic concepts related to Python
CO2	Leverage key Python Libraries such as Pandas for data manipulation.
CO3	Develop skills for analyzing data for visualization
CO4	Apply financial modeling concepts using Python
CO5	Apply automation, and scripting concepts using Python

CO-PO Mapping

	PO_1	PO_2	PO_3	PO_4	PO_5
CO_1	*	*			
CO_2		*	*		
CO_3			*		
CO_4			*	*	
CO_5				*	*

Course Content

S. No	Unit/chapter title	Course Content	Number of hours	Skills Developed
1	Unit- I Introduction to Python	Introduction to Python - Overview of Python and its applications in management, Basic Python syntax and data types (variables, numbers, strings, lists). Control Flow and Functions: Conditional statements (if, elif, else), Loops (for, while), Functions and parameter passing, Best practices for writing clean and efficient code, Data structures	12 Hrs	Cognitive Skills, Analytical Skills
2	Unit- II Data Manipulation with Python	Data manipulation and exploration (cleaning, filtering, sorting, grouping). Introduction to Pandas library, Two- Dimensional Pandas Data frames and obtain their statistical summary, Handle Missing data in Pandas Data Frames- Python functions to apply them along an axis in a Pandas Data frame. Reading and writing data from/to different file formats (CSV, Excel).	14 Hrs	Cognitive Skills, Analytical Skills
3	Unit- III Data Visualization	Introduction to Matplotlib and Seaborn libraries, Creating basic plots, Customizing plot appearance, Saving and exporting plots, multiple subplots. Introduction to Plotly library- Creating, Adding interactivity, Embedding Plotly plots in web applications and Jupyter Notebooks. Geographic Data Visualization, Time Series Visualization, Dash dashboards.	12 Hrs	Cognitive Skills, Analytical Skills
4	Unit- IV Financial Analysis and Modeling	Numpy: Arrays & basic operations, indexing and slicing, financial analysis, modeling, forecasting, decision making, support system using Python.	10 Hrs	Cognitive Skills, Analytical Skills
5	Unit- V Automation & application in	Introduction to web security: Business Intelligence (BI) and Customer Relationship Management (CRM),	12 Hrs	Cognitive Skills, Analytical

	business	Concepts and its application. Overview of automation concepts & applications. Introduction to automatic repetitive tasks, Writing scripts to automatic repetitive tasks, generating reports and dashboards with Python.		Skills,

Reference Books:

1. Bhute, P. (2024). Handbook Of Python With DSA - Beginner to Advanced: Mastering Python from Zero to Hero with Data Structures, Projects, Notes, Exercises and Assignments included [Print Replica]. LCF Publishing.
2. 2.Downey, A. (2015). Think Python: How to Think Like a Computer Scientist (2nd ed.). O'Reilly Media.
3. Matthes, E. (2019). Python Crash Course. No Starch Press
4. Kanetkar, A. (2023). Let Us Python.BPB Publishers.
5. Allen B. Downey, "Think Python: How to Think like a Computer Scientist", 2nd Edition, O'Reilly Publishers, 2016.
6. Karl Beecher, "Computational Thinking: A Beginner' s Guide to Problem Solving and programming", 1st Edition, BCS Learning & Development Limited, 2017.

Web Resource:

1. https://www.geeksforgeeks.org/get-financial-data-from-yahoo-finance-with-python/
2. Python documentation: http://docs.python.org/3.9/index.html
3. Python tutorial: https://docs.python.org/3.9/tutorial/ Python
4. Regular Expressions https://docs.python.org/3.9/library/re.html
5. Beautiful Soup: http://www.crummy.com/software/BeautifulSoup/bs4/doc/
6. Pandas: http://pandas.pydata.org/pandas-docs/stable
7. https://www.sanfoundry.com/python-problems-solutions/
8. https://www.toppr.com/guides/python-guide/examples/python-examples/

Journals:

1. Journal of Business Analytics
2. Journal of Management Information Systems (JMIS)
3. Journal of Business and Economic Statistics
4. Data Science Journal
5. Journal of Financial Data Science

PRACTICALS (LAB):

1. Declare an int value and store it in a variable.

2. Write a Python Program to find the sum of all elements in a list using loop.
   Input: - [10,20,30,40]
   Output: -100

3. A list contains tuples containing roll number, names and age of student. Write a Python program to gather all the names from this list into another list.

4. Build the DataFrame object below and assign it to the_companies_variable:

SR.NO	COMPANY	PRICE	TICKER
0	AMAZON	2375	AMZN.US
1	MICROSOFT	178.6	MSFT.US
2	FACEBOOK	179.2	FB.US

5. Build the pairplot() chart from the seaborn library. Pass variables

- Tenure
- MonthlyCharges
- Totalcharges

And the parameter : hue ='churn'
Tip : https://seaborn.pydata.org/generated/seaborn.pairplot.html

6. Sales Data Analysis:

- Write a Python program to read sales data from a CSV file and generate various reports such as total sales, sales by product/category, top-selling products, etc.

Implement data visualization using libraries like Matplotlib or Seaborn to create charts and graphs for better understanding of sales trends.

7. Financial Analysis:

- Develop a Python program to analyze financial statements (balance sheet, income statement, cash flow statement) of a company and calculate financial ratios like liquidity ratios, profitability ratios, and leverage ratios.
- Use libraries like Pandas for data manipulation and calculation.

8. Inventory Management:

- Create a Python program to manage inventory for a small business.
- Implement functionalities such as adding/removing items, updating stock levels, generating reports on stock status, and setting reorder points.

M21OE 3.1: FINANCIAL LITERACY

Total Teaching Hours: 45 Hours

No. of Hours / Week: 03

(03 credit)

CObj	Course Objectives
CObj_1	To familiarize non-finance students with the essentials of finance and investments
CObj_2	To enable the students to use financial data in planning, and decision making
CObj_3	To equip students with general knowledge, basic tools, and techniques for managing their personal finance and investment decisions

CO	Course Outcomes After completion of this module, students should be able to:
CO1	Understand and interpret the financial statements of a company
CO2	Identifies the role and importance of the finance function in business
CO3	Take investment decisions for their personal portfolio
CO4	Develop an attitude towards investments and be able to assess risk and returns
CO5	Analyze and develop budget control techniques for an organization

CO-PO Mapping

	PO_1	PO_2	PO_3	PO_4	PO_5
CO_1	*	*			
CO_2			*	*	
CO_3		*	*		
CO_4		*	*		
CO_5				*	*

Course Content

t/chapter title	Course Content	Number of hours	Skills Developed
Unit- I sics of Indian ancial System	Indian Financial System, functions of the Indian financial system, a basic understanding of the capital market, Money market in India.	08 Hrs	Cognitive Skills
Unit- II Investment Decisions	Investments, concepts and definition- Trading off between Risk & Returns, Golden Principles of Investments,Creating a personal portfolio- Investment in gold, investing in real estate, investment in mutual funds, government bonds, stock etc. advantages and disadvantages- Investing v/s savings- Do's and Don'ts of investments	10 Hrs	Cognitive Skills Analytical Skills
Unit- III Reading & Understanding Financial Statements	Financial statements - Basic terminologies – Assets, liabilities, current assets, current liabilities, long term assets and liabilities. Income, expenses etc. Understand and Analyze financial statements, Differentiate between income statement and balance sheet- Interpreting various items in the financial statements.	10 Hrs	Analytical Skills
Unit-IV Loans	Loans – Different types of loans. Calculation of EMIs, Fixed v/s floating rate of interest, Calculation of rate of interest, Dos and Don'ts of loans, Credit worthiness, CIBIL Scores. NPA and its impact.	09 Hrs	Analytical Skills
Unit-V Budgetary Control	Introduction to Budgetary Control , Types of Budgets, Budgetary Process, components of the master budget, Performance measurement and reporting, Technology in Budgetary Control, Ethical Considerations in Budgetary Control	08 Hrs	Analytical Skills

ooks for Reference:

1. Pandey, I. M. (1995). Financial Management. Vikas Publishing House Pvt. Ltd.
2. Chandra, P. (2007). Financial Management. Tata McGraw Hill.
3. Khan, M.Y. & Jain, P.K. (2017). Financial Management. Tata McGraw Hill.
4. Kishore, R.M. (2020). Financial Management. 8th edition.Taxmann Publications.
5. Shah, P. (2009). Financial Management. 2 ed. biztantra.
6. White, G. I., Sondhi, A. C., & Fried, D. (2002). Financial Statements. Wiley Books.
7. Tripathi, V. (2021). Basic Financial Management. 3e.Taxmann Publications.

Web Resource:

1. www.icai.org/students/Bos-knowledgeportal.
2. www.icmai.in
3. www.bseindia.com
4. www.capitalmarket.com
5. www.cmie.com
6. www.financeprofessor.com
7. www.moneycontrol.com
8. www.rbi.gov.in
9. www.sebi.gov.in

Journals:

1. Journal of Accounting
2. Indian Journal of Accounting

21SBC 3 .1: DIGITAL FLUENCY II

(Artificial Intelligence-IoT-Cloud Computing-Cyber Security)

Total Teaching Hours: 30 Hours

No. of Hours per Week: 3

(2 Credits)

CObj	Course Objectives
CObj_1	To provide a basic understanding of Artificial Intelligence and its importance in today's world
CObj_2	To provide an understanding of cyber security and its importance in protecting internet-connected systems against malicious cyber-attacks
CObj_3	To provide a basic understanding of cloud computing and other related services over networks

CO	Course Outcomes After completion of this module, students should be able to:
CO1	Understand the machine languages and learning such as visual perception in decision making.
CO2	Apply appropriate tools and techniques to protect systems, networks, programs,worms and malicious cyber-attacks.
CO3	Apply and familiarize with services such as Dropbox, resource pooling, using the storage facilities, etc.
CO4	Demonstrate an understanding of IoT, create information about the connected objects, analyze it and make decisions.
CO5	Interpret and apply strong data storage and privacy of data in storage and transit.

Course Content

Sl. No.	Unit/chapter title	Content	Number of hours	Skills developed
1	Unit- I Artificial Intelligence	Overview of Artificial Intelligence-meaning-definition-concept of AI-scope of AI. Gen AI Concepts. Application of Artificial Intelligence-How AI and machine learning are used in Business – Examples of AI in Business. AI in E-Commerce. Advantages and limitations of using AI in business. Meaning of machine learning-deep learning.	10 Hrs	Logical Skills
2	Unit- II Internet of Things (IoT)	Introduction-meaning and definition of IoT, IoT devices and examples. Features of IoT, Technologies of IoT, Advantages and disadvantages of using IoT. Major components of IoT, Trusted IoT development companiesin India. Applications of IoT.	8 Hrs	Technical & Analytical Skills
3	Unit- III Cloud Computing	Introduction, Meaning & definition of cloud computing. Characteristics of Cloud computing. Models of cloud computing. Cloud computing applications. Advantages & Dis advantages of cloud computing.	7 Hrs	Technical & Analytical Skills
4.	Unit- IV Cyber Security	Introduction- Meaning & importance of cyber security. key concepts of cyber security. Types of cybersecurity.	6 Hrs	Cognitive, Logical & Analytical Skills

Books for Reference:

1. Saha, Kantesha, Asif, (2021), "Digital Fluency", 1st Edition, HimalayaPublishing House, India.
2. Russell and Peter Norvig, (2010), "Artificial Intelligence, A Modern Approach" Third Edition, Prentice-Hall, Pearson Education Inc.
3. Erickson,(2008)," Hacking: The Art of Exploitation", second edition, Pearson Education Inc.
4. Wang, Ranjan, Chen, Benatallah,(2017), " Cloud Computing", first edition, CRC Press

Web Resources:

1. https://cloud.google.com/compute/?utm_source=google&utm_medium=cpc&utm_campaign=japac-IN-all-en-dr-bkwsrmkt-all-all-trial-e-dr- 1009882&utm_content=text-ad-none- none-DEV_c-CRE_505012043176- ADGP_Hybrid%20%7C%20BKWS%20-
2. %20EXA%20%7C%20Txt%20~%20Compute%20~%20Compute%20Engine_Business%20Services%20-%20google%20cloud%20computing.
3. https://www.netohq.com/blog/cyber-security-and-ecommerce
4. https://www.i-scoop.eu/internet-of-things-iot/internet-of-things-in-manufacturing/

Journals:

1. Artificial Intelligence Journal (AIJ)
2. Journal of Artificial Intelligence Research (JAIR)
3. Journal of Internet of Things (JIoT)
4. International Journal of Internet of Things and Cyber-Assurance
5. Internet of Things (IoT) Journal
6. IEEE Transactions on Cloud Computing
7. Journal of Cloud Computing: Advances, Systems, and Applications
8. International Journal of Cloud Computing
9. Journal of Cybersecurity
10. Computers & Security

NEP- Curriculum Framework for Approval

B.B.A (Business Analytics)- Matrix for IV Semester (w.e.f. 2023-24 onwards)

IV Semester							
ode	Course Code	Course	Teaching Hours	Course Components			Credits
				L	T	P	
AECC	M21KN 4.1/ M21HN 4.1/ M21AE 4.1	Language I (Kannada/Hindi/Additional English)	45	3	1	-	3
AECC	M21GE 4.1	Language II (English)	60	3	1	-	3
DSC	T23DC 4.1	International Business	60	4	-	-	4
DSC	T23DC 4.2	Corporate Accounting	60	4	-	-	4
DSC	T23DC 4.3	SQL for Business	60	3	-	2	4
OEC	M21OE 4.1	Event Management	45	3	-	-	3
AECC	21SBC 4 .1	Constitution of India	45	2	1	-	3
EC-VB	21VBC 4.1	Sports	30	-	-	2	1
EC-VB	21VBC 4.2	NCC/NSS/R&R/Cultural	30	-	-	2	1
	Total						26

te I:
ECC- Ability Enhancement Compulsory Course
SC - Discipline-Specific Course
E- Open elective (course offered by the department to students of other stream)
EC - VB Skill Enhancement Course - Value Based
EC - SB Skill Enhancement Course - Skill Based

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams / charts / Classwork / Casestudy / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

T23DC 4.1: INTERNATIONAL BUSINESS

Total Teaching Hours: 60

No. of Hours / Week: 4

(04 credit)

CObj	Course Objectives
CObj_1	To provide an understanding of the importance of international business has on the modern world.
CObj_2	To enable students to identify the factors that must be considered by a multinational corporation before entering a different country.
CObj_3	To provide an understanding of how international trade affects economic growth of a country.

CO	Course Outcomes After completion of this module, students should be able to:
CO1	Understand the stages of internationalization
CO2	Apply concepts to choose the companies strategies on mode of entry into another rcountry
CO3	Analyze the strategies adopted by companies to expand globally
CO4	Apply and adopt the procedures followed in India's import and export trade
CO5	Demonstrate market fluctuations in foreign exchange that affect trade

CO-PO Mapping

	PO_1	PO_2	PO_3	PO_4	PO_5
CO_1	*				
CO_2		*			*
CO_3				*	
CO_4			*	*	
CO_5	*			*	*

Course Content

S. No	Unit/chapter title	Course Content	Number of hours	Skills Developed
1	Unit- I Introduction to International Business	Meaning and Definition of International Business – Nature, Features of International Business, Stages of Internationalization. Approaches to International Business. International Business Environment. Meaning and factors affecting International Business Environment.	12 Hrs	Cognitive Skills
2	Unit- II Modes of Entry into International Business	Mode of Entry – Exporting, Licensing, Franchising, Contract Manufacturing, Turn Key Projects, Foreign Direct Investment, Mergers, Acquisitions, and Joint Ventures. Comparison of different modes of Entry (Case Study)	12 Hrs	Cognitive Skills
3	Unit- III Globalization & Exchange Rate	Globalization: Meaning – Features, Advantages and Disadvantages. Dimensions of Globalization. Globalization and Indian Economy. Globalization 2.0- meaning and features. Exchange rate and economic adjustment. Direct and indirect quote, parity theorems – PPP, international parity relations, International monetary system	12 Hrs	Analytical Skills
4	Unit- IV Regional Economic Cooperation	Definition, major provisions and functions of NAFTA, EU, ASEAN and SAARC. The impact of NAFTA, EU, ASEAN and SAARC on trade functions.	10 Hrs	Analytical Skills
5	Unit- V EXIM Trade	Export Trade, Procedure, Steps & Documentation, Direction of India's Trade, Export Financing, Documents related to Export Trade, Import Trade, Procedure, Steps, Documentations and Problems. EXIM Policy – Basics of balance of payments, Institutions connected with EXIM Trade, cross country risk analysis	14 Hrs	Employable Skills

Books for Reference:

1. Aswathappa, K. (2022). International Business. 6th ed. McGraw Hill Education.
2. Begum, Z., Paramesh, P. and Sudha, B. (2017). International Business. 1st ed. Himalaya Publishing House.
3. Hill, C. (2021). International Business. 13th ed. Tata McGraw Hill.
4. Peng, M. and Meyer, K. (2011). International Business. Cengage Learning EMEA.
5. Clark, E. (2007). International Finance Management. 2nd ed. Cengage Learning.

Web Resource:

1. World Economic Forum (WEF)
2. The International Trade Centre (ITC)
3. World Trade Organization (WTO)
4. Investopedia

Journals:

1. Journal of International Business Studies (JIBS)
2. International Business Review
3. Global Strategy Journal
4. Management International Review
5. Journal of World Business
6. International Marketing Review
7. International Business Review
8. International Journal of Business and Emerging Markets
9. International Journal of Business Governance and Ethics

T23DC 4.2: CORPORATE ACCOUNTING

Total Teaching Hours:

60 No. of Hours per

Week: 4 (4 credits)

CObj_ID	Course Objectives
CObj_1	To understand the concept of underwriting under the regulation of SEBI and assess underwriting commissions, differentiate between marked and unmarked applications, determine underwriters' liability.
CObj_2	To provide a foundational understanding of goodwill and share valuation, emphasizing the essential concepts and practical applications.
CObj_3	To provide comprehensive understanding of mergers and acquisitions, covering types of amalgamations, determining purchase considerations, preparation of post amalgamation balance sheet. Also to update students on recent developments in corporate accounting.

CO_ID	Course Outcomes After completion of this module, students should be able to:
CO1	An understanding of the fundamental concepts, regulations, and practices associated with underwriting in financial markets.
CO2	Able to apply various methods for valuation of shares, goodwill.
CO3	Analyzes the factors affecting valuation goodwill and shares.
CO4	Acquires the skills to understand the concepts of mergers and acquisitions and prepare post-merger balance sheets in accordance with Schedule III to the Companies Act 2013.
CO5	Gains insight of recent developments in accounting including Human Resource Accounting and Social Responsibility Accounting.

CO-PO Mapping

	PO_1	PO_2	PO_3	PO_4	PO_5
CO_1	*		*		
CO_2	*		*		
CO_3		*	*		
CO_4	*	*		*	*
CO_5	*	*	*	*	

Course Content

Sl. No	Unit/chapter title	Content	Number of hours	Skills Developed
1.	Unit- I Underwriting of Shares	Underwriting: Introduction, Meaning, Advantages, Types; SEBI Regulations; Underwriting Commission; Underwriters' Functions; Marked and Unmarked Applications; Determination of Underwriters' Liability; Firm & Pure Underwriting; Full & Partial Underwriting	12 Hrs	Cognitive skill
2.	Unit- II Valuation of Goodwill	Introduction & Meaning; Factors influencing Valuation of Goodwill; Circumstances of Valuation of Goodwill; Methods of Valuation of Goodwill: Average Profit Method, Super Profit Method, Capitalization of Average Profit & Super Profit Method and Annuity Method	12 Hrs	Analytical Skill and Cognitive skill
3.	Unit- III Valuation of Shares	Meaning – Need for Valuation – Factors affecting Valuation– Methods of Valuation: Intrinsic Value Method, Yield Method, Earning Capacity Method and Fair Value of shares.	12 Hrs	Analytical Skill
4.	Unit- IV Mergers And Acquisition of Companies	Meaning, Types & Objectives of merger and acquisition; Types of Amalgamation, Accounting for Amalgamation - Purchase Method (only); Purchase Consideration: Meaning, Methods – Lump sum Method, Net Assets Method, and Net Payment Method. Preparation of Balance Sheet after Merger as per Schedule III to Companies Act 2013	16 Hrs	Analytical Skill and Cognitive skill
5.	Unit- V Recent Trends in Accounting	Human Resource Accounting: Meaning, Need, Valuation of Human Resources – Historical Cost Approach – Replacement Cost Approach (Theory Only) Social Responsibility Accounting: Social Responsibility of Business – Meaning of social accounting – Approaches to social accounting (Theory Only)	08 Hrs	Analytical Skill and Cognitive skill

Books for Reference:

1. Kumar, A., Kumar, V. R., & Mariyappa, B. (2018). Advanced Corporate Accounting. New Delhi: Himalaya Publishing House.
2. Arulanandam, & Raman. (2017). Corporate Accounting-II. New Delhi: Himalaya Publishing House.
3. Tripathi, S. (2016). Roadmap to IFRS and Indian Accounting Standards (2016 Edition).
4. Maheswari, S. N. (2018). Financial Accounting. Vision Publishing House.
5. Soundarajan, A., & Venkataramana, K. (2019). Advanced Corporate Accounting. SHBP.
6. Gupta, R. L. (2017). Advanced Accountancy. Sultan Chand.
7. Shukla, M. C., & Grewal, T. S. (2017). Advanced Accountancy. Sultan Chand.
8. *Putty, S. (2019). Advanced Corporate Accounting. New Delhi: Himalaya Publishing House.*

Web Resource:

1. The Economist(economist.com/topics/corporate-accounting)
2. Accounting Coach (accountingcoach.com)
3. https://testbook.com/learn/corporate-accounting/
4. https://onlinemasters.ohio.edu/blog/corporate-accounting/
5. https://wikieducator.org/Corporate_Accounting
6. https://www.oreilly.com/library/view/corporate- accounting/
7. https://www.drnishikantjha.com/booksCollection/advanced_corporate_accounting_.pdf
8. https://web.thisisbeast.com/advanced-corporate-accounting-problems-and-solutions-pdf

Journals:

1. Journal of Accounting and Economics
2. The Accounting Review
3. Journal of Accounting Research
4. Journal of Corporate Finance
5. Journal of Business Finance & Accounting
6. Journal of Financial Reporting and Accounting
7. Journal of International Accounting Research

T23DC 4.3: SQL for Business

Total Teaching Hours: 60

No. of Hours / Week: 04

(4 credits)

CObj	Course Objectives
CObj_1	To understand the concept of Database Management with SQL
CObj_2	To analyze data retrieval, analysis and manipulation and modeling using SQL function
CObj_3	To develop skills on data aggregation and to work on views and indexes

CO	Course Outcomes After completion of this module, students should be able to:
CO1	Understands the concepts related to database management systems
CO2	Apply skills for data retrieval and data manipulation
CO3	Analyze the data functions
CO4	Design database schemas based on the conceptual model
CO5	Create views to access data, apply indexes for query optimization

CO-PO Mapping

	PO_1	PO_2	PO_3	PO_4	PO_5
CO_1	*		*		
CO_2		*		*	*
CO_3	*		*		
CO_4				*	*
CO_5			*		*

Course Content

S. No	Unit title	Course Content	Number of Hours	Skills Developed
1	Unit- I Introduction to Databases and SQL	Introduction to SQL (Structured Query Language - DBMS Concept and architecture, Data Models, Schemas and Instances, DBA, Centralized and Client Server Architecture, database users, end users, Database Languages and Interfaces, Database System Environment, Front End Tools. Overview of relational databases and their importance in business	12 Hrs	Cognitive Skills
2	Unit- II Data Retrieval & Manipulation with SQL	Data Retrieval: SELECT statement: retrieving data from a single table, Filtering data using WHERE clause, Sorting data with ORDER BY, Limiting results with LIMIT and OFFSET. Data Manipulation: - INSERT, UPDATE, and DELETE statements, Modifying data in tables, Transactions and data integrity	12 Hrs	Cognitive Skills & Technical Skills
3	Unit- III Data Analysis with SQL	Window functions for advanced analysis (ROW_NUMBER, RANK, DENSE_RANK), Common Table Expressions (CTEs), Recursive queries for hierarchical data	12 Hrs	Cognitive Skills
4	Unit- IV Data Modeling and Database Design	Entity-Relationship (ER) modeling, Normalization techniques (1NF, 2NF, 3NF), Creating and modifying database schemas. ER Diagram Examples of Hotel Management System, Library Management System, Online Shopping System, Banking System,	12 Hrs	Cognitive Skills, Technical Skills
5	Unit- V Aggregating Data & Working with Views and Indexes	Aggregating Data: Aggregate functions (SUM, AVG, COUNT, MIN, MAX), Grouping data with GROUP BY, Filtering grouped data with HAVING Views and Indexes: Creating and using views for simplified data access, Introduction to indexes for query optimization, Performance tuning techniques	12 Hrs	Cognitive Skills, Technical Skills

Books for Reference:

1. Beaulieu, A. (2020). Learning SQL, 3e: Generate, Manipulate, and Retrieve Data (3rd ed., Illustrated). O'Reilly Media.
2. Bayross, I. (2010) SQL, Pl/SQL the Programming Language of Oracle. 4th edition. BPB Publications.
3. Elmsasri, R., & Navathe, S. (2017). Fundamentals of Database Systems. 7th edition. Pearson Education.
4. Silberschatz, A., Korth, H. F., & Sudarshan, S. (2011), Database System Concepts. 6th edition. Tata McGraw-Hill Education.
5. Date, C.J., Kanman, A. & Swaminathan, S. (2006). An Introduction to Database Systems. 8th edition. Pearson Education.

6. Ramakrishnan, R. Gehrke, J. (2014), Database Management Systems. 3rd edition. Tata McGraw Hill Education.
7. MWidenius, M., Axmark, D., Cole, J., Lentz, A., & Dubois, P. (2002). MySQL Reference Manual. O'Reilly Community Press

Web Resource:

1. https://www.khanacademy.org/computing/computer-programming/sql
2. https://sqlzoo.net/wiki/SQL_Tutorial
3. https://www.coursera.org/courses?query=sql
4. https://www.sqlcourse.com/

Journals:

1. Journal of Data and Information Quality
2. Journal of Big Data
3. Journal of Database Management
4. ACM Transactions on Database Systems (TODS)
5. IEEE Transactions on Knowledge and Data Engineering (TKDE)

RACTICALS (LAB)

1. **Basic Queries:**
- Write an SQL query to retrieve all the details of employees from the "Employee" table.
- Retrieve the names of employees who joined the company after January 1, 2023.
- List the departments along with the number of employees in each department.
- Display the highest salary among all employees.

2. **Joins and Subqueries:**
- Write a query to display the names of employees along with their department names.
- Retrieve the names of employees who work in the 'Marketing' department.
- List the employees who have a salary greater than the average salary.
- Display the department name and the total salary of all employees in each department.

3. **Aggregation Functions:**
- Calculate the total number of employees.
- Calculate the average salary of employees.
- Find the department with the highest average salary.
- Retrieve the employee with the highest salary.

4. **Data Manipulation:**
- Insert a new employee record into the 'Employee' table.
- Update the salary of an employee with a specific ID.
- Delete the record of an employee who has resigned from the company.
- Retrieve the top 5 highest paid employees.

5. Advanced Queries:

a. List the employees whose salaries are within the top 10% of the salary range.
b. Retrieve the employees who have the same salary as their manager.
c. Display the employee with the second-highest salary.
d. Find the department with the highest number of employees whose names start with 'A'.

M21OE 4.1: EVENT MANAGEMENT

Total Teaching Hours: 45 Hours

No. of Hours / Week: 03

(03 credit)

CObj	Course Objectives
CObj_1	To the understand keyconcepts and functions of Event management
CObj_2	To apply the planning and organizing concepts in Event management
CObj_3	To provide knowledge on public relations and the planning and executing corporate events

CO	Course Outcomes After completion of this module, students should be able to:
CO1	Identifythe key characteristics of an event.
CO2	Recognize the key management competencies required in the events industry and to use interpersonal and communications skills to pursue career in events industry.
CO3	Apply the conceptual framework of Event Management, Event Services, Conducting Event and Managing Public Relations.
CO4	Identify the importance of public relations in Event management.
CO5	Acquire competencies to: Plan a proposal on corporate events

CO-PO Mapping

	PO_1	PO_2	PO_3	PO_4	PO_5
CO_1	*	*			
CO_2			*		
CO_3		*			
CO_4	*			*	
CO_5			*		*

Course Content

S. No	Unit/chapter title	Course Content	Number of hours	Skills Developed
1.	Unit- I Introduction to Event Management	Event- Meaning- Why Event Management- Analysis of Event, Scope of Event, Decision Makers- Event Manager Technical Staff- Establishing of Policies & Procedure- Developing Record Keeping Systems.	10 Hrs	Cognitive Skills
2.	Unit- II Event Management Procedure	Principles for holding an Event, General Details, Permissions- Policies, Government and Local Authorities, - Phonographic Performance License, Utilities- Five Bridge Ambulance Catering, Electricity, Water Taxes Applicable.	10 Hrs	Analytical Skills
3.	Unit- III Conduct of an Event	Preparing a Planning Schedule, Organizing Tables, Assigning Responsibility, Communication and Budget of Event- Checklist, Computer aided Event Management– Roles & Responsibilities of Event Managers for Different Events.	10 Hrs	Cognitive Skills
4.	Unit- IV Public Relations	Introductions to Public Relations- Concept- Nature- Importance- Limitations- Media- Types of Media- Media Management, Public Relation Strategy & Planning. Brain Storming Sessions- Writings for Public Relations.	08 Hrs	Transferrable Skills
5.	Unit- V Corporate Events	Planning of Corporate Event, Job Responsibility of Corporate Events Organizer, Arrangements, Budgeting, Safety of Guests and Participants, Creating Blue Print, Need for Entertainment in Corporate Events And Reporting.	07 Hrs	Employable Skills

Books for Reference:

1. Sonder, M. (2011). Event Entertainment and Production. Hoboken, NJ: Wiley & Sons, Inc. ISBN: 0-471-26306-0.Ghouse Basha – Advertising & Media Mgt
2. Anne Stephen. (2021) Event Management. HPH.
3. Kilkenny, S. (2021). The Complete Guide to Successful Event Planning. 2nd Edition. Atlantic Publishing Co.
4. Van der Wagen, L. (2015). Human Resource Management for Events. Routledge.
5. Hayed, N. (1996). Successful Team Management [Paperback]. Cengage Learning EMEA.
6. Mohan, S. (2012). Event Management & Public Relations. Enkay Publishing House.
7. Goyal, S. K. (2009). Event Management & Public Relations. Adhyayan Publisher.

Web References:

1. https://www.comit.ie/latest-news-from-comit/what-are-the-different-types-of-events.html
2. https://www.celebritycorporatekit.com/our-blog/6-types-of-corporate-events-which-is-right-for-your-organization/
3. https://www.wildapricot.com/blog/how-to-plan-an-event

Journals:

1. Camerlengo, Quirino. 2009. Il Cerimoniale, tra Stato e Regioni, e la Correttezza Costituzionale [The Ceremonial, between State and Regions, and the Constitutional Fairness]. In Le Regioni, n.3-4, 763- 775.
2. De Lasio, Emiliana, Matthew Hibberd, Michael Higgins and Michele Sorice. 2012. La Leadership Politica. Media e Costruzione del Consenso [Political Leadership. Media and Consensus Building]. Roma: Carocci Editore.
3. Maimone, Fabrizio. 2014. La Comunicazione Organizzativa. Comunicazione, Relazioni e Comportamenti Nelle Imprese, Nella P.A. e nel no Profit [The Organisational Communication. Communication, Relationships and Behaviors in Business, in P.A. and in the no Profit]. Milano: Angelini.
4. Ricci, Maurizio. 2016. Più Tecnologia, Meno Produttività [More Technology, Less Productivity]. Roma: La Repubblica.
5. Sgrelli, Massimo. 2016. Il Cerimoniale. Il Cerimoniale Moderno ed il Protocollo di Stato: Regole Scritte e non Scritte [The Ceremonial. The Modern Ceremonial and the State Protocol: Written and Unwritten Rules]. Aquila: Di Felice Editore.

INDIAN ACADEMY
Degree College - Autonomous
DEPARTMENT OF COMMERCE

Meeting Date: 10/04/2024 **Time:** 2:00 – 3:00pm

Venue: 517

MEMBERS OF THE MEETING:

SL NO	FACULTY	SIGNATURE
1.	Prof. Magdalene Daniel	M. Daniel
2.	Prof. Jaffer Mohammed	Absent
3.	Prof. Md. Arshad Ulla Khan	Arshad.
4.	Ms. Lakshmi K	Lakshmi.
5.	Mrs. Revathi. S	S. Revathi
6.	Ms. Venessa Priya. M	Venessa.
7.	Mrs. Preethi GS	Absent
8.	Mrs. Asma Banu	Asma
9.	Mrs. Syeda Firdose	Absent
10.	Mr. Naveen. N	Absent
11.	Mr. Raghu Guda	Absent
12.	Ms. Sheetal Sarah . V	Sarah
13.	Mrs. Shilpa S	Shilpa S 10/04/24
14.	Mr. Cheluvaraju	Raju.

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INDIAN ACADEMY
Degree College - Autonomous
DEPARTMENT OF COMMERCE

Meeting Date: 25th March 2024 **Time:** 2:00 - 3:00pm

Venue: 517

MEMBERS OF THE MEETING:

SL NO	FACULTY	SIGNATURE
1.	Prof. Magdalene Daniel	Magdalene Daniel
2.	Prof. Jaffer Mohammed	
3.	Prof. Md. Arshad Ulla Khan	Arshad.
4.	Ms. Lakshmi K	Lakshmi K.
5.	Mrs. Revathi. S	
6.	Ms. Venessa Priya. M	
7.	Mrs. Preethi GS	preethi 25/03/24
8.	Mrs. Asma Banu	Asma
9.	Mrs. Syeda Firdose	
10.	Mr. Naveen. N	
11.	Mr. Raghu Guda	Raghu
12.	Ms. Sheetal Sarah . V	Sarah
13.	Mrs. Shilpa S	Shilpa
14.	Mr. Cheluvaraju	

Magdalene Daniel
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INDIAN ACADEMY
GROUP OF INSTITUTIONS

Meeting Agenda

Date: 19/03/2024

Time: 2:00 Pm To 3:00 Pm

Location: [ROOM NO 517]

1. Welcome and Introduction

Opening remarks and outline of the meeting agenda.

