ACADEMIC CELL, GOVERNMENT COLLEGE
(AUTONOMOUS) RAJAHMUNDRY

Proceedings of the Principal, Government College (Autonomous), Rajahmundry
Present: Dr. Ramachandra R.K, M.Sc., Ph.D.

Rc. No. 28/GCRJY /UG-BoS/ 2025-26 dt. 04.09.2025

Sub: Government College (A), Rajamahendravaram- UG Boards of Studies (BoS)- Nomination of Members – Orders issued.

Ref: 1. UGC Guidelines of for Autonomous Colleges-2023.
2. Proc.No.ANUR/DAA/2025, dated 30-08-2025 of the Vice-Chancellor, ANUR

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Order

The Principal, Government College (Autonomous) Rajahmundry is pleased to nominate the following members to UG Board of Studies to frame the syllabus of **Geology subject** in all the semesters duly following the norms of the UGC regulations for the Autonomous colleges 2023.

S. No	Name	Designation
1	Dr. M.R. Goutham	Chairman
2	All Faculty members in the department	Member
3	Dr. P. Padmasree, Head, Dept. of Geology, Govt. Arts College (A), Anantapuramu	Subject Expert
4	Dr. P. Ganapthi Rao, Head, Dept. of Geology, MR College (A), Vizianagaram	Subject Expert
5	Prof.Y.Srinivasa Rao, Department of Geo sciences, AKNU	University Nominee
6	Sri P V V S S Dileep Allavarapu Assistant Geophysicist Directorate Ground Water & Water Audit Department, Vijayawada	Expert from Industry/Corporate Sector
7	Mr. B. Satya David Raju Central University of Punjab	Alumnus

The above members are requested to attend the BoS meeting in September 2025 and share their valuable views, and suggestions on the following functionaries.

a) Prepare syllabi for the subject keeping in view the objectives of the college, interest of the stake holders and National requirement for consideration and approval of the IQAC and Academic Council
b) Suggest methodologies for innovative teaching and evaluation techniques
c) Suggest the panel of names to the Academic Council for appointment of Examiners
d) Coordinate research, teaching, extension and other activities in the department of the College.
e) Suggest CLO, PLO, PI and subject experts to develop question bank in compliance with Bloom's Taxonomy.

The above said members are requested to bestow their services for the successful organization of the event.

PRINCIPAL
GOVERNMENT COLLEGE (AUTONOMOUS)
RAJAHMUNDRY

UG Board of Studies Meeting

Date: 15 September 2025

Venue: Department of Geology, Government College (Autonomous) Rajahmundry

In pursuance of the Government of Andhra Pradesh's directions to revamp undergraduate single major programs, and in alignment with NEP-2020 guidelines, the Department of Geology has revised its curriculum structure. The revision has been carried out after incorporating feedback from students, alumni, faculty, and industry experts, with a focus on strengthening the theoretical foundation, practical training, skill development, and employability. The department has accordingly restructured the B.Sc. Geology (Honors-Major) program, and also framed a Minor in Geology for students of other disciplines. The revised syllabi, course distribution, and elective options are placed before the Board of Studies for discussion and approval.

Agenda of the Meeting

1. New Curricular framework for academic year 2025-26
2. Curriculum design for B.Sc.(Honors- Geology) w.e.f. 2025-26
3. Design of Course objective and Course Learning Outcomes
4. Curriculum design for III,IV,V,VII and VIII semesters B.Sc.(Honors- Geology) w.e.f. 2023-24
5. Minor Program in Geology (for Non-Geology Students)
6. Pedagogical Approaches and Skill Orientation (SWAYAM, MOOCS)
7. Design model question papers and identifying potential paper setters
8. Evaluation and Assessment Reforms
9. Academic activities of the Department for the Academic year 2025-26
10. Initiation of Certificate Course on "Groundwater Exploration Techniques"
11. Any Other Items with the Permission of the Chair

Introduction

The Board of Studies meeting of the Department of Geology is convened on 15 September 2025 in the context of the curriculum revamping initiative mandated by the Government of Andhra Pradesh for undergraduate single major programs. The Government has emphasized the need for modern, skill-oriented, and industry-relevant curricula in alignment with the National Education Policy (NEP) 2020.

In preparation for this revision, the Department of Geology has undertaken a comprehensive review of the existing curriculum. Valuable feedback was collected from students, alumni, faculty members, and industry experts, highlighting the need to update course content, strengthen practical and field-based training, and introduce contemporary subjects such as Remote Sensing, GIS, and Mineral Exploration.

Based on these inputs, the Department has designed a restructured B.Sc. Geology (Honors) program that balances core geological sciences with applied skill-oriented tracks. The major program spans eight semesters, offering foundational courses such as Earth and Atmospheric Sciences, Crystallography, Mineralogy, Petrology, Sedimentology, Stratigraphy, Structural Geology, Hydrogeology, Economic Geology, and Palaeontology. Advanced courses in later semesters include Geochemistry, Isotope Geology, Advanced Structural Geology, and Applied Fields. To enhance employability, students can opt for Skill Elective Tracks:

Track A: Remote Sensing & GIS (covering Digital Image Processing, GIS applications, etc.)

Track B: Mineral Exploration (covering Geophysical Exploration, Mining Geology, Natural Resource Exploration, etc.).

In addition, the department is **offering a Minor program in Geology for students from other disciplines**, spread over four semesters (III to VI). The minor curriculum includes Crystallography, Mineralogy, Geomorphology, Petrology, Structural Geology, Economic Geology, and Palaeontology with Indian Geology, thereby giving non-major students an exposure to the fundamentals and applied aspects of Earth Sciences which enables them vertical mobility in academics.

The revised structure is designed to provide students with a broad theoretical foundation, practical laboratory skills, field exposure, and interdisciplinary applications, making them well-prepared for higher studies, competitive examinations, and industry careers.

This meeting is intended to present, deliberate upon, and approve the revised curriculum structure for both the Major and Minor programs in Geology, ensuring that it meets the academic standards, industry requirements, and future career prospects of students.

Composition of UG Board of Studies in Geology

S.No	Name	Designation
1	Dr. M.R. Goutham Associate Professor & Head Department of Geology	Chairman
2	Prof. Y. Srinivasa Rao Head, Department of Geosciences Adikavi Nannaya University Rajahmundry	University Nominee
3	Dr. P. Padmasree Professor & Head Department of Geology Government Arts College (A) Anantapuramu	Subject Expert
4	Dr. P. Ganapathi Rao Head, Department of Geology MR College (Autonomous) Vizianagaram	Subject Expert
5	Sri P V V S S Dileep Allavarapu Asst. Geophysicist Directorate, Groundwater & Water Audit Department, Vijayawada	Industrial Nominee
6	Dr. N. Srinivasa Rao	Faculty Member
7	Mr. S. Venkatesh	Faculty Member
8	Dr. R. Anil Kumar	Faculty Member
9	Mr. Ch. Abhishek	Faculty Member
10	Mr. B. Sai Krishna	Faculty Member
11	B. Satya David Raju	Student Nominee

Program Specific Outcomes (PSOs) for B.Sc. (Honours - Geology)

After completion of the program, the student will be able to:

PSO 1 - Core (Domain) Knowledge

Develop a comprehensive understanding of Earth systems including minerals, rocks, fossils, structures, geomorphological features, and geological processes through theoretical and practical courses.

