

**AG-303 Sedimentology****Credit Hours 2+1****Prerequisite:** AG-101**Learning Outcomes**

Students will be able to learn

- Various process of sedimentation
- Depositional environment
- Diagenetic environment

**Course Contents**

Introduction to Sedimentology, origin, transportation and deposition of sediments. Texture of sedimentary rocks and their statistical parameters. Sedimentary structures, their classification, morphology and significance. Classification and description of sedimentary rocks. Provenance of sediments. Diagenesis Concepts of sedimentary facies and facies associations. Physico-chemical controls of the sedimentary environments. Diagnostic features of fluvial, lagoonal, lacustrine, deltaic, tidal and marine environments. Tectonic controls of sedimentation.

**Lab.**

Grain size analysis of sediments and sedimentary rocks. Megascopic and microscopic study of sedimentary rocks. Separation and identification of heavy minerals. Study of sedimentary structures.

**TEACHING – LEARNING STRATEGIES**

- Lecture based examination
- Presentation/seminars
- Class discussion
- Quizzes

**ASSIGNMENTS – TYPE AND NUMBER WITH CALENDAR**

It is continuous assessment. The weightage of Assignments will be 25% before and after midterm assessment. It includes:

- classroom participation,
- attendance, assignments and presentation,
- homework
- attitude and behavior,
- hands-on-activities,
- short tests, quizzes etc.

## ASSESSMENT AND EXAMINATIONS

Sr. No.	Elements	Weightage	Details
1.	Mid Term Assessment	35%	It takes place at the mid-point of the semester
2.	Formative Assessment	25%	It is continuous assessment. It includes: classroom participation, attendance, assignments and presentation, homework, attitude and behavior, hands-on-activities, short tests, quizzes etc.
3.	Final Assessment	40%	It takes place at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.

### Books Recommended

1. Sand and sandstone by Pettijohn, F.J., Potter, P.E. & Siever, R., 1973, Springer Verlag.
2. Principles of Sedimentology by Friedman, G.M., & Sanders, J.E. 1978, John Wiley & Sons.
3. Depositional Sedimentary Environments by Reineck, H.E. & Singh, I.B., 1980, Springer – Verlag.
4. Carbonate Sedimentology by Tucker, M.E. & Wright, V.P, 1990, Blackwell.
5. Sedimentary Environment and facies by Reading, H.G., 1986, Balckwell
6. Applied Sedimentology by Selly, R.C., 1988, Chapman & Hall.
7. Petrology of Sedimentary Rocks by Boggs, Jr. S. 1992, Merril Publishing Co.
8. Sedimentary Rocks by Pettijohn, F.J., 1975, Harper and Row.
9. Sedimentary Geology by Prothero, D., & Schwab, F., 1996, W.H. Freeman & Co.