2. Internal Assessment Marks

Discussion on maintaining accurate records of internal assessment marks.

3. Non-NEP Papers

Reminder to send blueprints of Non-NEP papers to the COE.

4. Project Submissions

Instructions for students to submit titles and names for projects to be uploaded on Linways.

5. Class Group Communications

Directive to avoid involving students in posting messages in class groups.

6. Class Teacher Assignments

Assignment of class teachers:

II BCOM B: Asma Ma'am

VI BCOM B: Raju Sir

II MCOM: Naveen Sir

I MCOM: Arshad Sir

7. Student Dress Code and Appearance

Monitoring of students' dress code, hairstyles, and ear studs by teachers.

8. Internship Attendance

Communication to students on avoiding irregular attendance for internship work and classes.

Faculty guide's signature required for internship students.

9. Club Activities

Emphasis on conducting club activities regularly.

10. Department Notice Board: Naveen Sir to update the department notice board daily.

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Department meeting agenda and circular to be notified to faculty members prior to the meeting.

Follow-up of previous meetings to be done regularly.

Action taken report to be prepared and maintained on a monthly basis.

9. Documentation and Reporting

Syllabus completion report to be prepared and maintained on a monthly basis.

Curriculum plan to be discussed in meetings.

Signature of HOD and Coordinator required on all documents.

Mentor-mentee records to be maintained with dates.

Attendance registers to be signed by HOD and faculty.

10. Subject Allocation

Subjects to be allotted based on teachers' competence.

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DEPARTMENT OF COMMERCE

AGENDA OF THE MEETING

MEETING DATE: February & March 19th 2024 **TIME: 2 To 3 PM**

VENUE: ROOM NO. 517

MINUTES OF MEETING

PROCEEDINGS:

1. Maintain right track of internal assessment marks
2. Non –NEP papers blueprints to be sent to COE
3. Titles and names of students to be submitted by students for projects to upload on Linways
4. Do not involve students to post any message in the class groups
5. II BCOM B classs teacher Asma Ma'am
6. VI BCOM B classs teacher Raju Sir
7. II MCOM class teacher Naveen Sir
8. I MCOM class teacher Arshad Sir
9. Students dress code, hairstlyes, ear studs should be monitored by teachers in the class
10. Communicate to students to avoid being irregular for the internship work and classes
11. Faculty as guide signature is a must for internship students
12. Club activities must be conducted on a regular basis
13. Department notice board incharge Naveen Sir should update the board on a daily basis

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INDIAN ACADEMY
Degree College - Autonomous
Department of Commerce

Meeting Date: 19th March 2024 **Time:** 2 pm to 3 pm

Venue: 517

MEMBERS OF THE MEETING:

SL NO	FACULTY	SIGNATURE
1.	Prof. Magdalene Daniel	M-Daniel
2.	Prof. Jaffer Mohammed	
3.	Prof. Md. Arshad Ulla Khan	
4.	Ms. Lakshmi K	
5.	Mrs. Revathi. S	
6.	Ms. Venessa Priya. M	
7.	Mrs. Preethi GS	
8.	Mrs. Asma Banu	
9.	Mrs. Syeda Firdose	
10.	Mr. Naveen. N	
11.	Mr. Raghu Guda	
12.	Ms. Sheetal Sarah . V	
13.	Mrs. Shilpa S	
14.	Mr. Cheluvaraju	

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INDIAN ACADEMY
GROUP OF INSTITUTIONS

Meeting Agenda

Date: 17/01/2024

Time: 2:00 Pm To 3:00 Pm

Location: ROOM NO 517

1. Opening Remarks

Welcome and Introduction

Overview of the Meeting Agenda

2. Online Education and EVS Updates

Discussion on the transition of OE & EVS to online platforms

3. B.Com OE Schedule

OE for B.Com. to commence post-examinations

4. OE Selection Process

Implementation of Google Forms for OE selection

Instructions and timelines for form submissions

5. AQR Submission

Completion of AQR before the vacation period

Key deadlines and responsibilities

6. File Submissions

Reminder to submit all necessary files before vacation

List of required documents and submission procedures

7. Faculty Dress Code

Monitoring and enforcement of the faculty dress code

Guidelines and expectations

8. Faculty-Student Interactions

Importance of maintaining professional boundaries

Strategies to avoid close interactions with students

9. Club Activities

Launch of club activities on February 4th

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Activity schedule and coordination

10. Register Updates

Procedure for updating registers when stepping out of the college

importance of maintaining accurate records

11. Language Protoco

Prohibition of regional language greetings to students

Emphasis on using formal language

12. Lesson Plan Updates

Ensuring lesson plans are updated on Linways

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INDIAN ACADEMY
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DEPARTMENT OF COMMERCE

AGENDA OF THE MEETING

MEETING DATE: 17th January 2024 **TIME: 2 PM TO 3 PM**

VENUE: ROOM NO. 517

MINUTES OF MEETING

PROCEEDINGS:

1) OE & EVS will.be online.
2) OE for B.Com. will begin after exams.
3) Google forms for OE selection.
4) AQR to be completed before vacation.
5) Files to be submitted before vacation.
6) Dress code of faculties to be monitored.
7) Avoid closeness to students.
8) Feb 4th club activities to be started.
9) Update registers while stepping out from college.
10) No regional language greetings to students.
11) Linways to be updated with lesson plan.

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INDIAN ACADEMY
GROUP OF INSTITUTIONS

Meeting Agenda

Date: 21/07/2024

Time: 2:00 Pm To 3:00 Pm

Location: ROOM NO 517

1. Opening Remarks

Welcome and Introduction

Overview of the Meeting Agenda

2. Involvement of 3rd Semester

Discussion on including 3rd Semester students in upcoming activities and programs

3. IA 2 Question Paper Submission

Deadline and guidelines for submitting the IA 2 question papers

4. Class Conduct

Emphasis on not leaving classes early

Importance of adhering to scheduled class timings

5. Event Responsibilities

Assignment of responsibilities for event scoreboards and sheets

Coordination and preparatio

6. Judges Notification

Informing and confirming judges for upcoming events

7. Linways Updates

Regular updates on Linways

Ensuring lesson plans and student records are current

8. General Conduct and Maintenance

Dress code enforcement

Fee due notifications

Maintaining overall discipline among faculty and student

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9. Internships and Certificate Courses

Requirement for all students to complete internships and a 30-hour certificate course

10. Value Added Courses

Selection and allocation of value added courses for student

Ensuring courses are chosen and distributed appropriately

11. Final Year Requirements

Discussion on requirements to be completed before the 6th semester for final year students

12. PRC and BOS Meetings

PRC-10-22 scheduled for November

BOS-22-02 scheduled for December

Preparation and agenda for these meetings

13. Industrial Visit

Scheduled for 22nd November

Coordination and planning details

14. Industrial Visit Coordinators

Sheethal: Coordinator for 5th Semester students

Banu: Coordinator for 3rd Semester students

15. Core Discipline

Venessa and Jaffar to oversee core discipline

Magdelandine

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INDIAN ACADEMY
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DEPARTMENT OF COMMERCE

MEETING DATE: 21ST JULY 2023 **TIME: 2 PM TO PM**

VENUE: ROOM NO. 517

MINUTES OF MEETING

PROCEEDINGS:

1. 3rd Semester to be involved .
2. IA 2 question paper to be submitted.
3. Do not leave the class early.
4. Event Responsibility- score board and sheets.
5. Judges to be informed.
6. Linways to be updated regularly.
7. Dress code, fee due and discipline to be maintained.
8. All the students need to do internship and certificate course (30 hours)
9. Choose value added course and give students.
10. Final year before 6 semesters.
11. PRC -10-22 (Nov)
12. BOS -22-02 (Dec)
13. Industrial Visit - 22 November
14. Coordinators for Industrial visit:
    - Sheethal- For 5th sem students
    - Banu- For 3rd sem students

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15. Core discipline- Venessa and Jaffar.

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MEETING DATE: 21ST August 2023 **TIME: 2 PM TO PM**

VENUE: Seminar Hall 1

MINUTES OF MEETING

PROCEEDINGS:

1) The work allotment and timetable for the students will be prepared and shared for the bridge course.
2) All the assignments to be submitted on linways with typing format, no photos to be accepted. PDF scanning allowed for practicals.
3) 1st year class teachers to follow up with Not Reporting students
4) August 28th to handle work diary on linways.
5) Official event announcement is only allowed to take part with permission.
6) 1st year students are bunking in a huge number , teachers are required to insist the students.
7) Performance appraisal by 22nd August evening by Surya Sir.
8) DSR, IV and GL activities to be planned by 1st, 2nd and 3rd semester class teachers.
9) Social Media activities to increase the likes.
10) August 23rd, 2023- Unity in Diversity:

    1st sem A and B Sec- Adeeba, 1st sem C sec- Sheethal, PG- Shilpa

11) Dress code for the activity:

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1st A sec- shades of green, 1st B sec- white, 1st C sec- blue.

12) Discipline committee- Raghu, Md. Jaffar and Md. Arshad

13) Photo and video- Banu, Report- Venessa.

14) Decoration and technical- Naveen and Preethi

15) Saplings- Naveen

16) Green Rooms and overall supervision- Maria.

17) Budget of Unity in Diversity:

- 4500 received (used-4250; balance returned-250)
- Decoration- 500
- Trophies- 2500
- Sappling(4)- 1000
- Snacks- 500

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GROUP OF INSTITUTIONS

Meeting Agenda

Date: 08/09/2023

Time: 2:00 Pm To 3:00 Pm

Location: ROOM NO 517

1. Opening Remarks:

Introduction and outline of meeting objectives

2. Faculty Responsibilities:

Ensure timely entry and exit from classes

Monitor and maintain student discipline

Phone usage by students is prohibited during class

3. Discipline Management:

Report any discipline issues to the HOD

Emphasize discipline during the Spectrum event in class

4. Clubs and Committees:

Initium: Revathi and Preethi

Culidoscope: Venessa and Lakshmi

Talentia: Syeda and Banu

Commquest: Raghu and Naveen

5. Industrial Visit:

Coordinator: Preethi

6. Guest Lectures (GL):

Coordinators: Lakshmi, Raghu, and Preethi

7. CIA Coordination:

In-charge: Adeeba

8. Faculty Performance Tracking:

Maintain an Excel sheet to track the performance of faculties

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9. Student Guidance for PG Courses:

Encourage students to pursue M.Com for faculty appraisal benefits

10. New Club for ACCA:

Coordinators: Arshad, Magdelene, and Jaffar

11. Club Inaugurations:

Inaugurate clubs and committees as planned

12. DSR (Daily Student Reports):

Schedule for 1st Semester Class Teachers: 9th August 2023

Plan DSR, Industrial Visit, or Guest Lecture for 3rd and 4th semesters

13. Student Undertaking:

Ensure students receive and sign the necessary undertakings

14. IA-1 Question Papers:

Subject In-charge:

FA: Lakshmi

BD: Banu

AD: Revathi

POM: Venessa

15. Bridge Course Classes:

Review and update on bridge course progress

16. Assignments on Linways:

Submission and evaluation of Assignment 1

17. Freshers' Party:

Date: 20th September

Contribution: Rs. 50 from seniors to Arshad sir

Responsibilities:

Snacks: Naveen, Lakshmi, Ban

Decoration: Revathi, Naveen

Discipline: Syeda, Jaffar, Banu, Raghu

Judges: Vanessa, Preeth

Invitation: Adeeba, Sheetal

Theme, name, dress code, and invitations for freshers

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DEPARTMENT OF COMMERCE

MEETING DATE: 8th September, **2023** **TIME: 2 PM TO PM**

VENUE: ROOM NO. 517

MINUTES OF MEETING

PROCEEDINGS:

1) Faculties on time to class and exit from class.
2) Phone usage of students not to be allowed in the class.
3) Any discipline issues to be kept informed to the HOD
4) Discipline during spectrum among students to be maintained and told to students in the class.
5) Clubs and Committees:
   - Initium- Revathi and Preethi
   - Culidoscope- Venessa and Lakshmi
   - Talentia- Syeda and Banu
   - Commquest- Raghu and Naveen
6) Industrial Visit- Preethi
7) GL- Lakshmi, Raghu and Preethi
8) CIA- Adeeba
9) Excel sheet to be maintained for the performance of faculties.
10) Students encouraged by faculties to join PG course M.Com. will be added to appraisal.

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11) New club for ACCA- Arshad, Magdelene and Jaffar
12) Inauguration of clubs to be done
13) DSR to 1st sem class teachers organized schedule for 9th August 2023
14) 3rd sem and 4th sem DSR or IV or GL
15) Students undertaking to be issued to the students
16) IA 1 question papers to be ready
    - FA- Lakshmi
    - BD- Banu
    - AD- Revathi
    - POM- Venessa
17) Bridge course classes
18) Assignments on linways- Assignment 1
19) Freshers party -20th September- Rs. 50 contribution from seniors to Arshad sir
    - Snakes- Naveen, Lakshmi, Banu
    - Decoration- Revathi, Naveen
    - Discipline- Syeda, Jaffar, Banu, Raghu
    - Judges- Vanessa, Preethi
    - Invitation- Adeeba, Sheetal
    - Theme, name, dress code, invite freshers.
20) GST class strength is bad, students must be informed.

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INDIAN ACADEMY
GROUP OF INSTITUTIONS

Meeting Agenda

Date: 27/10/2023

Time: 2:00 Pm To 3:Pm

Venue: [517]

1. Opening Remarks:

Introduction to the Explorica event details

2. Event Date & Time

Date: 9th November

Time: 9:00 AM to 4:00 PM

Venue: Seminar Hall 2 and Multi-Purpose Hall

3. Participation:

Invite and involve Pre-University (PU) students as well

4. Year-Wise Events:

1st Year: Event 1

2nd Year: Event 2

3rd Year: Event 3

5. Event Specific Roles:

Best Accountant: Asma and Arshad

Collage: Preethi and Sheethal

Treasure Hunt (Run out of the Fire): Venessa and Lakshmi

Essay Writing (Mouth Piece): Jaffar and Adeeba

JAM: Naveen and Magdalene

Business Quiz (Shot Gun): Preethi and Raghu

Product Launch: Syeda and Banu

6. Registration and Promotion:

Handled by Naveen and Raghu

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Ensure proper communication and promotion of the event

7. Event Logistics:

Discuss the name for the event, Finalize rules and regulations for each event Budget planning and allocation

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DEPARTMENT OF COMMERCE

MEETING DATE: 27th October 2023 **TIME: 2 PM TO PM**

VENUE: ROOM NO. 517

MINUTES OF MEETING

PROCEEDINGS:

1) Explorica- 9th of November
2) Explorica Venue: Seminar hall 2 and multi purpose hall.
3) Time of Explorica: 9am to 4PM
4) Invite and involve PU also.
5) 1st year- event 1
6) 2nd year- event 2
7) 3rd year- event 3
8) Best accountant - Asma and Arshad
9) Collage- Preethi and Sheethal
10) Treasure hunt (Run out of the fire)- Venessa and Lakshmi
11) Essay writing (Mouth piece)- Jaffar and Adeeba
12) JAM- Naveen and Magdalene
13) Business Quiz (shot gun)- Preethi and Raghu
14) Product Launch- Syeda and Banu
15) Registration and promotion of the event- Naveen and Raghu
16) Name for the event, rules and regulations, budget for the event in charge.

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INDIAN ACADEMY
GROUP OF INSTITUTIONS

Meeting Agenda

Date:06/10/2023

Time: 2:00 Pm To 3:00 Pm

Venue: ROOM NO 517

1. Opening Remarks:

Overview of agenda items and key updates

2. Faculty Communication:

Ensure timely responses to messages in official groups and emails

3. Attendance Management:

Regularly enter attendance on Linways

Print and have 3rd and 5th-semester students sign attendance sheets

Inform students about the minimum attendance eligibility for exams

4. Dress Code Enforcement:

Ensure that both faculties and students adhere to the dress code

5. Academic Activities:

DSRs, Industrial Visits (IVs), and Guest Lectures (GLs) to be conducted as scheduled

6. Result Analysis:

Ensure the accuracy of result analysis with no errors

7. Club Inauguration:

Event scheduled for October 14th

8. Work Diary Management:

Update lesson plans on Linways and ensure proper documentation in the work diary

9. Student Reporting:

Submit a name list of students reported and not reported to the HOD

10. ID Card Compliance:

Ensure that all students and faculty members wear their ID cards on campus

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11. College Property Protection:

Emphasize that damaging college property is strictly prohibited

12. PG Semester Start:

PG 1st Semester to commence from 11th October onward

13. IA 1 IG Question Papers Submission:

Deadline: 10th October

In-charge for subjects:

CA: Venessa

IT: Lakshmi

MA: Syeda

ED: Sheethal

SAPM & IM: Preethi

GST: Three papers (ABC - one paper, D&E - one paper)

Tally: Raghu

Corporate Accounting: Revathi

E-Commerce: Banu

QABD: Adeeba

14. Submission of Open Elective, Language, and Specialization Lists

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DEPARTMENT OF COMMERCE

MEETING DATE: 6th October **2023**

TIME: 2 PM TO PM

VENUE: ROOM NO. 517

MINUTES OF MEETING

PROCEEDINGS:

1) Faculties to respond the messages on official groups and mails.
2) Entering attendance on linways.
3) 3rd and 5th semester printouts of attendance to be signed by students.
4) Communicate to students about the eligibility of attendance for exams.
5) Dress code of faculties and the students to be followed.
6) DSR, IV's and GL's to be conducted.
7) Result analysis should not have errors.
8) October 14th club inauguration.
9) Work dairy- Lesson plan on linways.
10) Name list to be submitted to HOD mentioning for students reported and not reported.
11) ID cards to be worn by students and faculties.
12) Damaging college property is strictly prohibited.
13) PG 1st semester to be started 11th october onwards.
14) IA 1 IG question papers to be submitted by 10th October.
    - CA - Venessa
    - IT - Lakshmi

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- MA - Syeda
- ED - Sheethal
- SAPM & IM - Preethi
- GST- Three papers (ABC- one paper, D&E- One paper)
- Tally - Raghu
- Corporate Accounting - Revathi
- E Commerece - Banu
- QABD - Adeeba

15) Open elective, languages and specialization list to be submitted.

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INDIAN ACADEMY
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Department of Commerce

Meeting Date: 23November 2023

Time: 1.30 pm to 2.30 pm

Venue: 403

MEMBERS OF THE MEETING:

SL NO	FACULTY	SIGNATURE
1.	Prof. Magdalene Daniel	Magdalene Daniel
2.	Prof. Jaffer Mohammed	
3.	Prof. Md. Arshad Ulla Khan	
4.	Ms. Lakshmi K	
5.	Mrs. Revathi. S	23/11/23
6.	Mrs. Adeeba Ahamed	
7.	Ms. Venessa Priya. M	
8.	Mrs. Preethi GS	
9.	Mrs. Asma Banu	
10.	Mrs. Syeda Firdose	
11.	Mr. Naveen. N	
12.	Mr. Banu Prakash	
13.	Mr. Raghu Guda	
14.	Ms. Sheetal Sarah	

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DEPARTMENT OF COMMERCE

MEETING DATE: 15th December **2023** **TIME: 2 PM TO PM**

VENUE: ROOM NO. 517

MINUTES OF MEETING

PROCEEDINGS:

1) 2 DSR - 1st year and 3rd year.
2) Freshers party
3) Guest lecture
4) Parents Teachers Meeting (PTM)
5) Industrial Visit
6) IA 1&2 Marks to be entered by 23rd December.
7) Scrutining and editing to be done digitally.
8) Dress code to be monitored in class by teachers.
9) Do not use students for personal use or favour.
10) Students are not allowed in classrooms and department without ID cards.
11) Boys and girls not to be witted together in the campus and classroom.
12) Subject allotment would be shared by 18th December, 2023.
13) Mobile phones mot be used inside the classrooms.
14) Undertakings and mentor cards to be completed
15) Exit mark at the end of the AY.
16) Club activities to be planned for the next semester.

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INDIAN ACADEMY
GROUP OF INSTITUTIONS

Meeting Agenda

Date:15/12/2023

Time: 2:00 Pm To 3:00 Pm

Venue: 517

1. Opening Remarks:

Overview of the agenda and key tasks for the academic session

2. DSR (Daily Student Report):

To be conducted for 1st and 3rd year students

3. Freshers Party:

Finalize planning and logistics

4. Guest Lecture:

Discuss scheduling and speaker arrangements

5. Parents Teachers Meeting (PTM):

Plan for upcoming PTM, set expectations and key discussion points

6. Industrial Visit:

Review arrangements and itinerary

7. IA Marks Entry:

IA 1 & 2 marks to be entered by 23rd December

Scrutinize and edit marks digitally

8. Dress Code Monitoring:

Teachers to monitor dress code compliance in classrooms

9. Appropriate Student Usage:

Faculty members are reminded not to use students for personal tasks or favors

10. ID Card Enforcement:

Ensure students wear ID cards; no entry into classrooms or departments without them

11. Student Behavior:

Boys and girls should not sit together in classrooms or on campus

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12. Subject Allotment:

Subject allotment for the next academic session to be shared by 18th December 2023

13. Mobile Phone Restrictions:

Strictly prohibit mobile phone usage inside classrooms

14. Mentor Cards and Undertakings:

Completion of student mentor cards and undertakings by the deadline

15. Exit Marks:

Exit mark process for students at the end of the academic year

16. Planning for Next Semester:

Discuss and plan club activities for the upcoming semester

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Department of Commerce

Meeting Date: 15th December 2023

Time: 2 pm to 3 pm

Venue: 517

MEMBERS OF THE MEETING:

SL NO	FACULTY	SIGNATURE
1.	Prof. Magdalene Daniel	Magdalene Daniel
2.	Prof. Jaffer Mohammed	
3.	Prof. Md. Arshad Ulla Khan	
4.	Ms. Lakshmi K	
5.	Mrs. Revathi. S	
6.	Mrs. Adeeba Ahamed	
7.	Ms. Venessa Priya. M	
8.	Mrs. Preethi GS	
9.	Mrs. Asma Banu	
10.	Mrs. Syeda Firdose	
11.	Mr. Naveen. N	
12.	Mr. Banu Prakash	
13.	Mr. Raghu Guda	
14.	Ms. Sheetal Sarah . V	

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MEETING DATE: 8th December **2023**

TIME: 2 PM TO PM

VENUE: ROOM NO. 517

MINUTES OF MEETING

PROCEEDINGS:

1) CIA from 13th December.
2) OT sessions of IA 1 & 2 will be conducted by COE.
3) 14th and 15th of December open to linways.
4) Hall ticket will not be issued for subjects having less than 75%.
5) CIA will not be given if not attended.
6) Fee payment are to be promptly done.
7) CIA for CM & SAPM will reflect same for IA 1& 2.
8) Last date to pay examination fees is 14th December.
9) OT to be selected ones portal is opened failing which it will be considered as supple.
10) Last working day is December 30th.
11) Exam starts Jan 3rd onwards.

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DEPARTMENT OF COMMERCE

Date: 17-02-2023

AGENDA OF THE MEETING

1. Valuation of UG Examination
2. PG Examination
3. CIA
4. Internal Audit -UG&PG
5. Time Table -(i) Even semester UG
(ii) Vacation Slot
6. Vacation Leave
7. Calendar of Events
8. Workload
9. Attendance -UG&PG
10. Industrial Visit
11. Conference & Seminars
12. Any other Points - (i) Staff adherence to time in and out register
(ii)Responsibility and Accountability

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DEPARTMENT OF COMMERCE
MINUTES OF MEETING

Meeting Date: 17th February 2023 **Time:** 12 pm to 1 pm

Venue: Room No. 407

PROCEEDINGS:

1. Prof Suryanarayana HOD began the department meeting by welcoming the faculties and mentioned that every month we would have department meetings on mandatory to discuss various tasks and would be reported to the Management regularly.
2. Valuation of UG exams must be completed on priority.
3. PG exams have begun for which the faculties should report regularly to the exam duties and be vigilant about all the exam tasks.
4. The UG exam valuation must be completed by the department before going for the vacation leave.
5. It was planned that a few activities like debate should be conducted for PG students to keep them more active and participative.
6. Industrial visits should be frequently planned and organised for UG and PG students for which Prof Jaffer Mohammed will take the lead in organising for the same.
7. A proper criteria should be followed by the department in marking CIA marks to students that is a minimum of 15 and 18 marks to be allotted for reported students which would help them score well in the examinations.
8. Internal audit tasks are assigned to each faculty for which the tasks are to be completed before the audit and the files must be kept ready.

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9. Preparation of time table for the even semester must be done on priority considering each faculties log in, work load and specialisations.
10. Vacation slots are finalised and no more changes will be encouraged for which it is requested that the assigned tasks need to be completed before going for vacation.
11. Calendar of events for the even semester and the academic year must be prepared and filed by the Coordinator Ms Maria Mendes.
12. Conferences must be planned and organised by the department in the coming days as we are lagging behind with it.
13. Faculty workload may increase or decrease based on requirement and subjects allotment of UG and PG for which acceptance and cooperation is required by each one.
14. PG attendance must be marked on Linways on a daily basis.
15. Lesson plan is the most required element for every subject for which the faculties need to prepare lesson plan for their respective subjects on Linways and update the same.
16. Industrial visits must be recorded in the department calendar of events.
17. Faculties need to pay more focus and attention towards research, publications and attending conferences regularly.
18. The value-added courses for the even semester will begin from March 06th 2023 and will go on up to 17th of March 2023, the department support will be required in terms of monitoring and attendance marking of BCom students attending the courses.
19. Staff movement out of college at odd times is monitored and was reported, this practice needs to be strictly avoided to overcome unpleasant situations in the department. Staff movement out of college can happen only during the stipulated lunch hour.
20. If any faculty arrives the need to step out of college during working hours must keep the HOD informed about it.

Magdelene

HOD
DEPT OF COMMERCE
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Bangalore - 43.

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DEPARTMENT OF COMMERCE

PARTICIPANTS OF MEETING

	NAME OF THE PERSON	SIGNATURE
	Prof. Suryanarayana K S	
	Mrs. Maria Mendes	
	Mrs. Shobha S	
	Prof. Jaffer Mohammed C	
	Mr. Mohammed Arshad Ulla Khan	
	Mrs. Lakshmi K	
	Ms. Revathi.S	
	Mrs. Shilpa S	
	Ms. Adeeba Ahamed	
	Ms. Venessa Priya M	
	Ms. Preethi G S	
	Ms. Asma Banu	
	Ms. Syeda Firdose	
	Mr. Naveen N	
	Mrs. Magdalene Daniel	
	Mr. Banu Prakash M	
	Mr. Guda Raghu	
	Ms. Sheetal Sarah V	

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Department of Computer Sciences

Board of Studies Meeting – Agenda

Date: 02 / 12 / 2023 **Venue:** Online (Google Meet)

AGENDA - 1:

Curriculum Revisions for I to VI Semester (NEP) for all the UG (BCA, B.Sc.) programmes and I to IV Semester PG (M.Sc. Data Science) programmes.

AGENDA- 2:

Compulsory Internship/ Certificate Course (Duration- 30 Hrs Course) for all the UG and PG students which needs to be completed by the end of V semester for UG and by III Semester by PG students.

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF COMPUTER SCIENCE

Minutes of Board of Studies Meeting

Date: 02 / 12 / 2023

Venue: Online (Google Meet) **Time:** 10:30 a.m.

Chairperson: Mrs. Anuradha P, Head, Dept. of Computer Science

Members Present:

Sl. No.	Name	Designation
1	Dr. Hanumantappa M BNU Representative	Professor & Chairperson, Dept. of Computer Science and Applications, Bangalore University
2	Dr.Regina.L.Suganthi Subject Expert	Dean of PG Sciences, Mount Carmel College Autonomous
3	Mr. Subham Industry Expert	Senior Tech Engineer, NMC Provectus Solutions Pvt. Ltd
4	Dr. T. Srinivasa Rao	Professor and Controller of Examinations
5	Mr. Regis Britto Arokia Raja	Professor and Deputy Controller of Examinations
6	Dr. Arati Mohapatro	Associate Professor
7	Mrs. Parvathy J	Assistant Professor
8	Ms. Apoorva S	Assistant Professor
9	Mrs. Sona K V	Assistant Professor
10	Ms. Anuradha. P	Chairperson

Agenda:

1. Curriculum Revisions for I to VI Semester (NEP) for all the UG (BCA, B.Sc.) programmes and I to IV Semester PG (M.Sc. Data Science) programmes.
2. Compulsory Internship/ Certificate Course (Duration- 30 Hrs Course) for all the UG and PG students which needs to be completed by the end of V semester for UG and by III Semester by PG students.

Proceedings:

Agenda 1: Curriculum Revisions for I to VI Semester (NEP) for all the UG (BCA, B.Sc.) programmes and I to IV Semester PG (M.Sc. Data Science) programmes.

Deliberations:

The following changes in the **course matrix of BCA** was approved:

- Database Management Systems and DBMS Lab from semester II were shifted to semester I
- Data Structures and Data Structures Lab from semester I were shifted to semester II
- B21DC6.5 - Mobile App Development Lab course was replaced by Project Lab in semester VI

- The following were discussed and approved in different courses of BCA:
- B21DC 1.1 - Discrete Structures:
  - include " binomial and normal probability Distribution"
- B21DC 2.2 - Object Oriented Programming Using Java:
  - specified types of built-in "Java Exceptions" to be covered
  - "File operations" were shifted from Unit 3 to Unit 4
- B21DC3.3 - Python Programming:
  - "File operations" were included in Unit 3
  - Topics to cover under 'numpy' and 'pandas' were specified
- B21DC4.3 - Internet and Web Technologies:
  - Topics were rearranged to give equal weightage to all the units
  - Included 'Introduction to Bootstrap' in Unit 3
- B21DC5.1 - Design and Analysis of Algorithms:
  - Included 'Master theorem' in Unit 1
  - Suggested to distribute hours uniformly across all the units
  - Shifted 'Brute Force' and 'Divide and Conquer' techniques from Unit 2 to Unit 1
- B21DC5.3 - Web Programming: Excluded each() function as it is now deprecated
- All Discipline specific courses of V and VI semester BCA had earlier 5 Units. In order to bring uniformity across all semesters, these DSC courses were restructured to 4 Units

The following changes were proposed in B.Sc. Computer Science programme:

- S21CS2.2 - Data Structures Lab: Programs were rephrased
- S21CS6.4 - Computer Networks Lab to be replaced by Project Lab in semester VI

The following were discussed and approved in different courses of M.Sc. Data Science:

- MDS105 - Python Programming Lab: Programs were added and restructured
- MDS206 - Professional Ethics And Corporate Governance:
    - included Ethics for IT Professionals and IT Users in Unit 2
    - shifted 'Mind And Its Mysteries Control of Senses and Mind' from Unit 2 and Unit 1

Agenda 2: Compulsory Internship/ Certificate Course (Duration- 30 Hrs Course) for all the UG and PG students which needs to be completed by the end of III semester for UG and by III Semester by PG students.

Deliberations:

- Chairperson briefed about the procedure for Certification Courses
- The following online certification courses from SWAYAM were proposed:
    - Animation
    - AI in Marketing
    - IoT
    - Blockchain and its Applications
    - Cloud Computing
    - Games and Information
    - Linux Bash (Shell Scripting)
    - Python for Data Science
    - Social Networks
    - Software Testing
    - Introduction to Information Technology
- Industry Expert, Subham suggested to complete the certification courses by the end of V semester for UG and by II Semester by PG students for the enlisted SWAYAM courses

lusion: The members revised the syllabus of BCA, B.Sc (Computer Science) and M.Sc. Data Science and pproved the same. The Chairperson thanked all the members, especially the external members for their ble suggestions.

g Time: 11:30 a.m.

tions:

Curriculum for I to VI Semester (NEP) for BCA and B.Sc (Computer Science) programmes were evised.

Curriculum for I to VI Semester (NEP) for I to IV Semester M.Sc. Data Science programmes were evised.

Compulsory Internship/ Certificate Course for all the UG and PG students were discussed.

Percentage of syllabus revision for BCA - 25%, BSc Computer Science - 8%, MSc Data Science - 10%.

Sl. No.	Name	Designation	Signature
1	Dr. Hanumantappa M BNU Representative	Professor & ChairPerson, Dept. of Computer Science and Applications, Bangalore University	
2	Dr.Regina.L.Suganthi Subject Expert	Dean of PG Sciences, Mount Carmel College Autonomous	online
3	Mr. Subham Industry Expert	Senior Tech Engineer, NMC Provectus Solutions Pvt. Ltd	online
4	Dr. T. Srinivasa Rao	Professor and Controller of Examinations	T. Srinivasa Rao 23
5	Mr. Regis Britto Arokia Raja	Professor and Deputy Controller of Examinations	
6	Dr. Arati Mohapatro	Associate Professor	
7	Ms. Parvathy J	Assistant Professor	
8	Ms. Apoorva S	Assistant Professor	
9	Ms. Sona K V	Assistant Professor	
10	Ms. Anuradha. P	ChairPerson	Anuradha 2/12/23

Anuradha
2/12/23
(chairperson)

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DEPARTMENT OF COMPUTER SCIENCE

Minutes of Board of Studies Meeting

Date: 23 / 12 / 2023

Venue: Online (Google Meet)

Time: 10:00 a.m.

Chairperson: Mrs. Anuradha P, Head, Dept of Computer Science

Members Present:

Sl. No.	Name	Designation
1	Dr. Hanumantappa M BNU Representative	Professor & ChairPerson, Dept. of Computer Science and Applications, Bangalore University
2	Dr. Kumar R Subject Expert	Professor and head, Dept of Computer Science-PG, Kristu Jayanti College
3	Dr. T. Srinivasa Rao	Professor and Controller of Examinations
4	Mr. Regis Britto Arokia Raja	Professor and Deputy Controller of Examinations
5	Dr. Arati Mohapatro	Associate Professor
6	Mrs. Parvathy J	Assistant Professor
6	Ms. Apoorva S	Assistant Professor
8	Mrs. Sona K V	Assistant Professor
9	Mr. Vidyul	Assistant Professor
10	Ms..Anuradha.P	ChairPerson

Agenda:

Approval of BCA Artificial Intelligence and Machine Learning programme.

Proceedings:

Approval of BCA Artificial Intelligence and Machine Learning programme.