PSO 2 - Analytical and Technical Skills

Acquire proficiency in field geology, laboratory techniques, geological mapping, remote sensing, GIS, and hydrogeological investigations to interpret and analyze geological data effectively.

PSO 3 - Application and Problem-Solving

Apply geological knowledge to address real-world issues such as natural resource exploration, groundwater management, environmental challenges, and hazard assessment.

PSO 4 - Research and Scientific Temper

Cultivate the ability to design and conduct geological studies, critically evaluate scientific literature, and carry out independent or collaborative research projects with socio-economic relevance.

PSO 5 - Professional and Ethical Readiness

Prepare for careers in geosciences, environmental consultancy, natural resource management, and higher studies with a strong foundation in ethics, sustainability, and responsibility towards society and the environment.

Department of Geology
Government College (Autonomous) Rajahmundry

Curriculum Framework for B.Sc (Honours) from A.Y. 2025-26
Major+Minor with CSP & 6th sem Internship

Semester	Major (4 Cr)			Minor (4 Cr)			AECC (3 Cr)			Multi Disny' (2 Cr)			Skill Enhancement Courses (4Cr/2Cr)			OOTC			(VAC) IKS# Env. Edn* (2 Cr)			Total		
	C	H (T+P)	Cr	C	H (T+P)	Cr	C	H (T+P)	Cr	C	H (T+P)	Cr	C	H (T+P)	Cr	C	H (T+P)	Cr	C	H (T+P)	Cr	C	H (T+P)	Cr
Sem 1	2	6+4	8				2	8	6				1	4+2	4							5	24	18
Sem 2	2	6+4	8				2	8	6	1	2	2	1	4+2	4				1#	2	0	7	28	20
Community Service Project of a minimum of 80 hours with 1 Credits. Student is eligible for Exit Option-1 with the award of Certificate in respective discipline																								1
Sem 3	3	9+6	12	1	3+2	4	2	8	6	1	2	2	1	2	2							8	32	26
Sem 4	3	9+6	12	1	3+2	4				1	2	2	1	2	2							6	24	20
Sem 5	1+2	3+2 6+4	12	2	6+4	8													1*	2	2	6	27	22
Sem 6	2	6+4	8	2	6+4	8																4	20	16
Internship/Apprenticeship/OJT a minimum of 180 hours (8 weeks) with 3 Credits. Student is eligible for Exit Option-2 with the award of Degree in respective discipline																								3
	15		**60**	**6**		**24**	**6**		**18**	**3**		**6**	**4**		**12**				**1+1**		**2**	**36**		**126**
Sem 7	3	9+6	12										2	6+4	8	1	2	2	1#	2	0	7	29	22
Sem 8	3	9+6	12										2	6+4	8	1	2	2	1#	2	0	7	29	22
4-YR	**21**		**84**	**6**		**24**	**6**		**18**	**3**		**6**	**8**		**28**	**2**		**4**	**4**		**2**	**50**		**170**

C	Courses		**H**	Hours		***Cr***	Credits		**OOTC**	Open Online Transdisciplinary		
#	Indian Knowledge Systems - Audit Course		*	Environ Edn								

Sl. No	Sem	Course Code	Course	CIA	SEE	Hrs. per Week			
						L	T	P	C
1	I		C1: Earth and Atmospheric Sciences	50	50	3	0	0	3
			C1P: Earth and Atmospheric Sciences	--	50	0	0	2	1
2			C2: Physical Geology & Geomorphology	50	50	3	0	0	3
			C2P: Physical Geology & Geomorphology	--	50	0	0	2	1
3			AECC - English	50	50	4	0	0	3
4			AECC - MIL (Telugu/Hindi/Sanskrit)	50	50	4	0	0	3
5			Skill Enhancement Course (SEC) Intro' to Artificial Intelligence			4	0	2**	4
			Total Number of Hours and Credits			**18**		**6**	**18**
				** Practice hours					
End of the Semester I of 1st Year									
6	II		C3: Fundamentals of Crystallography & Mineralogy	50	50	3	0	0	3
			C3P: Crystallography & Mineralogy	--	50	0	0	2	1
7			C4: Igneous and Metamorphic Petrology	50	50	3	0	0	3
			C4P: Igneous and Metamorphic Petrology	--	50	0	0	2	1
8			English	50	50	4	0	0	3
9			MIL (Telugu/Hindi/Sanskrit)	50	50	4	0	0	3
10			Multidisciplinary Course			2	0	0	2
11			Skill Enhancement Course (SEC) Application of Artificial Intelligence (Discipline Specific)			4	0	2**	4
12			Indian Knowledge System			2	0	0	0
Community Service Project (minimum of 80 hours with 1 Credit)									1
				** Practice hours					
			Total Number of Hours and Credits			22		6	21

End of the Semester II of 1st Year									
13	III		C5: Sedimentology and Stratigraphy	50	50	3	0	0	3
			C5P: Sedimentology and Stratigraphy	--	50	0	0	2	1
14			C6: Structural Geology and Field Geology	50	50	3	0	0	3
			C6P: Structural Geology and Field Geology	--	50	0	0	2	1
15			C7: Engineering Geology & Environmental Geology	50	50	3	0	0	3
			C7P: Engineering Geology & Environmental Geology	--	50	0	0	2	1
16			Minor			3	0	2	4
17			AECC (Creative Writing/Business Writing in English)			4	0	0	3
18			AECC (Creative Writing/Journalistic Writing in MIL - Telugu/Hindi/Sanskrit)			4	0	0	3
19			Multidisciplinary Course			2	0	0	2
20			Skill Enhancement Course (SEC) Design Thinking/Problem Solving / Others			2	0	0	2
			Total Number of Hours and Credits			**24**		**8**	**26**
End of the Semester III of 2nd Year									
21	IV		C8: Economic Geology	50	50	3	0	0	3
			C8P: Economic Geology	--	50	0	0	2	1
22			C9: Indian Geology	50	50	3	0	0	3
			C9P: Indian Geology	--	50	0	0	2	1
23			C10: Palaeontology	50	50	3	0	0	3
			C10P: Palaeontology	--	50	0	0	2	1
24			Minor			3	0	2	4
25			Multidisciplinary Course			2	0	0	2
26			Skill Enhancement Course (SEC) Design Thinking/Problem Solving / Others			2	0	0	2
			Total Number of Hours and Credits			**16**		**8**	**20**

