



Central University of Kerala

Established by the Parliament of India vide the Central University Act, 2009(No.25 of 2009)

Kasaragod, Kerala, India, 671123

DEPARTMENT OF GEOLOGY

No. CUK/GEO/BOS/MIN/2021/01

Dtd: 17/08/2021

Minutes of the 2nd Meeting of the 2th Board of Studies in Geology held online at 10.00 a.m. on 17/08/2021

The Department of Geology, Central University of Kerala conducted the Board of Studies (BoS) meeting on 17th August, 2021. It was the Second BoS meeting of the second Board of Studies. Due to the COVID-19 pandemic situation the meeting was conducted through online via Google Meet platform. The panel members included invited subject experts, Head of the Department, internal members and department faculties as special invitee. The attendees of the meeting were as follows: -

BoS Attendees:

Invited subject experts

- Prof. (Dr.) Rajneesh Bhutani, Professor, Department of Earth Sciences, Pondicherry University
- Prof. (Dr.) Rajesh Raghunath, Professor, Dept .of Geology, University of Kerala,
- Prof. (Dr.) Prakash Narasimha, K.N., Professor, Department of studies in Earth science, University of Mysore, Manasagangotri
- Dr. A. Anil Kumar, Director, Marine & Coastal Survey Division, Geological Survey of India, Manglaluru.

Internal members from the Central University of Kerala

- Dr. Pratheesh P., Assistant Professor and HOD (i/c), Dept. of Geology.
- Dr. Sijinkumar A.V., Assistant Professor, Dept. of Geology.
- Dr. S. Anbazhagi, Assistant Professor, Dept. of Environmental Science.

Special invitee from the Central University of Kerala

- Dr. Sandeep K., Assistant Professor, Dept. of Geology.
- Dr. Chandan Kumar B., Assistant Professor, Dept. of Geology.



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The BoS meeting started with the welcome address by Dr. Pratheesh P., Head of the Department (i/c). Dr. Pratheesh P. gave a brief introduction on the objectives of the BoS meeting. Thereafter, he welcomed all experts and faculty to the meeting, and briefed the agenda of BoS meeting.

The agenda for discussion in the BoS meeting was proposed by the Head of the Department. The main items discussed in the BoS are given below:

- (a) The inclusion of programme outcome and course outcomes in the syllabus of department of geology, central university of Kerala thereof.
- (b) Consider the revised syllabus for 2021 admission
- c) Inclusion of employment oriented courses in syllabus

The details of agenda-wise discussion and the final recommendation by the BoS are given below.

Agenda 1: The inclusion of programme outcome and course outcomes in the syllabus of department of geology, central university of Kerala thereof.

Dr. Pratheesh P. has explained the Faculty Council discussion regarding inclusion of programme outcome and course outcomes in the syllabus. Then Dr. Pratheesh P. invited the Board of Studies opinion. BoS members have accepted the proposed programme outcome and course outcome. Prof. Rajneesh Bhutani opined that there should be some integration of thinking skills in the programme outcome.

Recommendation: Following a detailed discussion on the contents, the members approved the inclusion of programme outcome and course outcomes in the Department of Geology, Central University of Kerala curriculum.

Agenda 2: Consider the revised syllabus for 2021 admission.

Dr. Pratheesh P. has presented the revised syllabus for 2021 along with proposed programme structure. BoS members have accepted the proposed programme structure with some small suggestions.



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Prof. Rajneesh Bhutani pointed that Geochemistry was missing from the curriculum, which is very much essential for an earth science. After a long discussion, BoS has decided to incorporate Geochemistry as a compulsory elective paper. Prof. Prakash Narasimha has suggested the usage of 'Planetary Sciences' instead of 'planetary Geosciences'. Dr. A. Anil Kumar has suggested a title change for Oceanography as 'Oceanography and Marine Geology'. Prof. (Dr.) Rajesh Raghunath has recommended some modifications in sequence stratigraphy. Apart from this BoS has recommended a number of additions in the core course discussion.