Deliberations:

Prof. Hanumantappa M. conveyed that:

- The institution must write to UGC and check with UGC whether this programme is in the approved list of programmes and also frame the eligibility criteria as per UGC guidelines. Also, check for BCA in AI and ML programmes in state universities.
- Write a letter to BNU requesting a letter of consent from BNU to launch the new programme.
- B.Sc. in AL and ML would be more suitable than a BCA in AL and ML

The Programme Educational Objectives (PEOs), Programme Outcomes (POs), course matrix for semesters I and II, were presented by the chairperson.

Prof. Hanumantappa M. recommended to maintain the course matrix for the first year of BCA in AI and ML, same as the regular BCA programme, and in the second and third year, include specific courses on AL and ML. Prof. Kumar also had the same opinion and all members of the board agreed to this.

Conclusion: The Chairperson thanked all the members, especially the external members for their valuable suggestions.

Closing Time: 11 a.m.

Resolutions:

1. The new programme, BCA Artificial Intelligence and Machine Learning, must be in the UGC approved list of programmes and eligibility criteria must be framed according to UGC guidelines.
2. On seeking the consent of Bengaluru North University (BNU), the new programme can be commenced with the Course matrix of 1st and 2nd semester to be maintained the same as regular BCA.

Sl. No.	Name	Designation	Signature
1	Dr. Hanumantappa M BNU Representative	Professor & ChairPerson, Dept. of Computer Science and Applications, Bangalore University	
2	Dr. Kumar R Subject Expert	Professor and head, Dept of Computer Science-PG, Kristu Jayanti College	
3	Dr. T. Srinivasa Rao	Professor and Controller of Examinations	
4	Mr. Regis Britto Arokia Raja	Professor and Deputy Controller of Examinations	
5	Dr. Arati Mohapatro	Associate Professor	
6	Ms. Parvathy J	Assistant Professor	
6	Ms. Apoorva S	Assistant Professor	
8	Ms. Sona K V	Assistant Professor	
9	Mr. Vidyul	Assistant Professor	
10	Ms. Anuradha.P	ChairPerson	23/12/23

23/12/23
[Chairperson]

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INDIAN ACADEMY
Degree College - Autonomous

Department of Computer Sciences

Board of Studies Meeting – Agenda

Date: 20 / 04 / 2024

Venue: Online (Google Meet)

AGENDA:

Approval of 3rd and 4th semester BSc (Data Science) syllabus.

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF COMPUTER SCIENCE

Minutes of Board of Studies Meeting

Date: 20 / 04 / 2024

Venue: Online (Google Meet) **Time:** 10:30 a.m.

Chairperson: Mrs. Anuradha P, Head, Dept of Computer Science

Members Present:

Sl. No.	Name	Designation
1	Dr. Hanumantappa M BNU Representative	Professor & ChairPerson, Dept. of Computer Science and Applications, Bangalore University
2	Dr.Regina.L.Suganthi Subject Expert	Associate Professor and Registrar- Admission, Mount Carmel College Autonomous
3	Mr. Subham Industry Expert	Senior Tech Engineer, NMC Provectus Solutions Pvt. Ltd
4	Dr. T. Srinivasa Rao	Professor and Controller of Examinations
5	Mr. Regis Britto Arokia Raja	Professor and Deputy Controller of Examinations
6	Dr. Arati Mohapatro	Associate Professor
7	Ms. Parvathy J	Assistant Professor
8	Ms. Apoorva S	Assistant Professor
9	Ms. Shital Kulkarni	Assistant Professor
10	Ms. Sona KV	Assistant Professor
11	Mr. Soumya Babu	Assistant Professor
12	Ms. Shwetha	Assistant Professor
13	Ms. Anuradha P.	ChairPerson

Proceedings:

Agenda: Approval of 3rd and 4th semester BSc (Data Science) syllabus.

Deliberations:
The chairperson presented the syllabus of 3rd and 4th sem B.Sc Data Science.
The following suggestions were proposed by the external members in the 3rd and 4th semester courses of the Data Science:

- D23DC3.4: Web Programming Lab:
  - include lab programs related to tax calculation such as GST calculation in bill generation.
- D23DC3.5: Artificial Intelligence Lab:
  - Instead of factorial, fibonacci and tree data structure lab programs include the lab programs specific to theory topics in AI.
- D23DC4.2 : Data Analytics:
  - instead of visualization in Unit IV include web scraping topic.
- D23DC4.4: Data Analytics Lab:
  - include the programs on working with data extracted from websites

Conclusion: The members discussed and approved the 3rd and 4th semester syllabus of B.Sc. Data Science. The Chairperson thanked all the members, especially the external members for their valuable suggestions.

Closing Time: 11:45 a.m.

Resolutions:

Syllabus for 3rd and 4th semester B.Sc.Data Science programme was ratified and the suggestions are to be incorporated.

Percentage of syllabus revision of 3rd & 4th semester BSc DS - 100%.

INDIAN ACADEMY
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DEPARTMENT OF COMPUTER SCIENCE

Members of Board of Studies Meeting

Sl. No.	Name	Signature
1	Dr. Hanumantappa M BNU Representative	
2	Dr.Regina.L.Suganthi Subject Expert	(ONLINE) PRESENT
3	Dr. Kumar R Subject Expert	ABSENT
4	Mr. Timothy Paul Alumni	ABSENT
5	Mr. Subham Industry Expert	(ONLINE) PRESENT
6	Dr. T. Srinivasa Rao	T. Srinivasa Rao 26/4/2024.
7	Mr. Regis Britto Arokia Raja	
8	Dr. Arati Mohapatro	
9	Ms. Parvathy J	Absent
10	Ms. Apoorva S	
11	Ms. Shital Kulkarni	skkulkarni
12	Ms. Sona KV	
13	Ms. Beena Uphale	Absent
14	Mr. Soumya Babu	Soumya Babu
15	Ms. Shwetha	

PRINCIPAL
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CHAIRPERSON
Department of Computer Science
Indian Academy Degree College
Hennur Cross, Hennur Main Road
Bangalore-560043

INDIAN ACADEMY
Degree College - Autonomous

Department of Computer Science

Board of Studies Meeting – Agenda

Date 25/6/24 **Venue:** Circulation through email

AGENDA - 1:

- Approval of B.Sc EMCs Programme for the academic year 2024-25.

Triple Major Combination: B.Sc (Electronics/ Mathematics / Computer Science) with an intake of 20 seats.

- Approval of BCA intake of 200 seats, B.Sc Data Science-40 seats for the academic year 2024-25.

AGENDA- 2:

Curriculum approval for I and II Semester BCA, BCA (AI & ML), B.Sc Data Science and B.Sc Computer Science (SEP)

- Detailed Syllabus of I and II Semesters
- Continuous Internal Assessment
  (End Semester Examination: 60% & Continuous Internal Assessment: 40%)

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF COMPUTER SCIENCE

Minutes of Board of Studies Meeting

: 25/6/2024

e: Circulation through email

rperson: Anuradha P

bers:

Sl. No.	Name	Designation
1	Dr. Hanumantappa M BNU Representative	Senior Professor, Dept. of Computer Science and Applications, Bangalore University
2	Dr.Regina.L.Suganthi Subject Expert	Registrar of Admissions, Mount Carmel College Autonomous
3	Dr. R.Kumar Subject Expert	Professor, Head, Dept. of Computer Science (PG), Kristu Jayanti College Autonomous
4	Mr. Timothy Paul Alumni	Assistant Professor, St. Joseph's Evening College-Autonomous
5	Mr. Subham Industry Expert	Senior Tech Engineer, NMC Provectus Solutions Pvt. Ltd
6	Dr. T. Srinivasa Rao	Professor and Controller of Examinations
7	Mr. Regis Britto Arokia Raja	Professor and Deputy Controller of Examinations
8	Dr. Arati Mohapatro	Associate Professor
9	Ms. Parvathy J	Assistant Professor
10	Ms. Apoorva S	Assistant Professor
11	Ms. Shital Kulkarni	Assistant Professor
12	Ms. Sona KV	Assistant Professor
13	Mr. Soumya Babu	Assistant Professor
14	Ms. Shwetha	Assistant Professor

Proceedings:

The Chairperson had circulated the syllabi of all 4 programmes namely, BCA, BCA (AI & ML), BSc (Data Science) and B.Sc Computer Science by mail with the agenda (mentioned above) in the mail contents, seeking approval for the same. Detailed syllabi of all 4 programmes were sent as attachments.

Agenda 1:

- Approval of B.Sc EMCs Programme for the academic year 2024-25.

Triple Major Combination: B.Sc (Electronics/ Mathematics / Computer Science) with an intake of 20 seats.

- Approval of BCA intake of 200 seats, B.Sc Data Science-40 seats for the academic year 2024-25.

Deliberations:

Dr.Regina had enquired why B.Sc EMCs intake is only 20 seats and she suggested programme combination of Maths, Statistics and Economics can be introduced in the institution.

Agenda 2:

Curriculum approval for I and II Semester BCA, BCA (AI & ML), B.Sc Data Science and B.Sc Computer Science (SEP)

Deliberations:

The chairperson has circulated by mail the 1st and 2nd semester syllabus of BCA, BCA (AI & ML), BSc (Data Science), B.Sc CS programmes.

In 24BDSDC2.6: DATA STRUCTURES LAB, the 13th question must include insertion and deletion operations was suggested by Dr.Regina.

Also, the members had asked to check whether in UUCMS, the CIA component of 40% instead of 20% (as per SEP guidelines), can be implemented or not.

Conclusion: The members replied to the chairperson's mail approving the 1st and 2nd semester syllabus of BCA, BCA (AI & ML), BSc (Data Science), B.Sc CS programmes.

The Chairperson thanked all the external members for their consent and valuable suggestions by mail.

Resolutions:

The 1st and 2nd semester syllabus of BCA, BCA (AI & ML), BSc (Data Science), B.Sc CS programmes were ratified and approved by the BOS members.

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF COMPUTER SCIENCE

Members of Board of Studies Meeting

Sl. No.	Name	Signature
1	Dr. Hanumantappa M BNU Representative	Online (Circulation by mail)
2	Dr.Regina.L.Suganthi Subject Expert	Online (Circulation by mail)
3	Dr. R.Kumar Subject Expert	Online (Circulation by mail)
4	Mr. Timothy Paul Alumni	Online (Circulation by mail)
5	Mr. Subham Industry Expert	Online (Circulation by mail)
6	Dr. T. Srinivasa Rao	T. Srinivasa Rao. 25/6/2024
7	Mr. Regis Britto Arokia Raja	
8	Dr. Arati Mohapatro	
9	Ms. Parvathy J	
10	Ms. Apoorva S	
11	Ms. Shital Kulkarni	
12	Ms. Sona KV	
13	Mr. Soumya Babu	
14	Ms. Shwetha	
15	Ms. Anuradha P.	25/6/24

Anuradha
25/6/24
[Chairperson].

INDIAN ACADEMY
Degree College - Autonomous

Department of Humanities

Psychology

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF PSYCHOLOGY

Board of Studies Meeting – Agenda

Date: 02/12/2023 **Venue:** Board Room

AGENDA:-

AGENDA - 1:

Curriculum Discussion for I/II/III/IV/V/VI Semester B.A. Psychology (NEP).

- Course Matrix – for the I/II/III/IV/V/VI Semesters.
- Detailed Syllabus and Blueprints– for I/II/III/IV/V/VI Semesters.

AGENDA- 2:

- Suggestions and approval of internship program for final year B.A students.

AGENDA- 3:

- Approval of Board of examiners (BOE) members.

AGENDA - 4: Any other matter with the permission of the Chair of BOS

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF PSYCHOLOGY

Minutes of Board of Studies Meeting

Date: 02 / 12 / 2023

Venue: Board Room (Room No. S8)

Time: 10:00 a.m.

Chairperson: Ms. Shobha
Members:

Sl. No.	Name	Designation
1	Ms. Shobha	Chairperson
2	Dr. Sreenivas .M	BU nominee
3	Dr. Geetha A	Subject Expert
4	Dr. K. Jayasankara Reddy	Subject Expert
5	Dr. M Ramani Balu	Industrial Expert
6	Ms. Karishma Thapa	Alumni
7	Ms. Sherline Deepak	Member
8	Mr. Augustin Joseph. M	Member

Agenda:

1. Curriculum Discussion for I/II/III/IV/V/VI Semester B.A. Psychology (NEP).
2. Suggestions and approval of internship program for final year B.A students.
3. Approval of Board of examiners (BOE) members.

Proceedings:

Agenda 1: Curriculum Discussion for I/II/III/IV/V/VI Semester B.A. Psychology (NEP).

- **I sem B.**A. – no changes were suggested in the syllabus
- **II sem B.**A. – no changes were suggested in the syllabus
- **III sem B.**A. – no changes were suggested in the syllabus
- **IV sem B.**A. – no changes were suggested in the syllabus
- **V sem B.**A. – no changes were suggested in the syllabus
    - No changes were made for social psychology.
    - Industrial psychology: following changes were suggested:
    - Unit II: omit 'how to write a job description', include process in job analysis.
    - Unit III: omit goals of training.
    - Unit IV: include types of stress and management for leaders.

- **VI sem B.**A. – no changes were suggested in the syllabus

Agenda 2: Suggestions and approval of internship program for final year B.A students.

- Suggestions on the list of institutions and organizations.
- Suggestion for MoU with various institution.
- Internship Guidelines and credits for internships.
- Internship evaluation criteria.

Agenda 3: Approval of Board of examiners (BOE) members.

- The board approved the existing panel list of board of examiners.
- No changes in BOE members were made.

The meeting concluded with a note of gratitude expressed by the Ms. Sherline Deepak to the members of the BOS for their valuable deliberation.

Closing Time: 11:30 AM

Resolutions:

1. The board of studies approved the syllabus for I, II, III, IV, V and VI semester – theory and practical.
2. The department presented the list of panels of examiners for the academic year 2023-24 and the same was approved by the board.
3. The board recommended changes for the internship programs, like MoU with various institution and organisations.

INDIAN ACADEMY
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DEPARTMENT OF PSYCHOLOGY

BOARD OF STUDIES MEETING

DATE:03/12/2023		**TIME : 9:30 A.M**	
SL.NO	**NAME**	**DESIGNATION**	**SIGNATURE**
1	Ms. Shobha	**CHAIRPERSON**	
2	Dr.Sreenivas. M	**Banglore University Nominee**	
3	Dr. Geetha A	**Subject Expert**	
4	Dr. K.Jayasankara Reddy	**subject Expert**	
5	Dr. m. Ramani Balu	**Industrial Expert**	2/12/23.
6	Ms. Karishma Thapa	**Alumin**	
7	Ms. Sherline Deepak	**Member**	
8	Mr. Augustin Joseph	**Member**	

INDIAN ACADEMY
Degree College - Autonomous

Department of Humanities
Journalism

INDIAN ACADEMY
Degree College - Autonomous

Department of Humanities - Journalism
Board of Studies Meeting – Agenda

Date: 05/12/2023 **Venue: Google Meet**

AGENDA:

AGENDA -1: Curriculum Discussion for I/II/III/IV/V/VI Semester B.A. Journalism (NEP)

- Course Matrix – for the I/II/III/IV/V/VI Semesters
- Detailed Syllabus and Blueprints– for I/II/III/IV/V/VI Semesters

AGENDA- 2: Approval of the online courses and Internship proposed

- Online courses or Internship-compulsory internship or online courses for B.A. Journalism

AGENDA - 3: Approval of the Panel of Examiners to the BOE

- List of Panel of Examiners

AGENDA - 4: Any other matter with the permission of the Chair of BOS

INDIAN ACADEMY
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DEPARTMENT OF JOURNALISM

Minutes of Board of Studies Meeting

Date: 05/12/2023

Venue: Google Meet **Time:** 2:00 p.m.

Chairperson: Prof. Shobha S

Members Present:

Sl. No.	Name	Designation
1	Ms. Shobha.S	Chairperson
2	Dr.B Shaila Shree	BNU Nominee
3	Dr.Shantharaju S	Subject Expert
4	Dr. Juby Thomas	Subject Expert
5	Ms.Sumaa Tekur	Industrial Expert
6	Ms. Nibedita Roy Chowdhury	Alumni
7	Dr N Thilaka	Member
8	Mr Roshan Honest Raj A	Member
9	Ms Abhirami	Member

Agenda:

1. **Curriculum Discussion for I/II/III/IV/V/VI Semester B.A. Journalism (NEP)**
2. **Approval of the online courses and Internship proposed**
3. **Approval of the Panel of Examiners to the BOE**
4. **Any other matter with the permission of the Chair of BOS**

Proceedings:

The Chairperson began the meeting by welcoming and introducing the members of Board of Studies to Indian Academy Degree College – Autonomous. Further, the Chairperson handed over the forum to Mr. Roshan to carry forward. Mr. Roshan briefly presented the changes in the syllabus.

Agenda 1: Curriculum Discussion for I/II/III/IV/V/VI Semester B.A. Journalism (NEP)
Mr Roshan presented the changes in the Syllabus of Journalism based on NEP Curriculum and the members had approved the same with the following observation.

Deliberations:

- **I Semester, A21 JR 1.1: Introduction to Journalism**

  Unit 3:
  - Formerly it was Glossary of Journalism, which was changed to 'Types of Journalism'.

- **I Semester, Open Elective**

  A21 OE 1.2: Writing for Media

  Unit 1:
  - Journalism jargons.
  - Editing techniques: Factual, Objectivity, Accuracy and Language. Was added to the syllabus
  - Press release and writing lead was removed.
  - News writing(inverted pyramid was added)

- **III Semester, A21 JR 3.1: News Reporting and Analysis**
  - There was swap between the 2nd and 3rd unit.

  Unit 2:
  - Unit 3 is brought up to unit 2.
  - Qualities of Reporter: Duties, Functions, Types of Reporting - Beat Reporter, nose for news, reading, ethics, morals, understanding of sociology Correspondents, Foreign Correspondence, Stringers, Freelance Journalist & Mofussil, Citizen journalism, data journalism, finance journalism, science journalism

  Unit 3: Unit 2 was shifted as unit 3
  - Writing News- Structure of News, Types of News, Lead, Kinds of Leads, and Interviewing: Methods of writing Interview stories- FORK approach, Funnel and inverted funnel Press Conferences and Press Release Writing
  - Research, planning, framing questions were removed from syllabus.

- **III Semester, A21 OE 3.1: Feature Writing and Freelancing**

  Unit 1:
  - Qualities was added to syllabus.

  Unit 2:
  - Travel and life style, book reviews and movie reviews were added.
  - Middles, columns and editorials were removed from syllabus.

Agenda 2: Approval of the online courses and Internship proposed.

Deliberations:

- Online courses or Internship – compulsory internship or online courses for B.A Journalism.
- Final decision is yet to be made on internship depending, matters like credits, duration and semester etc.
- It was suggested that instead of pre-deciding the online courses from 'Swayam' the department could check the course availability at the prescribed semester and suggest accordingly.

Agenda 3: Approval of Panel of Examiners to the BOE.

Deliberations:

1.	Ms. Devishree Shetty	St. Aloysius College (Autonomous) Mangalore
2.	Mr Dalu Jose	Loyola Degree College
3.	Ms Bhavya Shetty	St Aloysius College Autonomous Mangaluru

- Mr. Roshan presented the list of panel of examiner's to the board members for approval, the same was approved unanimously.
- The following were added to the existing list.

Agenda 4: Any other matter with the permission of the Chair of BOS.

Deliberations:
The meeting concluded with a note of gratitude expressed by Ms. Abhirami to the members of the BOS for their valuable deliberations.

CLOSING TIME: 3:00 PM

RESOLUTIONS:

- Syllabus changes were modified according to the board member suggestions from I Sem to VI Sem as per NEP 2020 and was approved.
- The list of panels of examiners was presented and the same was approved by the Board.

INDIAN ACADEMY
Degree College - Autonomous

Department of Humanities
Political Science

INDIAN ACADEMY
Degree College - Autonomous

Department of Humanities – Political Science
Board of Studies Meeting – Agenda

Date: 05 / 12/ 2023

Venue: S9 (B Block)

AGENDA - 1:

Curriculum Discussion for I/II/III/IV/V/VI Semester B.A. Political Science (NEP)

- Course Matrix – for the I/II/III/IV/V/VI Semesters
- Detailed Syllabus and Blueprints– for I/II/III/IV/V/VI Semesters

AGENDA- 2:

- Approval of BOE Members

AGENDA- 3:

- Other subjects with chair permission

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF POLITICAL SCIENCE

Minutes of Board of Studies Meeting

Date: 02 /12/ 2023

Venue: S9 (B Block) **Time:** 11:00 a.m.

Chairperson: Prof. Shobha. S

Members Present:

Sl. No.	Name	Designation
1	Prof. Shobha. S	Chairperson
2	Dr. S. Y. Surendra Kumar	BNU Nominee
3	Dr. M. J. Michael	Subject Expert
4	Dr. P. E. Somiah	Subject Expert
5	Ms. Tejaswini	Alumni
6	Prof. Muralidhara K	Member

AGENDA:

1. **Curriculum Discussion for I/II/III/IV/V/VI Semester B.A. Political Science (NEP)**
2. **Approval of the online courses and Internship proposed**
3. **Approval of the Panel of Examiners to the BOE**
4. **Any other matter with the permission of the Chair of BOS**

Proceedings:

Agenda 1: Curriculum discussion for I to VI Semester B.A. Political Science.
Deliberations: The proposal of Course Matrix and Syllabus of Political Science based on NEP Curriculum and the members had approved the same unanimously.

Agenda 2: Approval of BOE Members
Deliberations: The list of examiners was presented to the board members for approval and the same was approved unanimously by adding few names to the list.

Agenda 3: Internship for VI Semester
Deliberations: The board as subjected to follow NEP guidelines.

Conclusion: The BOS meeting was closed by Vote of Thanks by the Ex-officio member of BOS.

Closing Time: 1.30 pm

Resolutions:

1. The Course Matrix of I Sem to VI Sem as per NEP 2020 was presented and the same as approved by the board as status quo.
2. The Department presented the list of panels of examiners for the academic year 2023-2024 and the same was approved by the Board.
3. The board suggested to follow the guidelines for Internship (State Curriculum Committee)

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF POLITICAL SCIENCE

Board of Studies Meeting

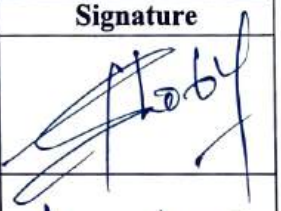
DATE: 05/12/2023

VENUE: S9 (B Block)

TIME: 11.00 AM

CHAIRPERSON: Ms. Shobha. S

MEMBERS:

Sl. No.	Name	Designation	Signature
1	Ms. Shobha. S.	Chairperson	
2	Dr. Surendra Kumar S Y	BNU Nominee	
3	Dr. S. J. Michael	Subject Expert	
4	Dr. P. E. Somaiah	Subject Expert	
6	Ms. Tejashwini R. L.	Alumni	
7	Mr. Muralidhara. K.	Member	

INDIAN ACADEMY
Degree College - Autonomous

Department of Languages

Hindi

INDIAN ACADEMY
Degree College - Autonomous

Department of Languages (Hindi)

Board of Studies Meeting – Agenda

Date: 20 / 04 / 2024 **Venue:** Board Room

AGENDA - 1:

- Approval for the Common syllabus for the programme B.Com, B.B.A.

AGENDA - 2:

- Approval for the Common syllabus for the programme B.C.A, B.Sc., B.A.

AGENDA - 3:

- Curriculum design and development for I & II Semester.

AGENDA - 4:

- Approval of additional Panel of Examiners to the BOE

AGENDA - 5:

- Any other matters with prior approval of the Chair.

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF LANGUAGES - HINDI

Minutes of Board of Studies Meeting

Date: 20 / 04/ 2024

Venue: Board Room **Time:** 10:00 a.m.

Chairman: Dr.Mahindra Kumar

Members Present:

Sl. No.	Name	Designation
1.	Dr. Mahindra Kumar	Chairman
2.	Prof. Prija K Nair	Member, Head, Dept. Of Languages
3.	Dr. Vinay Kumar	BNU Nominee, HoD-Hindi, Bishop Cotton Women's Christian College, Bengaluru
4.	Dr. Ranjeet Kumar	Industry Expert, Translation officer, DRDO, Bengaluru.
5.	Prof. Vijay Kumar	Member, Associate Professor

Agenda:

1. Approval for the Common syllabus for the programme B.Com, B.B.A.
2. Approval for the Common syllabus for the programme B.C.A, B.Sc., B.A.
3. Curriculum design and development for I & II Semester.
4. Approval of additional Panel of Examiners to the BOE
5. Any other matters with prior approval of the Chair.

Proceedings: BOS meeting for Hindi was held on 20th April 2024, the Chairman commenced the meeting by welcoming the members of the Board of Studies. Further the Chairman briefed on the previous meeting and agenda of the present meeting.

Agenda 1: Approval for the Common syllabus for the programme B.Com, B.B.A.

Agenda 2: Approval for the Common syllabus for the programme B.C.A, B.Sc., B.A.

Deliberations: Despite the reservation voiced by the external experts regarding the implementation of common syllabus for UG programme consensus was reached to overcome the operational challenges within the Institution. Consequently, it was decided to adopt a common syllabus for B.Com & B.B.A programme while a common syllabus is proposed for B.Sc., B.C.A & B.A.

Agenda 3: Curriculum design and development for I & II Semesters.

Deliberations: As per the NEP guideline Curriculum is designed and developed for I & II Semesters .

Agenda4: Approval to include additional Panel of Examiners to the BOE.

Deliberations: BOS members have approved to include additional Panel of Examiners to the BOE.

Agenda5: Any other matters with prior approval of the Chair.

Deliberations: Discussed the job opportunities of Hindi translators in various central government departments.

Conclusion: The meeting concluded with words of gratitude expressed by the Chairman.

Closing Time: 12:30pm

Resolutions:

- As per the NEP guidelines, curriculum is designed and developed for I & II Semester B.Com, B.B.A. and B.Sc., B.C.A., B.A.
- BOS members have approved to include additional Panel of Examiners to the BOE.

INDIAN ACADEMY
Degree College - Autonomous

MATRIX AND SYLLABUS

For the Programmes B.Com/B.B.A.

Hindi

NEP Based Curriculum (2024 onwards)

I Semester

NEP- Curriculum Framework for Approval

Hindi - Matrix for I, Semester (w.e.f. 2024-25 onwards)

I SEMESTER							
Code	Course Code	Course	Teaching hours	Course Components			Credits
				L	T	P	
AECC		Language I (Hindi)	60	4	-	-	3

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

Theory

Total teaching hours: 60

No. of hours per week: 4

(3 credits)

CObj	Course Objectives
CObj_1	हिन्दी कहानियों से परिचित कराना ।
CObj_2	हिन्दी कहानी के वाचन और लेखन कौशल का विकास कराना ।
CObj_3	कहानियों के माध्यम से नैतिकमूल्यों के प्रति स्वस्थ दृष्टिकोण विकसित करना ।

CO	Course Outcomes इस कोर्स के बाद छात्र सक्षम हो सकेंगे,
CO1	हिन्दी कहानी के अंतर्भाव को समझने की कला का निर्माण होगा ।
CO2	हिन्दी के कहानी साहित्य की जानकारी प्राप्त करेंगे ।
CO3	हिन्दी की विभिन्न कहानियों से परिचित होंगे ।
CO4	कहानियों के अध्ययन से रचनात्मक लेखन की रूचि उत्पन्न होगी ।
CO5	व्याकरण के अध्ययन से हिन्दी भाषा के प्रयोग में सक्षम होंगे ।

CO-PO Mapping

	Programme Outcomes		
	Commerce	**Business Administration**	**Business Analytics**
CO_1	**4**		
CO_2			**5**
CO_3			
CO_4		**5**	**4**
CO_5		**3**	

Course Content

Sl. No.	Unit / Chapter title	Content	Number of hours	Skills developed
1	Unit - I	1. ठाकुर का कुआँ - प्रेमचंद 2. पुनर्जन्म - सुदर्शन 3. चीफ की दावत - भीष्म सहानी	18 Hrs	विश्लेषणात्मक , संज्ञानात्मक , मूल्यांकन और संश्लेषण
2	Unit – II	4. बहादूर - अमरकांत 5. परदा - यशपाल 6. गुण्डा - जयशंकर प्रसाद	18 Hrs	विश्लेषणात्मक , संज्ञानात्मक , मूल्यांकन और संश्लेषण
3	Unit – III	7. मूल्य - आचार्य चतुरसेन शास्त्री 8. वापसी - उषा प्रियंवदा	12 Hrs	संज्ञानात्मक , अनुसंधान , हस्तांतरणीय कौशल
4	Unit – IV	1.शब्दानुवाद (Translation Terminology) 2.लिंग, वचन, विशेषण और क्रिया।	12 Hrs	संज्ञानात्मक , रोजगारपरक , जीवन कौशल

संदर्भ पुस्तक:

1. सुगम हिंदी व्याकरण: प्रो.वंशीधर एवं धर्मपाल शास्त्री।
2. व्यवहारिक हिंदी व्याकरण तथा रचना: डॉ. हरदेव बाहरी
3. हिन्दी व्याकरण: डॉ.नागप्पा
4. अभिनव व्यहारिक हिन्दी - डॉ.परमानंद गुप्ता
5. सुबोध व्यावहारिक हिन्दी - डॉ कुलदीपगुप्ता

INDIAN ACADEMY
Degree College - Autonomous

MATRIX AND SYLLABUS

For the Programmes B.Com/B.B.A.

Hindi

NEP Based Curriculum (2024 onwards)

II Semester

NEP- Curriculum Framework for Approval

Hindi - Matrix for II Semester (w.e.f. 2024 - 25 onwards)

II SEMESTER							
Code	Course Code	Course	Teaching hours	Course Components			Credits
				L	T	P	
AECC		Language I (Hindi)	60	4	-	-	3

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

HN 2.1 B.COM.& B.B.A – GADYA VARIDHI

Theory

Total teaching hours: 60

No. of hours per week: 4

(3 credits)

CObj	**Course Objectives**
CObj_1	हिन्दी गद्यविधाओं से परिचित कराना ।
CObj_2	हिन्दी गद्य का वाचन और लेखन कौशल का विकास कराना ।
CObj_3	गद्य के माध्यम से मानवीय मूल्यों के प्रति स्वस्थ दृष्टिकोण विकसित करना ।

CO	**Course Outcomes** इस कोर्स के बाद छात्र सक्षम हो सकेंगे,
CO1	हिन्दी गद्य के अंतर्भाव को समझने की कला का निर्माण होगा ।
CO2	हिन्दी के गद्य साहित्य की जानकारी प्राप्त करेंगे ।
CO3	हिन्दी की विभिन्न गद्यविधाओं से परिचित होंगे ।
CO4	गद्य के अध्ययन से रचनात्मक लेखन की रूचि उत्पन्न होगी ।
CO5	व्याकरण के अध्ययन से हिन्दी भाषा के शुध्द स्वरुप को समझेंगे ।

CO-PO Mapping

	Programme Outcomes		
	Commerce	**Business Administration**	**Business Analytics**
CO_1			**5**
CO_2	**4**	**5**	
CO_3			
CO_4		**3**	**4**
CO_5			

Course Content

Sl. No.	Unit / Chapter title	Content	Number of hours	Skills developed
1	Unit - I	1. बड़े घर की - प्रेमचंद 2. उत्साह - आ.रामचन्द्र शुक्ल 3. भोलाराम का जीव - हरिशंकर परसाई	18 Hrs	विश्लेषणात्मक , संज्ञानात्मक , मूल्यांकन और संश्लेषण
2	Unit – II	4. नींव की ईंट - रामवृक्ष बेनीपुरी 5. बहता पानी निर्मला- सचिदानंद हीरानंद वात्सायन अज्ञेय 6. पर्यावरण और हम - राजीव गर्ग	18 Hrs	विश्लेषणात्मक , संज्ञानात्मक , मूल्यांकन और संश्लेषण
3	Unit – III	7. रामा - महदेवी वर्मा 8. वैज्ञानिक युग और संस्कृति - शांतिप्रिय द्विवेदी	12 Hrs	संज्ञानात्मक , अनुसंधान , हस्तांतरणीय कौशल
4	Unit – IV	1. प्रयोजन मूलक हिन्दी: रोजगार परख हिन्दी, विज्ञापन, सृजनात्मक लेखन, हिन्दी साफ्टवेर । 2. सरकरी पत्र: सामान्य सरकारी पत्र, कार्यालय ज्ञापन, कार्यालय आदेश और अधिसूचना ।	12 Hrs	संज्ञानात्मक , रोजगारपरक , जीवन कौशल

संदर्भ पुस्तक:

1. सुगम हिंदी व्याकरण: प्रो.वंशीधर एवं धर्मपाल शास्त्री।
2. व्यवहारिक हिंदी व्याकरण तथा रचना: डॉ. हरदेव बाहरी
3. हिन्दी व्याकरण: डॉ.नागप्पा
4. अभिनव व्यहारिक हिन्दी - डॉ.परमानंद गुप्ता
5. सुबोध व्यावहारिक हिन्दी - डॉ कुलदीपगुप्ता

INDIAN ACADEMY
Degree College - Autonomous

MATRIX AND SYLLABUS

For the Programmes B.C.A/B.Sc./B.A.

