

BOARD OF STUDIES 2024- 2025 BIOCHEMISTRY- MAJOR

DEPARTMENT OF BIOCHEMISTRY

MVP CAmpus Visakhapatnam-530017

Phone.0891-2955084,85

VISION: Creating Human Excellence for a Better Society

MISSION: Unfoldinteaworld-class organisation witha strongacademicandresearchbase, producing responsible citizenstoclear to the changing needs of



M.V.P., Rushikonda, Visakhapatnam-530,045. [website: www.gvpcdpgc.edu in (Approved by AICTE. [PermanentlyAffiliated to Andhra University.] Accredited by NAAC). UG,PG-MBA and UG Engineering B. Tech (CE, CSE, ECE, ME) programs are Accredited by NBA.

DEPARTMENT OF BIOCHEMISTRY AGENDA OF BOARD OF STUDIES MEETING Date: 30-09-2024

- > Introduction of the BOS members.
- Approval of New courses for BSc. Honors Biochemistry Major Syllabi of sem-III and IV for the Academic Year 2024-25 for the Admitted Batch 2023-2024.
- Approval of New courses for BSc .Honors Biochemistry Minor syllabi for sem-III and IV of the Academic Year 2024-25 for the Admitted Batch 2023-24.
- Approval to organize value-added course /addon course for the Academic Year 2024-25 for admitted batch 2023-24 students.
- ➤ Approval to continue the existing syllabi of BSc.Honors Biochemistry Major and Minor for sem-I and II of the Academic Year 2024-25 for the Admitted Batch 2024-25.
- ➤ Approval to continue the existing evolution system for Semesters I, II III, and IV for the Academic Year 2024-25.
- ➤ Approval to continue the existing CBCS pattern for the Sem-V and Sem-6 (Long Term Internship) for the Academic Year 2023-24 for the Admitted Batch 2022-23.
- > Approval CO, PSO, and PO of BSc. Honors Biochemistry-Major.
- Approval of the unit test and semester-end exam blueprint, Question Bank, and Model papers.
- > Approval of the list of Paper setters and external examiners' names.
- Discussion on Feed Back received on Curriculum Enrichment from the stakeholders
 (Alumni, Parents, Students, Employee, Industry Representative and Peer)



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DEPARTMENT OF BIOCHEMISTRY

BOS COMMITTEE 2024

The Members present in the meeting of the Board of Studies BSc. Honors Biochemistry was held on 30-09-24 in the Department of Biochemistry, Gayatri Vidya Parishad College for Degree and P.G. Courses (A).

MEMBER	NAME & DESIGNATION	SIGNATURE
Head of the Department (Chairman)	Dr.Ilahi Shaik Head of the Department.	Ilali
Faculty Members	D.V.Sushma Chandra Assistant Professor	de la constant de la
Vice Chancellor's Nominee)	Prof. T. Raghava Rao, Dept. of Biochemistry, Andhra University, Visakhapatnam	The property
Academic Council's Nominee	. Dr. V. Narasing Rao Department of Biochemistry PRISM Degree and P.G Courses Visakhapatnam	V. Newsonych
A representative from the Corporate Sector/industry	D. Venkata Sai Naga Siva Senior Executive, Quality Control in Microbiology GLAND PHARMAPvt Ltd, JNPC Visakhapatnam	Wandy's
Meritorious Alumni	Mylapalli kavya keerthana Dr. Reddy's laboratories Technical trainee in Formulation and drug product development (Biologics Unit). Hyderabad.	M. Lauja <u>kuthi</u>
Student Nominee	Lakshmi Deepthi	Deepthi

Director

Visakhapatnam

Dean of Academic Affairs

Academic Affairs

or Begree and P.G. Courses (Bayatri Vidya Parishad College

for Degree and PG Courses(A)

Principal PRINCIPAL

Gayatri Vidya Parishad College for Degree and PG Courses (A) Visakhapatnam

GAYTRI VIDYA PARISHAD COLLEGE FOR DEGREE AND PG COURSES(A) Affiliated to Andhra University // Accredited by NAAC and NBA VISAKHAPATNAM BOARD OF STUDIES- DEPARTMENT OF BIOCHEMISTRY DATE: 30-09-2024

Proceedings of the meeting of the Board of Studies in Biochemistry held on 30-09-2024 in the Department of Biochemistry, Gayatri Vidya Parishad College for Degree and P.G. Courses (A). Members Present:

1. CHAIRPERSON

Dr. Ilahi Shaik HOD, Biochemistry.