End of the Semester IV of 2nd Year									
27	V		C11: Hydrogeology	50	50	3	0	0	3
			C11P: Hydrogeology	--	50	0	0	2	1
SE-A:Skill Elective Track A (Remote Sensing & GIS)									
28	V - Track A		*C12: SEA1:Fundamentals of Remote Sensing	50	50	3	0	0	3
			*C12P: SEAP1: Fundamentals of Remote Sensing lab	--	50	0	0	2	1
29			*C13: SEA2:Digital Image Processing for Geosciences	50	50	3	0	0	3
			*C13P: SEAP2: Digital Image Processing for Geosciences Lab	--	50	0	0	2	1
SE - B:Skill Elective Track B (Mineral Exploration)									
28	V - Track B		*C12: SEB1:Fundamentals of Geophysical Exploration	50	50	3	0	0	3
			*C12P:SEBP1: Fundamentals of Geophysical Exploration Lab	--	50	0	0	2	1
29			*C13: SEB2: Mining Geology	50	50	3	0	0	3
			*C13P:SEBP2: Mining Geology Lab	--	50	0	0	2	1
30			Minor			3	0	2	4
31			Minor			3	0	2	4
32			Environmental Education			2	0	0	2
			Total Number of Hours and Credits			**17**		**10**	**22**
SE-A:Skill Elective Track A (Remote Sensing & GIS)									
33	VI-Track A		*C14: SEA3:Geographic Information System	50	50	3	0	0	3
			*C14P: SEAP3: Geographic Information System Lab	--	50	0	0	2	1
34			*C15: SEA4: Applications of Remote Sensing	50	50	3	0	0	3
			*C15P:SEAP4: Applications of Remote Sensing Lab	--	50	0	0	2	1
SE - B:Skill Elective Track B (Mineral Exploration)									
33	VI - Track B		*C14: SEB3: Natural Resource Exploration	50	50	3	0	0	3
			*C14P: SEBP3: Natural Resource Exploration Lab	--	50	0	0	2	1
34			*C15: SEB4: Mineral Economics	50	50	3	0	0	3

			*C15P:SEBP4: Mineral Economics Lab	--	50	0	0	2	1
35			Minor	50	50	3	0	2	4
36			Minor	--	50	3	0	2	4
	Internship for 180 hours)								3
			Total Number of Hours and Credits			**12**		**8**	**19**
C12, C13, C14, and C15 (2 courses in Semester V and 2 in Semester VI) must be selected from the same track.									
The student must choose **only one track - either Track A or Track B - and continue with the same track** across both semesters.									
End of the 3rd Year									
37	VII		C16: Advanced Mineralogy	50	50	3	0	0	3
			C16P: Advanced Mineralogy Lab	--	50	0	0	2	1
38			C17: Advanced Igneous and Metamorphic Petrology	50	50	3	0	0	3
			C17P: Advanced Igneous and Metamorphic Petrology Lab	--	50	0	0	2	1
39			C18: Advanced Structural Geology	50	50	3	0	0	3
			C18P: Advanced Structural Geology Lab	--	50	0	0	2	1
40			Major Electives -5 (19):						
41			A: Hydrogeology and Groundwater Exploration	50	50	3	0	0	3
42			A: Hydrogeology and Groundwater Exploration Lab	--	50	0	0	2	1
			Major Electives -5 (19):						
41			B. Fuel Geology	50	50	3	0	0	3
42			B. Fuel Geology Lab	--	50	0	0	2	1
			Major Electives -6 (20):			3	0	0	3
43			A: Field Geology and Surveying	50	50	3	0	0	3
44			A: Field Geology and Surveying Lab	--	50	0	0	2	1
			Major Electives -6 (20):						
43			B: Precambrian Geology	50	50	3	0	0	3
44			B: Precambrian Geology Lab	--	50	0	0	2	1
45	VIII		C:21 Stratigraphy and Indian Geology	50	50	3	0	0	3

			C:21P Stratigraphy and Indian Geology Lab	--	50	0	0	2	1
46			C:22 Sedimentary Petrology and Sedimentology	50	50	3	0	0	3
			C:22P Sedimentary Petrology and Sedimentology Lab	--	50	0	0	2	1
47			C:23 Geochemistry and Isotope Geology	50	50	3	0	0	3
			C:23P Geochemistry and Isotope Geology Lab	--	50	0	0	2	1
			Major Elective 7 (24)			3	0	0	3
48			A: Watershed Management	50	50	0	0	2	1
			AP: Watershed Management Lab	--	50	3	0	0	3
			Major Elective 7 (24)			0	0	2	1
49			B: Disaster Management	50	50	3	0	0	3
			BP: Disaster Management Lab	--	50	0	0	2	1
	VIII		Major Elective 8 (25)			3	0	0	3
50			A:Quaternary Geology	50	50	0	0	2	1
			AP: Quaternary Geology Lab	--	50	3	0	0	3
			Major Elective 8 (25)			0	0	2	1
51			B: Sedimentary Basins of India	50	50	3	0	0	3
			BP: Sedimentary Basins of India Lab	--	50	0	0	2	1
End of the Semester VIII of 4th Year									

Courses - Credit Distribution		
Component	**Distribution**	**Credits**
Major	11 Core Courses × 4 Credits = 44	60
	4 Skill Courses × 4 Credits = 16	
Minor	6 Courses × 4 Credits	24
AECC (Languages)	English: 3 Courses × 3 Credits = 9	18
	MIL: 3 Courses × 3 Credits = 9	
Multidisciplinary Courses	3 Courses × 2 Credits	6
Skill Enhancement Courses (SECs)	AI: 2 Courses × 4 Credits = 8	12
	Others: 2 Courses × 2 Credits = 4	
Value Added Course	Environmental Education = 2	2
CSP + Internship	-	4
Total	**-**	**126**

Scheme of Valuation for Practical Examinations			
S. No.	Description	Odd Semester (Internal Practical)	Even Semester (External Practical)
1	Record Maintenance*	10	10
2	Viva-Voce	10	10
3	Problem Solving / Experiment/ Procedure Explanation	15	15
4	Lab Performance	15	15
Total		**50 Marks**	**50 Marks**

***Award of Marks for Record Maintenance**

S. No.	Number of Practicals Recorded	Marks Awarded
1	10 Practicals and Above	10
2	8 Practicals	8
3	6 Practicals	6
4	5 Practicals	5
5	Less than 5	0

- Odd Semesters (**Internal**): Conducted by the concerned faculty (course teacher). One additional examiner will be nominated by the Department In-charge.
- Even Semesters (**External**): Conducted jointly by an External Examiner (from another college/university) and the concerned faculty (as Internal Examiner).