Hindi

NEP Based Curriculum (2024 onwards)

I Semester

NEP- Curriculum Framework for Approval

Hindi - Matrix for I Semester (w.e.f. 2024 - 25 onwards)

I SEMESTER							
Code	Course Code	Course	Teaching hours	Course Components			Credits
				L	T	P	
AECC		Language I (Hindi)	60	4	-	-	3

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

HN 1.1 B.C.A. B.Sc & B.A – GADYA SAMPADA

Total teaching hours: 60

No. of hours per week: 4

(3 credits)

CObj	Course Objectives
CObj_1	हिन्दी कहानियों से परिचित कराना ।
CObj_2	हिन्दी कहानी के वाचन और लेखन कौशल का विकास कराना ।
CObj_3	कहानियों के माध्यम से नैतिकमूल्यों के प्रति स्वस्थ दृष्टिकोण विकसित करना ।

CO	Course Outcomes इस कोर्स के बाद छात्र सक्षम हो सकेंगे,
CO1	हिन्दी कहानी के अंतर्भाव को समझने की कला का निर्माण होगा ।
CO2	हिन्दी के कहानी साहित्य की जानकारी प्राप्त करेंगे ।
CO3	हिन्दी की विभिन्न कहानियों से परिचित होंगे ।
CO4	कहानियों के अध्ययन से रचनात्मक लेखन की रूचि उत्पन्न होगी ।
CO5	व्याकरण के अध्ययन से हिन्दी भाषा के प्रयोग में सक्षम होंगे ।

CO-PO Mapping

	Programme Outcomes						
	Computer Application	**AI &ML**	**Data Science**	**Life Science**	**Physical Science**	**Journalism /English**	**Psychology**
CO_1				**5**	**2**	**4**	
CO_2							
CO_3							
CO_4	**5**	**5**	**5**				
CO_5	**3**	**3**	**3**	**4**	**4**		**5**

Course Content

Sl. No.	Unit / Chapter title	Content	Number of hours	Skills developed
1	Unit - I	1. ईदगाह - प्रेमचंद 2. कर्मफल – यशपाल 3. गले की जंजीर - अमरकांत	18 Hrs	विश्लेषणात्मक , संज्ञानात्मक , मूल्यांकन और संश्लेषण
2	Unit - II	4. नशा – मन्नु भंडारी 5. अभाव – विष्णु प्रभाकर 6. पितृशोक – मेहरुन्निसा परवेज	18 Hrs	विश्लेषणात्मक , संज्ञानात्मक , मूल्यांकन और संश्लेषण
3	Unit – III	7. पत्नी – जैनेन्द्र कुमार 8. माँ मुझे स्कूल जाना है –डा.सुरेश मारुति राव मुले	12 Hrs	संज्ञानात्मक , अनुसंधान , हस्तांतरणीय कौशल
4	Unit – IV	1.शब्दानुवाद (Translation Terminology) 2.लिंग, वचन, विशेषण और क्रिया ।	12 Hrs	संज्ञानात्मक , रोजगारपरक , जीवन कौशल

संदर्भ पुस्तक:

1. सुगम हिंदी व्याकरण: प्रो.वंशीधर एवं धर्मपाल शास्त्री।
2. व्यवहारिक हिंदी व्याकरण तथा रचना: डॉ. हरदेव बाहरी
3. हिन्दी व्याकरण: डॉ.नागप्पा
4. अभिनव व्यहारिक हिन्दी - डॉ.परमानंद गुप्ता
5. सुबोध व्यावहारिक हिन्दी - डॉ कुलदीपगुप्ता

INDIAN ACADEMY
Degree College - Autonomous

MATRIX AND SYLLABUS

For the Programmes B.C.A/B.Sc./B.A.

Hindi

NEP Based Curriculum (2024 onwards)

II Semester

NEP- Curriculum Framework for Approval

Hindi - Matrix for II Semester (w.e.f. 2024 - 25 onwards)

II SEMESTER							
Code	Course Code	Course	Teaching hours	Course Components			Credits
				L	T	P	
AECC		Language I (Hindi)	60	4	-	-	3

Continuous Internal Assessment – Scheme of Evaluation

For Theory Courses

End Semester Examination: 60%

Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	05		
iii. Classroom participation	05		
Total			40

HN 2.1 B.C.A., B.Sc. & B.A. – GADYA SAMPADA

Theory

Total teaching hours: 60

No. of hours per week: 4

(3 credits)

CObj	**Course Objectives**
CObj_1	हिन्दी गद्यविधाओं से परिचित कराना ।
CObj_2	हिन्दी गद्य का वाचन और लेखन कौशल का विकास कराना ।
CObj_3	गद्य के माध्यम से मानवीय मूल्यों के प्रति स्वस्थ दृष्टिकोण विकसित करना ।

CO	**Course Outcomes** इस कोर्स के बाद छात्र सक्षम हो सकेंगे,
CO1	हिन्दी गद्य के अंतर्भाव को समझने की कला का निर्माण होगा ।
CO2	हिन्दी के गद्य साहित्य की जानकारी प्राप्त करेंगे ।
CO3	हिन्दी की विभिन्न गद्यविधाओं से परिचित होंगे ।
CO4	गद्य के अध्ययन से रचनात्मक लेखन की रूचि उत्पन्न होगी ।
CO5	व्याकरण के अध्ययन से हिन्दी भाषा के शुध्द स्वरुप को समझेंगे ।

CO-PO Mapping

	Programme Outcomes						
	Computer Application	AI &ML	Data Science	Life Science	Physical Science	Journalism/ English	Psychology
CO_1				5		4	
CO_2						5	
CO_3							
CO_4					2		5
CO_5	3	3	3	4			

Course Content

Sl. No.	Unit / Chapter title	Content	Number of hours	Skills developed
1	Unit - I	1. पूस की रात - प्रेमचंद 2. मधुमक्खियों से सबक - धर्मवीर भारती । 3. सदाचार का ताबीज – हरिशंकर परसाई	18 Hrs	विश्लेषणात्मक , संज्ञानात्मक , मूल्यांकन और संश्लेषण
2	Unit – II	4. निष्ठुर न्याय - हरिकृष्ण प्रेमी 5. सुई दो रानी, डोरा दो रानी - महादेवी वर्मा । 6. संस्कृति है क्या? - रामधारी सिंह दिनकर ।	18 Hrs	संज्ञानात्मक , अनुसंधान , हस्तांतरणीय कौशल
3	Unit – III	7. बढते शोर का गहराता संकट - राजेन्द्र कुमार राय, रवीन्द्र कुमार वर्मा । 8. गौरी - सुभद्रा कुमारि चौहान	12 Hrs	विश्लेषणात्मक , संज्ञानात्मक , मूल्यांकन और संश्लेषण
4	Unit – IV	1. संक्षेपण 2. अनुवाद कला: परिभाषा, प्रकार, अनुवाद की आवश्यकता, अच्छे अनुवादक के गुण ।	12 Hrs	संज्ञानात्मक , रोजगारपरक, जीवन कौशल

संदर्भ पुस्तक:

1.सुगम हिंदी व्याकरण: प्रो.वंशीधर एवं धर्मपाल शास्त्री।

2.व्यवहारिक हिंदी व्याकरण तथा रचना: डॉ. हरदेव बाहरी

3.हिन्दी व्याकरण: डॉ.नागप्पा

4.अभिनव व्यहारिक हिन्दी - डॉ.परमानंद गुप्ता

5.सुबोध व्यावहारिक हिन्दी - डॉ कुलदीपगुप्ता

INDIAN ACADEMY
Degree College - Autonomous

Department of Life Sciences-Biochemistry

Board of Studies Meeting – Agenda

Date: 01/12/2023 **Venue:** HoD chamber (On-line)

AGENDA-1:

- Curriculum revision for I to VI Semester (NEP) for UG programmes.
- Edited Syllabus

AGENDA-2:

- Curriculum revisions for I to IV Semester for PG programmes.
- Edited Syllabus

AGENDA-3:

- Approval for introducing internship/certificate course for both UG and PG programmes.

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF LIFE SCIENCES - BIOCHEMISTRY

Minutes of Board of Studies Meeting

DATE: 01/12/2023

VENUE: HOD chamber, Dept of Life Sciences, Indian Academy Degree College.

TIME: 12:00 PM to 1.00 PM (Online)

CHAIRPERSON: Dr.Ananda Vardhan H, Head of Life Sciences, IADCA.

MEMBERS:

SL. No	Name of the BoS panel members	Designation/ Department/ University/Address
1.	**Dr. H. Ananda Vardhan** (Chairman)	BOS Chairman Professor & Head, Dept. of Life Sciences, Indian Academy Degree College (Autonomous), Bangalore.
2.	**Dr. Manjunatha.H** (University Nominee)	Position: Professor, Dept. of Biochemistry, Bangalore University Jnanabharathi Campus Bengaluru-560 056. Email id: manjunatha75@gmail.com 87626 61348
3.	**Dr. Veeraraghavan.V** (Subject expert)	Position: Professor, Department of Biochemistry School of Allied Health Sciences, REVA University, Bangalore College:REVA University,Bengaluru Mobile No: 9880241577 Email id: veera.raghavan@reva.edu.in
4.	**Dr. P. Dhamodhar** (Subject expert)	Position: Associate Professor, Department of Biotechnology, M.S.Ramaiah Institute of Technology, Bangalore College: M.S.Ramaiah Institute of Technology , Bengaluru Mobile No: 98803 41651 Email id: dhamu_bio@msrit.edu
5.	**Dr. Vijayakumar Muppala** (Industry expert)	Position: Director Industry: Acronym Ingredients India Pvt. Ltd., Jigani, Anekal Taluk, Bangalore Mobile No: 7358707966 Email id: vijay@acronymindia.com

6.	Mr. Chandrashekhar Aradhya S N (Alumnus)	Position: Associate Microbiologist, Industry: Eurofins Analytical Services India, Hoodi Bangalore Mobile No: 99800 54555 Email id: chandrashekhararadhyasn@gmail.com
7.	Dr. Pushpa .K (Member)	Professor and Program Coordinator, Dept of LS-Biochemistry, IADCA Bengaluru
8.	Dr. Suma. T.K. (Member)	Assistant Professor, Dept of LS-Biochemistry, IADCA Bengaluru
9.	Dr. Erumalla Venkata Nagaraju (Member)	Associate Professor, Dept of LS-Biochemistry, IADCA Bengaluru
10.	Mrs. Dilshad Begum (Member)	Assistant Professor, Dept of LS-Biochemistry, IADCA Bengaluru
11.	Mrs. Kashma.N.B. (Member)	Assistant Professor, Dept of LS-Biochemistry, IADCA Bengaluru

Agenda:

1. Curriculum revisions for I to VI Semester (NEP) for UG programmes.
2. Curriculum revisions for I to IV Semester for PG programmes.
3. Approval for introducing internship/certificate course (Duration-30hrs) for all the UG and PG programs which needs to be completed by the end of III Semester for UG and by the end of III or IV Semester by PG students.

Proceedings:

The chairperson began the meeting by formally welcoming the members of the Board of Studies. He introduced himself and the faculty members to the Board. A brief out of the agenda of the meeting was given.

Agenda 1:

Curriculum for the courses taught by Biochemistry program to the B.Sc combination offered at IADCA i.e., B.Sc BCMB was observed to have some syllabus repetitions. In this context, the PRC recommended for a change in the syllabus of 4th semester courses BC 4.1 and BC 4.2. The removed portions and the added portions are put forth to the BOS board for review and approval.

Deliberations:

All the board members approved the proposed changes.

Agenda 2:

Curriculum for the courses taught in M.Sc Biochemistry program offered at IADCA was observed to have a need for syllabus revision. In this context, the PRC recommended for slight modifications in the syllabus of courses MBC 106, 107, 201, 202, 401 403 and 404. The removed portions and the added portions are put forth to the BOS board for review and approval.

Deliberations:

All the board members approved the proposed changes.

Agenda 3:

In view of the Academic council of IADCA taking a decision to introduce a compulsory letter credit Internship/Certificate Course (minimum duration of 30 hrs) as a mandatory requirement for all the UG and PG students of IADCA (by the end of III Semester for PG students / by the end of III or IV Semester for UG students). The same was discussed in the PRC and as per the recommendations; the students would be either encouraged to take-up internship amongst the MOU industries of IADCA or an equivalent online MOOC course (only from the authorized platforms i.e., SWAYAM, NPTEL or edX) could be pursued. The same is being put forth before the BOS board for review and approval.

Deliberations:

All the board members approved the proposal to introduce Internship/Certificate Course for both UG and PG programs.

INDIAN ACADEMY
Degree College - Autonomous

S21 BC 4.1: ANALYTICAL BIOCHEMISTRY
THEORY

Sl.No	Module title	Module Content	Number of Hours	Skills Developed
1	**Biochemical investigations**	Outline of strategies in biochemical investigations, models for biochemical investigations, introduction to animal cell culture and plant tissue culture, applications. Preparation of extracts for biochemical investigations. Methods of tissue homogenization: (Potter-Elvejham, mechnical blender, sonicator and enzymatic). Centrifugation techniques, principles and applications- differential, density gradient. Ultra-centrifugation- preparative and analytical. Tracer techniques: Radio isotopes, units of radio activity, half life, β and γ- emitters, use of radioactive isotopes in biology, ELISA, RIA. Solvent extraction, solid phase extraction, Soxhlet extraction. Physicochemical properties of metabolites and drugs from plant materials	15	**Cognitive Skills**
2	**Chromatography**	General Principles of chromatography – adsorption and partition, partition coefficient, Rf values Types of chromatographic techniques, Principle and applications – Paper chromatography- solvents, Rf value, applications; Thin layer chromatography- principle, choice of adsorbent and solvent, Rf value, applications; Gel filtration, Ion-exchange- principle, resins, action of resins, experimental techniques, applications, Affinity chromatography. HPLC: Instrumentation, mobile phases in HPLC, factors affecting resolution in HPLC chromatography. Normal and reverse, Fast protein liquid chromatography (FPLC). Gas chromatography: Principle and design of instrument. Factors affecting GC, stationary phase, mobile phase.	15	**Cognitive Skills**
3	**Electrophoresis and spectroscopy**	Electrophoresis: principle, non-denaturing PAGE, denaturing electrophoresis (PAGE), SDS-PAGE, SDS-PAGE in reducing conditions, isoelectrofocusing. 2D	15	**Cognitive Skills**

		electrophoresis, Immuno-electrophoresis: Dot blotting and immune-diffusion tests with antibodies, zone electrophoresis/immune-electrophoresis. Rocket electrophoresis, counter immune-electrophoresis, Agarose gel electrophoresis of nucleic acids. Spectroscopic techniques: Beer and Lamberts law, Principles of colorimeter, spectrophotometer, circular dichroism (CD), CD of biomolecules (proteins) and LD (linear dichroism) of biomolecules. IR spectroscopy, NMR: Principle, biochemical application of NMR. Mass spectroscopy: Principle, experiment, ionization modes, equipments in MS analysis Uses of MS in Biochemistry		
4	**Microbiological techniques**	Microscopy: Basic principles of light microscopy, phase contrast, electron microscope and fluorescent microscope and their applications. Preparation of different growth media, isolation and culturing and preservation of microbes, Gram staining- Gram positive and Gram negative bacteria, motility and sporulation, Sterilization techniques- Physical methods, chemical methods.	15	**Cognitive Skills**
4	**Isotopic and immunological techniques**	Radioisotopic methods of analysis - Radio isotopes, units of radio activity, half life, β and γ- emitters, detection and measurement of radioactivity – GM counter, scintillation counter. Autoradiography. Applications of radioisotopes – 3H, 14C, 131I, 60Co and 32P. Biological effects of radiations. Important biological discoveries using radioisotopes. Immunological techniques – antigen-antibody interaction, immune-diffusion tests with antibodies, Immuno-electrophoresis: zone electrophoresis, Rocket electrophoresis, counter immune-electrophoresis. Immunoblotting. Radioimmunoassays (RIA). ELISA – principle, types and applications. Immunofluorescence. Introduction to immunofluorescent staining and flow cytometry. Introduction to biosensors.	15	**Cognitive Skills**

S21 BC 4.2: BIOCHEMICAL TECHNIQUES PRACTICAL

Sl.No	Moduletitle	Module Content	Number of Hours	Skills Developed
1	Practical4	Separation of amino acids by paper chromatography	4 Hrs/week	Employable & Analytical Skills
2		Separation of serum proteins by gel electrophoresis		
3		Absorption maxima of coloured substances (p-Nitrophenol and Methyl Orange)		
4		Absorption maxima of proteins (BSA) and nucleic acids		
5		Separation of plant pigments using paper chromatography		
6		Separation of plant pigments by column chromatography using silica gel-G		
7		Demonstration of separation of lipids by TLC		
8		Sterilization techniques Extraction and estimation of lycopene from tomato fruit		
9		Identification of Bacterial cells Extraction and estimation of anthocyanin from flowers		
10		Pure culture technique- Streak, Pour Plate and Serial dilution Study of antigen and antibody interaction by immunodiffusion		
11		Simple Staining and Gram Staining Agarose gel electrophoresis of DNA		

I Sem M.Sc.

MBC – 106: General Biochemistry Lab

1. Preparation of buffers; Acetate, phosphate and tris buffer.
2. Determination of iodine number and peroxide value of oils and fats.
3. Determination of pka of weak acids and amino acids by pH metric titration.
4. Hydrolysis of starch / glycogen and estimation of its purity by H.J. method.
5. Hydrolysis of starch / glycogen and estimation of its purity by Somogy's method.
6. Estimation of vitamin C by dichlorophenol indophenol method.
7. Estimation of reducing sugars (lactose in milk) by DNS method.
8. Estimation of protein by Lowry's method.
9. Estimation of inorganic phosphate by Fiske-Subbarao method.
10. Estimation of tyrosine by Millon's method.
11. Estimation of DNA by Diphenylamine method.
12. Estimation of RNA by Orcinol method.
13. Estimation of calcium and magnesium by EDTA methods
14. Absorption spectra of proteins and nucleic acids and determination of molar extinction coefficient.
15. Extraction of potato starch / liver glycogen and estimation by iodine
16. Extraction of proteins from seeds and estimation by Bradford's method.
17. Extraction of lecithin and cholesterol from egg yolk.

I Sem M.Sc.

MBC – 107: Clinical Biochemistry and Microbiology Lab

Clinical Biochemistry

1. Estimation of glucose by Folin Wu method.
2. Estimation of cholesterol by Zack's method.
3. Estimation of haemoglobin by Wong's method
4. Estimation of urea in blood by Diacetylmonoxime method.
5. Determination of A/G ratio by Biuret method.
6. Analysis of SGOT-SGPT (AST, ALT) / creatine kinase / acid or alkaline phosphatase.
7. Qualitative analysis of Urine sample for normal and abnormal constituents.
8. Estimation of uric acid in serum and urine by Caraway's method
9. Estimation of creatinine and creatine in serum and urine by Zaffe's method.
10. Estimation of urea in urine by Nesslerization method (Urease method).
11. Glucose estimation by GOD-POD method

Microbiology

1. Preparation and sterilization of culture media (Complete and Synthetic)- Broth and Plates
2. Propagation of bacteria and fungi
3. Staining of bacteria – Simple staining, differential staining (Gram), staining of spores
4. Quantification of Bacteria (Serial Dilution and Plate count)
5. Determination of growth curve of bacteria and Calculation of Generation Time

6. Biochemical tests and motility for the identification of bacteria
7. Propagation and enumeration of Bacteriophage by plaque count
8. Antibiotic sensitivity test

II Sem M.Sc.

MBC – 201: Enzymology

Introduction to Enzymes: Nomenclature and classification of enzymes. Specificity and active site. Fundamentals of enzyme assay – enzyme units, coupled kinetic assay. Enzyme localization. Criteria of purity of enzymes. Monomeric and oligomeric enzymes: Monomeric enzymes; Serine proteases, zymogen activation, multifunctional enzymes, oligomeric enzymes and multi- enzyme complexes.

Enzyme Technology: Industrial and clinical applications of enzymes, Immobilization of enzymes- methods and applications. Enzyme engineering. Designer enzymes (Abzymes, Ribozymes). **5 hrs**

The investigation of active site structure: The identification of binding sites and catalytic sites –trapping the E-S complex, use of substrate analogs, enzyme modification by treatment with proteolytic enzymes, photo – oxidation and chemical modification of amino acid side chains (cys, met, his, ser, asp, glu, lys, and tyr). Affinity labeling studies (chymotrypsin triose phosphate isomerase) an and super reactive amino acid chains (chymotrypsin and glutamate dehydrogenase). The 3-D structural features of active sites as revealed by X-ray crystallographic and chemical studies (chymotrypsin trypsin, elastase and triose phosphate isomerase). Site directed mutagenesis. **7 hrs**

Enzyme catalysis: Chemical nature of enzyme catalysis-General acid-base catalysis, electrostatic catalysis, covalent catalysis, intramolecular catalysis and enzyme catalysis. Mechanisms of action of the following enzymes-lysozyme, ribonuclease, lactate dehydrogenase, serine proteases (chymotrypsin, trypsin, elastase), sulphydryl enzymes (papain and alcohol dehydrogenase), and multi-enzyme complexes (pyruvate dehdrogenase complex). Metal– activated and metallo-enzymes (mechanism of action of pyruvate kinase, creatine kinase, superoxide dismutase & carboxypeptidase – A). **7 hrs**

Coenzymes: The mechanistic role of the following coenzymes in enzyme catalyzed reactions – nicotinamide nucleotides, flavin nucleotides, pyridoxal phosphate, coenzyme-A, lipoic acid, thiamine pyrophosphate, biotin, tetrahydrofolate and coenzyme B_{12}. **6 hrs**

Kinetics of enzyme-catalyzed reactions: Methods used in the investigation of the kinetics of enzyme-catalyzed reactions, initial velocity studies, rapid reaction techniques and relaxation technique. Enzyme kinetics of single substrate reactions – Michaelis-Menten and Briggs and Haldane theory (rapid equilibrium and steady state theory). Kinetic data evaluation-linear transformation of Michaelis-Menten equation. Pre-steady state kinetics. Integrated velocity equation. Haldane equation. King-Altman procedure for deriving the rate equation. Effect of pH & temperature on enzymatic reactions, Arrhenius plot, determination of activation energy. **9 hrs**

Enzyme Inhibition: Types of reversible inhibitors; competitive, non-competitive, uncompetitive, and mixed inhibitors. Partial inhibition, substrate inhibition and allosteric inhibition. Irreversible inhibition. **6 hrs**

Kinetics of bi- substrate reactions: Sequential mechanism, compulsory order and random order mechanism, non-sequential mechanism, ping pong mechanism, distinction between different kinetic pathways using primary and secondary plots. Inhibition studies in the characterisation of bisubstrate reactions. Investigations of reaction mechanisms using isotopic exchange at equilibrium. **5 hrs**

Allostery of enzyme action: Binding of ligands to proteins, Co-operativity, the Hill equation, Adair equation, Scatchard plot and equilibrium dialysis techniques. *Sigmoidal kinetics:* MWC and KNF models. Significance of sigmoidal behavior. Allosteric enzymes and metabolic regulation. Study of ATCase as typical allosteric enzyme. Other mechanisms of metabolic regulation. **7 hrs**

II Sem M.Sc.

MBC – 202: Analytical Biochemistry II

UNIT 1: Chromatography

Introduction, partition coefficient, phase systems, liquid and solid phases, parameters employed in column chromatography, retention, resolution, physical basis of peak broadening, plate height equation, capacity factors, peak symmetry, standard systems of chromatography and its components, stationary phase, elution. Principle procedure and application of paper chromatography

Thin layer chromatography: Introduction; phases used in TLC, preparative TLC, metabolic profiling, solvent systems for TLC. Detection of compounds on TLC plates.

Modes of chromatography: Ion exchange, major ion exchange matrices, elution in ion exchange chromatography. Examples of cation and anion exchangers, chromate-focusing. Gel filtration: matrix used fractionation range and matrices, determination of native mass of protein by gel filtration. Reverse phase principle and procedure. Hydrophobic interaction chromatography

Affinity chromatography: Affinity ligands immobilization of ligands. Activation of matrices, coupling affinity ligands (example–GSH). Metal affinity chromatography, His tag, open column chromatography, hydroxyl apatite chromatography.

HPLC: Instrumentation, column, pumps, plumbing, injectors, mobile phases in HPLC, two dimensional HPLC , factors affecting resolution in HPLC chromatography, flow rate and linear velocity. Separate modes: normal and reverse, gradient reverse phase, ion suppression and ion pairing. Chiral-HPLC, chiral columns. Detectors: types, UV, visible fluorescence, electrochemical detectors. Fast protein liquid chromatography (FPLC).

Gas chromatography: Principle and design of instrument. Factors affecting GC, stationary phase, mobile phase, column length, diameter, film thickness, flow rate temperature, sample introduction. Detectors: flame ionization, thermal ionization, electron capture, mass selective detection. G.L.C; principle and application.

18 hrs

UNIT 2: Gas chromatography: Principle and design of instrument. Factors affecting GC, stationary phase, mobile phase, column length, diameter, film thickness, flow rate temperature, sample introduction. Detectors: flame ionization, thermal ionization, electron capture, mass selective detection. G.L.C; principle and application.

Thin layer chromatography: Introduction; phases used in TLC preparative TLC, metabolic profiling, solvent systems for TLC. Detection of compounds on TLC plates.

Unit 2: Electrophoresis: Historical developments, principle, non-denaturing PAGE, activity staining for enzymes, zymogram, denaturing electrophoresis (PAGE), SDS-PAGE, SDS-PAGE in reducing conditions, chemical cross linking of proteins urea electrophoresis, isoelectrofocusing. Electrophoresis in DNA sequencing, Sanger- deoxynucleotide sequencing. Foot printing of DNA.

Capillary electrophoresis: Principle, instrumentation, electro-osmotic flow, free solution capillary electrophoresis. Choice of buffers and ionic strength. Organic modifiers electro chromatographic-electrically driven HPLC. Capillary sample introduction and detection in capillary electrophoresis.

Immuno-electrophoresis: Dot blotting and immune-diffusion tests with antibodies, zone electrophoresis/immune-electrophoresis. Rocket electrophoresis, counter immune-electrophoresis, Agarose gel electrophoresis of nucleic acids, pulse field electrophoresis, physical basis, equipment and applications. Electroblotting: western, southern, northern equipments and application. **10 hrs**

UNIT 3: Spectroscopic techniques

Wave particle duality of light, electromagnetic spectrum, transition in spectroscopy. Principle, design and application of colorimeter and UV-Vis spectrophotometry. Principle, design and application of fluorescence spectroscopy. Spectroscopy techniques using plane polarized light, circular dichroism (CD), equipment for CD measurement, CD of biomolecules (proteins) and LD (linear dichroism) of biomolecules.

IR spectroscopy: Physical basis of IR spectroscopy. Instrumentation, use of IR in structure determination, Fourier transfer, IR spectroscopy, Raman IR spectroscopy.

NMR: Principle, effect of atomic, identity on NMR, chemical shift, spin coupling NMR, measurement of NMR spectra, biochemical application of NMR, P31 NMR to study transition in phases. *ESR:* Principle, measurement of ESR spectra uses of ESR in chemistry.

Mass spectroscopy: Principle, overview of MS- experiment, ionization modes, equipments in MS analysis (Identification of metabolites) MS of protein/ peptides. Interfacing MS with other methods; MS/MS, LC/MS, GC/MS, electrophoresis/MS. Uses of MS in Biochemistry: MS and heterogeneity in proteins, peptide mapping, post translation modification analysis, determination of disulfide bridges, analysis of DNA compounds.

X ray diffraction – Braggs law, space group symmetry, non-crystallographic symmetry, impossible symmetry, growing crystal sample preparation, X-ray sources, data collection, electron density maps (Reciprocal and real space), the phase problem, Molecular replacement, MIR (multiple Isomorphous replacement) Anomalous scattering, Model building (simple molecule –Benzene, complex structure – peptide, as simple as possible).

X ray diffraction – principle, Braggs law, X-ray crystallography of proteins, growing crystal sample preparation, X-ray sources, data collection, electron density maps, the phase problem, Molecular replacement, MIR (multiple Isomorphous replacement) Anomalous scattering, Model building. **14 hrs**

UNIT 4: Proteomics

Introduction, approaches to proteomics, techniques used in proteomics. Electrophoresis in proteomics, 2D SDS–PAGE, basic principle, instrumentation, analyses of cell proteins, free flow electrophoresis, blue native gel electrophoresis, Mass spectrometry in proteomics, tagging methods for MS proteomics, isotope coded affinity tagging, tagging for tandem MS. Microarrays, protein biochips. Post translational modifications in proteomics, proteolysis, glycosylation, oxidation, protein disulfides, phospho-proteins. **5 hrs**

UNIT 5: Metabolomics

HPLC and FPLC based approaches in metabolomics. Criteria for the selection of chromatography methods and their importance in metabolomics. Application for cellular metabolomics for metabolic pathway structure. Size of metabolome, metabolite identification, pathway identification and pathway integration. Metabolite profiling for infectious disease. Metabolite profiling in heart disease-application. Metabonomics in preclinical pharmaceutical discovery and development. **5 hrs**

IV Sem M.Sc.

MBC – 401: Molecular Biology II

UNIT 1: Gene Expression in Prokaryotes

Definition of regulon, operon, cis and trans acting elements. Bacterial trascription control; the lac operon, induction and diauxy. Discovery and structure of lac operon. Positive control of lac operon. Utility of merodiploids in understanding regulation of operon. Molecular basis of repression. Isolation of repressor, assay of binding of lac operator and repressor. Effect of repressor on dissociation of RNA pol. Positive control of lac operon; mechanism of action of CRP/CAP, transcription activation by recruitment, characterization of binding of cAMP-CAP-DNA. Activation of lac PL transcription by CAP-cAMP. Catabolite repression, inducer exclusion and prevention mechanism. Anatomy and regulation of arabinose and tryptophan operons. Riboswitches; discovery and models of riboswitch action. *Phage strategies;* Regulatory cascade controlling lytic development. Functional clustering of phage genomes. Antitermination in lambda phage, maintenance of lysogeny by lambda phage. Characterization of λ-repressor-DNA binding, molecular properties of λ-repressor, establishment of lysogeny. Sigma switching in phage infection. **14 hrs 11 hrs**

UNIT 2: Gene Expression in Eukaryotes

Stages/levels of regulation of gene expression in eukaryotes; Chromatin structure and its effect on transcription. Organization of chromatin- 30 nm fiber, higher order chromatin folding. Effect of histones on transcription activation. Nucleosome positioning; SV 40 mini chromosome, experimental location of nucleosomal positions; DNase hypersensitive sites and mapping. Locus control regions.

Histone modifications; Acetylation of histone tails. Identification of histone acetyl transferases (HATs). Properties and roles of P_{55} and Gcn-5 HATs. Histone deacetylases; experimental demonstration of HDACs in repressor complexes.

Chromatin remodeling; Major classes of remodeling complexes; assay of remodeling; ChIP. Composition of SWI2/SNF2 and ISWI complexes. Model of SWI2/SNF2 mechanism. Remodeling in yeast HO gene and human IFN-β promoter. Histone code. Heterochromatin silencing; chromo and bromo domains, histone methylation, HMTases, SFR and RAP-proteins. Transcription elongation through nucleosomes; FACT and PARP.

Mapping and quantifying transcripts; Northern blots; S1 mapping of 5' and 3' ends of transcripts. Primer extension, Runoff transcription and G-less cassette transcription, measuring *in-vivo* transcription rate-nuclear run on transcription. Quantification of gene expression by measuring protein product.

12 hrs 11 hrs

UNIT 3: Transcriptional activators

Classification, structure and function, domains of activators. DNA binding motifs; Zn fingers- Gal 4 activator of yeast. Nuclear receptor- structure and function of glucocorticoid, thyroid and orphan receptors. Domains of nuclear receptors; homeo, bZIP and bHLH domains. Modularity of domains of activators; chimeric transcription factors- Gal4-LexA, two hybrid assay. Dimerization of activators, modular arrangement of enhanceosomes. Recruitment of TFIID and holoenzyme; evidence, role of enhancers, interaction between enhancer and promoter-control region of human metallothionine gene. Insulators-working, insulator bodies, working of imprinting control region (ICR). Transcription factories, detection. Co-activators and mediators; discovery of mediators- mediators factors; activation of CRE-linked gene model for nuclear receptor activation. Regulation of transcription factors; modification of activation by ubiquitination, sumoylation and acetylation. Signal transduction pathways; Ras, Raf, JAK stat pathway.

Regulation of gene expression via stability of mRNA; Casein mRNA and transferring-receptor mRNA, gel mobility shift assay for IRE binding protein, model for TFR mRNA destabilization by iron.

RNA interference; post transcriptional gene silencing (PTGS) and quelling. Definition, mechanism of RNAi. Classical experiments with petunia and *C. elegans*. Simplified model, composition and function of Dicer and RISC. Role of Argonaute. siRNAs, role of RNAi machinery in heterochromatin formation and gene silencing- EF1A gene. miRNAs; control of gene expression by miRNAs example and experimental proofs, pathways of gene silencing by miRNA. Stimulation of translation by miRNAs. Translation repression; processing bodies.

13 hrs 12 hrs

UNIT 4: Translation

Ribosomes: Prokaryotic ribosomes; molecular components, *in vivo* assembly, dissociation of subunits, and polysomes. Eukaryotic components and their assembly, organelle ribosomes.

Genetic code; breaking the code, experimental results leading to deciphering genetic code, coding properties of mRNA, Co-linearity of genes and proteins, Coding properties of tRNA, triplet binding assay, use of synthetic oligo nucleotides (works of Khorana and Neirenberg), base pairing between codon and ani-codon, Wobble base pairing. Properties of genetic code, deviation from universal genetic code.

Translation: Initiation of protein synthesis in prokaryotes, Shine-Dalgarno sequence, formation of 30 S and 70 S initiation complexes; effect of GTP hydrolysis by IF2. exchange of ribosomal subunits. Eukaryotic translation initiation-scanning model, eukaryotic initiation factors, role of eIF4E, F, and G. Formation of stable 48S initiation complex, role of eIF1 and eIF1A, toeprint assay, direction of polypeptide synthesis and mRNA translation. Control of translation in bacteria and eukaryotes. Amino acyl-tRNA synthetases, formation of ternary complex among amino-acyl tRNA, EF-T, and GTP, three site model of ribosome, peptide bond formation, G-protein and translation, stop codon supression, release factors, aberrant

termination, non-stop mRNAs, termination of transcription, termination codon, no-go-decay of mRNA. Inhibitors of prokaryotic and eukaryotic translation. Post-translational modifications of proteins. Mechanism of translational control. **13 hrs 11 hrs**

UNIT 5: Genomics

Basics of genomics, Fundamentals of Whole-Genome Sequencing, Shotgun sequencing, Next Generation Sequencing (NGS) Technology. Sequencing of Phage (phiX174), Viral and Bacterial Genomes. Human Genome sequencing, the human genome project, Positional cloning, identification of mutation in Huntington disease, significance of RFLP and CAG repeats, VNTR and STS markers and microsatellies, mapping with STS.

Functional genomics: Transcriptomics, Microarray and microchips, SAGE, and CAGE, Whole Chromosome Transcriptional Mapping, genomic functional profiling, Genome-wide search for DNA–protein interactions in yeast by ChIP analysis, mapping transcription factor binding site by ChIP, locating enhancers and promoters, in situ expression pattern, SNP and pharmacogenomics. Micro/si RNA technology and applications in studying gene functions.