2. VICE CHANCELLORS NOMINEE

Prof. T. Raghava Rao
Department of Biochemistry
Andhra University
Visakhapatnam

3. Academic Council's Nominee

Dr. V. Narasing Rao Department of Biochemistry PRISM Degree and P.G Courses Visakhapatnam

4. Representative from the Corporate Sector/industry

D. Venkata Sai Naga Siva Senior Executive, Quality Control in Microbiology GLAND PHARMAPvt Ltd, JNPC Visakhapatnam

5. Meritorious Alumni

Mylapalli kavya keerthana Dr. Reddy's laboratories Technical trainee in Formulation and drug product development (Biologics Unit). Hyderabad.

6. Members of the Staff

Smt. D.V. Sushma Chandra

7. Student Nominee

Lakshmi Deepthi (3rd year)



Minutes of Board of Studies-2024

The Board of Studies of the Department of Biochemistry met on 30-09-2024 at 15:30 hrs. and discussed the following:

- The Chairman of the BOS introduced the members of the BOS to the Vice Chancellor Nominee and started the meeting by reading the 2023-24 BOS meeting resolution.
- 2. Chairman BOS requested to the Vice Chancellor Nominee Prof. T. Raghav Rao approve the changes made in the Practical syllabus (Sem-III) and theory suggest any modifications needed to the newly introduced courses syllabus in Sem-III & IV major and minor students of BSc. Honors Biochemistry for the admitted batch 2023-24. To develop the skill and research orientation for the students introduced analytical techniques like homogenization, centrifugation separation of Amino acids by TLC, and Column Chromatography in Sem-III -Analytical Skills Practical syllabus.

The newly introduced syllabus is oriented in such a way that it caters to the job needs of the student meets the present-day job employability requirements, and develops sound skill techniques in the fields of Biochemistry.

Vice Chancellor Nominee Prof. T. Raghav Rao has gone through the syllabus he was satisfied. He suggested to provide more hands-on training to enhance practical skills.

- 3. Chairman BOS requested Members of the BOS approval to organize a Value-added course on Indian Traditional Medicine for Holistic Human Health and its Scheme of Evaluation for the Academic year 2024-25 for the BSc. Honors students.
- 4. The representative from Industry Mr. D.V.S.N. Siva suggested having an MoU with industries to train the students in Quality analysis and Quality control to increase their employability opportunities in the students in Pharma sector.

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DEPARTMENT OF BIOCHEMISTRY

Minutes of Board of Studies-2024

Meritorious Alumini Kavya Keerthana suggested training students to get ranks in CUCET and GATE.

6. Members of BOS suggested implementing research projects at the UG level by providing infrastructure and knowledge assistance.

7. Members of the BOS suggested conducting seminars, workshops, symposia, quiz programs, and expos to foster creative thinking and update recent advances in the field of Lifesciences.

8. The feedback received from the Parents, alumni, and parents on the curriculum discussed in the BOS and as per their suggestions value added courses, MoU, and industry visits incorporated as a part of the curriculum enrichment.

9. Members of BOS suggested that students should do one or two online courses in the parent domain and another in the interdisciplinary domain offered by the Swayam, Course era. etc., to increase indepth knowledge of the subject.

10. Members of BOS suggested to implement ICT-based innovative teaching methodology using audio-visual lessons.

Dr.IlahiShaik Head of the Department

Prof. T. Raghava Rao Dept. of Biochemistry Andhra University. Dr. V. Narasing Rao
Department of Biochemistry
PRISM Degree and P.G Courses

DEPARTMENT OF BIO CHEMISTRY

G.V.P. Degree College
Plot No. 23, Sector-8, M.V.P. Colony

VISARMAPATNAM - 621



Proceedings of the meeting of the Board of Studies in Biochemistry held on 30-09-2024 in the Department of Biochemistry, Gayatri Vidya Parishad College for Degree and P.G. Courses (A). Members Present:

1. CHAIRPERSON

Dr. Ilahi Shaik HOD, Biochemistry.