Minutes of the Meeting

Chairperson: Dr. M.R. Goutham, Head of the Department of Geology

Members Present:

1. Prof. Y. Srinivasa Rao, Head, Dept. of Geosciences, Adikavi Nannaya University, Rajahmundry - **University Nominee**
2. Dr. P. Padmasree, HoD, Department of Geology, Government Arts College (A), Anantapuramu - **Subject Expert (**Attended online)
3. Dr. P. Ganapathi Rao, HoD, Department of Geology, MR College (A), Vizianagaram - **Subject Expert (**Attended online)
4. Sri P.V.V.S.S. Dileep Allavarapu, Assistant Geophysicist, Directorate Ground Water & Water Audit Department, Vijayawada- **Industrial Nominee**
5. Dr. N. Srinivasa Rao, Faculty member - **Member**
6. Mr. S. Venkatesh, Faculty member - **Member**
7. Dr. R. Anil Kumar, Faculty member - **Member**
8. Mr. Ch. Abhishek, Faculty member - **Member**
9. Mr. B. Sai Krishna, Faculty member - **Member**
10. Mr. B. Satya David Raju, IIT Madras - **Student Nominee**

The meeting of the Board of Studies in Geology commenced under the Chairmanship of Dr. M.R. Goutham, Head of the Department of Geology.

The Chairman extended a cordial welcome to all the members of the Board and expressed gratitude for their presence and participation. He highlighted the importance of the meeting in the context of revising and approving the B.Sc. (Honours) Geology curriculum framework to be implemented from the academic year 2025-26.

In his opening remarks, the Dr. Goutham informed the members that, being an autonomous institution, the College has developed the new curriculum structure in line with NEP-2020 and UGC guidelines. He further noted that the structure was evolved with comprehensive feedback from stakeholders, including students, alumni, faculty

members, industry representatives, and academic experts.

He emphasized that the revised framework aims to:

- strengthen the core foundations of geology,
- provide multi-disciplinary exposure,
- incorporate skill enhancement and employability components,
- align with Outcome Based Education (OBE), and
- prepare students for research, higher education, and professional careers.

He concluded his remarks by seeking the active contributions and suggestions of the members to enrich and finalize the curriculum framework.

Agenda Item 1: New Curricular framework for academic year 2025-26

Discussion

Dr. M.R. Goutham, Head of the Department of Geology and Chairman, BoS, explained to the members the proposed Curriculum Framework for B.Sc. (Honours) from A.Y. 2025-26. He added that this framework has been evolved in line with NEP 2020.

He explained the Board that the curriculum structure had already been revised during 2023-24 with the introduction of Single Major Programs. Subsequently, considering the feedback received from various stakeholders, the framework for the Academic Year 2025-26 has been further refined by adding more number of Ability Enhancement and skill-based courses to support holistic development of the students.

He informed that the proposed framework provides **flexibility, skill orientation, and multi-disciplinary exposure**, aligning with national standards. He added that its effective implementation will depend on coordination across departments, industry collaborations for internships, and timely preparation of course syllabi and rubrics.

Dr. Goutham further stated that under the earlier curriculum structure, Pathway Courses were offered in Semester I to provide students sufficient time to decide on their Minor Program

in Semester II. However, it was observed that evaluating these pathway courses posed practical difficulties, as they covered a wide range of subjects such as Mathematics, Physics, Chemistry, and Basic Computer Skills. Ensuring uniform delivery and assessment of these courses at the degree level proved challenging.

To overcome these concerns, the revised framework has replaced Pathway Courses with discipline-specific Fundamental Computer Courses, and the selection of the Minor Program has been postponed to Semester III. Student feedback also revealed that restricting Ability Enhancement Courses (AECCs) to the first two semesters limited their effectiveness; accordingly, AECCs have now been extended up to Semester III.

In addition, the duration and credit allocation of the Community Service Project (CSP) have been reduced. Previously, the structure included one short-term internship and one semester-long internship, amounting to nearly eight months. As students felt this duration was excessive, the internship component has now been rationalized to an eight-week Program carrying three credits, to be completed concurrently with regular semester courses.

The total credit requirement for the three-year degree Program is fixed at 126 credits. The Major Discipline comprises 15 courses, including core and skill-oriented papers, accounting for 60 credits, while the Minor Program consists of 6 courses with a total of 24 credits. Skill Enhancement Courses (SECs) have been introduced in Semesters I and II, with mandatory courses on (i) Fundamentals of Artificial Intelligence and (ii) Applications of Artificial Intelligence.

The Indian Knowledge System (IKS) has been introduced in Semester II as a value-added audit course. Environmental Education is included in Semester V with two credits, and three Multidisciplinary Courses are incorporated across Semesters II, III, and IV.

During the deliberations, Subject Expert Mr. Dileep sought clarification on the Multiple Entry-Exit options and corresponding credit requirements. In response, Dr. Goutham explained that students may exit after the first year with 40 credits and obtain a Certificate in Geology, subject to completion of the CSP and a four-week MOOC carrying one additional credit. After completing 85 credits at the end of the second year, students are eligible for a Diploma in Geology if they want to exit. For the four-year Honours degree, a total of 170 credits is required.

Subject Expert Dr. Ganapathi Rao enquired about the continuation of the four-year degree Program. The Chairman clarified that the Program could not be continued as no student has opted for the same. The department has therefore restricted a viability criterion of 20%

enrolment, with a minimum of 12 students, for offering the fourth year.

The Subject Experts appreciated the department's initiative in revising the curriculum in alignment with NEP 2020 and its emphasis on the holistic development of students.

After detailed discussion on the Curriculum Framework for B.Sc. (Honours) from A.Y. 2025-26, as explained by Dr. M.R. Goutham, Head of the Department of Geology and Chairman, BoS, the members of the Board unanimously approved the structure.

The Board appreciated the introduction of **Skill Enhancement Courses** in Geology in areas such as Remote Sensing & GIS, Hydrogeology, Environmental Geology, Mineral Exploration, Engineering Geology, Disaster Management and Climate Studies. The Board recommended strengthening collaborations with industries, government organizations, and research institutes for effective internships, field training, and skill development.

Resolution 1: The Board of Studies unanimously resolved to approve and adopt the new B.Sc. (Honours) Curriculum Framework 2025-26 designed by the College, evolved through stakeholder consultation and feedback, for implementation in the Department of Geology with effect from the Academic Year 2025-26.

Item 2: Curriculum design for B.Sc.(Honors- Geology) w.e.f. 2025-26

The Chairman, Dr. Goutham, placed before the Board the semester-wise syllabus of the department's Major Programme, B.Sc. (Honours) in Geology, designed in accordance with the Revised Curriculum Framework to be implemented from the Academic Year 2025-26. He provided a detailed overview of the Core Courses offered in Semesters I and II, and initiated comprehensive deliberations on the course objectives, Course Learning Outcomes (CLOs), and their relevance to contemporary academic and industry requirements. The Chairman highlighted that all courses had been redesigned and updated to ensure academic rigor, industry relevance, sustainability, and alignment with emerging trends in geosciences.