Whole genome - de novo sequencing or resequencing; exome sequencing; RNA sequencing; small RNA sequencing; metagenomics; Ribosomal RNA depletion (RNA-Seq) and small RNA enrichment; 16S rRNA based sequencing for metagenomics, comparative genomics, personal genomics, minimal genome, barcode of life. Gene Expression and Gene Regulation Networks RNA-seq analyses. Alternate splicing, ENCODE. Epigenomic analyses and cancer/ diseases. Bisulfite sequencing. **7 hrs**

IVSem M.Sc.

MBC – 403: Biotechnology

UNIT 1: Introduction Introduction and over view of cloning procedures. Isolation of nucleic acids, characterization and purification of plasmid, bacteriophage genomic DNA for cloning purpose. **3 hrs**

Introduction to recombinant DNA technology. Over view of cloning procedures. **1 hr**

UNIT 2: Restriction endonucleases and DNA modifying enzymes

Restriction enzymes Discovery, classification, properties, and applications. Reactions, application of the following modifying enzymes employed in rDNA technology; DNA- and RNA ligase, Phosphatases and kinases DNase (DNase-I) and RNases (RNase A, H), S1- and Micrococcal nuclease, double and single stranded exonucleases. DNA and RNA polymerases (Klenow fragment), template independent RNA polymerases. Topoisomerase. Linkers and adapters, TA-cloning. **6 hrs**

UNIT 3: Cloning Vectors

Basic properties of plasmids, desirable properties of vectors, plasmids as vectors. Directional cloning in plasmid vectors, blunt end cloning in to plasmids. Preparation and transformation of competent *E.coli.* electroporation, Screening colonies using X-gal and IPTG (α -complementation), screening by hybridization. Bacteriophage lambda vectors; Insertional and replacement lambda vectors, transfection, *in vitro* packaging, screening recombinant phages. Cloning in M13 vector and COSMID vectors and their applications. *Expression vectors:* Characteristics of expression vectors, expression vectors for cloning and expression in bacteria, yeast and mammalian cells. Super vectors; characteristic features and utility of BAC and YAC vectors. **7 hrs**

UNIT 4: Genomic and cDNA libraries

Outline of methodology for genomic library construction, creation of genomic libraries using lambda and cosmid vectors. Growth, evaluation and storage of genomic libraries. cDNA libraries; methodology, random

arrayed and ordered cDNA libraries, screening cDNA libraries; probe selection, hybridization. Screening with antibodies, rescreening and sub-cloning. Characterization of plasmid clones, restriction digestion, southern blot, PCR and sequence analysis. **6 hrs**

Unit 5: PCR: Discovery, principle and procedure, varients of PCR- RT-PCR, long PCR, differential PCR, and inverse PCR. Application of PCR; Rapid amplification of cDNA ends (5'and 3' RACE), Cloning PCR products, PCR in screening clones, colony PCR, Diagnositc application of PCR. **6 hrs**

Unit 6: Sequencing and mutagenesis: Principle of DNA sequencing, automated sequencing, extending the sequence, shot gun sequencing. Analysis of sequence data; annotation, ORF, exon-intron boundaries, identification of genes and their products. **4 hrs**

UNIT 5: PCR and DNA Sequencing

Discovery, principle and procedure, variants of PCR- RT-PCR, long PCR, differential PCR, and inverse PCR. Application of PCR; Rapid amplification of cDNA ends (5'and 3' RACE), Cloning PCR products, PCR in screening clones, colony PCR, Diagnositc application of PCR. Principle of DNA sequencing, automated sequencing, extending the sequence, shot gun sequencing. Analysis of sequence data; annotation, ORF, exon-intron boundaries, identification of genes and their products. **8 hrs**

Unit 7: Gene transfer to animals cells: over view of strategies, transfection methods, phospholipids as delivery vehicles, electroporation and direct transfer, transient and stable transformation, Cotransformation and selection of stable transformants, selectable markers for animal cells. Mammalian plasmid expression vectors, reporter genes. Gene transfer by viral vectors; adeno and baculo virues, retroviral vectors. **6 hrs**

Unit 8: Gene transfer to plants: plant cell culture and proptoplast, callus and their manipulations. *Agarobacterium* mediated transformation, Ti plasmid, mechanism of T-DNA transfer, Function of T-DNA genes, Ti-plasmid derivatives as plant vectors (disarmed T-DNA), cointegrate and binary vectors, high capacity binary vectors, selectable markers for plants, control of transgene expression in plants. Direct DNA transfer to plants; protoplast transformation, particle bombardment, *in-planta* and chloroplast transformation. Plant expression vectors; CaMV and TMV vectors. **6 hrs**

UNIT 6: Gene transfer to animal and plant cells

Over view of strategies, transfection methods, phospholipids as delivery vehicles, electroporation and direct transfer, transient and stable transformation, Cotransformation and selection of stable transformants, selectable markers for animal cells. Mammalian plasmid expression vectors, reporter genes. Gene transfer by viral vectors; adeno and baculo virues, retroviral vectors. Plant cell culture and proptoplast, callus and their manipulations. *Agarobacterium* mediated transformation, Ti plasmid, mechanism of T-DNA transfer, Function of T-DNA genes, Ti-plasmid derivatives as plant vectors (disarmed T-DNA), cointegrate and binary vectors, high capacity binary vectors, selectable markers for plants, control of transgene expression in plants. Direct DNA transfer to plants; protoplast transformation, particle bombardment, *in-planta* and chloroplast transformation. Plant expression vectors; CaMV and TMV vectors. **12 hrs**

UNIT 7: Industrial Biotechnology

Fermentation: Fermentation process design, operation and characteristics of fermentation processes; batch, fed-batch and continuous culture systems, instrumentation and bioprocess control. Downstream process: Introduction to various downstream process operations in biopharmaceutical manufacturing such as centrifugation, filtration, tangential flow filtration, cell disintegration, solvent-solvent extraction, supercritical fluid extraction etc. Major areas of biotechnology in the pharmaceutical industry such as antibiotics, vaccines, diagnostics, antibodies, biopharmaceuticals (insulin, interferon, GSF, CSF and therapeutic proteins etc.); commercial aspects, priorities for future biotechnological research. **6 hrs**

UNIT 8: Nanobiotechnology and Biosensors

Basic overview of nanomaterials, introduction to general terminologies, synthesis methodologies, physical and chemical characterization. Definition and methods of preparation of nano-bioparticles. Applications in drug designing, drug delivery & protein engineering.

Biosensors – concept and design of biosensors, types and uses of biosensors food and fermentation processes, environment monitoring, and clinical diagnostics. **5 hrs**

IV Sem M.Sc.

MBC – 404: Immunology

Infection: Types of infection and nature of infective agents. Nonspecific host defense mechanisms. Anatomical barriers; lysozyme and other antimicrobial agents. **3 hrs**

Organs and Cells of the Immune System: lymphoid organs; Primary- bone marrow and thymus, Secondary – lymph nodes, spleen, MALT and skin; tertiary Lymphoid tissue; lymphatic system; Immune Cells- neutrophils, monocytes macrophages, basophils, natural killer cells, eosinophils, dendritic cells, phagocytosis, oxygen dependent and independent killing. **4 hrs**

Complement system: Introduction, alternate and classical pathway, regulation. **4hrs**

Immunity: States of immunity; innate and acquired immunity, naturally and artificial acquired passive and active immunity. Immunization practices, use of toxoids, killed and attenuated organisms. Surface components and newer vaccines, production of vaccines. **4 hrs**

Immunoglobulins: Structure and functions of immnoglobulins Types; isotypes and idiotypes, isoantibodies. Methods of raising antibodies. Monoclonal antibodies, production and purification. **5 hrs**

The Immune System: Recognition of self and non self, the major histocompatibility antigens, H-2 and HLA antigens, Antigenecity; humoral and cell mediated immunity. T and B lymphocytes; origin, differentiation, characteristics and functions, nature of surface receptors, antigen processing and presentation. T cell and B cell interaction. Cytokines, monokines, lymphokines and their functions. FACS. **9 hrs**

Molecular Immunology: Theories of antibody formation; clonal selection and network, Genetics of antibody diversity, germ line and somatic mutation theories, immunoglobulin, MHC a TCR gene organization and their recombination, class switch of Ig genes. **7 hrs**

Clinical Immunology: Immune disorders; hyper sensitivity, autoimmune and immunodeficiency diseases. Tissue transplantation; auto – iso -, allo-, and xenografts, tissue matching, transplantations rejection, mechanism and control, tumor immunology, immunotherapy. **7 hrs**

Clinical Immunology: Immune disorders- Pathogenesis, diagnosis and treatments. Hyper sensitivity reactions: Types , haemolytic disease of new born-Erythroblastosis fetalis. Immunity to infectious diseases : viral - influenza, bacteria – tuberculosis, parasite – Plasmodium falciparum, helminthes. Autoimmune disorders (Hemolytic anemia, Hashimoto's thyroiditis, Rheumatiod arthritis, Myasthenia gravis, Multiple sclerosis) and Immunodeficiency disorders (SCID and AIDS). Tissue transplantation; auto – iso -, allo-, and xenografts, tissue typing, HLA typing, graft rejection, mechanism and control. Cancer immunology: Tumor antigens, immune response to tumors, tumor evasion, cancer immunotherapy. **10 hrs**

Immuno assay methods: Antigen – antigen interaction – affinity and avidity, determination of affinity and avidity constants. Principle, procedure and applications of Immunoprecipitation, neutralization, agglutination, complement fixation, immunodiffusion, immunofluorescence, RIA, ELISA – direct, indirect, sandwich, multiplex, micro ELISA Techniques. Western blotting. **5 hr**

Proceedings:

The on-line meeting concluded with the vote of thanks by the Chairperson.

Closing time: 1:00 PM.

SL. No	Name of the BoS panel members	Signature
1.	Dr. H. Ananda Vardhan (Chairman)	01/12/23.
2.	Dr. Manjunatha.H (University Nominee)	Absent
3.	Dr. Veeraraghavan.V (Subject expert)	
4.	Dr.P. Dhamodhar (Subject expert)	
5.	Dr. Vijayakumar Muppala (Industry expert)	Absent
6.	Mr. Chandrashekhar Aradhya S N (Alumnus)	
7.	Dr. Pushpa .K (Member)	1/12/23
8.	Dr. Suma. T.K. (Member)	1/12/23
9.	Dr. Erumalla Venkata Nagaraju (Member)	01/12/2023
10.	Mrs. Dilshad Begum (Member)	01/12
11.	Mrs. Kashma.N.B. (Member)	1/12/23

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF LIFE SCIENCES

PROGRAM: BIOTECHNOLOGY

Minutes of Board of Studies (BoS) Meeting

Date: 01st December, 2023 (Friday) **Time: 2.00-4.00p.m.** **Venue: Biotechuology**

Sl. No.	Name	Designation	Signature
1	Dr. Ramachandra Murthy T. T. S.	Chairperson	
2	Prof. Nagamani T. S.	BNU Nominee	
3	Dr. N. M. Guruprasad.	Subject Expert	
4	Dr. Narendra Ram M.	Industrial Expert	
5	Mr. Rajan Chourasiya	Post Graduate Student (Alumni)	
6	Dr. Paramesh H.	Member	
7	Prof. Sudhakar Malla	Member	
8	Dr. Vanitha G. Ramesh	Member	01/12/23
9	Dr. Divya	Member	1/12/23
10	Dr. Mohammed Rafiqkhan K.	Member	01/12/2023
11	Dr. Kalaiyarasu T.	Member	01/12/23

Program Coordinator - Biotechnology
Department of Life Sciences
Indian Academy Degree College - Autonomous
Bangalore - 560043

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF LIFE SCIENCES

PROGRAM: BIOTECHNOLOGY

Minutes of Board of Studies (BoS) Meeting

Date: 01st December, 2023 (Friday) **Time: 2.00-4.00p.m.** **Venue: Biotechnology**

Sl. No.	Name	Contact Number	Signature
1	**Prof. Nagamani T. S.** **(Bangalore North University- Nominee)** Associate Professor, Department of P.G. Studies in Biotechnology, Nrupathunga University, Bangalore. naguts@gmail.com	9448015750	01/12/2023
2	**Dr. N. M. Guruprasad.** **(External Expert)** Associate Professor, Department of Biotechnology, School of Applied Science and Management, Reva University, Bangalore. guruprasadnm@gmail.com	8970579908	
3	**Dr. Narendra Ram M. S.** **(Industry Expert)** Founder and CSO of Cellsys Biosciences Pvt. Ltd., Bangalore. narendra.ram@cellsysbiosiences.com	8074921655	
4	**Mr. Rajan Chourasiya** **(Alumni)** Business Head, Bionome, Bangalore rajan@bionome.in	8668470445	
5	**Dr. Ramachandra Murthy T. T. S** Associate Professor and Program Coordinator, Department of Life Sciences-Biotechnology, Indian Academy Degree College – Autonomous, Bangalore. murthy.biotech@iadc.ac.in	9845326749	

6	**Dr. Paramesh H.** Associate Professor, Department of Life Sciences-Biotechnology, IADC-A, Bangalore. dr.paramesh.biotech@iadc.ac.in	9743326306	
7	**Prof. Sudhakar Malla** Associate Professor, Department of Life Sciences-Biotechnology, IADC-A, Bangalore. sudhakar.biotech@iadc.ac.in	9964893384	
8	**Dr. Vanitha G. Ramesh** Associate Professor, Department of Life Sciences- Biotechnology, IADC-A, Bangalore. vanitha.genetics@iadc.ac.in	9845498466	01/12/23
9	**Dr. Divya** Assistant Professor, Department of Life Sciences- Biotechnology, IADC-A, Bangalore. divyababu.biotech@iadc.ac.in	9740979514	1/12/23
10	**Dr. Mohammed Rafiqkhan K.** Associate Professor, Department of Life Sciences- Biotechnology, IADC-A, Bangalore. dr.rafiq.biotech@iadc.ac.in	9003715721	01/12/2023
11	**Dr. Kalaiyarasu T.** Assistant Professor, Department of Life Sciences-Biotechnology, IADC-A, Bangalore. dr.kalaiyarasu.biotech@iadc.ac.in	9944818841	01/12/23

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INDIAN ACADEMY
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DEPARTMENT OF LIFE SCIENCES

PROGRAM: BIOTECHNOLOGY

Board of Studies (BoS) Meeting: Minutes

(Effective for the academic year 2023-2024 onwards)

Date: 01st December, 2023 (Friday) **Time: 2.00-4.00p.m.** **Venue: Biotechnology**

AGENDA - 1:

Curriculum revision for I to VI semesters (NEP) for the U.G. syllabus was discussed and approved.

The Blue Prints of the Question Papers for I to VI semesters (UG-NEP) were presented and approved.

AGENDA- 2:

The scheme of evaluation for Continuous Internal Assessment (CIA) components of the Program: Biotechnology was approved for UG & PG courses.

AGENDA - 3:

Proposal to integrate the compulsory internship/certificate course (online/offline-30 hours) for all the UG and PG students which needs to be completed by the end of III semester for UG and by III or IV semester by PG students was approved. The members suggested formulating the Evaluation process and award of the Letter grades based on their performance.

Note: Advised to undertake internship from second year onwards instead from first year itself in case of UG courses.

AGENDA - 4:

MBT306-Industrial and Institutional visit course in the III semester of M.Sc. Biotechnology is restored for the existing batch (2022-23) with 2 credits, to be evaluated for 50 marks. This will help the students in bridging the gap between the academia and the industry.

AGENDA - 5:

The consent was given by the BoS members to update the Board of Examiners (BoE) for UG & PG in Biotechnology.

AGENDA - 6:

The reframed Program Outcomes (POs) & the Course Outcomes (Cos) in UG (NEP) Syllabus were approved.

AGENDA - 7:

Revision of PG syllabus was not proposed and considered.

AGENDA - 8: Any other relevant matter – Nil.

Program Coordinator - Biotechnology
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INDIAN ACADEMY
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Department of Life Sciences- Genetics
Board of Studies Meeting – Agenda

Date: 02 / 12 / 2023

Venue: Room 212 (Online mode)

AGENDA - 1:

Approval of I to VI semester B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum) revised course matrix and syllabus.

- Course matrix of I to VI Semester B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum).
- Detailed syllabus of I to VI Semester B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum).

AGENDA- 2:

Approval of blueprint of all the courses of from I to VI semesters B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum).

AGENDA- 3:

Internship/ Certificate Course (Duration- 30 hours) for the B.Sc. (Genetics/Biotechnology) and M.Sc. Applied Genetics Students.

INDIAN ACADEMY
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DEPARTMENT OF LIFESCIENCES -GENETICS

Minutes of Board of Studies Meeting

Date: 02 / 12 / 2023

Venue: Room 212 (Online mode) **Time:** 10:00 a.m.

Chairperson: Dr. Shubha Rajiv

Members Present:

Sl. No.	Name	Designation
1	Dr. Shubha Rajiv (Chairperson)	Programme Coordinator and Professor (Genetics) Department of Life Sciences IADC-A
2	Dr. Asha Devi (BU Nominee)	Professor Department of Zoology Bangalore University
3	Dr. Roy U. B (Subject Expert)	Professor and Deputy Registrar Nrupathunga University Bengaluru
4	Dr. Lipika Sahoo (Industry Expert)	Founder and CEO Lifeintelect Consultancy Pvt. Ltd Bengaluru.
5	Mr. Shubham Kumar (Alumni)	Clinical Database Programmer Parexel International Bengaluru
6	Mrs. Cynthia Irene Kasi Member	Assistant Professor Department of Life Sciences-Genetics IADC-A

Agenda:

1. Approval of revised course matrix and syllabus of I to VI semester B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum).
2. Approval of blueprint of all the courses of Genetic course of I to VI semesters B.Sc (Genetics/Biotechnology) Programme (NEP Curriculum).
3. Internship/ Certificate Courses (Duration- 30hours) for all the B.Sc. (Genetics/Biotechnology) and M.Sc Applied Genetics Students.

Proceedings:
The Chairperson, Dr.Shubha Rajiv welcomed all the members to the meeting and the discussion was carried forward as per the agenda.

Agenda 1: Approval of I to VI semester B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum) revised course matrix and syllabus. Approval of revised course matrix and syllabus of I to VI semester B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum).

Deliberations:

- BoS members approved the revised Course Matrix and syllabus of I to VI semester B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum) which is implemented with effect from the academic year 2023-2024.
- Due to overlap of courses in the new course combination B.Sc. (GBt) the following changes were made in the course matrix:

Semester	Course	Existing Course Code/ Title	Proposed Course Code/ Title
I	OE-1	S21OE: Principles of Genetics	S23OE: Genes and Diseases
II	OE-2	S21OE: Genetic Counseling	S23OE: Health and Lifestyles
III	OE-3	S21OE: Eugenics, Euthenics and Society	S23OE: Genes and Behavior
III	DSC- 3	S21GN 3.1: Biomolecules and Molecular Genetics (Theory)	S23GN 3.1: Molecular Genetics (Theory)
III	DSC- 3	S21GN 3.2: Biomolecules and Molecular Genetics (Practical)	S23GN 3.2: Molecular Genetics (Practical)
IV	OE- 4	S21OE: Human Genetic Disorders	S23OE: Genetic Counseling
V	DSC- 6	S21GN 6.1: Advanced Plant and Animal Tissue culture Technology (Theory)	S23GN 6.1: Population and Evolutionary Genetics (Theory)
V	DSC- 6	S21GN 6.1: Advanced Plant and Animal Tissue culture Technology (Practical)	S23GN 6.2 : Population and Evolutionary Genetics (Practical)
VI	DSC- 8	S21GN 8.1: Population and Evolutionary Genetics(Theory)	S23GN 8.1 : Biomedical Genetics (Theory)
VI	DSC- 8	S21GN 8.2: Population and Evolutionary Genetics(Practical)	S23GN 8.2 : Biomedical Genetics (Practical)

- **II Semester B.Sc. Genetics S21GN 2.1 : Bioinstrumentation and Animal Cell Culture (Theory)**
  - Approval was taken for the corrections in Unit-I by replacing subtopics 'Microscopy-principle and optical components' as "Microscope: Introduction and Principle".
  - From Unit-I subtopic, Uses of microscopy and Biological applications 'High content screening and high throughput imaging' was removed.
  - From Unit-II, Axillary Spectrophotometers, flame photometer was removed.
  - From Unit-III, High Speed centrifuge and its subtopics, 'Components: Electrodes, Power supply, Electrophoresis chamber' was removed.

- **III Semester B.Sc. Genetics S23GN 3.1 : Molecular Genetics (Theory)**

- BoS members suggested to specify the types of post transcriptional modifications as 5' guanine capping, RNA splicing and 3' polyadenylation in Unit-II (b).
- Members also suggested to include Wobble Hypothesis under Unit-II(c) 'Translation' instead of Unit-II (a).
- Suggestion was made to include Introduction to Next Generation Sequencing (NGS) in Unit-III(c).

- **VI Semester B.Sc. Genetics S23GN 8.1 : Biomedical Genetics (Theory)**
- BoS members suggested to first introduce Genetic factor to common diseases and disease models for multifactorial inheritance as Unit-I followed by Human diseases as Unit-II.
- Members suggested that under 'Human diseases' the second subtopic to be titled as 'Infectious Diseases'.

- **VI Semester B.Sc. Genetics S23GN 8.2 : Biomedical Genetics (Practical)**
- BoS members suggested that in Module 8, DNA and protein profile of any three diseases can be included as spotters.

- **I Semester Open Elective OE-1: Genes and Diseases (Theory)**
- BoS members approved the syllabus of OE-1 (Total teaching hours: 45, 3 Credits) with minor modifications.
- BoS members suggested to include 'Common genetic terminologies' in Unit-I: Introduction to Genetics.
- Members also suggested to include popular case studies relevant to Unit-II and Unit-III.

- **II Semester Open Elective OE-2: Health and Lifestyles (Theory)**
- BoS members approved the syllabus of OE-2 (Total teaching hours: 45, 3 Credits) with minor modifications.
- Members suggested to rephrase 'evolution of health' as " Changing paradigm in health and lifestyles" in Unit-II
- One of the members suggested that in Unit-IV, for subtopic 'Introduction to stress' specific examples of companies coming up with products for music therapy and its impact to be included.
- Similarly a suggestion was given to include positive case studies on managing mental health and ways to foster wellness in Unit- IV.
- Members suggested to include relevant case studies in Unit-II, Unit-III and Unit-IV.

- **III Semester Open Elective OE-3: Genes and Behavior (Theory)**
- BoS members approved the syllabus of OE-3 (Total teaching hours: 45, 3 Credits) with minor modifications by including 'Basic genetic terminologies' in Unit-I.

Agenda 2: Approval of blueprint of all the Genetic courses of I to VI semesters B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum).

Deliberations:
Members approved the blueprint of all the Genetic course, including core and open elective papers of I to VI semesters B.Sc. (Genetics/ Biotechnology) Programme (NEP Curriculum).

Agenda 3: Internship/ Certificate Course (Duration- 30 hours) for all the B.Sc. (Genetics/Biotechnology) and M.Sc. Applied Genetics Students.

Deliberations: Members approved the proposal of compulsory Internship/ Certificate Course (Duration- 30 hours with letter credit) for all the B.Sc. (Genetics/ Biotechnology) and M.Sc. Applied Genetics students before the commencement of IV semester.

Conclusion: The BoS members approved the course matrix and blueprints of I to VI Semester B.Sc. (Genetics/Biotechnology) Programme (NEP curriculum). The members ratified the II, III and VI semester syllabi of DSC S21 GN 2.1, S21 GN 3.1 and S21 GN 8.1 and syllabi of open electives OE-1, OE-2 and OE-3 and approved the same. The members also approved the proposal of internship/ Certificate Course to be taken up by all the B.Sc. (Genetics/Biotechnology) and M.Sc. Applied Genetics students.

Closing Time: 1.00 pm

Resolutions:

- The Course matrix of I to VI semester B.Sc. (Genetics/Biotechnology) Programme (NEP curriculum) was approved.
- The syllabi of II, III and VI semester Genetics discipline specific core papers (DSC) S21 GN 2.1, S23 GN 3.1, S23 GN 8.1, S23 GN 3.2 and S23 GN 8.2 and syllabi of open electives OE-1, OE-2 and OE-3 were ratified and approved.
- The blueprint of all the Genetic courses of I to VI semesters B.Sc. (Genetics/Biotechnology) Programme (NEP Curriculum) were approved.
- The proposal of Internship/ Certificate Course to be taken up by all the B.Sc. (Genetics/Biotechnology) and M.Sc. Applied Genetics Students was approved.

Sl. No.	Department	Name	Postal Address	Signature
1	Chairman	Dr. Shubha Rajiv	Programme Coordinator and Professor (Genetics) Department of Life Sciences IADC-A	Shubha 02/12/2023
2	BU Nominee	Dr. Asha Devi	Professor Department of Zoology Bangalore University	
3	Subject Expert	Dr. Roy U. B	Professor and Deputy Registrar Nrupathunga University Bengaluru	Attended online.
4	Industrial Expert	Dr. Lipika Sahoo	Founder and CEO Lifeintelect Consultancy Pvt. Ltd Bengaluru	Attended online
5	Alumni	Mr. Shubham Kumar	Clinical Database Programmer Parexel International Bengaluru	Attended online.
6	Member	Mrs. Cynthia Irene Kasi	Assistant Professor(Genetics) Department of Life Sciences IADC-A	2/12/23

Shubha 02/12/2023

Programme Coordinator

Program Coordinator - Genetics
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BOS- 02.12.2023

Department of Life Sciences
Microbiology

INDIAN ACADEMY
Degree College - Autonomous

Department of Life Sciences-Microbiology

Board of Studies Meeting – Agenda

Date: 02.12.2023 **Venue: Board Room (Room No: 306)**

AGENDA - 1:

Curriculum revision for I to VI semesters (NEP) for the U.G. syllabus and approval of Blue Prints for Question Paper.

AGENDA- 2:

Open Elective Course: Cosmetic Microbiology (Offered by Microbiology)

Target Students: B.Com, BBA, BA, BCA.

The programme has to maintain uniform number of hours

AGENDA- 3:

Approval of scheme of evaluation for CIA components (UG Microbiology)

AGENDA- 4:

Approval of scheme of evaluation for CIA components (PG Microbiology)

AGENDA- 5:

Proposal to integrate the compulsory internship/certificate course

Note: Letter Grades

AGENDA - 6:

Curriculum revision for I to IV semesters for M.Sc., Microbiology course matrix (Effective for the academic year 2024 Onwards)

AGENDA - 7:

Any other information with the permission of the chair

INDIAN ACADEMY
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DEPARTMENT OF LIFE SCIENCES- MICROBIOLOGY

Minutes of Board of Studies Meeting

DATE: 02.12.2023 **VENUE: Board Room 306** **TIME: 09.30 a.m. - 12.30 p.m.**

Sl. No.	Name	Designation	Present/ Absent
1	**Dr.Malaiyarasa Pandian P.** Program Coordinator-Microbiology & Professor, Department of Life Sciences-Microbiology, IADC-A, Bengaluru-43	Chairman	Present
2	**Dr. Arun Jyothi Mathias** Professor, Department of Microbiology Maharani Cluster University, Bengaluru	BNU Nominee	Absent
3	**Dr. Pramod T** Associate Professor, Department of Microbiology, School of Life sciences, Jain University, Bangaluru-560069	Subject Expert	Present
4	**Dr. Yogesh BJ** Domain Consultant Higher Education Tata Consultancy Services Ltd.	Industrial Expert	Present
5	**Prof. P. Rajarajan** Vice Principal & Professor, Department of Life Sciences-Microbiology, IADC-A, Bengaluru-43	Member	Present
6	**Dr. S. Anu Kiruthika** Associate Professor Department of Life Sciences-Microbiology, IADC-A, Bengaluru-43	Member	Present
8	**Dr. K. Sahithya** Assistant Professor, Department of Life Sciences-Microbiology, IADC-A, Bengaluru-43	Member	Present
9	**Ms.Qurath Ul-Ain,** Assistant Professor Department of Life Sciences-Microbiology, IADC-A, Bengaluru-43	Member	Present

10	**Ms.Agna K** Assistant Professor Department of Life Sciences-Microbiology, IADC-A, Bengaluru-43	Member	Present
11	**Ms. Monisha I,** Research Assistant, Food Biotechnology Department, Guandong Technion Israel Institute of Technology	Alumna	Present Online
12	**Ms.M.Koteshwari** Process Executive, Cigna health care process, First Source, Bengaluru	Alumna	Absent

AGENDA - 1:

Curriculum revision for I to VI semesters (NEP) for the U.G. syllabus and approval of Blue Prints for Question Paper (Effective for the academic year 2023-2024 onwards)

AGENDA- 2:

Open Elective Course: Cosmetic Microbiology (Offered by Microbiology)

Target Students: B.Com, BBA, BA, BCA.

The programme has to maintain uniform number of hours

AGENDA- 3:

Approval of scheme of evaluation for CIA components (UG Microbiology)

AGENDA- 4:

Approval of scheme of evaluation for CIA components (PG Microbiology)

AGENDA- 5:

Proposal to integrate the compulsory internship/certificate course

Note: Letter Grades

AGENDA - 6:

Curriculum revision for I to IV semesters for M.Sc., Microbiology course matrix (Effective for the academic year 2024 Onwards)

AGENDA - 7:

Any other information with the permission of the chair

PROCEEDINGS:

Board of Studies of Microbiology (UG & PG) was held on 02.12.2023 between 09:30 am and 12:30 pm at 306 Board Room, Indian Academy Degree College-Autonomous, Bengaluru.

The Chairman welcomed all the members who were present for the meeting. The meeting thereafter deliberated by Chairman on agenda of important modifications in NEP B.Sc. BCMB and M.Sc., Microbiology Programme. Following were the minutes of meeting.

AGENDA - 1:

Curriculum revision for I to VI semesters (NEP) for the U.G. syllabus and approval of Blue Prints for Question Paper (Effective for the academic year 2023-2024 onwards)

Semester: IV

EXISTING	PROPOSED TO BE CHANGED
S21 MB 4.1 Microbial Enzymology and Metabolism (T)	**S21 MB 4.3 Soil, Agricultural and Environmental Microbiology (T)**
S21 MB 4.2 Microbial Enzymology and Metabolism (P)	**S21 MB 4.4 Soil, Agricultural and Environmental Microbiology (P)**

- The Board scrutinized the NEP B.Sc., BCMB Program course matrix and syllabi and after detailed discussion, the following changes were made to avoid redundancy. In the fourth semester, S21 MB4.1 Microbial Enzymology is replaced with Soil, Agricultural and Environmental Microbiology.
- Dr.Pramod T suggested to add the content related with production of biofertilizer and biopesticides in unit II of theory paper and dissolved oxygen and COD experiments in practical.
- All the members discussed about fourth semester syllabus and blueprint of Soil, Agricultural and Environmental Microbiology course and agreed for further approval.

SEMESTER - IV

S21 MB 4.3: Soil, Agricultural and Environmental Microbiology

THEORY

Total Teaching Hours: 60 **No. of Hours per week: 4 (4 Credits)**

Course Content

Sl. No.	Unit/Chapter title	Content	Number of hours	Skills developed
1	Soil Microbiology	Soil -definition, types, physical and chemical characters, soil profile; Soil microorganisms -Bacteria, fungi, actinomycetes, algae, protozoa, and viruses. Interactions between plants and microorganisms-types of interactions (positive and negative) Microorganisms of rhizosphere, rhizoplane and phylloplane, mycorrhiza (Types and its applications). Microbes and biogeochemical cycles -Nitrogen, sulphur, carbon and phosphorous. Bioleaching -Copper and Iron -ore form available, areas of deposits, methods of leaching, mechanism and significance. Biodegradation -Cellulose, Pectin, plastics and pesticides.	15	**Research and analytical skills**
2	Agricultural Microbiology	Microorganisms in agriculture - Biochemistry, genetics and physiology of Nitrogen fixation, Symbiotic- Rhizobium, Nonsymbiotic- *Azotobacter,* BGA and associative- *Azospirillum* associations. Biofertilizers -Definition, Types, Production (bacterial, fungal, Phosphate solubilizers, BGA, Plants - *Azolla);* kind of association, mode of application and merits. Biopesticides -Introduction, types, Production (bacterial- *Bacillus thuringiensis,* viral -NPV, fungal- *Trichoderma),* mode of action, factors influencing, genes invoived and target pests. .	15	**Research and analytical skills**

		Study of microbes as plant pathogens - *Puccinia, Plasmopara, Cercospora, Pyricularia; Xanthomonas oryzae;* Mycoplasma- Sandal spike, grassy shoot; Viruses TMV, Tomato leaf curl).		
3	Environmental Microbiology- Air	**Microbiology of air** Introduction -definition, atmospheric layers, sources of microorganisms, air microflora of indoor and outdoor air, factors affecting air microflora, significance of air borne microbes, endotoxins, control and management of air borne microbes. Techniques of trapping air borne microorganisms -gravity slide, petriplate exposure, verticalcylinder, Hirst spore trap, Rotorod sampler, Andersen sampler, Burkard trap, hand held air sampler, impingers and filtration. Advantages and disadvantages of these techniques. Biohazards in occupational environment, allergy testing.	15	**Technical skills and expertize**
4	Environmental Microbiology-Water	**Microbiology of water** Introduction, natural waters, distribution of microorganisms in the aquatic environment, sources and types of water pollution, biological indicators of water Pollution Determination of the sanitary quality of water- N index, membrane filtration, Biological Oxygen Demand. Water purification in municipal water supply, parameters of potable water.	15	**Research and Technical skills**

Blue print format of Question paper (UG) - NEP

IV Semester BSc

S21 MB 4.1: SOIL, AGRICULTURAL AND ENVIRONMENTAL MICROBIOLOGY

Maximum Marks : 60 marks

Inclusive of all choices : 94 marks

Question Paper Pattern

Section A : 5 out of 7 questions, each carrying 2 marks (5 × 2=10)

Section B : 4 out of 6 questions, each carrying 5 marks (4 × 5= 20)

Section C : 3 out of 5 questions, each carrying 10 marks (3 × 10= 30)

		Section – A 2 marks	Section – B 5 marks	Section – C 10 marks	Total marks
Units	**Hours allotted**	No. of questions	No. of questions	No. of questions	
1	15	2	2	1	24
2	15	1	1	2	27
3	15	2	1	1	19
4	15	2	2	1	24
Total	**60**	7	6	5	94

S21 MB 4.4: Soil, Agricultural and Environmental Microbiology

PRACTICAL

Total Teaching Hours: 60 No. of Hours per week: 4 (2 Credits)

Total units allotted: 15

SL.NO.	EXPERIMENT	Hours
1	Isolation and enumeration of bacteria and fungi from rhizosphere and rhizoplane.	2 units
2	Study of Rhizobium from legume root nodules (gram staining) and isolation of *Rhizobium* (using Yeast Extract Mannitol Agar) and *Azotobacter* (using Ashby's Mannitol Agar) from soil.	2 units
3	Isolation of actinomycetes from soils using Glucose Aspergine Agar by plate method	2 unit
4	Study of antagonism between soil microorganisms by plate methods- Bacteria Vs Bacteria, Bacteria vs. Fungi, Fungus vs. Fungus, Actinomycetes vs. Bacteria/Fungi.	2 units
5	Study of plant pathogens- Tikka Disease, Sandal Spike, Downy Mildew and Tomato Leaf Curl.	1unit

6	Study of fungi -*Cladosporium, Helminthosporium, Mucor, Curvularia, Alternaria, Geotrichum, Trichoderma,* (specimens)	1 unit
7	Study of airborne microorganisms (bacteria and Fungi) in different environments by exposure plate method.	1 unit
8	Study of air samplers- Anderson's sampler, Hirst Spore trap, Rotorod sampler and vertical cylinder	1unit
9	Determination of Dissolved Oxygen, Biological Oxygen Demand and Chemical Oxygen Demand	1unit
10	Microbial examination of water by coliform, MPN methods -for potable and sewage water	2 units

References:

1. Alexander M., Introduction to soil Microbiology, Wiley Eastern Limited, New Delhi
2. Alexopoulas C.J. and Mims C.W., *Introductory Mycology*, New Age International, New Delhi.
3. Aneja K.R., Experiments in Microbiology, Plant pathology, Tissue culture and Mushroom cultivation, New Age International, New Delhi. ...
4. Hurst, C.J., Environmental *Microbiology*, ASM Press, Washington D.C.
5. Mehrotra A.S}, *Plant Pathology*, Tata McGraw Hill Publications Limited, New Delhi
6. Pelczar M.J., Chan E.C.S. and Krieg N.R., *Microbiology*, McGraw Hill Book Company, New York.
7. Prescott Lansing M., Harley John P. and Klein Donald A., *Microbiology*, WCB McGraw- Hill, New York.
8. Salle A.J., *Fundamental Principles of Bacteriology*, Tata McGraw- Hill Publishing Company Limited, New Delhi.
9. Stacey R.H. and Evans H.J., *Biological Nitrogen Fixation*, Chapman and Hall Limited, London.
10. Stanier R. Y., Ingraham J.L., *General Microbiology*, Prentice Hall of India Private Limited, New Delhi.
11. Subbarao N.S., *Soil Microorganisms and Plant Growth*, Oxford and IBH Publishing Company, New Delhi.
12. Steward W.D.P., *Nitrogen Fixation in Plants*, The Athlone Press, London

AGENDA- 2:

Open Elective Course: Cosmetic Microbiology (Offered by Microbiology)

Target Students: B.Com, BBA, BA, BCA.