2. VICE CHANCELLORS NOMINEE

Prof. T. Raghava Rao Department of Biochemistry Andhra University Visakhapatnam

3. Academic Council's Nominee

Dr. V. Narasing Rao Department of Biochemistry PRISM Degree and P.G Courses Visakhapatnam

4. Representative from the Corporate Sector/industry

D. Venkata Sai Naga Siva Senior Executive, Quality Control in Microbiology GLAND PHARMAPvt Ltd, JNPC Visakhapatnam

5. Meritorious Alumni

Mylapalli kavya keerthana Dr. Reddy's laboratories Technical trainee in Formulation and drug product development (Biologics Unit). Hyderabad.

Members of the Staff Smt. D.V. Sushma Chandra

7. Student Nominee

Lakshmi Deepthi (3rd year)



Resolutions:

It is Resolved

- Approve the introduction of the following new courses for students admitted to the B.Sc. Honors - Biochemistry Major program (2023-2024 batch) for Semesters III and IV:
- 1. Course No. 5: Analytical Techniques (Focusses on Skill Development)
- 2. Course No. 6: Basic Microbiology (Focuses on the development of Employability opportunities)
- 3. Course No. 7: General Physiology (Focusses on skill development)
- 4. Course No. 8: Genetics (Address Cross-cutting issues)
- 5. Course No. 9: Bioenergetics and Metabolism of Carbohydrates and Lipids.
- 6. Course No. 10: Clinical Biochemistry (Entrepreneurship)
- 7. Course No. 11: Immunology (Focusses on Employability)
- 2. Approve the introduction of the following new courses for the students admitted to the B.Sc. Honors Biochemistry Minor (2023-2024 batch) for Semesters III and IV:
 - 1. Course No. 2: Analytical Techniques
 - 2. Course No. 3: Bioenergetics and Metabolism of Carbohydrates and Lipids
 - 3. Course No. 4: Clinical Biochemistry
 - 3. Approve the implementation of a short-term internship program, either virtual or offline, at the end of Semester IV for students of the 2023-2024 admitted batch.
 - 4. Approve to organize the Value-added course on (30 hrs) Indian Traditional Medicine for Holistic Human Health and scheme of Evaluation (50M 25M (Report writing on Traditional Medicines) + 25M (online Multiple choice questions) for the students of BSc. Honors in the Academic year 2024-25.
 - 5. Approve the continuation of the existing syllabus for Semester II for students of the 2024-2025 admitted batch in the B.Sc. Honors Biochemistry Major program and Minor.
 - Approve the continuation of the Community Service Project for students of the 2024-2025 admitted batch in the B.Sc. Honors - Biochemistry Major program at the end of the Semester-II
 - 7. Approve the continuation of the Semester end Examination of Semester II, i.e., 40% for continuous assessment (Mid Exam 20M + Assignment 10 M + Activity-based work 10M) and External Evaluation 60 % Biochemistry Major, to the admitted batch 2024-2025

- 8. Approve the continuation of the Practical examination i.e., (50 M) 25 % assigned for internal evaluation and 25% for the External evaluation to the admitted batch 2024-2025
- Approve the continuation of the approved syllabi and unit and semester-end Examination
 pattern of Biochemistry of 2020-21 for Semesters -V to the students of admitted batch 20222023 in B. Sc Microbiology-Biotechnology-Biochemistry Degree Course.
- 10. To approve the students of the 2022-2023 admitted batch to carry out the final (Term) internship in the VI semester, as per the guidelines of APSCHE.
- Approve signing MoU with Lotus Granges (India Limited), Visakhapatnam, to provide internship training in Quality analysis of Water, Waste Water, soil, Food, and Drug Samples.
- 12. Approve the POs, PSOs, and COs.
- 13. Approve the blueprint and Model Question papers of Semesters III and IV for the students of the Admitted Batch 2023-24 in the B.Sc. Honors Biochemistry Major program and Minor.
- 14. Approve the list of examiners and paper setters having a minimum of 5 years of full-time service in handling degree classes.