The University Nominee, Prof. Y. Srinivasa Rao, along with the Subject Experts, Dr. Padmasree and Dr. Ganapathi Rao, and the Industry Expert, Mr. Dileep, appreciated the systematic and well-structured presentation and congratulated the department on the quality of the syllabus design. During the discussion, the Industry Expert suggested exploring the integration of open-source software and virtual laboratory platforms, wherever feasible, to enhance experiential learning. The Board welcomed the suggestion and noted it for implementation.

The members of the Board engaged in detailed discussions on the individual course contents, objectives, and learning outcomes, and commended the department for effectively aligning the syllabus with the recommendations of NEP 2020 and the state-level academic framework.

Resolutions

2. The Board of Studies unanimously approved the Curriculum Design for B.Sc. (Honours) - Geology, developed in accordance with the Revised Curriculum Framework for 2025-26.
3. The Board recommended the integration of open-source laboratory and virtual lab components, strengthening the focus on clearly defined Course Learning Outcomes (CLOs), and the continued inclusion of industry-relevant and skill-oriented content.
4. The Board resolved to recommend the approved syllabus for implementation from the Academic Year 2025-26 and to forward the same to the Academic Council for its approval.

Item 3: Design of Course Objectives and Course Learning Outcomes (CLOs)

Discussion

While presenting the detailed syllabus, the Chairman, Dr. Goutham, highlighted that all courses under the revised curriculum have been systematically structured with clearly articulated Course Objectives and Course Learning Outcomes (CLOs), with the aim of ensuring measurable and outcome-oriented student learning aligned with the overall programme objectives.

He explained that the CLOs have been formulated in accordance with Bloom's Taxonomy, addressing various cognitive levels such as remembering, understanding, applying, analyzing, evaluating, and creating. Each CLO has been carefully mapped to the relevant Program Learning Outcomes (PLOs) and their associated Performance Indicators (PIs), thereby enabling a structured framework for assessment, monitoring, and attainment analysis.

The Chairman further elaborated on the assessment design methodology, demonstrating how question papers are prepared with due consideration to CLO-PLO alignment. This approach facilitates the systematic calculation of CLO attainment levels at the conclusion of each course. In this context, he presented model question papers for Semesters I and II and explained the concept document developed by the College Academic Cell, which provides comprehensive guidelines

for CLO-PLO mapping, assessment strategies, and attainment evaluation.

This was followed by an in-depth discussion among the members. Subject Expert Dr. Padmasree appreciated the initiative and observed that *"the strength and effectiveness of this Board of Studies meeting lies in the clarity of this concept and the careful design of the question papers and attainment framework."* Subject Expert Dr. Ganapathi Rao also commended the structured mapping model, noting that while it holds significant potential for improving learning outcomes, it also poses a pedagogical challenge that requires faculty preparedness for effective implementation.

In response, the Chairman informed the Board that the institution proposes to conduct Faculty Development Programmes (FDPs) and hands-on workshops to build faculty capacity and ensure the effective adoption of CLO-PLO mapping and Outcome-Based Education (OBE) practices across the department.

The Board noted that this approach ensures strong alignment of the syllabus with the recommendations of NEP 2020 and the state-level academic framework.

Resolutions

5. The Board of Studies examined and approved the formulation of Course Objectives and Course Learning Outcomes (CLOs) for all courses under the revised curriculum, designed in accordance with Bloom's Taxonomy and Outcome-Based Education (OBE) principles.
6. The Board appreciated the systematic CLO-PLO-PI mapping framework, the incorporation of attainment measurement through model question papers, and the department's initiative in adopting academic best practices to enhance quality assurance and accountability in learning outcomes.
7. The Board resolved to implement the CLO-PLO mapping and attainment evaluation process across all courses of the department and to organize Faculty Development Programmes (FDPs) for training faculty members in the effective design, implementation, and assessment of learning outcomes.

Item 4: Curriculum design for III,IV,V,VII and VIII semesters B.Sc.(Honors-Geology) w.e.f. 2023-24

Discussion

The Chairman, Dr. Goutham, placed before the Board the semester-wise syllabus for the 2023-24 and 2024-25 admitted batches of the B.Sc. (Geology) programme covering Semesters III, IV, V, and VI. He informed the members that the syllabi for Semesters III and IV, including the Minor courses, remain unchanged and shall continue to be implemented as per the existing approved curriculum.

It was further explained that the courses proposed for the subsequent semesters have been designed to keep pace with recent industry developments and to strengthen students' domain-specific competencies. The Chairman presented the detailed syllabi of the newly introduced courses, which were deliberated upon at length by the Board.

The Industry Nominee, Mr. Dileep, suggested the inclusion of industry-oriented case studies within the course units to enhance practical exposure and application-based learning. The Board welcomed and unanimously agreed to the suggestion.

The University Nominee, Prof. Y. Srinivasa Rao, sought clarification on the extent of major or minor revisions in the syllabus. In response, the Chairman clarified that substantial revisions had already been undertaken in the previous academic year, and that a new curricular framework aligned with NEP 2020 has been formulated for the forthcoming batches. The present proposal, he explained, pertains solely to the semester-wise continuation and introduction of courses for the ongoing batches.

All members expressed their consent with the proposed curriculum and appreciated the department's initiative in integrating advanced and technology-driven content into the programme.

Resolutions

8. The Board of Studies approved the semester-wise curriculum for Semesters III, IV, V, and VI of the B.Sc. (Honours) Geology programme for the 2023-24 and 2024-25 admitted batches.
9. The Board endorsed the introduction of the proposed new courses and appreciated the incorporation of industry-oriented case studies, as suggested by the Industry

Nominee.

10. It was resolved to recommend the approved semester-wise curriculum for implementation and to forward the same to the Academic Council for its approval.

Item No 5: Minor Program in Geology (for Non-Geology Students)

Discussion

The Chairman, Dr. Goutham, placed before the Board the curriculum structure for the proposed Minor Programme in Geology. He informed the members that, in accordance with the Revised Curriculum Framework to be implemented from the Academic Year 2025-26, the Minor Programme will be offered from Semester III onwards.

He explained that the Minor Programme comprises 6 courses, to be completed over Semesters III, IV, V, and VI, enabling students from other disciplines to acquire additional domain-specific knowledge, thereby enhancing their employability prospects and interdisciplinary competence.

During the deliberations, Subject Expert Dr. Ganapathi Rao sought clarification regarding the availability of a Minor Programme for students pursuing Geology as their Major. In response, the Chairman clarified that for B.Sc. (Geology) Major students, Computer Applications has been designated as the Minor Programme, in line with academic requirements and NEP 2020 guidelines. Subject Expert Dr. Padmasree appreciated this combination and observed that computational skills are crucial for higher studies and contemporary geoscience applications.

The Chairman further elaborated that students majoring in Geography will be offered Geology as a Minor Programme by the department. The Board noted that this arrangement supports the multidisciplinary and flexible learning objectives envisaged under NEP 2020.