The programme has to maintain uniform number of hours

EXISTING	PROPOSED TO BE CHANGED
Three Units	Four Units

- As per the requirement for uniformity, every course must have equal number of units in a program.
- Chairman gave the feedback report of cosmetic microbiology which was given by previous batch students about toughness in unit III biochemistry portion (Lactic acid, Astaxanthin, β-carrageenan, α -cyclodextrin, Ceramide, Hyaluronic acid, Surfactin–C, β - Carotene and Glutathione).
- BOS members suggested to include regulations and applications of cosmetic in the place of synthesis.
- BOS members discussed and agreed for splitting of unit I into two units and replacement of microbial product of cosmetics with cosmetic regulations and applications.

Open Elective: S21 MB 3.8 Cosmetic Microbiology

Existing

S. No	Unit title	Course Content	Number of Hours	Skills Developed
Unit 1	**Microorganisms and cosmetics**	Scope of cosmetic microbiology, - Role of microbes in cosmetics preparation. Microorganisms in cosmetics – Preservation of cosmetics – Mechanisms of action of Cosmetic preservatives – Enzymes in cosmetics. Quality control measures in cosmetics preparation – Microbial resistance – Critical Control point.	15 Hours	Transferrable Skills and Analytical Skills

Unit 2	**Antimicrobial properties of natural cosmetic products**	Honey, Garlic, Neem, Turmeric, Aloe vera, tea tree, Tulsi, Green Tea, Chamomile, Neem, Rosemary, Sandalwood, lemon grass, avocado and shea butter	15 Hours	Cognitive Skills
Unit 3	**Microbial Products in Cosmetics**	Lactic acid, Astaxanthin, β-carrageenan, α - cyclodextrin, Ceramide, Hyaluronic acid, Surfactin – C, β - Carotene and Glutathione	15 Hours	Cognitive Skills

To be proposed and approved

Sl. No	Unit title	Course Content	Number of Hours	Skills Developed
1.	Microorganisms and cosmetics	Scope of cosmetic microbiology, - Role of microbes in cosmetics preparation. Microorganisms in cosmetics – Preservation of cosmetics – Mechanisms of action of Cosmetic preservatives	11 hours	Transferable Skills and Analytical Skills
2.	Enzymes and Quality control measures in cosmetics	Plant and microbial origin based Enzymes in cosmetics Quality control measures in cosmetics preparation Microbial resistance – Critical Control point	11 hours	Transferable Skills and Analytical Skills
3.	Antimicrobial properties of natural cosmetic products	Honey, Garlic, Neem, Turmeric, Aloe vera, tea tree, Tulsi, Green Tea, Chamomile Rosemary, Sandalwood, lemon grass, avocado and shea butter	11 hours	Cognitive Skills
4.	Cosmetic Product Regulation	Ingredients, Safety assessment, Efficacy data, Labelling requirements for cosmetic products. Environmental and safety concerns of cosmetic ingredients. Guidelines on green cosmetics and challenges in green formulation. Application of Cosmetics Products: Solutions, creams, lotions, ointment, paste, gels, sticks, tablets, capsules, powders and aerosols.	12 hours	Cognitive Skills

Blue print format of Question paper (UG) - NEP

III Semester

S21 MB 3.8: COSMETIC MICROBIOLOGY

Maximum Marks : 60 marks

Inclusive of all choices : 94 marks

Question Paper Pattern

Section A : 5 out of 7 questions, each carrying 2 marks (5 × 2=10)

Section B : 4 out of 6 questions, each carrying 5 marks (4 × 5= 20)

Section C : 3 out of 5 questions, each carrying 10 marks (3 × 10= 30)

		Section – A 2 marks	Section – B 5 marks	Section – C 10 marks	Total marks
Units	**Hours allotted**	No. of questions	No. of questions	No. of questions	
1	11	1	2	1	22
2	11	3	1	1	21
3	11	2	2	1	24
4	12	1	1	2	27
Total	**45**	7	6	5	94

AGENDA- 3:

Approval of scheme of evaluation for CIA components (UG Microbiology)

- Chairman presented about the CIA of both existing and proposed for discussion.
- The different methods of evaluation are carried out during CIA with the existing activities ii.Snap Quiz / Oral Viva Voce (T)/Reflective Essay. The following activities will be proposed to enhance CIA evaluations such as Presentation / Creating diagrams /charts / Classwork / Case study / Field work.

UG- Continuous Internal Assessment – Scheme of Evaluation
For Theory Courses
End Semester Examination: 60%
Continuous Internal Assessment: 40%

Activities (CIA: 40 Marks)	Existing Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	30	30	
1. Weightage (Marks)	10	10	20
2. Assignment (Marks)	20		20
i. Writing	10		10
ii.Snap Quiz / Oral Viva Voce (T)/Reflective Essay	05		05
iii. Classroom participation	05		05
Total			40

Activities (CIA: 40 Marks)	Proposed and Approved Scheme		Total Marks (40)
	IA-1	IA-2	
Session Test Maximum Marks	**30**	**30**	-
1. Weightage (Marks)	**10**	**10**	**20**

2. Assignment (Marks)	**20**	**20**
i. Writing	**10**	**-**
ii. Quiz / Presentation / Creating diagrams /charts / Classwork / Case study / Viva / Field work etc.	**05**	**-**
iii. Classroom participation	**05**	**-**
Total		**40**

AGENDA- 4:

Approval of scheme of evaluation for CIA components (PG Microbiology)

Chairman explained about existing CIA components of M.Sc., Microbiology theory to the members. For the purpose of uniformity among the PG programmes CIA components, proposed CIA is presented for discussion.

Existing CIA: Seminars, assignments, internal exams (midterm, endterm) – 10 marks each. Total of 30 marks/ paper, soft core 15 marks with similar criteria.

PG CIA Components
Theory Paper (30 Marks)

Activities (CIA: 30 Marks)	Marks		Total Marks (30)
	Mid-Term Exam	End-Term Exam	
Session Test Maximum Marks	35	70	
1. Weightage (Marks)	05	10	15
2. Assignment - I	05		05
3. Assignment - II	05		05
4. Class Participation	05		05
Total			30

PG CIA Components
Practical Paper (30 Marks and 15 Marks)

Activities (CIA: 30 Marks)	Total Marks (30)	Total Marks (15)
Session Test Maximum Marks		
1. Lab Performance	15	05
2. Observation	05	05
3. Mock Test	10	05
Total	30	15

BOS members discussed and agreed for approval.

AGENDA- 5:

Proposal to integrate the compulsory internship/certificate course (online/offline-30 hours) for all the UG and PG students which needs to be completed by the end of III/IV semester.

(NOTE: Offline/Online, Evaluation method)

Note: Letter Grades will be awarded

Chairman informed about letter credit is mandatory as per the decision of college overall the programmes through internship/certificate course.

Prof.Rajarajan P enlightened about the importance of internship and certificate courses for both NEP and PG programme during their placements and higher educations.

Dr.Pramod T explained about the Swayam and NPTEL's time of offering courses are not align with our academic schedule and commitments. Majority of our weak students won't get into certificate course, in that case we have to take care them by conducting in-house internship certificate course.

Dr.Yogesh BJ said that students will take up more online internship and certificate course than offline. It is very difficult to track offline internship.

Pramod T suggested to get in touch with institutes/industries/institution to monitor the student's performance and attentiveness.

Ms.Agna suggested that weekly attendance at the campus is helpful to monitor the student's progress during their internships.

BoS members suggested to allow student to do reputed online certificate courses during first second year for achieving letter credit before going to third year.

AGENDA - 6:

Curriculum revision for I to IV semesters for M.Sc., Microbiology course matrix

(Effective for the academic year 2024 Onwards)

Chairman described about the M.Sc. Microbiology program course matrix to the members and also need of importance to revamp the courses between semesters and inclusion of research methodology, and internships. From the academic year 2017-18, M.Sc., Microbiology courses are educated and revised according to industrial needs without changing nomenclature of the courses. It is the time to give revised nomenclature for the courses.

BOS members are gone through the course matrix and discussed about revised nomenclature and agreed.

In the first semester, the courses Bacteriology & virology and Eucaryotic Microbiology are merged into single course as Fundamentals of Microbiology. Environmental Microbiology course is delivered in second semester which is revamped to first semester after the discussion and decision of BOS members.

In the second semester, Research Methodology course is introduced for inculcating research knowledge. Bioinformatics practical session of third semester is shifted to second semester along with food microbiology practicals.

Dr.Pramod J suggested that students can be segregated to multiple industry/institutes to get hands on experience through internships.
Internship should be available within the campus - CIIRC, Biozeen, SIT etc.,

Semester: I

Hours	Credits	Existing	Proposed To Be Changed	Credits
52	4	Bacteriology and Virology	**Fundamentals of Microbiology**	4
52	4	Eukaryotic Microbiology	**Microbial Biochemistry**	4
52	4	Microbial Physiology and Biochemistry	**Bioinstrumentation**	4
52	4	Microbial and Biochemical techniques	**Environmental Microbiology**	4
26	2	Biostatistics(Softcore)	Biostatistics(Softcore)	2
60	4	Bacteriology, Virology and Eukaryotic Microbiology Practical	**Microbial Diversity and Microbial Biochemistry Practical**	4
60	4	Microbial Physiology, Biochemistry, Microbial techniques Practical	**Bioinstrumentation and Environmental Microbiology Practical**	4
	26			**26**

Semester II

Hours	Credits	Existing	Proposed To Be Changed
52	4	Microbial Genetics	Microbial Genetics
52	4	Molecular Biology	Molecular Biology

52	4	Environmental Microbiology	Food Microbiology
52	4	Food Microbiology	**Research Methodology**
26	2	Bioinformatics	**Data Science in Biology**
60	4	Microbial Genetics and Molecular Biology Practical	Microbial Genetics and Molecular Biology Practical
60	4	Environmental and Food Microbiology Practical	Food Microbiology and Data Science in Biology Practical
	26		

Semester III

Hours	Credits	Existing	Proposed To Be Changed	Credits
52	4	Medical Microbiology	Medical Microbiology	4
52	4	Immunology	Immunology	4
52	4	Recombinant DNA Technology	Molecular Engineering	4
60	4	Medical Microbiology and Immunology Practical	Medical Microbiology, Immunology and Molecular Engineering Practical	4
60	4	Recombinant DNA technology and Bioinformatics Practical		

60	2	Industrial and Institutional visit report	**Internship**, Industrial and Institutional visit report	4
52	4	Write it Right / Psychology in Life	Write it Right / Psychology in Life	4
	26			**24**

Internship training for 15 days is included

MOOC"S / SWAYAM online test is Compulsory are added

Semester IV

Hours	Credits	Existing	Proposed To Be Changed	Credits
52	4	Agricultural Microbiology	Soil & Agricultural Microbiology	4
52	4	Industrial Microbiology	Industrial Bioprocess technology	4
52	4	Microbial Biotechnology	Microbial Technology and Nanotechnology	4
60	4	Agricultural, Industrial Microbiology and Microbial Biotechnology Practical	Soil & Agricultural, Industrial Bioprocess technology and Microbial Technology Practical	4
60	4+2	Dissertation & Project Viva	Dissertation & Project Viva	**6**
	22			22

Fundamentals of Microbiology

Total Teaching Hours: 52 **No. of Hours per week: 4 (4 Credits)**

Unit 1:

Scope of microbiology, Ancient microbiology - Refutation of a biogenesis: Discovery of penicillin: Discovery of vaccination: One-gene one-enzyme hypothesis, Contribution of scientists – Leeuwenhoeck, Edward Jenner, Alexander Fleming, Joseph Lister, Robert Koch, Louis Pasteur, Hargobind Khorrana. Modern Microbiology: Landmark achievements in 20th century. Microbial taxonomy - Definition and systematics, Nomenclatural rules and identification. Haeckel's three kingdom classification, Whittaker's five kingdom approach - Woese domain system. Major characteristics used in taxonomy: Morphological, physiological and metabolic, genetic and molecular taxonomy. Bergey's Classification of bacteria. 10 Hours

Unit 2:

Differences between prokaryotic and eukaryotic cell. Biology of bacteria - cell structure, size, shape, arrangement membrane, cell wall, cytoplasmic inclusions, mesosomes, flagella and motility, slime, glycocalyx, capsule, pili, chemotaxis, endospore - biology of fungi, structure, physiology and classification – biology of yeast – reproduction - virus (bacteriophages) structure, life cycle (lytic and lysogenic) – biology of algae – mycoplasma – prions.

-10 Hours

Unit 3:

Microbial nutrition: Microbial nutrient requirements, macro-nutrients, micro-elements, growth factors, sources of nutrients, nutritional classification of bacteria: phototroph, chemotroph, autotroph, heterotroph, photoautotroph, photoheterotroph, chemoautotroph, chemoheterotroph – nutritional patterns of pathogens – saprophytes – auxotroph. 8 Hours

Unit 4:

Extremophiles: Diversity of microorganisms of arctic, antarctic and hydrothermal vents – Archaeal biology - acidophile, alkaliphile, anaerobe, cryptoendolith, halophile, hyperthermophile, hypolith, lithoautotroph, metal-tolerant microbes, oligotroph, osmophile, piezophile, polyextremophile, psychrophile/cryophile, radio-resistant, thermophile, thermoacidophile, xerophile – mechanism of extremophiles. 8 Hours

Unit 5:

Cultivation of microbes: Types of growth media (natural, synthetic, complex, enriched, selective- definition with examples), pure culture methods (streak plate, spread plate, pour plate,

stab culture, slant culture). Anaerobic (thioglycollate, anaerobic chamber, Robertson's media, microaerophilic), liquid shake culture of aerobic bacteria, 8 Hours

Unit 6:

Control of microbes - sterilisation, disinfection, antiseptic, tyndalization, pasteurization: physical - dry heat, moist heat, UV light, ionizing radiation, filtration, HEPA filter, chemical methods. 8 Hours

References

1. Christopher J. Woolverton, Linda Sherwood, Joanne Willey Prescott LM Harley JP and Klein DA (2016). Microbiology (10th edition) McGraw-Hill Education.
2. Schaechter M and Leaderberg J (2009). The Desk encyclopedia of Microbiology (3rd edition) Elseiver Academic press, California.
3. John Webster (January 25, 2007). Introduction to Fungi. (3rd edition). Cambridge University Press, Cambridge.
4. Nester, E.W., Roberts, C.V. and Nester, M.T. (2015). Microbiology, A human perspective.(8th Edition) McGraw-Hill Education (January 6, 2015)
5. Madigan MT Martinko. JM and Parker J Brock TD (2017). Biology of Microorganisms. (15th edition). Pearson
6. Holt, J.S., Kreig, N.R., Sneath, P.H.A and Williams, S.T. Bergey's Manual of Determinative Bacteriology (9th Edition), Williams and Wilkins, Baltimore.
7. Mara D. and Horan N. (2013). The Handbook of Water and Waste-Water Microbiology. (3rd edition) Academic CRC Press.

RESEARCH METHODOLOGY

Total Teaching Hours: 52 **No. of Hours per week: 4 (4 Credits)**

Unit 1:
Foundations of Research: Meaning, Objectives, Motivation, Utility. Concept of theory, empiricism, deductive and inductive theory. Characteristics of scientific method – Understanding the language of research – Concept, Construct, Definition, Variable. Research Process 8 Hours

Unit 2:
Research Design: Concept and Importance in Research – Features of a good research design – Exploratory Research Design – concept, types and uses, Descriptive Research Designs – concept, types and uses. Experimental Design: Concept of Independent & Dependent variables. 8 Hours

Unit 3:
Qualitative and Quantitative Research: Qualitative research – Quantitative research – Concept of measurement, causality, generalization, replication. Merging the two approaches. 5 Hours

Unit 4:
Sampling: Concepts of Statistical Population, Sample, Sampling Frame, Sampling Error, Sample Size, Non Response. Characteristics of a good sample. Probability Sample – Simple Random Sample, Systematic Sample, Stratified Random Sample & Multi-stage sampling. Determining size of the sample – Practical considerations in sampling and sample size.
-10 Hours

Unit 5:
Interpretation of Data and Paper Writing – Layout of a Research Paper, Impact factor of Journals, When and where to publish? Ethical issues related to publishing,
Plagiarism and Self-Plagiarism. 8 Hours

Unit 6:
Use of Encyclopedias, Research Guides, Handbook etc., Academic Databases. Use of tools / techniques for Research: methods to search required information effectively, Reference Management Software like Zotero/Mendeley, Software for paper formatting like LaTeX/MS Office, Software for detection of Plagiarism. 13 Hours

References:

1. Business Research Methods – Donald Cooper & Pamela Schindler, TMGH, 9th edition
2. Business Research Methods – Alan Bryman & Emma Bell, Oxford University Press.
3. Research Methodology – C.R.Kothari

The meeting concluded with words of gratitude expressed by the Chairperson.

CLOSING TIME: 11.45 AM

RESOLUTIONS:

- BoS approved the changes in the course matrix of B.Sc., IV semester theory and practical courses of NEP scheme for BCMB program (S21 MB 4.1-Microbial Enzymology is replaced with Soil, Agricultural and Environmental Microbiology).
- The board is gone through with UG and PG CIA modifications and discussed about the evaluation categories and agreed for approval.
- Course matrix of M.Sc., Microbiology is approved with the suggestions of BOS members for the upcoming batch 2024-26. The addition of research methodology course in second semester and internships/certificate course in third semester are elaborately discussed and approved.
- The Board carefully scrutinized the draft syllabus and after detailed discussion the following changes were made to improve the syllabus to meet the present and future challenges in the industrial field. BoS approved the M.Sc. course matrix for the academic year 2024-25.

INDIAN ACADEMY
Degree College - Autonomous

MATRIX AND SYLLABUS

For the Programme M.Sc. (Microbiology)

I – IV Semester

Academic Year: 2024-25 onwards

M.Sc., Microbiology Course Matrix
I Semester

Paper	Title of the paper	Periods/ Week	Duration	IA	EA	Maximum Marks	Credits
I Semester			**Theory**				
MMB 101	Fundamentals of Microbiology	4	4	30	70	100	4
MMB 102	Environmental Microbiology	4	4	30	70	100	4
MMB 103	Microbial Physiology and Biochemistry	4	4	30	70	100	4
MMB 104	Microbial and Biochemical Techniques	4	4	30	70	100	4
MMB 105	Biostatistics (Soft core)	2	2	15	35	50	2
			Practical				
MMB 106	Fundamentals of Microbiology and Environmental Microbiology	4	4	30	70	100	4
MMB 107	Microbial Physiology, Biochemistry and Microbial Techniques	4	4	30	70	100	4
Total marks and Credits						650	26

Semester I

FUNDAMENTALS OF MICROBIOLOGY

Theory

Total Teaching Hours: 52

No. of Hours per week: 4

(4 Credits)

Unit 1:

Scope of microbiology, Ancient microbiology - Refutation of a biogenesis: Discovery of penicillin: Discovery of vaccination: One-gene one-enzyme hypothesis, Contribution of scientists – Leeuwenhoeck, Edward Jenner, Alexander Fleming, Joseph Lister, Robert Koch, Louis Pasteur, Hargobind Khorrana. Modern Microbiology: Landmark achievements in 20th century. Microbial taxonomy - Definition and systematics, Nomenclatural rules and identification. Haeckel's three kingdom classification, Whittaker's five kingdom approach - Woese domain system. Major characteristics used in taxonomy: Morphological, physiological and metabolic, genetic and molecular taxonomy. Bergey's Classification of bacteria.

-10 Hours

Unit 2:

Differences between prokaryotic and eukaryotic cell. Biology of bacteria - cell structure, size, shape, arrangement membrane, cell wall, cytoplasmic inclusions, mesosomes, flagella and motility, slime, glycocalyx, capsule, pili, chemotaxis, endospore - biology of fungi, structure, physiology and classification – biology of yeast – reproduction - virus (bacteriophages) structure, life cycle (lytic and lysogenic) – biology of algae – mycoplasma – prions.

-10 Hours

Unit 3:

Microbial nutrition: Microbial nutrient requirements, macro-nutrients, micro-elements, growth factors, sources of nutrients, nutritional classification of bacteria: phototroph, chemotroph, autotroph, heterotroph, photoautotroph, photoheterotroph, chemoautotroph, chemoheterotroph – nutritional patterns of pathogens – saprophytes – auxotroph.

- 8 Hours

Unit 4:

Extremophiles: Diversity of microorganisms of arctic, antarctic and hydrothermal vents – Archaeal biology - acidophile, alkaliphile, anaerobe, cryptoendolith, halophile, hyperthermophile, hypolith, lithoautotroph, metal-tolerant microbes, oligotroph, osmophile, piezophile, polyextremophile, psychrophile/cryophile, radio-resistant, thermophile, thermoacidophile, xerophile – mechanism of extremophiles.

-8 Hours

Unit 5:

Cultivation of microbes: Types of growth media (natural, synthetic, complex, enriched, selective- definition with examples), pure culture methods (streak plate, spread plate, pour plate, stab culture, slant culture). Anaerobic (thioglycollate, anaerobic chamber, Robertson's media, microaerophilic), liquid shake culture of aerobic bacteria,

-8 Hours

Unit 6:

Control of microbes - sterilisation, disinfection, antiseptic, tyndalization, pasteurization: physical - dry heat, moist heat, UV light, ionizing radiation, filtration, HEPA filter, chemical methods. -8 Hours

References

1. Christopher J. Woolverton, Linda Sherwood, Joanne Willey Prescott LM Harley JP and Klein DA (2016) Microbiology (10th edition) McGraw-Hill Education.
2. Schaechter M and Leaderberg J (2009). The Desk encyclopedia of Microbiology (3rd edition) Elsevier Academic press, California.
3. John Webster (January 25, 2007). Introduction to Fungi. (3rd edition). Cambridge University Press, Cambridge.
4. Nester, E.W., Roberts, C.V. and Nester, M.T. (2015). Microbiology, A human perspective.(8th Edition) McGraw-Hill Education (January 6, 2015)
5. Madigan MT Martinko JM and Parker J Brock TD (2017). Biology of Microorganisms. (15th edition) Pearson
6. Holt, J.S., Kreig, N.R., Sneath, P.H.A and Williams, S.T.(1989). Bergey's Manual of Determinative Bacteriology (9th Edition), Williams and Wilkins, Baltimore.
7. Mara D. and Horan N. (2013). The Handbook of Water and Waste-Water Microbiology. (3rd edition) Academic CRC Press.

M.Sc., Microbiology Course Matrix

II Semester

Paper	Title of the paper	Periods/ Week	Duration	IA	EA	Maximum Marks	Credits
II Semester		**Theory**					
MMB 201	Microbial Genetics	4	4	30	70	100	4
MMB 202	Molecular Biology	4	4	30	70	100	4
MMB 203	Research Methodology	4	4	30	70	100	4
MMB 204	Food Microbiology	4	4	30	70	100	4
MMB 205	Bioinformatics (Soft core)	2	2	15	35	50	2
		Practical					
MMB 206	Microbial Genetics, Molecular Biology	4	4	30	70	100	4
MMB 207	Food Microbiology and Bioinformatics	4	4	30	70	100	4
Total marks and Credits						650	26

Semester II

RESEARCH METHODOLOGY

Theory

Total Teaching Hours: 52

No. of Hours per week: 4

(4 Credits)

Unit 1:

Foundations of Research: Meaning, Objectives, Motivation, Utility. Concept of theory, empiricism, deductive and inductive theory. Characteristics of scientific method – Understanding the language of research – Concept, Construct, Definition, Variable. Research Process -8 Hours

Unit 2:

Research Design: Concept and Importance in Research – Features of a good research design – Exploratory Research Design – concept, types and uses, Descriptive Research Designs – concept, types and uses. Experimental Design: Concept of Independent & Dependent variables. -8 Hours

Unit 3:

Qualitative and Quantitative Research: Qualitative research – Quantitative research – Concept of measurement, causality, generalization, replication. Merging the two approaches. -5 Hours

Unit 4:

Sampling: Concepts of Statistical Population, Sample, Sampling Frame, Sampling Error, Sample Size, Non Response. Characteristics of a good sample. Probability Sample – Simple Random Sample, Systematic Sample, Stratified Random Sample & Multi-stage sampling. Determining size of the sample – Practical considerations in sampling and sample size. -10Hours

Unit 5:

Interpretation of Data: Paper Writing – Layout of a Research Paper, Impact factor of Journals, When and where to publish? Ethical issues related to publishing, Plagiarism and Self-Plagiarism. -8 Hours

Unit 6:

Uses of Resources: Use of Encyclopedias, Research Guides, Handbook etc., Academic Databases. Use of tools / techniques for Research: methods to search required information effectively, Reference Management Software like Zotero/Mendeley, Software for paper formatting like LaTeX/MS Office, Software for detection of Plagiarism. -13 Hours

References:

1. Kothari, C.R. (2004).Research Methodology: Methods and Techniques, New Age International Publishers.
2. Babbie, E., (2013). The Practice of Social Research, 13 edn., Wadsworth.
3. Jacques B., Henry F. Graffv, (2004). The Modern Researcher, Wadsworth.
4. Punch,K. (2006). Developing Effective Research Proposals, Sage.
5. Henn, M., M. (2006). Weinstein and M. Foard, A Short Introduction to Social Research, Vistaar.
6. Nicolas Walliman, (2011). Research Methods: The Basics, Routledge.
7. Kvale,S. (2008). Doing Interviews, London, Sage.
8. Desai, V, and R. Potter (2006). Doing Developmental Research, Vistaar, Delhi.
9. Strunk, W. and E.B. White. (2000) The Element of Style, Needham Heights.

M.Sc., Microbiology Course Matrix

III Semester

Paper	Title of the paper	Periods/ Week	Duration	IA	EA	Maximum Marks	Credits
III Semester			Theory				
MMB 301	Medical Microbiology	4	4	30	70	100	4
MMB 302	Immunology	4	4	30	70	100	4
MMB 303	Recombinant DNA Technology	4	4	30	70	100	4
OPE	Write it Right / Psychology in Life	4	4	30	70	100	4
			Practical				
MMB 305	Medical Microbiology and Immunology	4	4	30	70	100	4
MMB 306	Recombinant DNA Technology	4	4	30	70	100	4
MMB 307	Industrial and Institutional visit report					50	2
Total marks and Credits						650	26

M.Sc., Microbiology Course Matrix
IV Semester

Paper	Title of the paper	Periods/ Week	Duration	IA	EA	Maximum Marks	Credits
IV Semester			**Theory**				
MMB 401	Soil & Agricultural Microbiology	4	4	30	70	100	4
MMB 402	Industrial Bioprocess technology	4	4	30	70	100	4
MMB 403	Microbial Technology and Nanotechnology	4	4	30	70	100	4
			Practical				
MMB 404	Advanced Microbial Technology	4	4	30	70	100	4
MMB 405	Project Work/ Dissertation	4	4		100	100	4
	Project Viva	2			50	50	2
Total marks and Credits						550	22
						2500	**100**

Approval of scheme of evaluation for CIA components (PG Microbiology)

PG CIA Components

Theory Paper (30 Marks)

Activities (CIA: 30Marks)	Marks		Total Marks (30)
	Mid-Term Exam	End-Term Exam	
Session Test Maximum Marks	**35**	**70**	
1. Weightage (Marks)	05	10	15
2. Assignment – I	05		05
3. Assignment – II	05		05
4. Class Participation	05		05
Total			**30**

PG CIA Components

Practical Paper (30 Marks)

Activities (CIA: 30Marks)	Total Marks (30)
Session Test Maximum Marks	
1. Lab Performance	15
2. Observation	05
3. Mock Test	10
Total	**30**

Program Coordinator - Microbiology
Department of Life Sciences
Indian Academy Degree College - Autonomous
Bangalore - 560043

INDIAN ACADEMY
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INDIAN ACADEMY
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Department of Life Sciences

Board of Studies Meeting – Agenda

Date: 22/06/2024

Venue: Board Room, IADC-A

AGENDA - 1:

Approval of New Programme for the academic year 2024-25 (B.Sc.) / Revised intake in the Programmes

- Triple Major Combinations: B.Sc. (Biotechnology, Microbiology, Genetics), B.Sc. (Biotechnology, Genetics, Biochemistry) and B.Sc. (Microbiology, Chemistry, Zoology)
- Single Major Programme: B.Sc. (Biotechnology)
- Ph.D. Programme

AGENDA- 2:

Curriculum Discussion for I and II Semester B.Sc.

- Course Matrix – for the I/II/III/IV/V/VI Semesters
- Detailed Syllabus and Blueprints– for I and II Semesters
- Continuous Internal Assessment (End Semester Examination: 60% & Continuous Internal Assessment: 40%- applicable to all programmes)

AGENDA- 3:

Closure of certain programmes

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF LIFE SCIENCES

Minutes of Board of Studies Meeting

Date: 22/06/2024

Venue: Board Room, Indian Academy Degree College.

Time: 9.30 PM to 12.00 Noon

Chairperson: Dr.Ananda Vardhan H, Head, Department of Life Sciences, IADCA.

Members Present:

Agenda:

1. Approval of New Programme for the academic year 2024-25 (B.Sc.) / Revised intake in the Programmes

   - Triple Major Combinations: B.Sc. (Biotechnology, Microbiology, Genetics), B.Sc. (Biotechnology, Genetics, Biochemistry) and B.Sc. (Microbiology, Chemistry, Zoology)
   - Single Major Programme: B.Sc. (Biotechnology)
   - Ph.D. Programme

2. Curriculum Discussion for I and II Semester B.Sc.

   - Course Matrix – for the I/II/III/IV/V/VI Semesters
   - Detailed Syllabus and Blueprints– for I and II Semesters
   - Continuous Internal Assessment (End Semester Examination: 60% & Continuous Internal Assessment: 40%- applicable to all programmes)

3. Closure of earlier offered UG and PG programmes

Proceedings:

The chairperson began the meeting by formally welcoming the members of the BOS and introduced the newly appointed University Nominee and all the program coordinators to the forum. A brief out of the agenda of the meeting was given.

Agenda I: Approval of New Programme for the academic year 2024-25 (B.Sc.) / Revised intake in the Programmes.

Deliberations:

The proposed Triple majors and Single major combinations under the SEP-2024 has been discussed upon along with the proposed intake as follows.

Combinations	Proposed intake strength
B.Sc. (Biotechnology, Microbiology, Genetics),	30
B.Sc. (Biotechnology, Genetics, Biochemistry)	20
B.Sc. (Microbiology, Chemistry, Zoology)	20
B.Sc. (Biotechnology)	20

The revised intake for the PG programs offered in Life Sciences is being presented to the board, as follows

PG Program	Earlier intake strength	Revised intake strength
M.Sc. Microbiology	50	30
M.Sc. Biotechnology	60	45
M.Sc. Applied Genetics	10	NA
M.Sc. Biochemistry	20	20

Also, the discussions about Ph.D. program to be initiated at IADC-A is being deliberated upon with a brief outline of the course matrix to be offered to the scholars after admissions.