LIST OF EXAMINERS FOR BIOCHEMISTRY

Sl. No.	Name of the Examiner	Designation and Working Institution	Contact Information
1.	Smt. G. Dorka Vijaya Kumari	HOD, Dept. of Biochemistry, Guntur Degree College for Women (A), Guntur.	+91-9963928874
2.	Smt. D. Vijaya Sri	Lecturer in Biochemistry, Guntur Degree College for Women (A), Guntur.	+91-9177814172
3.	Dr. B. Dhana Sree	HOD, Department of Biochemistry, K V R Government College for Women (A), Kurnool.	dhanasreebiochemistry @gmail.com
4.	Smt. Shaheda Arfath	Assistant Professor in Biochemistry, A Q J Degree College, Visakhapatnam.	+91-9441817636
5.	Smt. Ishita Basu	Lecturer in Biochemistry, B V K Degree College, Visakhapatnam.	+91-9959366481
6.	Dr. A. Mousami Sankar	Assistant Professor SJCW, Visakhapatnam	7829822828
7.	Dr. V. Narsinga Rao	Assistant Professor Prism College for Degree and PG courses.	8309385686

Signatures Of the BoS Members:

S.	Name	Signatures
No.		
1	Prof. T. Raghava Rao	The period
2	Dr.V. Narasing Rao	V. Derskiget
3	D. Venkata Sai Naga Siva	Dodoni
4	Smt. D.V. Sushma Chandra	de la companya della companya della companya de la companya della
5	Mylapalli kavya keerthana	M. Langa Laste
6	Lakshmi Deepthi	Deepthi

Gayatri Vidya Parish Dean Academic Affairs Chi Gayatri Vidya Parish Dean Academic Affairs Cayatri Vidya Parishad College (or Degree and PG Courses(A)

Chairman BOS

PRINCIPAL Gayatri Vidya Parishad College for Degree and PG Courses (A) Visakhapatnam

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DEPARTMENT OF BIOCHEMISTRY

(W.E.F 2023-2AY ONWARDS)

PROGRAM-SPECIFIC OUTCOMES FOR BIOCHEMISTRY MAJOR

Sl. No.	On completing B.Sc. Biochemistry, the student will be able to:
PSO 1	Understand the fundamental chemistry of biomolecules and biological processes of the human body by applying the knowledge of chemical structures of the biomolecules and mechanisms to interpret their role in metabolic pathways.
PSO 2	Comprehend biochemical techniques such as chromatography, electrophoresis, spectroscopic, and Molecular methods to isolate, identify, purify, and characterize natural compounds for the benefit of society.
PSO 3	Develop research competence by reviewing science literature, developing research methodology, and executing research projects by integrating the knowledge of bioinformatics and biostatics.
PSO 4	Grow as entrepreneurs in the fields of health, nutrition, biotech industries, and agriculture by adopting the knowledge of Biochemistry.

Levels of Bloom's Taxonomy

Level – 1	Remembering
Level – 2	Understanding
Level – 3	Applying
Level – 4	Analyzing
Level – 5	Evaluating
Level – 6	Creating

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(W.E.F 2023-24 AY ONWARDS)

Students graduating with a B.SC /B. A./ B. Com should be able to achieve the following

PROGRAM OUTCOMES (POS)

PO	FRAM OUTCOMES (POs)
	Programme Outcome Description
PO 1	Critical Thinking: Students can take informed actions by differentiating between fact and opinion, recognizing and evaluate, develop inferential skills, and distinguish logical assumptions from different perspectives and make decisions and judgments by using scientific-based reasoning.
PO 2	Analytical skills: The students can analyze and interpret concepts from various methods and apply these methods to analogous situations. They assess the elements of a problem and become competent at problem-solving.
PO 3	Usage of modern tools and technologies: Students develop a scientific orientation and are at ease with the adoption of modern techniques
PO 4	Effective communication: Students develop skills like listening, speaking, reading, and writing in their respective domains and become communicators
PO 5	Ethics: Students develop ethical values and contribute to nation-building as responsible citizens.
PO 6	Self-directed and life-long learning: Acquire the ability to engage in independent and lifelong learning in the broadest context of sociotechnological changes
PO 7	Social interaction: Students develop empathy towards societal needs and can contribute to sustainable development.