All members expressed their satisfaction with the well-structured Minor Programme design and acknowledged its relevance within the multidisciplinary academic framework.

Resolutions

11. The Board of Studies approved the introduction of the Minor Programme in Geology for non-Geology students, in accordance with the Revised Curriculum Framework effective from the Academic Year 2025-26.
12. The Board resolved to recommend the approved Minor Programme structures for implementation from the Academic Year 2025-26 and to forward the proposal to the Academic Council for its approval.

Item No 6: Pedagogical Approaches and Skill Orientation (SWAYAM, MOOCS)

Discussion

The Chairman, Dr. Goutham, placed before the Board an overview of the pedagogical practices and skill-oriented strategies adopted by the department to enhance the overall effectiveness of the teaching-learning process. He explained that a strong emphasis has been laid on experiential learning, with internships incorporated in the final semester to provide students with hands-on exposure to industry and professional environments. He further stated that Project-Based Learning (PBL) has been reinforced through the introduction of a mandatory Community Service Project (CSP) to be undertaken immediately after Semester II by all students.

The Chairman also informed the Board that the department has ensured that all faculty members are trained in Information and Communication Technology (ICT) and are actively utilizing digital tools, learning management systems, and interactive teaching technologies in classroom instruction. These initiatives were noted to be in line with the learner-centric pedagogical approach and holistic skill development emphasized in the National Education Policy (NEP) 2020.

During the deliberations, the Industry Expert, Mr. Dileep, raised an important concern regarding the maintenance of academic integrity in the context of the growing use of Generative Artificial Intelligence tools. He observed that verifying the originality and authenticity of student assignments has become increasingly challenging and suggested the adoption of plagiarism detection software to uphold academic standards.

In response, the Chairman acknowledged the relevance of the issue and agreed to pursue the matter with the Principal and the Academic Council. He emphasized the importance of formulating a college-wide plagiarism policy, particularly covering assignments, project reports, and internship documentation, in order to ensure academic honesty, transparency, and quality assurance.

The members of the Board appreciated the department's forward-looking pedagogical initiatives and its sustained commitment to continuous quality enhancement in teaching and learning practices.

Resolutions

13. The Board of Studies approved the pedagogical approaches presented, including:
    a. Strengthening of ***experiential learning through internships*** in the final semester,
    b. Enhancement of ***Project-Based Learning (PBL)*** through a mandatory Community Service Project (CSP) after Semester II,
    c. Effective ***integration of ICT-enabled teaching-learning tools*** across all courses, and
    d. Embedding of ***skill-oriented practical components*** within the curriculum.
14. The Board also recommended the adoption of a plagiarism detection mechanism and the formulation of a college-wide plagiarism policy, as suggested by the Industry Expert. The Chairman will place this recommendation before the Principal and the Academic Council for necessary implementation.
15. It was resolved to continue and further strengthen these pedagogical practices to ensure the delivery of high-quality, outcome-based education.

Item No. 7: Design model question papers and identifying potential paper setters

Discussion

The Chairman, Dr. Goutham, presented before the Board the Model Question Paper blueprint, explaining in detail its structure, alignment with Bloom's Taxonomy, and its systematic linkage to Course Learning Outcomes (CLOs), Program Learning Outcomes (PLOs), and Performance Indicators (PIs). He demonstrated how the proposed blueprint ensures balanced coverage of all course units, facilitates outcome-based assessment, and maintains the required academic rigor and uniformity in evaluation.

The Chairman elaborated that the Model Question Paper is structured to include:

- Five essay-type questions, each mapped to higher-order cognitive levels of Bloom's Taxonomy, with internal choice from each unit, thereby ensuring coverage of all five units of the course; and
- Eight short-answer questions of three marks each, out of which students are required to answer any five, ensuring adequate representation from all units.

The Model Question Papers prepared for Semesters I and II were presented in detail, illustrating their alignment with Outcome-Based Education (OBE) principles and demonstrating how they facilitate CLO attainment measurement and analysis.

During the discussion, Subject Expert Dr. Padmasree appreciated the systematic and meticulous preparation of the model question papers, noting their high academic quality and strong alignment

with Bloom's Taxonomy. She observed that the adoption of such a structured question paper blueprint would significantly contribute to consistency and transparency in evaluation practices. She further suggested the development of a comprehensive question bank for the benefit of both students and paper setters, to support effective implementation and uniform assessment standards. The Chairman acknowledged the suggestion and agreed to initiate the development of a structured, course-wise question bank, aligned with CLOs and unit-wise learning outcomes.

Resolutions

16. The Board of Studies approved the Model Question Paper blueprint and the Model Question Papers presented for Semesters I and II, noting their alignment with Bloom's Taxonomy and the CLO–PLO mapping framework.
17. The Board recommended the preparation of course-wise Question Banks to support paper setters and to provide students with structured academic resources. It was resolved that the department shall develop and implement the question banks in alignment with the approved blueprint and defined learning outcomes.

Item No 8: Evaluation and Assessment Reforms

Discussion

The Chairman, Dr. Goutham, placed before the Board the Continuous Internal Assessment (CIA) and Semester End Examination (SEE) patterns, along with the concept document issued by the College, which outlines the evaluation framework in accordance with the National Education Policy (NEP) 2020. He explained that the overall assessment structure is designed to ensure balanced, continuous, and outcome-oriented evaluation, with the following weightage:

- CIA: 50 marks
- SEE: 50 marks

The Chairman elaborated that the CIA component comprises multiple assessment tools aimed at promoting comprehensive and holistic evaluation of student performance. These include Mid-Term / Internal Assessment Examinations, Online Examinations, Assignments, Clean & Green activities (student participation), Attendance, pedagogy-related components, and Seminars/Presentations. He further informed the Board that the minimum qualifying requirement for CIA is 40%.

With regard to practical examinations, the Chairman clarified the evaluation procedures as

follows:

- For odd semesters, the Internal Practical Examination shall be conducted and evaluated by the concerned faculty member, along with an additional internal expert nominated by the Head of the Department.
- For even semesters, the External Practical Examination shall be conducted by an external examiner appointed through the Controller of Examinations (CoE).

He also stated that the minimum qualifying mark for practical examinations is 50%.

During the deliberations, the University Nominee, Prof. Y. Srinivasa Rao, sought clarification on the procedure to be followed in cases where a student fails to qualify in the CIA. In response, the Chairman explained that if a student meets the attendance requirement and has completed all other mandatory CIA components, but fails in either the Mid-Term or Online Mid-Term Examination, the student will be permitted to reappear in the subsequent semester, subject to payment of the prescribed fee and approval of the Principal and the Controller of Examinations.