Sl. No.	Name of the Course	Contact Hours per Week	Exam Hours	Maximum Marks			Credits
				Continuous Assessment	Course-end Examination	Total	
01	Paper-I: Research Methodology	04	03	30	70	100	04
02	Paper-II: Cognate/Core Subject	04	03	30	70	100	04
03	Paper-III: Field of Specialization	04	03	30	70	100	04
04	Paper – IV Research and Publication Ethics	02	02	15	35	50	02
Total		**14**	**14**	**90**	**210**	**350**	**14**

Viva Voce	**50**

The committee members deliberated about the combinations and gave their consent to offer the combinations along with the proposed / revised intakes of both UG and PG programs. Also, the course work matrix for Ph.D. program was also appreciated and accepted by the board.

Agenda II:

- Curriculum Discussion for I and II Semester B.Sc. along with the Course Matrix – for the I/II/III/IV/V/VI Semesters
- Detailed Syllabus and Blueprints– for I and II Semesters
- Continuous Internal Assessment (End Semester Examination: 60% & Continuous Internal Assessment: 40% applicable to all programmes)
- Detailed syllabus of Ph.D. entrance exam and the course work.

Deliberations:

BOS committee chairman presented the detailed curriculum matrix for all the four proposed UG combinations along with the syllabus for Ph.D. program course work. The board members discussed about the syllabus contents across the combinations as follows,

- Maintenance of uniformity across the combinations with respect to the number of credits, units and teaching hours is being looked at.
- Reiteration by the University nominee about conformity of the CIA component as per SEP ie., 80 + 20 instead of 60 + 40 as proposed. The nominee felt that this change needs a formal approval from the concerned University authorities, though it's a good initiative.
- Change in the course title from "Basics of Chemistry" to "Basic Chemistry"
- Editing the experiment "Absorption maxima of DNA and Protein" to "Spectral Characteristics of nucleic acids and Proteins" in the course Bioanalytical Techniques practical's.
- Introduction of "PET scan", "PFGE" in the course Bioanalytical Techniques.
- Discussion about reduction in the contents of the course Basic Physiology.
- Reiteration by the University nominee about conformity with respect to the number of credits, units and teaching hours for all the Ph.D. course work papers.
- Discussions about the considerations to be made with reference to the admission of Ph.D. students. Suggestions were uniformly given by the external members to give equal preference for both the full time or part time scholars.

The suggestions were discussed upon, deliberated and then accepted for inclusion in the revised syllabus file.

Agenda III: Closure of earlier offered UG and PG programmes

Since the new SEP is being implemented by the affiliating university, the earlier offered double major combinations for which the approvals were taken earlier, stands closed and the same is being discussed about before the BOS board.

Dual Major Programmes to be Closed		
B.Sc. Biotechnology - Microbiology	30	Closed
B.Sc. Genetics - Biotechnology	30	Closed
B.Sc. Genetics - Microbiology	30	Closed
B.Sc.Biochemistry - Microbiology	30	Closed
B.Sc.Chemistry - Zoology	20	Closed
B.Sc. Biotechnology- Biochemistry	20	Closed
B.Sc. Chemistry - Microbiology	20	Closed
B.Sc. Zoology - Microbiology	20	Closed
PG Program to be Closed		
M.Sc. Applied Genetics	10	Closed

The above mentioned programs were approved for closure.

Conclusion:

The BOS meeting concluded with the vote of thanks by the Chairperson.

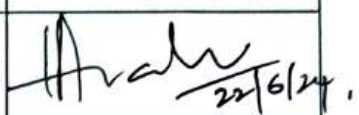
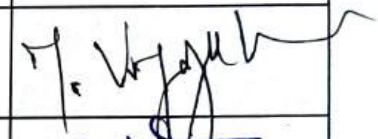
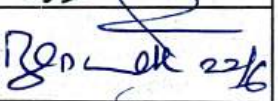
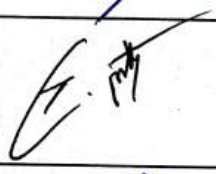
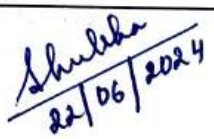
Closing time: 2:00 PM.

Resolutions: As per the deliberations of the committee members the following resolutions were recommended for further presentation and approval at ACM.

1. The combinations proposed i.e., B.Sc. (Biotechnology, Microbiology, Genetics), B.Sc. (Biotechnology, Genetics, Biochemistry), B.Sc. (Microbiology, Chemistry, Zoology) and B.Sc. (Biotechnology) were recommended.
2. The course matrix and syllabi were suggested to be edited as per the suggestions and recommended to be presented in ACM.
3. Syllabus for the Ph.D. entrance exam and all the course work papers were suggested to be edited as per the suggestions and recommended to be presented in ACM.
4. Closure of the earlier offered UG and PG courses was recommended to the ACM.

Members Present:

Members Present:

Name	Designation	Signature
Dr.Ananda Vardhan.H Chairperson	HOD, Life Sciences Indian Academy Degree College – Autonomous, Bengaluru.	
Dr. V.Veeraraghavan University Nominee	Professor, Department of Biochemistry, School of Allied Health Sciences, REVA University, Bengaluru.	
Dr. Vijay Muppala Industry Expert	Director – Business Development, DR Biosciences, Bengaluru.	
Mr.Chandrashekar Aradhya SN Alumnus	Associate Microbiologist, Industry: Eurofins Analytical Services India, Hoodi Bangalore	
Dr.Thilaka.N Special Invitee	Principal IADC-A, Bengaluru.	
Dr.Dwarakanath.B.S Special Invitee	Research Advisor IADC-A, Bengaluru.	
Prof.Rajarajan P Special Invitee & Subject Expert	Vice-Principal IADC-A, Bengaluru.	
Dr.Pushpa K Member	Professor & Program Coordinator - Biochemistry Department of Life Sciences, IADC-A, Bengaluru.	
Dr. Ramachandra Murthy T. T. S. Member	Associate Professor & Program Coordinator - Biotechnology Department of Life Sciences, IADC-A, Bengaluru.	
Dr.Shubha Rajiv Member	Professor & Program Coordinator - Genetics Department of Life Sciences, IADC-A, Bengaluru.	
Dr.Malaiyarasa Pandian P. Member	Professor & Program Coordinator - Microbiology Department of Life Sciences, IADC-A, Bengaluru.	
Dr.Sangeetha Annie George Member	Professor & Program Coordinator - Zoology Department of Life Sciences, IADC-A, Bengaluru.	

INDIAN ACADEMY

Degree College - Autonomous

Department of Life Sciences

INDIAN ACADEMY
Degree College - Autonomous

Department of Life Sciences

Board of Studies Meeting – Agenda

Date: 02/05/2024 **Venue:** Board Room, IADC-A

AGENDA – 1: Approval of New Programmes with one Major one Minor course combination for B.Sc. Life Sciences (As per IIA model of KSHEC)

AGENDA – 2: Curriculum design and development for the new B.Sc. Life Science combinations

a. I to VI Semester Programme Matrix (including the 5 PEOs, 5 POs, 5 PSOs).

b. Detailed curricula for I and II Semester.

AGENDA – 3: Approval of additional panel members to BOE list for UG and PG programs for the A.Y. 2024-25

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF LIFE SCIENCES

Minutes of Board of Studies Meeting

Date: 02/05/2024

Venue: Board Room, Indian Academy Degree College.

Time: 11:00 PM to 1.00 PM

Chairperson: Dr.Ananda Vardhan H, Head, Department of Life Sciences, IADCA.

Members Present:

Agenda:

1. Approval of New Programmes with one Major one Minor course combination for B.Sc. Life Sciences (As per IIA model of KSHEC)
2. Curriculum design and development for the new B.Sc. Life Science combinations
   a. I to VI Semester Programme Matrix (including the 5 PEOs, 5 POs, 5 PSOs).
   b. Detailed curricula for I and II Semester.
3. Approval of additional panel members to BOE list for UG and PG programs for the A.Y. 2024-25

Proceedings:

The chairperson began the meeting by formally welcoming the members of the BOS and introduced the program coordinators of the newly formed Department of Life Sciences. All the respective faculty members under different programs were introduced to the Committee. A brief out of the agenda of the meeting was given.

Agenda I

Approval of new programmes with one Major one Minor course combination for B.Sc. Life Sciences (As per IIA model of KSHEC).

Deliberations:

BOS committee chairman proposed the following B.Sc combinations and explained about the reason behind choosing the specified combinations.

The combinations proposed were,

Combinations	Proposed intake strength
B.Sc Biotechnology (Major) with Genetics (Minor)	30
B.Sc Biotechnology (Major) with Biochemistry (Minor)	30
B.Sc Microbiology (Major) with Biotechnology (Minor)	30

The committee members deliberated about the combinations and gave their consent to offer the combinations.

Agenda II

Curriculum design and development for the new B.Sc. Life Science combinations.

a. I to VI Semester Programme Matrix (including the 5 PEOs, 5 POs, 5 PSOs)

b. Detailed curricula for I and II Semester

Deliberations:

BOS committee chairman along with the respective program coordinators and faculty members presented the detailed curriculum matrix for all the six semesters across all the three proposed combinations. The suggestions were discussed upon, deliberated and then accepted for inclusion in the revised syllabus file.

a. The detailed curriculum matrix for all the combinations, across the semesters proposed were discussed upon and accepted by the BOS upon some specific clarifications given to the queries.

b. In the combination B.Sc – BT (Major) and G (Minor) – for the course offered in the I semester BT i.e., "Bioanalytical techniques", a detailed discussion happened and the board has advised to offer the course with modification in the syllabus content along with the an appropriate change in the course title. It was suggested that the course name could be "Biomolecules and Bioanalytical techniques" along with the inclusion of appropriate syllabus components.

c. In the combination B.Sc – BT (Major) and G (Minor) – for the course offered in the II semester BT i.e., "Introduction to Microbiology", in Unit IV members advised to remove the concepts of Applications of Microbiology since the remaining portions would take time to cover. Moreover since the concepts removed would anyways be studied in higher semesters, the suggestion was considered.

d. In the combination B.Sc – BT (Major) and BC (Minor) – for the course offered in the I semester BT i.e., Bioanalytical Techniques, as per the suggestions of the board, minor changes i.e., deletion of Atomic Absorption Spectroscopy and Immunological techniques were carried out in Unit 3 and Unit 4 respectively.

e. In the combination B.Sc – BT (Major) and BC (Minor) – for the course offered in the I semester BC i.e., Biomolecules, as per the suggestions of the board, minor changes i.e., inclusion of "Vitamins" was carried out in Unit 4.

f. In the combination B.Sc – BT (Major) and BC (Minor) – for the course offered in the II semester BT i.e., "Introduction to Microbiology", in Unit IV members advised to remove the concepts of Applications of Microbiology since the remaining portions would take time to cover. Moreover since the concepts removed would anyways be studied in higher semesters, the suggestion was considered.

g. In the combination B.Sc – MB (Major) and BT (Minor) – for the course offered in the I semester MB i.e., "General Microbiology", as per the suggestions of the members, additional concepts on "Microscopy" were added in Unit I.

h. In the combination B.Sc – MB (Major) and BT (Minor) – for the course offered in the I semester MB i.e., "General Microbiology - Practical", as per the suggestions of the members, minor modifications were carried out.

i. In the combination B.Sc – MB (Major) and BT (Minor) – for the course offered in the II semester MB i.e., "Microbial Diversity", as per the suggestions of the members, minor rearrangement of the existing contents of syllabus with a corresponding change in the titles of the units were being carried out.

j. In the combination B.Sc – MB (Major) and BT (Minor) – for the course offered in the II semester MB i.e., "Microbial Diversity - Practical", as per the suggestions of the members, addition of "Drop Plate method" under Expt. 2 is being carried out.

Conclusion:

The BOS meeting concluded with the vote of thanks by the Chairperson.

Closing time: 2:00 PM.

Resolutions: As per the deliberations of the committee members the following resolutions were recommended for further presentation and approval at ACM.

1. The combinations proposed i.e., B.Sc Biotechnology (Major) with Genetics (Minor), B.Sc Biotechnology (Major) with Biochemistry (Minor) and B.Sc Microbiology (Major) with Biotechnology (Minor) were recommended.

2. The course matrix and syllabi were suggested to be edited as per the suggestions and recommended to be presented in ACM.

Members Present:

Name	Designation	Signature
Dr.Ananda Vardhan.H (Chairperson)	HOD, Dept of Life Sciences Indian Academy Degree College – Autonomous, Bengaluru. dr.ananda.lifesciences@iadc.ac.in	2/5/24.
Dr. Ramachandra Murthy T. T. S.	Associate Professor and Program Coordinator, Department of Life Sciences-Biotechnology, Indian Academy Degree College – Autonomous, Bengaluru. murthy.biotech@iadc.ac.in	
Prof. Nagamani T. S. Bangalore North University (BNU) Nominee	Associate Professor, Department of P.G. Studies in Biotechnology, Nrupathunga University, Bengaluru. naguts@gmail.com	2/5/24
Dr. N. M. Guruprasad Subject Expert (External)	Associate Professor, Department of Biotechnology, School of Applied Science and Management, Reva University, Bengaluru. guruprasadnm@gmail.com	2/5/24
Dr. Narendra Ram M. S. Industry Expert	Founder and CSO of Cellsys Biosciences Pvt. Ltd., Bengaluru. narendra.ram@cellsysbiosiences.com	
Mr. Rajan Chourasiya Post Graduate Student Alumnus	Business Head, Bionome, Bengaluru. rajan@bionome.in	–
Dr. Paramesh H. Member	Associate Professor, Department of Life Sciences-Biotechnology, IADC-A, Bengaluru. dr.paramesh.biotech@iadc.ac.in	
Prof. Sudhakar Malla Member	Associate Professor, Department of Life Sciences-Biotechnology, IADC-A, Bengaluru. sudhakar.biotech@iadc.ac.in	
Dr. Vanitha G. Ramesh Member	Associate Professor, Department of Life Sciences-	02/05/24

	Biotechnology, IADC-A, Bengaluru. vanitha.genetics@iadc.ac.in	
Dr. Divya Member	Assistant Professor, Department of Life Sciences- Biotechnology, IADC-A, Bengaluru. divyababu.biotech@iadc.ac.in	2/5/24
Dr. Mohammed Rafiqkhan K. Member	Associate Professor, Department of Life Sciences- Biotechnology, IADC-A, Bengaluru. dr.rafiq.biotech@iadc.ac.in	2/5/24.
Dr. Kalaiyarasu T. Member	Assistant Professor, Department of Life Sciences- Biotechnology, IADC-A, Bengaluru. dr.kalaiyarasu.biotech@iadc.ac.in	
Prof. P. Rajarajan	Vice Principal & Professor, Department of Life Sciences- Microbiology, IADC-A, Bengaluru. rajarajan.microbiology@iadc.ac.in	
Dr. Arun Jyothi Mathias BNU Nominee	Professor, Dept. of Microbiology, Maharani Cluster University, Bengaluru. arunjomathias@gmail.com	–
Dr. Pramod T Subject Expert	Associate Professor, Department of Microbiology, School of Life sciences, Jain University, Bangaluru-560069 pramod.t@jainuniversity.ac.in	
Dr. S.S. Easwaran Industry Expert	Academic Dean, Biocon Academy, Bengaluru- 560100 ss.easwaran@bioconacademy.com	
Ms. Ambika Gangula Student Alumnus	Research associate, Discovery biology Syngene international. gkambika25@gmail.com	21/5/24.
Dr.Malaiyarasa Pandian P. Member	Program Coordinator-Microbiology & Professor, Department of Life Sciences- Microbiology, IADC-A, Bengaluru-43 Pandian.microbiology@iadc.ac.in	–
Dr. S. Anu Kiruthika Member	Associate Professor Department of Life Sciences-	

	Microbiology, IADC-A, Bengaluru. dr.anu.microbiology@iadc.ac.in	
Dr. K. Sahithya Member	Assistant Professor, Department of Life Sciences-Microbiology, IADC-A, Bengaluru. dr.sahithya.microbiology@iadc.ac.in	–
Ms. Qurath Ul-Ain, Member	Assistant Professor Department of Life Sciences-Microbiology, IADC-A, Bengaluru. qurath.lifesciences@iadc.ac.in	
Ms. Agna K Member	Assistant Professor Department of Life Sciences-Microbiology, IADC-A, Bengaluru agna.lifescience@iadc.ac.in	
Dr. Dwarakanath.B.S Special Invitee	Research Advisor Indian Academy Degree College – Autonomous, Bengaluru. dwarakanath@iadc.ac.in	
Dr. Shubha Rajiv Special Invitee	Professor & Program Coordinator, Department of Life Sciences-Genetics, IADC-A, Bengaluru shubha.lifesciences@iadc.ac.in	02/05/2024
Dr. Pushpa K. Special Invitee	Professor & Program Coordinator, Department of Life Sciences-Biochemistry, IADC-A, Bengaluru pushpa.biochem@iadc.ac.in	

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF CHEMISTRY

Sl.No.	NAME OF THE MEETING	DATE BOS MEETING	NAME OF THE PAPER REVISED	% OF SYLLABUS REVISED
1	BOARD OF STUDIES	26-05-23	MCH-205 GREEN CHEMISTRY	100

PAGE NO :
DATE : / /

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF CHEMISTRY

Minutes of Board of Studies Meeting

DATE: 26-06-2023

VENUE: MBA Board room, **TIME: 11AM**

CHAIRPERSON: Dr.K.Shyamsunder

MEMBERS:

Sl. No.	Name	Designation
1	Dr.K.Shyamsunder	BOS Chairman Professor & Head
2	Dr.Hariprasad.S	Professor of Chemistry, Bangalore Central University, Central college ,Bangalore. BNU Nominee.
3	Dr.K.Ramakrishna Reddy	Principal Govt Science College & Registrar Nrupathunga University,Bangalore (Subject Expert General Chemistry)
4	Dr.Prasanna kumar.S.G	Professor& Head of Chemistry, M.S.R.I.T, Bangalore. (Subject Expert General Chemistry)
5	Mr.K.Rajasekhar	General Manager, Industrial Rubber Products of India.
6	Mr. K.R. Gurukiran	Alumni

7	Dr. Bhaskar Reddy.M	Industry Consultant, Bulk drug & Pharma products, Bangalore. Industrial Consultant.
8	Dr. Dephan Pinheiro	Professor of Chemistry, Christ University, Bangalore. (Subject Export)
9	Mrs. Latha .V	Associate Professor
10	Dr. Monika Bajpai	Associate Professor
11	Dr.Jeelan Basha N	Associate Professor
12	Mrs.Nandhini	Assistant Professor
	Dr.G.Robin Wilson	Assistant Professor
13	Dr.Vijaya latha	Assistant Professor

AGENDA:

1. Curriculum discussion for 5th & 6th Semester B.Sc (NEP) to follow B2 model i.e; Two subjects major at 5th & 6th semester B.Sc .

2 .Replacing "Biological Chemistry" with (Green Chemistry) in II Semester PG MCH-205

3. Approval of UG/PG board of examiners list.

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Proceedings of the BOS meeting

BOS meeting held on 26-06-2023 at 11.00 am at board room. The Chairperson began the meeting by formally welcoming the members of the board of studies. He introduced himself and the faculty members to the board; a brief out was given on the agenda of the meeting.

1. Approval of B.Sc Chemistry syllabus (NEP) batch: The syllabus of B.Sc Chemistry V and VI semesters for 2023-2024 was discussed.

2. The committee discussed to follow the B2 model i.e.; Two majors at B.Sc 5th & 6th semesters.

3. Change of paper MCH-205 (Green Chemistry) in II Semester PG with "Biological Chemistry" were discussed in detail by the members of the committee.

4. Additional panel of examiners list for UG/PG approval: The members discussed to approve the additional panel of examiners list for UG and PG courses for the year 2023-24.

The meeting ended at 12.30 pm with vote of thanks by the BOS Chairman, Department of Chemistry, Indian Academy Degree College-Autonomous, Bangalore-560043.

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BOS Resolutions for the year 2023-24.

RESOLUTIONS:

1. The Syllabus of B.Sc Chemistry V and VI Semesters for 2023-2024 was discussed and approved with some suggestions & modifications.

2. The committee recommended to follow the B2 model i.e. ; Two majors at 5th & 6th semester B.Sc for the benefit of the students. B_3-1 S.G. prof

2. The members discussed in detail to remove MCH 2O5 (Green chemistry) paper in II Semester M.Sc Chemistry Syllabus and introduce "Biological Chemistry" which may be useful for students to carry out multi discipline research work. from the academic year 2023-24 onwards.

3. The members of the BOS unanimously approved the additional panel of examiners list for UG and PG courses.

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The following BOS members were present.

Sl. No.	Name	Signature
1	Dr.K.Shyamsunder	26.05.2023
2	Dr.Hariprasad.S	Absent
3	Dr.K.Ramakrishna Reddy	26/05/23
4	Dr.Prasanna kumar.S.G	S.G.Prasanna
5	Mr.K.Rajasekhar	Absent
6	Mr. K.R. Gurukiran	
7	Dr. Bhaskar Reddy.M	Absent
8	Dr. Dephan Pinheiro	Absent
9	Mrs. Latha .V	
10	Dr. Monika Bajpa	
11	Dr.Jeelan Basha N	
12	Mrs.Nandhini	Nandini.B.N 26/05/2023
	Dr.G.Robin Wilson	26/05/23.
13	Dr.Vijaya latha	

INDIAN ACADEMY
Degree College - Autonomous

Syllabus

MCH-205 : Biological Chemistry For 2024-25 Batch onwards **36hrs**

UNIT-I

1. Biochemical Thermodynamics : Introduction-stages of energy transformation. Energy reactions ,exergonic and endergonic reactions. Thermodynamic interpretation of energy reactions. Relationship between free energy and equilibrium constant. Concept of entropy and free energy.

3hrs

2. Energy phosphates: definition, examples, structural features of ATP.
Energy coupling in biological reactions (explain the concept with suitable examples).
Biological oxidation: comparison of oxidation with combustion using glucose as an example. Redox potentials of some biologically important half reactions. Calculation of energy yield from biological redox reaction (oxidation of NADH by oxygen, reduction of acetaldehyde by NADH). Mitochondrial electrontransport chain, oxidative phosphorylation. Substrate level phosphorylation.

9hrs

UNIT-II

3. Enzymes & Mechanism of Enzyme action :
Introduction and historical perspective, chemical and biological catalysis, remarkable properties of enzymes like catalytic power, specificity and regulation. Nomenclature and classification, extraction and purification. Fischer's lock and key and Koshland's induced fit hypothesis, concept and identification of active site by the use of inhibitors, affinity labeling and enzyme modification by site-directed, mutagenesis. Enzyme kinetics, Michaelis-Mentien and Lineweaver-Burk plots, reversible and irreversible inhibition.

9hrs

4. Co-Enzyme Chemistry:
Cofactors as derived from vitamins, coenzymes, prosthetic groups, apoenzymes. Structure and biological functions of coenzyme A, thiamine pyrophosphate, pyridoxal phosphate, NAD+, NADP+, FMN, FAD, lipoic acid, vitamin B12. Mechanisms of reactions catalysed by the above cofactors.

3hrs

UNIT-III

5. Essential and trace elements in biological systems with reference to Na^+, K^+, Ca^{2+}, Fe^{2+}, P, Cu, V and Ni. Metallo-porphyrins with special reference to haemoglobin, myoglobin and chlorophyll. Role of cobalamin (vitamin-B_{12}coenzyme) in living systems.

3hrs

6. NUCLEIC ACIDS
Types–Components of nucleic acids, bases, nucleosides and nucleotides with structures. Partial structure of polynucleotide. Chargoffs rule of base equivalence, Semi conservative model, DNA replication, Structure of DNA (Watson-Crick model) and RNA. Biological roles of DNA and RNAs. Gentic code, characteristics of genetic codes, Central dogma in molecular biology.

9hrs

MCH 105 GREEN SYNTHESIS (SOFT CORE)

36 Hours
6

UNIT-I

Use of ultrasound and Microwaves in Organic Synthesis **7h**

Use of ultrasound: Introduction, Sonochemical esterification, substitution, addition, alkylation, oxidation, reduction and coupling reactions.

Use of Microwaves: Introduction, concept, reaction vessel/medium, atom efficiency (% atom utilization), advantages and limitations. N-alkylation and alkylation of active methylene compounds, condensation of active methylene compounds with aldehydes and amines. Diels-Alder reaction. Deprotection of esters and silyl ethers. **(EMP)**

UNIT-II

Ionic liquids: Introduction, structure, synthesis and applications of some important ionic liquids in organic synthesis. **(EMP)**

3h

Polymer supported reagents in organic synthesis

Introduction- properties of polymer support, advantages of polymer supported reagents and choice of polymers.

Applications: Substrate covalently bound to the support: Synthesis of oligosachcharides, Ugi-Ullmann cyclisation. Preparation of polymer bound aldehyde and application in aldol and Wittig reactions. Synthesis of polystyryl boronic acid and use in diol protection reaction. Reagent linked to a polymeric material: Preparation of sulfonazide polymer and application in diazotransfer reaction. Synthesis of polymer bound per acid and its applications.

Polymer supported catalytic reactions: Preparation of polymer supported $AlCl_3$ and application in esterification and acetal formation reactions **(EMP /SKD/EDP)**

9h

UNIT-III

Phase transfer catalysis and Crown ethers **8h**

Phase transfer catalysis: Introduction, definition, mechanism of phase transfer catalysis. Types of phase transfer catalysts and reactions and their Advantages.

Preparation of catalysts and their application in substitution, elimination, addition, alkylation, oxidation and reduction reactions.

Crown ethers: Introduction, nomenclature, nature of donor site. General synthesis of Crown ethers.

Synthetic applications: Alkylation, generation of carbenes, aromatic substitution and displacement reactions. Generation and application of superoxide anions. Cation activation reactions **(EMP)**

UNIT-IV

Multi-component Reactions **9h**

Use of the following reactions in organic synthesis: Passerini-Ugi; Hantsch; Biginelli; Doebner-Miller; Ritter; Jacobson; Betti; Robinson-Schopf; Barbier; Baylis-Hilmann; Ivanov and Suzuki coupling reaction.**(EMP/SKD)**

SUGGESTED BOOKS

1. Stereochemistry of carbon compounds, E. L. Eliel, S. H. Wilen and L. N. Mander, John Wiley & Sons, 1994.
2. Stereochemistry, Potapov, MIR, Moscow, 1984.
3. Stereochemistry, Nasipuri, D, New Age, 1999.
4. Advanced organic chemistry, J. March, 4th Edn. John Wiley, 2008.
5. Organic Chemistry, R. E. Ireland Prentice-Hall India, New Delhi, 1975.
6. Some modern methods of Organic Synthesis, W. Caruthers, Cambridge Uni. Press London, 2nd Edn. 1998.
7. Stereochemistry of organic compounds- Principle and applications, D. Nasipuri, 2nd Edn., New Age International Publishers, 2001.
8. Principles and applications of asymmetric synthesis, G D Lin, Y M Li and A S C Chan, Wiley Interscience, 2001.
9. A textbook of organic chemistry, V. K. Ahluwalia and M. Goyal, Narosa Publishing House, New Delhi, 2000.
10. Organic synthesis: Special techniques, V. K. Ahluwalia and R. Aggarwal, Narosa, New Delhi, 2003.
12. Green Chemistry, environment friendly alternatives, R. Sanghi and M M Srivastava, Narosa, New Delhi, 2003
12. Green Chemistry-an introduction text, Royal Society of Chemistry, UK, 2002.
13. Organic chemistry Vol. 2, 6th Edn., I. L. Finar, Longman, 1992.
14. Crownethers & cryptands, G. W. Gokel, Monograph, The Royal Society of Chemistry, 1991.
15. Macrocyclic Polyether Chemistry, G. W. Gokel, S. M. Korzeniowski, Vol 1 to 3, Wiley, NY, 1978, 1981, 1987.
16. Phase Transfer Catalysis in Organic Synthesis, W. B. Weber, G. W. Gokel, Springer, Berlin, 1977.
17. Phase Transfer Catalysis, E. V. Dehmlov, S. S. Dehmlov, 2nd Edn., Verlagchemie, Wienheim, 1983.
18. Polymers as aids in Organic synthesis, N. K. Mathur, C. K. Narang and R. E. Williams, Academic Press, NY, 1980.

B3-I. Curriculum and Credit Framework for Undergraduate Programme with two core subjects as majors (both with practicals) in the first three years, and choosing one of them for the 4th year.

Sem.	Discipline Specific Courses - Core (DSC), Elective (DSE) (Credits) (L+T+P)	Minor/ Multidisciplinary/ Open Elective (OE) Courses (Credits) (L+T+P)	Ability Enhancement Courses (AEC)(Credits) (L+T+P) (Languages)	Skills Enhancement Courses (SEC) (Credits) (L+T+P)/ Value Added Courses (Credits) (L+T+P) (common for all UG Programs)/ Summer Internship.		Total Credits
I	DSC-A1(4), A2(2) DSC-B1(4), B2(2)	OE-1 (3)	L1-1(3), L2-1(3) (4 hrs each)	**SEC-1**: Digital Fluency (2) (1+0+2)/ Env. Studies (3)	Health, Wellness & Yoga (2) (1+0+2)	25/26
II	DSC-A3(4), A4(2), DSC-B3(4), B4(2)	OE-2 (3)	L1-2(3), L2-2(3) (4 hrs each)	Env. Studies (3)/ SEC-1: Digital Fluency (2)(1+0+2)	Sports/NCC/NSS/R&R(S&G) / Cultural (2) (0+0+4)	26/25
Students exiting the programme after securing 46 credits will be awarded UG Certificate in Disciplines A and B provided they secure 4 credits in work based vocational courses during summer term or internship/Apprenticeship in addition to 6 credits from skill-based courses earned during the first year.						
III	DSC-A5(4), A6(2), DSC-B5(4), B6(2)	OE-3 (3)/ India and Indian Constitution (3)	L1-3(3), L2-3(3) (4 hrs. each)	**SEC-2**: AI/Financial Edu. & Inv. Aw. (2) (1+0+2)	Sports/NCC/NSS/R&R(S&G)/ Cultural (2) (0+0+4)/ SEC (2)	25
IV	DSC-A7(4), A8(2), DSC-B7(4), B8(2)	India and Indian Constitution (3) / OE-3(3)	L1-4(3), L2-4(3) (4 hrs. each)	**SEC-3**: Financial Edu. & Inv. Aw. /AI (2) (1+0+2)	Sports/NCC/NSS/R&R(S&G)/ Cultural (2) (0+0+4)/ SEC (2)	25
Students exiting the programme after securing 92 credits will be awarded UG Diploma in Disciplines A and B provided they secure additional 4 credits in skill based vocational courses offered during first- or second-year summer term.						
V	DSC-A9(4), A10(2), A11(4), A12(2);	DSC-B9(4), B10(2), B11(4), B12(2)		**SEC-4**: Cyber Security (2) (1+0+2)/Internship (2)		26
VI	DSC-A13(4), A14(2), A15(4), A16(2);	DSC-B13(4), B14(2), B15(4), B16(2)		**SEC-5**: Relevant SEC (2) (1+0+2)/ Internship (2)		26
Students exiting the programme after 3-years will be awarded UG Degree in Disciplines A and B as double majors upon securing 136 credits and satisfying the minimum credit requirements under each category of courses prescribed.						
	B.Sc. (Honours with Research) in Discipline A		B.Sc. (Honours) in Discipline A			
VII	DSC-A17(4), A18(2), A19(4), A20(2); Res. Methodology (4)	DSE-E1(3), Vocational-1(3) Res. Proposal formulation (2*)	DSC-A17(4), A18(2), A19(4), A20(2); Res. Methodology (4).	DSE-E1(3), Vocational-1(3).		22
VIII	DSC-A21(4).	DSE-E2(3), Vocational-2(3), Research Project (10+2*)	DSC-A21(4), A22(2), Internship/ Apprenticeship (4).	DSE-E2(3), E3(3) Vocational-2(3), 3(3).		22
Bachelor of Science Degree Honours with or without research, B.Sc. (Honours with Research) or B.Sc. (Honours) in Discipline A with Discipline B as Minor will be awarded upon securing 176 credits and satisfying the minimum credit requirements under each category of courses prescribed.						

Note: Only those students who secure 75% marks or CGPA of 7.5 and above in the first six semesters may choose to undertake research in the fourth year.
Honours students not undertaking research have to do 3 to 4 Additional Courses/Entrepreneurship Courses and Internship/Apprenticeship for 12 credits.

S. G.

26/05/23

INDIAN ACADEMY
Degree College - Autonomous

Department of Chemistry

Panel
~~Board~~ of Examiners PG /UG for the year 2023-24

Sl. No	Name of Examiner	Subject Specialization	College	email	Contact No
1	DR. MAHESH K. C	Physical Chemistry	Mount Carmel college	kcmahesh78@gmail.com	9901407814
2	Dr.Keerthi Prasad	Physical Chemistry	Maharanis Cluster University	keerthikp@gmail.com	9731998355
3	Prof.Vimala preetham Raj	Physical Chemistry	Mount Carmel college	preethamvimala@yahoo.com	9449695520
4	Dr.Manohar	Physical Chemistry	KLE College	manohar@gmail.com	973109558
5	Dr.Umayal	Organic Chemistry	Mount Carmel college	l.umayal23@gmail.com	9900937829
6	Dr.Pinky pal	Organic Chemistry	Mount Carmel college	pinkypal@gmail.com	7760512715
7.	Dr.B.Priya Anil	Organic Chemistry	Mount Carmel college	bpriyaanil@gmail.com	9620288711
8	Dr.Basavarajaiah N	Organic Chemistry	Vijaya College	drsmbasu@gmail.com	9620012975
9	Dr.Selva ganapathy	Bio inorganic Chemistry	Mount Carmel college	Selva.chemist5@gmail.com	8903149464

I.A.O.C. and Centre For Research & Post Graduate Studies Bangalore-560 041

Received 26/05/23

S. S. Patil

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INDIAN ACADEMY
Degree College - Autonomous

Department of Chemistry
Circular
Program review committee meeting

Date: 16-11-2023
Time: 11am
Venue: HOD room

AGENDA – 1:

To introduce compulsory certificate course (30hrs) / internship for the B.Sc students under swayam-NPTEL platform for the academic year 2024-25.

AGENDA- 2:

Revision of III semester M.Sc organic chemistry syllabus, MCH -302 (Chemistry of Natural products).