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(W.E.F 2023-24 AY ONWARDS)

BIOCHEMISTRY MAJOR COURSE STRUCTURE For Semester-III and IV

Year	Sem	Subject Code	Name Of The Course	Theory/ Lab	Internal	External			Teaching Hours	Total Hour
PART		Code			Marks	Marks	Total	Credits		s
2 PART-	Ш		Multidisciplinary course PROJECT MANAGEMENT Skill enhancement course Basic Electrical Appliances	T	-	50	50	2	2hrs/week 2hrs/week	30
			Analytical Techniques	T	40	60	100	3	3hrs/week	
			Analytical Techniques	L	25	25	50	1	2hrs/week	30
			Basic Microbiology	T	40	60	100	3	3hrs/week	
			Basic Microbiology	L	25	25	50	1	2hrs/week	30
			General Physiology	T	40	60	100	3	3hrs/week	
			General Physiology	L	25	25	50	1	2hrs/week	30
	III		Genetics	Т	40	60	100	3	3hrs/week	
2			Genetics	L	25	25	50	1	2hrs/week	30

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(W.E.F 2023-24 AY ONWARDS)

Table I: Template for Allocation of Internal Marks as a part of Continuous Internal Assessment (CIA) methods

w.e.f. 202	3-24		
Assessment	Marks for each Mid examination	Time	Pass Mark
Assignments (at least one assignment from each unit).	10 M	NA	
The weightage of marks for the assignment should be awarded after the completion of all the assignments that are finished before the mid examinations are commenced. Projects/ Seminars/ PPT/ Quizzes/ Field trips etc. Internal examination pattern for both mid I and Mid II:	10 M 20 M	NA 1 Hour	The marks obtained by a student for 100 marks in both mid examinations is to be scale down to 40 marks. Minimum Pass marks 15/40
TOTAL	40 M		

Table II: Allocation of External Marks for Semester end Theory Examinations

Duration of the exam Maximum marks	3 Hours 60 M 24 M
Minimum pass marks Paper pattern	Section A (20 marks) Answer the following 5x4=20M Section B (40 marks)
là.	Answer the following questions(internal choice)5x10=50M

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BLUE PRINT FOR SEMESTER END EXAMINATIONS PAPER SETTING

	Learning	level wise Wei	ghtage	
Bloom's Taxonomy level	Weightage	marks	Essay type	Short answer type
Knowledge/ Remember	33%	20	2(two out of four)	1
Understanding/ Comprehension	27%	16	2(two out of four)	1
Application	20%	12	1(two out of four)	1
Analysis	13%	8		1
Synthesis/ Evaluate	7%	4		1
Total	100	60		10 out of 15 questions

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BLUE PRINT

	Time: 3 hours	Maximum Marks: 60
		PART- A
	Answer ALL the following questions.	
	Each question carries Two marks.	5 X 2 = 10 Marks
1.		
2.		
3.		
4. 5.		
٥.		
		PART- B
	Answer all the following questions (Draw	the diagrams wherever necessary).
	Each question carries Ten marks	5 X 8 = 40 Marks
6.	(a)	
	4.5	Or
	(b)	
7	(a)	
/.	(a)	Or
	(b)	OI.
8.	(a)	
		Or
	(b)	
•		
9.	(a)	Or
	(b)	Or
	(6)	
10	e. (a)	
		Or
	(b)	
		2 Of Theles



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PRACTICAL BLUE PRINT

GROUP:

BATCH NO.

Time: 3 hours Maximum Marks: 25

1. MAJOR EXPERIMENT

[15 MARKS]

2. RECORD [5 MARKS]

4. VIVA VOCE [5 MARKS]

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(W.E.F 2023-24 AY ONWARDS)

Table III: Allocation of Practical Internal Marks

Category	Marks
Practical record	5
spotters	5
Major Experiment (2 out of 1)	15
Maximum marks	25
Pass marks	13

Table III: Allocation of Practical sem end external Marks

Category	Marks
Major Experiment (2 out of 1)	15
viva	10
Maximum marks	25
Pass marks	13

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