Resolutions

18. The Board of Studies approved the proposed evaluation and assessment reforms, including the revised CIA and SEE structure in alignment with NEP 2020.
19. The Board resolved to adopt the following:
    a. CIA of 50 marks with a multi-component evaluation framework,
    b. SEE of 50 marks to be conducted as per the approved question paper blueprint,
    c. Internal and External practical examination procedures as presented, and
    d. CIA qualifying criteria and re-assessment procedure for students who do not qualify in CIA components.

Item No 9: Academic activities of the Department for the Academic year 2025-26

The Chairman presented a comprehensive list of activities planned by the department for the academic year 2025-26. After a thorough discussion, the Board members approved the following departmental activities.

Date	Event	Activities	In collaboration with
16 October 2025	National Fossil Day	Lectures on importance of fossils in estimating the age of the rocks/earth.	Department of Zoology & Botany
Feb/Mar 2026	One-week Geological Fieldtrip in and around Cuddaph Basin		
	Bhuvana Bodha 2024- A student-centred activity		
21 March 2026	International Day of Forests	1. Wild forest tree plantation on Campus 2. Spreading of seed balls in local forests	Botany department
22 March 2026	World Water Day	1. Seminar/Invited lectures on importance of water in achieving Sustainable Development Goals of UN 2. Water-themed competitions, quizzes, and contests.	Central Groundwater Board/State Groundwater Department
22 April 2026	Earth Day	Invited Lectures on *Earth Resources*.	
5 June 2026	World Environment Day	Guest lecture on "*Application of geological knowledge to the investigation of processes occurring at or near Earth's surface in order to mitigate natural hazards and minimize environmental degradation*"	

During discussions, the university nominee Prof. Y. Srinivasa Rao and subject experts enquired about the budgetary needs to implement the above action plan. The Chairman responded that the College will provide partial financial assistance to organize the events from internal resources of the college. The university nominee Prof. Y. Srinivasa Rao suggested to approach any funding agency and organize a national / International seminar/conference which was accepted by the Board.

Resolution 20

The Action plan of the department for the Academic Year 2025-26has been unanimously approved by all members. The Department will implement the proposed academic activities as per the plan.

Item No 10: Initiation of Certificate Courses on "Groundwater Exploration Techniques"

Discussion

The Chairman, Dr. Goutham, placed before the Board a proposal for initiating a Certificate Course on "Groundwater Exploration Techniques" under the Department of Geology. He informed the members that the proposed course is envisioned as a skill-oriented, value-added programme intended to enhance students' practical expertise, employability, and field readiness in groundwater studies, in line with the objectives of NEP–2020.

Dr. Goutham explained that groundwater exploration and sustainable aquifer management have become critical national priorities owing to increasing water stress, climate change impacts, rapid urbanization, and agricultural demand. There is a growing requirement for trained personnel with hands-on skills in groundwater prospecting, borewell site selection, aquifer characterization, and basic geophysical methods. In this context, the department proposes the certificate course to cater to UG and PG students of Geology and allied disciplines, as well as other interested learners, thereby promoting multidisciplinary and lifelong learning.

He further elaborated that the course would be practice- and field-oriented, covering topics such as fundamentals of hydrogeology, groundwater occurrence and movement, surface and subsurface indicators of groundwater, electrical resistivity techniques, borewell site selection, well logging basics, interpretation of geophysical data, and preparation of groundwater investigation reports. Adequate emphasis would be given to field demonstrations, case studies, and real-time data interpretation, ensuring a strong interface between theory and application.

Dr. Goutham also informed that the programme would be delivered through a blended mode, comprising classroom teaching, fieldwork, and hands-on practical sessions. He highlighted that the department possesses qualified faculty with expertise in hydrogeology, and has scope for collaboration with external experts, agencies, and NGOs, which would enrich the learning experience through guest lectures and field exposure.

During the discussion, the University Nominee, Prof. Y. Srinivasa Rao, suggested that the department may explore obtaining formal affiliation for the certificate course from the affiliating university by paying the prescribed affiliation charges. He opined that such an affiliation would confer official academic recognition, enhance the credibility and acceptability of the certificate,

and strengthen the status of the programme as an authorized offering of the college.

The Subject Expert, Dr. Padmasree, sought clarification on the necessity of initiating a separate certificate course when several relevant courses are already being offered through NPTEL. Responding to this, the Chairman, Dr. Goutham clarified that while NPTEL offers courses primarily in areas such as Remote Sensing, GIS, and certain fundamental geology subjects (e.g., petrology), it does not offer a dedicated, field-oriented course specifically focused on "Groundwater Exploration Techniques." He emphasized that groundwater exploration is a highly applied and location-specific discipline, requiring hands-on training, field demonstrations, and practical interpretation skills, which cannot be adequately addressed through purely online platforms. Hence, the proposed certificate course would fill an important skill gap by offering experiential learning beyond the scope of existing NPTEL courses.

The Board members further discussed aspects relating to course duration, eligibility, assessment methods, and certification. It was suggested that the course be structured as a short-term certificate programme with clearly defined objectives and learning outcomes, evaluated through attendance, practical assignments, field reports, and a final assessment, thereby ensuring academic rigor and transparency.

The Board appreciated the proposal and observed that the certificate course aligns well with the skill development, vocational education, employability, and entrepreneurship thrust of NEP–2020. Members noted that the programme would enhance students' prospects for employment in groundwater consultancy, government departments, NGOs, and self-employment ventures, while also strengthening the department's outreach and academic innovation.

Dr. Goutham assured the Board that a detailed syllabus, course structure, evaluation scheme, and implementation framework, including the possibility of university affiliation, would be prepared and submitted to the appropriate academic bodies for approval. He further clarified that the course would be offered in accordance with institutional norms, without adversely affecting the regular academic programme.

Resolutions

21. The Board of Studies approved the proposal to initiate a Certificate Course on "Groundwater Exploration Techniques" as a skill-oriented, value-added programme under the Department of Geology, in alignment with NEP–2020 and the objectives of outcome-based and experiential learning.

22. The Board further recommended that the department **explore obtaining affiliation from the affiliating university** by paying the prescribed affiliation charges, so that the certificate course may be offered as an **official programme of the college**.

Item 11. Any Other Items with the Permission of the Chair

a) Mandatory Fieldwork for Geology Students

With the permission of the Chair, the matter of mandatory fieldwork for Geology students was taken up for discussion. Both the Subject Experts emphasized that Geology is inherently a field-oriented science, and practical exposure through systematic fieldwork is essential for students to understand geological processes, structures, lithological variations, and real-world applications of classroom learning.

In response, the Chairman, Dr. Goutham, informed the Board that at present, final-year undergraduate and postgraduate students are exposed to local field visits, which provide preliminary hands-on experience. However, he acknowledged that these field visits are limited in duration and scope and may not be sufficient to fully meet the disciplinary requirements of geological training.