HOD of Physical Sciences

Department of Chemistry
I.A.D.C. and Centre For
Research & Post Graduate Studies
Bangalore—560 043

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF CHEMISTRY

Minutes of the program review committee meeting

Venue: HOD room

Time: 11:00 am

Date : 16-11-2023

Subject: program review committee meeting

Chairperson: Dr. K. Shyamsunder, HOD, Dept of Physical Sciences

Members:

Sl. No.	Name	Designation
1	Dr. K. Shyamsunder	Professor & Head Department of Physical Sciences
2	Dr.Mahesh.K.C	Associate Professor, Mount carmel college, Bangalore (Subject expert general chemistry)
3	Dr.Hareesh Kumar.P	Associate professor, M.S.Ramaiah degree college, Bangalore
4	Dr.Keerthi Prasad	Professor, Maharanis Cluster University, Bengaluru.
7	Prof. Latha .V	Associate Professor
8	Dr. Monika Bajpai	Associate Professor & Co-Ordinator
9	Dr. Jeelan Basha N	Associate Professor
10	Prof. Nandhini	Assistant Professor
11	Dr. G. Robin Wilson	Assistant Professor
12	Dr.Chitra banu	Assistant Professor

HOD
Department of Chemistry
I.A.D.C. and Centre For
Research & Post Graduate Studies
Bangalore-560 043

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Proceedings of the meetings: The HOD of physical Sciences placed the agenda before the committee members for the discussions.

1. To introduce the compulsory certificate course (30hrs) / internship for the B.Sc students under swayam or MPTL platform for the academic year 2024-25.

2. Revision of III semester M.Sc organic chemistry syllabus, MCH -302 (Chemistry of Natural products).

The committee members discussed the above agenda points and taken the following decisions.

1. The committee agreed to introduce the certificate courses for the B.Sc (NEP) batch students from the academic year 2024-25 onwards.
2. The committee is gave suggestion to revamp the syllabus of MCH-302 (Chemistry of Natural products) to only 20-25%.

The meeting ended with a vote of thanks.

Sl. No.	Name	Signature
1	Dr. K. Shyamsunder	
2	Dr.Mahesh.K.C	
3	Dr.Hareesh Kumar.P	
4	Dr.Keerthi Prasad	
5	Prof. Latha .V	
6	Dr. Monika Bajpai	
9	Dr. Jeelan Basha N	
10	Prof. Nandhini	
11	Dr. G. Robin Wilson	
12	Dr.Chitra banu	

HOD of Physical Sciences

HEAD
Department of Chemistry
I.A.D.C. and Centre For
Research & Post Graduate Studies
Bangalore-560 043

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF CHEMISTRY

Sl.No.	NAME OF THE MEETING	DATE OF BOS MEETING	NAME OF THE PAPER REVISED	% OF SYLLABUS REVISED
1	BOARD OF STUDIES	26-05-2023	MCH-205 GREEN CHEMISTRY	100
2	BOARD OF STUDIES	27-11-2023	MCH-302 CHEMISTRY OF NATURAL PRODUCTS	25

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INDIAN ACADEMY
Degree College - Autonomous

Department of Chemistry
Board of Studies Meeting – Agenda

Date: 27th November 2023 **Venue:** MBA Board room, **Time:** 11am

AGENDA - 1:

To introduce compulsory certificate course (30hrs) / internship for the B.Sc students under swayam-NPTEL platform for the academic year 2024-25.

AGENDA- 2:

Revision of III semester M.Sc organic chemistry syllabus, MCH -302 (Chemistry of Natural products).

AGENDA - 3:

To approve in B.Sc (Chemistry & Physics) dual combination in Physical Sciences.

AGENDA - 3:

Approval of PG panel of examiners list.

Coordinator
(Dr.Monika Bajpai)

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INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF CHEMISTRY
Minutes of Board of Studies Meeting

DATE: 27-11-2023
VENUE : MBA Board room,
CHAIRPERSON: Dr.K.Shyamsunder
Coordinator : Dr.Monika Bajpai

TIME: 11AM

MEMBERS:

Sl. No.	Name	Designation
1	Dr.K.Shyamsunder	BOS Chairman Professor & Head of Physical Sciences
2	Dr.Hariprasad.S	Professor of Chemistry, Bangalore Central University, Central college ,Bangalore. BNU Nominee.
3	Dr.K.Ramakrishna Reddy	Professor of Chemistry, Regional Joint Director of Collegiate Education, Govt. of Karnataka
4	Dr.Prasanna kumar.S.G	Professor& , M.S.R.Degree College, Bangalore.
5	Mr. K.R. Gurukiran	Alumni
6	Dr. Dephan Pinheiro	Professor of Chemistry, Christ University, Bangalore.
7	Mrs. Latha .V	Associate Professor
8	Dr. Monika Bajpai	Associate Professor & Co-Ordinator
9	Dr.Jeelan Basha N	Associate Professor
10	Mrs.Nandhini	Assistant Professor
11	Dr.G.Robin Wilson	Assistant Professor
12	Dr.Chitrabanu	Assistant Professor

INDIAN ACADEMY
Degree College - Autonomous

PROCEEDINGS: BOS meeting held on 27-11-2023 at 11.00 am at MBA board room.

The Coordinator began the meeting by formally welcoming the Chairman & members of the board of Studies. She introduced herself and the faculty members to the board and placed the agenda for the discussion.

1. To introduce the compulsory certificate course (30hrs) / internship for the B.Sc students under swayam -NPTEL platform for the academic year 2024-25.

2. Revision of III semester M.Sc organic chemistry syllabus, MCH -302 (Chemistry of Natural products).

3. To approve the B.Sc(Chemistry & Physics) dual combination in Physical Sciences.

3. Additional panel of examiners list for [illegible] PG approval.

INDIAN ACADEMY
Degree College - Autonomous

RESOLUTIONS:

1. The members discussed in detail the benefits of certificate courses/ internship for the B.Sc students. The committee suggested that for 30hrs course 2 credits should be given so that students get benefited from the course. Otherwise students may not show interest.

2. The members recommended and approved 25% change of syllabus in the III semester M.Sc, MCH-302(Chemistry of natural products).

3. The members unanimously approved the proposed B.Sc(Chemistry & Physics) dual combination in Physical Sciences.

4. The members of the BOS approved the additional panel of examiners list for [redacted] PG courses.

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INDIAN ACADEMY
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Members Present :

Sl. No.	Name	Signature
1	Dr.Monika Bajpai	Monika
2	Dr.Hariprasad.S	Absent
3	Dr.K.Ramakrishna Reddy	Absent
4	Dr.Prasanna kumar.S.G	J.G.Prasanna
6	Dr. Dephan Pinheiro	
7	Mrs. Latha .V	Latha V
9	Dr.Jeelan Basha N	
10	Mrs.Nandhini	Nandini B N 27.11.2022
11	Dr.G.Robin Wilson	
12	Dr.Chitrabanu	Absent

The meeting ended with vote of thanks.

Monika

Coordinator
(Dr.Monika Bajpai)

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REVISION OF MCH-302: CHEMISTRY OF NATURAL PRODUCTS SYLLABUS

MCH-302 CHEMISTRY OF NATURAL PRODUCTS 2024-25 BATCH ONWARDS **52HRS**

UNIT-I **15HRS**

Alkaloids: Definition, Classification and isolation of alkaloids, general methods of structural determination of alkaloids, detailed study of structure elucidation, stereochemistry, rearrangement, Synthesis of the following alkaloids- Papaverine, Adrenaline, Ephedrine, Piperine, Cinchonine, Quinine, Morphine and Reserpine.

Unit-II **15 HRS**

Terpenoids: Introduction, classification, isoprene rules, methods of structure determination. Structural elucidation & synthesis of geraniol, menthol, α-pinene, camphor and farnesol.

Diterpenoids: Abietic and Pimaric acid, Triterpenoids: Squalene. Carotenoide: Introduction and geometrical isomerization of Carotenes. Structre and Synthesis of β-Carotene and Lycopene.

Prostaglandins: Introduction, Nomenclature, Classification and Biological role of Prostaglandins, Structural elucidation and stereochemistry of PGE1, PGE2 and PGE3. Total synthesis of PGE1 (Corey's method)

Unit-III **11HRS**

(a).Nucleic Acids: Primary, secondary and tertiary structure of DNA; DNA replication and heredity; Structure and function of mRNA, tRNA and rRNA.

(b). Proteins: Acid-base properties of amino acids, polypeptides; primary, secondary, tertiary and quaternary protein structures, classification of proteins on basis of structure and biological function.

Unit – IV **11HRS**

Anthocyanins andFlavones: Occurrence, nomenclature and general methods of structure determination. Synthesis of cyanidin chloride, cyanin, Hirsutidin chloride, Flavones (Kostanecki and BakerVenkataraman approaches), Flavonols.

References :

1. Natural Products Chemistry-Vol. I & II: G. R. Chatwal, Himalaya Bombay, 1990.

2. Chemistry of Natural Products-Vol. I & II: O. P. Agarwal, Goel Gorakhpur, 1985.

3. Organic Chemistry-Vol. I-II: I. L. Finar, Longmann ELBS London, 2000.

4. Chemistry of Natural Products: Sujatha V. Bhat, B. A. Nagasampige and M. Sivakumar, 2nd reprint, Springer, 2006.

5. The Organic chemistry of Drug Design and Drug Action, R.B.Silverman,Academicpress.

6. Natural Products: Chemistry and Biological Significance, J.Mann,R.S.Davidson,

7. J.B. Hobbs, D.V.Banthrope and J.B.Harborne, Longman,Essex.

8. Organic chemistry, Vol 2, I.L.Finar,ELBS.

9. Introduction to Flavonoids, B.A.Bohm, Harwood Academicpublishers

10. New Trends in natural product chemistry, Atta-ur-Rahman and M.I.Choudhary,Harwood Academicpublishers.

Learning Objectives:

1. To learn general methods of structure determination, isoprene rule and synthesis of Terpenoids & Carotenoids.

2. To understand nomenclature, occurrence, isolation, classification and synthesis of alkaloids.

3 .To know isolation, structure determination and synthesis of steroids.

4. To learn nomenclature and general methods of structure determination, and synthesis of Anthocyanins and Flavones.

5. To learn about introduction to alkaloids, structure elucidation, stereochemistry of alkaloids, and synthesis of few alkaloids.

6. To study terpenoids, isoprene rules, methods of structure determination synthesis of terpenoids, diterpenoids and prostaglandins.

7. To learn about steroids, Blanc's rule, chemistry of different steroids and steroidal hormones .

Course Outcomes:

After successful completion of the course the students will:

1. Learn general methods of structure determination, isoprene rule and synthesis of Citral, Menthol, Camphor, Phytol etc.

2. Understand nomenclature, occurrence, isolation, classification and synthesis of Ephedrine, atropine, Quinine and Morphine

3. Know isolation, structure determination and synthesis of cholesterol , Androsterone.

4. Learn nomenclature and general methods of structure determination, and synthesis of cyanin, Hirsutidin chloride, Flavones and Flavonols.

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF CHEMISTRY

Sl.No.	NAME OF THE MEETING	DATE OF BOS MEETING	NAME OF THE PAPER REVISED	% OF SYLLABUS REVISED
1	BOARD OF STUDIES	26-05-2023	MCH-205 GREEN CHEMISTRY	100
2	BOARD OF STUDIES	27-11-2023	MCH-302 CHEMISTRY OF NATURAL PRODUCTS	25
3	BOARD OF STUDIES	23-04-2024	---	---

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Agenda & Resolutions:

Review of B.Sc Chemistry Syllabus –NEP batch: The Syllabus review of B.Sc Chemistry I/II Semesters for 2024-2025 were discussed and asked to continue the same.

MEMBERS PRESENT:

Sl. No.	Name	Signature
	Dr. K. Shyamsunder	
	Dr.Mahesh.K.C	
	Dr.I. Umayal	
	Dr.Basavarajaiah.S.M	
	Mrs. Latha .V	
	Dr. Monika Bajpai	
	Dr.Jeelan Basha	
	Dr.G.Robin wilson	
	Mrs. Nandhini	
0	Dr.Chitra banu	

OD Physical Sciences

HEAD
Department of Chemistry
U.D.C. and Centre For
Research & Post Graduate Studies
Bangalore—560 043

PAGE NO :
DATE : / /

INDIAN ACADEMY
Degree College - Autonomous

Department of Physical Sciences- Chemistry

Date: 23 /04 / 2024

Venue: Chemistry department

AGENDA - 1:

Review of B.Sc Chemistry syllabus-NEP batch

AGENDA- 2:

Approval of PG panel of examiners list.

HEAD
Department of Chemistry
I.A.D.C. and Centre For
Research & Post Graduate Studies
Bangalore-560 043

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF CHEMISTRY

Minutes of Board of Studies Meeting
Date: 23/04/2024

Venue: Chemistry Department **Time:** 11am

Chairperson: Dr.K.Shyamsunder

Members Present:

Sl. No.	Name	Designation
1	**Dr.K.Shyamsunder**	**HOD Physical Sciences**
2	Dr.Monika Bajpai	Associate Professor & Coordinator
3	Dr.Prasanna Kumar.S.G	Professor ,M.S.R. Degree college
4	Dr.Mahesh.K.C	Associate Professor,Mount Carmel College
5	Dr.Basavarajaiah.S.M	Associate Professor, Vijaya College
6	Prof.Latha.V	Associate Professor
7	Dr.Jeelan Basha.N	Associate Professor
8	Prof.Nandini.B.N	Assistant Professor
9	Dr.G.Robin Wilson	Assistant Professor
10	Dr.Chitra Banu	Assistant Professor

AGENDA - 1:

Review of B.Sc Chemistry syllabus-NEP batch

PAGE NO :
DATE : / /

AGENDA- 2:

Approval of PG panel of examiners list

Proceedings:

Agenda 1: Review of B.Sc Chemistry syllabus-NEP batch

Deliberations: The members discussed in detail the revision of B.Sc Chemistry syllabus for the academic year 2024-25.The committee decided to review the syllabus in the next BOS meeting.

Agenda 2: Approval of PG panel of examiners list.

Deliberations: The members of the BOS discussed and approved the additional panel of examiners for the PG course.

Conclusion: The meeting ended with vote of thanks.

Closing Time: 12.30 pm

Resolutions: 1. The committee decided to review the B.Sc (NEP) syllabus in the next BOS meeting.

2. The members of the BOS approved the additional panel of examiners for the PG course.

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Department of Chemistry
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PAGE NO :
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INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF CHEMISTRY

Minutes of Board of Studies Meeting
Date: 23/04/2024

Venue: Chemistry Department **Time:** 11am

Chairperson: Dr.K.Shyamsunder

Members Present:

Sl. No.	Name	SIGNATURE
1	**Dr.K.Shyamsunder**	
2	Dr.Monika Bajpai	
3	Dr.Prasanna Kumar.S.G	
4	Dr.Mahesh.K.C	
5	Dr.Basavarajaiah.S.M	Absent
6	Prof.Latha.V	
7	Dr.Jeelan Basha.N	
8	Prof.Nandini.B.N	Nandini BN
9	Dr.G.Robin Wilson	
10	Dr.Chitra Banu	

INDIAN ACADEMY
Degree College - Autonomous

Department of Chemistry
Board of Examiners (PG) for the year 2024-25

Sl.No	Name of Examiner	Subject Specialization	College	Experience yrs	email	Contact No
1	Dr.Kavitha vijaya	Physical Chemistry	Vijaya College	10	kavitharaghavachari@gmail.com	9480628096
2	Dr.Vijeth Shetty	Physical Chemistry	Christ University	12	vijeth.shetty@christuniversity.in	8105093268 8095683016
3	Dr.Dakshayani	Physical Chemistry	Mount Carmal college	15	daksha2001chem@gmail.com	8762527489
4	Vani.S	General Chemistry	Mount Carmal college	09	vanis241@gmail.com	9900758773
5	Dr.Shivanna.M	General Chemistry	Reva University	08	Shivanna.m@reva.edu.in	9964556195
6	Dr.Ankusab Nadaf	General Chemistry	Nrupatunga University	07		9036149385
7	Dr.Arunkumar.N.S	General Chemistry	Central College	06	Arun.msc2012@gmail.com	8553655971
8	Dr.Omkar murthy	Physical Chemistry	Bangalore University	06	Omkar.dungvath@gmail.com	8970867203
9	Dr.James Arulraj	Physical Chemistry	Christ University	12		8880456508
10	Dr.Nalina	Organic Chemistry	KLE College	10		9916079322
11	Dr.Babu giriyana gowda patil	Physical Chemistry	Maharanis Cluster University	10		9900475412

Department of Chemistry
I.A.D.C. and Centre For
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Bangalore—560 043

PAGE NO : 1

INDIAN ACADEMY
Degree College - Autonomous

Department of Electronics

BOARD OF STUDIES MEETING

26/05/2023

AGENDA:

1) Curriculum discussion and Approval for 5th & 6th Semester NEP batch B.Sc Electronics
2) Approval of BOE members
3) The practical hours of the paper Analog and Digital Electronics (S21 EL 2.) has to be changed from three hours to four hours.

26/5/23.

26/5/23.

26/05/2023

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HENNUR MAIN ROAD
BENGALURU - 83

INDIAN ACADEMY DEGREE COLLEGE AUTONOMOUS Hennur Main Road Kalyan Nagar Bangalore 560043

INDIAN ACADEMY
Degree College - Autonomous

Date: 26th May 2023

Venue: Physics Lab

Subject: Department of Electronics (IADC AUTONOMOUS) BOS MEETING 12

Chair: K Aruna, Assistant Professor & Incharge of Department of Electronics

Sl. No	Department	BOS Members Name/Designation/College	Signature
1	BU Nominee	Dr. Manjesh Professor Department of Electronic Science Bangalore University	26/5/23
2	Subject Expert	Dr. H M Mahesh Professor Department of Electronic Science, Bangalore University	26/5/23
3	Subject Expert	Dr. A. Upendra Raju Associate Professor Department of Electronics Mount Carmel College- Autonomous	online
4	Industrial Expert	Ms Uma Reddy, Entrepreneur	
5	Alumni	Mr. Reuben Abilash I V K	

INDIAN ACADEMY
Degree College - Autonomous

Date: 26th May 2023

Venue: Physics Lab

Subject: Department of Electronics (IADC AUTONOMOUS) BOS MEETING 12

Chair: K Aruna, Assistant Professor & Incharge of Department of Electronics

Sl. No	Department	BOS Members Name/Designation/College	Signature
1	BU Nominee	Dr. Manjesh Professor Department of Electronic Science Bangalore University	26/5/23
2	Subject Expert	Dr. H M Mahesh Professor Department of Electronic Science, Bangalore University	26/5/23
3	Subject Expert	Dr. A. Upendra Raju Associate Professor Department of Electronics Mount Carmel College- Autonomous	online
4	Industrial Expert	Ms Uma Reddy, Entrepreneur	
5	Alumni	Mr. Reuben Abilash I V K	

6	Internal Member	Dr Vivek T Assistant Professor ,Department of Physics Indian Academy Degree College- Autonomous, Bangalore-560043	
7	Internal Member	Dr Abhiram J, Assistant Professor Department of Physics Indian Academy Degree College- Autonomous, Bangalore-560043	

INDIAN ACADEMY
Degree College - Autonomous

Department of Electronics

BOARD OF STUDIES MEETING

Minutes of Meeting

Date: 26/05/2023

Time: 11:00 am

AGENDA:

1) Curriculum discussion and Approval of syllabus for 5th & 6th Semester NEP batch B.Sc Electronics
2) Approval of BOE members
3) The practical hours of the paper Analog and Digital Electronics (S21 EL 2.) has to be changed from three hours to four hours.

The BoS chairperson, K Aruna welcomed Bangalore University Nominee Dr Manjesh and subject experts Dr H M Mahesh, from Bangalore University, Dr A Upendra Raju, from Mount Carmel College (Autonomous). She also welcomed Industry expert Ms Uma Reddy from Hitech Magnetics and Alumni Mr. Reuben Abilash I V K. She explained V and VI SEM as per NEP 2020.

PROCEEDINGS:

AGENDA 1:

University Nominee Prof. Manjesh reviewed the V and VI semester syllabi pertaining to the course B.Sc. – Electronics and suggested to implement the syllabus as per NEP guidelines. He has further advised to adhere with the syllabus from Parent University (Bangalore North University) and frame the syllabus in accordance to it with a deviation of curriculum up to 20 %. Prof. H M Mahesh, domain expert suggested to include applications, activities, self- study topics for each module. He has also emphasized on rearrangement of modules for better pedagogical process. Dr. A Upendra Raju, domain expert had also recommended to act in accordance with the suggestions made by Prof. Manjesh and Prof. H M Mahesh. Industrial expert Ms. Uma Reddy suggested to introduce experiential learning with strong instrumentation skills as part of academic programme. Alumni has suggested to upgrade the curriculum with recent industrial needs like Internet of Things (IoT). The syllabi has to be reapproved through an online meeting after proposal of curriculum in accordance with BNU syllabus for V and VI Semester.

INDIAN ACADEMY
Degree College - Autonomous

Department of Electronics

BOARD OF STUDIES MEETING

26/05/2023

AGENDA:

1) Curriculum discussion and Approval for 5th & 6th Semester NEP batch B.Sc Electronics
2) Approval of BOE members
3) The practical hours of the paper Analog and Digital Electronics (S21 EL 2.) has to be changed from three hours to four hours.

26/5/23 26/5/23

A.M.C
26/05/2023

INDIAN ACADEMY
Degree College - Autonomous

Date: 26th May 2023

Venue: Physics Lab

Subject: Department of Electronics (IADC AUTONOMOUS) BOS MEETING 12

Chair: K Aruna, Assistant Professor & Incharge of Department of Electronics

Sl. No	Department	BOS Members Name/Designation/College	Signature
1	BU Nominee	Dr. Manjesh Professor Department of Electronic Science Bangalore University	
2	Subject Expert	Dr. H M Mahesh Professor Department of Electronic Science, Bangalore University	26/5/23
3	Subject Expert	Dr. A. Upendra Raju Associate Professor Department of Electronics Mount Carmel College- Autonomous	online
4	Industrial Expert	Ms Uma Reddy, Entrepreneur	
5	Alumni	Mr. Reuben Abilash I V K	

6	Internal Member	Dr Vivek T Assistant Professor .Department of Physics Indian Academy Degree College- Autonomous, Bangalore-560043	
7	Internal Member	Dr Abhiram J. Assistant Professor Department of Physics Indian Academy Degree College- Autonomous, Bangalore-560043	

AGENDA- 2 :

Approval of BOE members for the year 2023-24.

SL No.	Name	Designation
1	Dr. Manjesh	BU Nominee
2	Dr. H. Mahesh	member
3	Dr. A. Upendra Raju	member
6	Prof. Nagendra.	member
7	Prof. Malasa M	member
8	Prof. RajashriPadaki	member
9	Dr. Mohan	member
10	Prof. Amjad Khan	member
11	SathyaVeena V	member
12	Prof. Mary D'cruz	member
13	Mrs. Asharani R	member
14	Lata Kulkarni	member
15	Dr. Naveen Kumar R	member
16	Dr. S. Thiyagaraj	member
17	Ms. Hasitha K	member

AGENDA 2:

The members have approved the list of examiners and BOE Panel.

AGENDA 3:

In order to compensate the credit of 2 for practical S21EL2.2 (Analog and Digital electronics Lab), the practical hours are modified from 3 Hours to 4 Hours.

Finally, Prof. K Aruna, concluded the meeting and expressed her gratitude towards the BOS panel.

CLOSING TIME: 1.30 PM

Sl. No	Department	BOS Members Name/Designation/College	Signature
1	BU Nominee	Dr. Manjesh Professor Department of Electronic Science Bangalore University	26/5/23
2	Subject Expert	Dr. H M Mahesh Professor Department of Electronic Science, Bangalore University	26/5/23
3	Subject Expert	Dr. A. Upendra Raju Associate Professor Department of Electronics Mount Carmel College- Autonomous	online
4	Industrial Expert	Ms Uma Reddy, Entrepreneur	
5	Alumni	Mr. Reuben Abilash I V K	
6	Internal Member	Dr Vivek T Assistant Professor Department of Physics Indian Academy Degree College- Autonomous, Bangalore-560043	
7	Internal Member	Dr Abhiram J, Assistant Professor Department of Physics Indian Academy Degree College- Autonomous, Bangalore-560043	

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6	Internal Member	Dr Vivek T Assistant Professor ,Department of Physics Indian Academy Degree College- Autonomous, Bangalore-560043	
7	Internal Member	Dr Abhiram J, Assistant Professor Department of Physics Indian Academy Degree College- Autonomous, Bangalore-560043	

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF ELECTRONICS

Minutes of Board of Studies Meeting

DATE: 26/05/2023

VENUE: Physics Lab. TIME: 11 AM

CHAIRPERSON: K Aruna

MEMBERS:

SL No.	Name	Designation
1	Dr. Manjesh J	BU Nominee
2	Dr. H Mahesh	Subject Expert
3	Dr. A. Upendra Raju	Subject Expert
4	Ms Uma Reddy	Industrial Expert
5	Mr. Reuben Abilash I V K	Alumni
6	Prof. Nagendra.	member
7	Prof. Malasa M	member
8	Prof. RajashriPadaki	member
9	Dr. Mohan	member
10	Prof. Amjad Khan	member
11	SathyaVeena V	member

12	Prof. Mary D'cruz	member
13	Mrs. Asharani R	member
14	Lata Kulkarni	member
15	Dr. Naveen Kumar R	member
16	Dr. S. Thiyagaraj	member
17	Ms. Hasitha K	member

26/5/23 26/5/23

AGENDA - 3 :

The practical hours of the paper Analog and Digital Electronics (S21 EL 2.) has to be changed from three hours to four hours.

Practical: S21 EL 2.2: ANALOG AND DIGITAL ELECTRONICS – LAB

S. No	Module title	Number of Hours	Skills Developed
	Part-A(Any FIVE)		
1.	Study of JFET/MOSFET characteristics – determination of parameters.	4	Cognitive, Analytical
2.	Study of single stage JFET amplifier.(frequency response and band width)	4	Cognitive, Analytical
3.	UJT characteristics and relaxation oscillator	4	Cognitive, Analytical
4.	SCR characteristics – determination of IH and firing voltage for different gate currents.	4	Cognitive, Analytical
5.	Design of inverting and non-inverting amplifier using Op-amp & study of frequency response.	4	Cognitive, Analytical
6.	Op-amp inverting and non-inverting adder, subtractor and averaging amplifier.	4	Cognitive, Analytical
7.	Study of the zero-crossing detector and comparator.	4	Cognitive, Analytical
8.	Design and study of differentiator and integrator using op-amp for different input waveforms.	4	Cognitive, Analytical
9.	Design and study of Wien bridge and RC phase shift oscillator using op-amp.	4	Cognitive, Analytical
10.	Design and study of first order high-pass and low-pass filters using op-amp.	4	Cognitive, Analytical
11.	Study of Colpitt's and crystal oscillator using transistor.	4	Cognitive, Analytical

26/5/23

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12.	Astable multivibrator using IC555 timer.	4	Cognitive, Analytical
13.	Monostable multivibrator using IC555 timer.	4	Cognitive, Employable, Analytical
	Part- B (Any SEVEN)		
14.	Half Adder and Full Adder using (a) logic gates (b) using only NAND gates.	4	Cognitive, Analytical
15.	Half Subtractor and Full Subtractor(a) logic gates (b) using only NAND gates.	4	Cognitive, Analytical
16.	4 bit parallel binary adder and subtractor using IC7485.	4	Cognitive, Analytical
17.	Study of BCD to decimal decoder using IC7447	4	Cognitive, Analytical
18.	Study of the Encoders and priority encoders.	4	Cognitive, Analytical
19.	Study of Multiplexer and Demultiplexer using ICs.	4	Cognitive, Analytical
20.	Study of 2-bit and 4-bit magnitude comparators.	4	Cognitive, Analytical
21.	Study of Clocked RS, D and JK Flip-Flops using NAND gates.	4	Cognitive, Analytical
22.	Study of 4-bit asynchronous counter using JK Flip-Flop IC7476, modify to decade counter and study their timing diagrams.	4	Cognitive, Analytical
23.	Study of 4-bit Shift Register – SISO, modification to ring counter using IC 7495.	4	Cognitive, Analytical
24.	Digital to Analog converter using binary weighted resistor method, determination of resolution, accuracy and linearity error	4	Cognitive, Analytical

***Minimum of TEN Experiments to be performed excluding demonstration experiments**

26/5/23 26/5/23

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INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF MATHEMATICS

Minutes of Board of Studies Meeting

DATE: 3rd June 2023

VENUE: MBA Board Room **TIME:** 10:30 AM

CHAIRPERSON: Prof. Lakshmikanthamma P K

MEMBERS:

Sl. No.	Name	Designation
1	Ms. Lakshmikanthamma P K	Chairman
2	Dr. Medha Itagi Huilgol	BNU Nominee
3	Dr. Sumithra R	Subject Expert
4	Dr. K Sushan Bairy	Subject Expert
5	Ms. Dhanya Santhosh	Industrial Expert
6	Ms. Deepthi K	Alumni
7	Ms. Lourdhu Jannet Vinoli X	Co-ordinator & Member
8	Ms. Shyba P	Member

AGENDA:

1) **Curriculum discussion for 5th and 6th Semester NEP batch B.Sc.**
2) **Discussion and approval of Blue print and model question papers for the 5th and 6th semeste**
3) **BoE list Approval for the academic year 2023-2024 B. Sc (Mathematics)**
4) **Any other matters**

INTRODUCTION:

The Chairperson began the meeting by formally welcoming the members of the Board of Studies. She introduced herself and the faculty members to the board; a brief out was given on the agenda of the meeting.

PROCEEDINGS:

The meeting concluded with words of gratitude expressed by the Chairperson.

CLOSING TIME: 2 PM

RESOLUTIONS:

1. Course matrix and detailed syllabus for V and VI semester BSc (NEP) Mathematics is discussed, changes were made according to the discussion and approved.
2. Blue print and question paper pattern for V and VI semester BSc (NEP) Mathematics is discussed, changes were made according to the discussion and approved.
3. The committee approved the updated panel of examiners of UG.

Additional examiners if need be chosen from amongst the panel of examiners approved by nearby recognized institutions/Universities.

03/06/23

HOD
DEPT. OF MATHS
Indian Academy Degree College
Kalyan Nagar, BANGALORE - 43

INDIAN ACADEMY
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DEPARTMENT OF MATHEMATICS

Members attended the BOS meeting:

Sl. No.	Name	Signature
1	Prof. Lakshmikanthamma P K	Lakshmikanthamma P.K 08/06/23
2	Dr. Medha Itagi Huilgol	03/06/23.
3	Dr. Sumithra R	03/06/2023
4	Dr. SushanBairy K	03/06/2023
5	Mrs. Dhanya Santhosh	
6	Ms. Deepthi K	
7	Prof. Lourdhu Jannet Vinoli X	
8	Prof. Shyba P	

INDIAN ACADEMY
Degree College - Autonomous

DEPARTMENT OF MATHEMATICS

Minutes of Board of Studies Meeting

Date:28 / 11 / 2023

Venue: MBA Board Room**Time:**2:00 p.m.

Chairperson: Dr. K. Shyamsunder, HOD, Dept of Physical Sciences

Members Present:

Sl. No.	Name	Designation
1	Dr. K. Shyamsunder	Professor& Head Department of Physical Sciences
2	Prof. Lourdhu Jannet Vinoli X	Associate Professor & Co-ordinator
3	Dr. Medha Itagi Huilgol	Professor, Department of Mathemati Bangalore City University, Central Coll Campus, Bangalore
4	Dr. Sumithra R	Head, Department of Mathematics, Nrupathunga University, Bangalore.
5	Dr. K Sushan Bairy	Assistant Professor, Reva University, Bangalore.
6	Ms. Dhanya Santhosh	Senior Business Analyst, Tata Consultancy Services Ltd., Bangalore.
7	Ms. Deepthi K	Tax Senior in Ernst and Young, Anandapura TC Palya Post, Bangalore-560036.
8	Ms. Lakshmikanthamma P K	Professor
9	Ms. Shyba P	Assistant Professor

AGENDA:

1) **Reframing of Pos and COs for all the papers.**
2) **Proposed to integrate the internship/certificate courses (online-30 Hours) in the UG programme to be completed within the III semester of the programme.**
3) **Approval for addition to the list of Board of Examiners for the undergraduate programme.**
4) **Any other matters**

INTRODUCTION:

The Co-ordinator began the meeting by formally welcoming the members of the Board of Studies. She introduced herself and the faculty members to the board; a brief out was given on the agenda of the meeting.

PROCEEDINGS:

The meeting concluded with words of gratitude expressed by the Co-ordinator.

CLOSING TIME: 4 PM

RESOLUTIONS:

1. POs and COs of all the papers of BSc (NEP) Mathematics is discussed, changes were made according to the discussion and approved.
2. The committee discussed and approved to take at least one internship/certificate course (online (Swayam/NPTEL) 30 hours /8weeks in the UG programme to be completed by the end of the V semester of the programme.
3. The committee approved the updated panel of examiners of UG

Additional examiners if need be chosen from amongst the panel of examiners approved by nearby recognized institutions/Universities.

Members attended the BoS Meeting:

Sl. No.	Name	Signature
1	Prof. Lourdhu Jannet Vinoli X	X 28/11/2023
2	Dr. Medha Itagi Huilgol	28/11/2023.
3	Dr. Sumithra R	28/11/2023
4	Dr. SushanBairy K	28/11/2023
5	Ms. Deepthi K	28/11/23
6	Prof. Lakshmikanthamma P K	28/11/23.
7	Prof. Shyba P	28/11/23

INDIAN ACADEMY
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Department of Physical Sciences

Physics

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INDIAN ACADEMY
Degree College - Autonomous

Department of Physical Sciences- Physics

Board of Studies Meeting – Agenda

Date: 25 / 04 / 2024

Venue: Board Room (Room No.306)

AGENDA - 1:

- Revised list of examiners for the Academic Year 2024-25

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Proceedings:

- **Agenda 1:** Revised list of examiners for the Academic Year 2024-25.

Deliberations: The members of BoS suggested to include few faculties from Surana college and Jain university as external examiners in the panel, provided they have completed a minimum of 3 years of experience. The members have also suggested to remove the examiners who have retired from their services.

Conclusion: The members of the BOS approved the list of examiners in the panel.

Closing Time: 11:30 a.m.

Resolutions:

- Approved list of additional examiners for the academic year 2024-25

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