Recommendation: After a detailed discussion on the revised syllabus, the members unanimously approved the new syllabus for MSc Geology programme in Department of Geology Central University of Kerala. All the recommendations from the experts have incorporated in the revised syllabus.

Agenda 3: Inclusion of employment oriented courses in syllabus.

Dr. Pratheesh P. has explained the feedback received from the Alumni through the Alumni Coordinator, on the inclusion of employability oriented courses. He also pointed that the faculty council has discussed the same and incorporated a new core course 'Geospatial Technology and Engineering Geology' in the proposed syllabus. BoS had a fruitful discussion on the syllabus framework of the newly inducted course.

Recommendation: Following a detailed discussion on the contents, the members approved inclusion of 'Geospatial Technology and Engineering Geology' as core course in the proposed curriculum.

After this, overall agenda discussed in the BoS were summarised by Dr. Pratheesh P. Thereafter, Dr. Sijinkumar A.V. offered the vote of thanks, which concluded the BoS meeting.

Dr. Pratheesh P.

Head (i/c), Department of Geology

**CENTRAL UNIVERSITY OF KERALA
DEPARTMENT OF GEOLOGY
M.Sc. GEOLOGY**

Course Code	EGE 5203	Semester	II
Course Title	Sedimentology		
Credits	3	Type	Core

This is a participatory, experimental and employability based skill development course for sedimentological techniques.

Course Description

Sedimentology is the study of sediments and sedimentary rocks and the processes by which they are formed. The course will provide an understanding of sedimentary processes, collection and analysis of sedimentary data. It also develops an understanding of the processes involved in the formation and diagenesis of sedimentary rocks. The course deals with the analysis of deposits from a variety of continental, marginal marine and marine sedimentary environments using various sedimentary techniques. This course develops the skills needed to make interpretations of sedimentary successions, decipher sedimentary processes, past environmental conditions and provenance of sediments.

Course Outcome

By the end of the course, students are expected to be able to:

- Describe and interpret sedimentary rocks and their depositional environment.
- Describe and illustrate the various types of sedimentary structures and relate these to the processes which are responsible for these structures.
- Summarise the composition and properties of sedimentary rocks and justify the classification schemes used for these sediments.
- Evaluate the physical, chemical and biological processes that lead to sedimentary rock formation under different environmental conditions.
- Be conversant with the principal environments in which sediments are deposited and be able to identify these in the geological record on the basis of their distinguishing features.
- Interpret sedimentary processes based on the composition of the rock and sedimentary structures.
- Identify the depositional environment of sediments (i.e. continental; shallow and deep marine)
- Identify sedimentary deposits that are characteristic of various types of sedimentary basins

Course Structure

Module - 1

Fluid flow and sediment transport- Reynolds number, Froude Number, Hjulstrom's diagram. Sedimentary Textures: Concept of grain size and classification. Grain size estimation: direct measurement, sieving and settling methods. Modern methods- Laser diffraction analysis. Frequency distribution and grain size (statistical) parameters. Grain shape and fabric. Sedimentary structures: Classification and origin- depositional structures, deformational structures, erosional structures and biogenic structures. Applications of sedimentary structures in paleo-environmental and paleocurrent studies.

Module – 2

Sedimentary Petrology: Mineralogy, classification and depositional environments of conglomerate, sandstone, limestone and mud rock. Diagenesis of clastic and non-clastic rocks- diagenetic processes and diagenetic environments. Provenance studies: mineral stability, mineralogical maturity and mobility. Use of heavy minerals in provenance studies.

Module – 3

Depositional environments - marine, non-marine, and mixed depositional environments. The association of primary sedimentary structures and textural characteristics with depositional environments and settings. Concept of sedimentary facies, association models. Walther's Law of correlation of sedimentary facies. Types and classification of sedimentary basins. Basin analysis. Sedimentary basins of India.

Evaluation & Grading

Skill development (Analytical, Writing and Presentation) – 20%

Class Test – 20%

End Semester Assessment – 60%

References

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- Selley, R. C. (2000). Applied Sedimentology, Academic Press, 523p.
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