After detailed deliberation, the members collectively expressed the view that structured and mandatory fieldwork should form an integral component of the Geology curriculum. The Board suggested that students of the Second Year and Final Year should be required to undertake a minimum one-week field trip, focusing on geological mapping, stratigraphic studies, structural analysis, geomorphological observations, and basic field-based data collection relevant to the course outcomes.

The Board further recommended that students should submit a comprehensive fieldwork report, documenting observations, interpretations, maps, sketches, photographs, and conclusions, thereby reinforcing analytical and reporting skills. To ensure academic seriousness and accountability, the members suggested that appropriate marks be allocated for fieldwork and the field report as part of the evaluation framework.

The Board also deliberated on the scheduling of such fieldwork and clearly emphasized that the proposed field trips should be planned in a manner that does not interfere with other mandatory curricular components, including the Community Service Project (CSP), short-term internships, and long-term internships prescribed under the NEP-aligned curriculum. It was

suggested that the department prepare a well-coordinated academic calendar to accommodate all these requirements without overlap.

All members unanimously agreed that the introduction of mandatory, well-structured fieldwork would significantly enhance students' practical competencies, professional readiness, and alignment with national and international standards in geological education.

Resolutions

23. It is resolved that the Board of Studies approved the introduction of mandatory fieldwork as an integral component of the Geology curriculum, recognizing the field-oriented nature of the discipline and its importance in achieving program learning outcomes.
24. It is resolved that Second Year and Final Year undergraduate students of Geology shall undertake a minimum one-week field trip, and submit a fieldwork report documenting geological observations, interpretations, and analyses as prescribed by the department.
25. It is resolved that appropriate marks shall be allocated for fieldwork and the fieldwork report as part of the evaluation framework, in accordance with Outcome-Based Education (OBE) principles.
26. It is resolved that the fieldwork shall be planned without overlap or interference with other mandatory curricular components such as the Community Service Project (CSP), short-term internships, and long-term internships, ensuring smooth academic progression.
27. It is further resolved that the department shall prepare detailed fieldwork guidelines, assessment criteria, and scheduling plans, and place the same before the Academic Council for approval and implementation.

b) Development and Upgradation of Laboratory Infrastructure

Discussion

After the completion of the formal academic deliberations, the members of the Board of Studies visited the Department of Geology to review the existing laboratory facilities, with particular focus on the recently established Remote Sensing & GIS Laboratory and the Hydrogeochemistry Laboratory.

During the visit, the Chairman, Dr. Goutham, briefed the Board on the current status of the Remote Sensing & GIS laboratory. He informed that the laboratory is presently functional using open-source software, primarily QGIS, which is being effectively utilized for teaching Remote Sensing, GIS applications, and introductory spatial analysis. He further stated that, in

order to expose students to industry-standard proprietary software and to support advanced research, consultancy, and skill-based training, the department proposes to procure licensed software such as ArcGIS in the future.

The Board members appreciated the initiative taken by the Chairman in establishing the Remote Sensing & GIS laboratory and commended the department for effectively leveraging open-source tools despite resource constraints.

The Chairman then apprised the Board about the facilities available in the Hydrogeochemistry Laboratory, stating that at present, the laboratory is equipped to estimate only a limited number of basic cations and anions. He emphasized that, to strengthen practical training, research capability, and employability skills in groundwater and hydrogeochemical studies, there is a pressing need to upgrade the laboratory with essential analytical instruments such as UV–Visible Spectrophotometer, Flame Photometer, and related accessories. He also informed the Board that due to financial limitations, the department has not yet been able to procure these instruments.

The Board strongly emphasized the importance of a well-equipped hydrogeochemistry laboratory, especially in the context of groundwater studies, environmental monitoring, and applied geology, and unanimously recommended that the laboratory be upgraded with the required basic analytical instruments at the earliest.

During the interaction, the Industrial Expert, Mr. Dileep, enquired about the status of geophysical studies in the department. Responding to this, the Chairman informed the Board that the college has recently sanctioned a DDR3–SSR Electrical Resistivity Apparatus to the department. He stated that the equipment is currently being used for student training, field demonstrations, and will also be extensively utilized in the proposed Certificate Course on Groundwater Exploration Techniques.

Mr. Dileep, being a geophysicist, appreciated this development and assured the Board and the department of his full cooperation and technical support in strengthening geophysical studies, field applications, and student training activities.

Overall, the Board expressed satisfaction with the department’s efforts in developing laboratory infrastructure and acknowledged the proactive initiatives taken by the Chairman to strengthen practical, research, and skill-oriented learning.

Resolutions

28. Resolved that the Board of Studies appreciated the efforts of the Department of Geology and the Chairman, Dr. Goutham, in establishing and strengthening the Remote Sensing & GIS Laboratory using open-source software and recommended exploring the procurement of licensed software such as ArcGIS to enhance advanced learning, research, and industry readiness.
29. Resolved that the Board strongly recommended the upgradation of the Hydrogeochemistry Laboratory by equipping it with essential analytical instruments such as UV–Visible Spectrophotometer, Flame Photometer, and other basic facilities to improve practical training, research output, and employability skills.
30. Resolved that the Board took note of the availability of the DDR3–SSR Electrical Resistivity Apparatus in the department and approved its utilization for regular academic training, fieldwork, and the proposed Certificate Course on Groundwater Exploration Techniques.
31. Resolved further that the department shall place the requirement for laboratory upgradation before the Principal and the Academic Council and explore funding avenues through college funds, government grants, research schemes, and consultancy initiatives.
32. Resolved that the Industrial Expert's assurance of technical support in geophysical studies was noted with appreciation, and collaborative efforts shall be encouraged for strengthening applied geoscience training.

The meeting concluded with formal vote of thanks proposed by Dr. Narra Srinivasa Rao, faculty member of the department.

Dr. M.R. Goutham
Chairman-BoS
Undergraduate Programs
Department of Geology
Government College (Autonomous),
Rajahmundry

Following Members attended the UG BoS Meeting on 15 September 2025

S.No	Name	Designation	Signature with date
1	Dr. M.R. Goutham Associate Professor & Head Department of Geology	Chairman	
2	Prof. Y. Srinivasa Rao Head, Department of Geosciences Adikavi Nannaya University Rajahmundry	University Nominee	
3	Dr. P. Padmasree Professor & Head Department of Geology Government Arts College (A) Anantapuramu	Subject Expert	
4	Dr. P. Ganapathi Rao Head, Department of Geology MR College (Autonomous) Vizianagaram	Subject Expert	
5	Sri P V V S S Dileep Allavarapu Asst. Geophysicist Directorate, Groundwater & Water Audit Department, Vijayawada	Industrial Nominee	
6	Dr. N. Srinivasa Rao	Faculty Member	
7	Mr. S. Venkatesh	Faculty Member	
8	Dr. R. Anil Kumar	Faculty Member	
9	Mr. Ch. Abhishek	Faculty Member	
10	Mr. B. Sai Krishna	Faculty Member	
11	B. Satya David Raju	Student Nominee	