

Programme: M. Sc. (Marine Sciences)

Course Code: MSO 383**Title of the Course:** Sedimentology Practical

Number of Credits: 02

Effective from AY: June 2018-19

Prerequisites for the course:	Fundamental courses in all the branches of Marine Sciences of this University or any other University recognized as equivalent.	
Objective:	This course introduces to experiments to analysis to understand depositional environments and processes.	
Content:	Module – I 1. Grain size analysis – sand, silt, clay using pipette method – estimation and interpretation – at least ten samples from a sediment core (12 hrs; Ref 1,5) 2. Determination of organic carbon – at least ten samples from a sediment core (4 hrs; Ref 1, 4,6) 3. Heavy mineral identification (4 hrs; Ref 1,2) 4. Study of stratigraphic correlation (4 hrs; Ref5) 5. Study of paleo-current analysis (8 hrs; Ref4) Module – II 1. Measurement of sphericity and roundness of sediment grains - at least 30 grains (8 hrs; Ref 1,2) 2. Identification of sedimentary rocks (4 hrs; Ref 3,7) 3. Identification of sedimentary structures (4 hrs; Ref 3,4) 4. Study of sedimentary facies (4 hrs; Ref 4,5) 5. Preparation of samples for X-ray diffraction analysis (4 hrs; Ref 4,6) 6. XRD analysis for clay minerals (4 hrs; Ref 4,6) 7. Clay mineral identification and estimation of Semiquantitative percentages and interpretation (4 hrs; Ref 4,6)	24 hours 24 hours
Pedagogy:	Laboratory experiments / Computations / Plotting and Interpretations and analysis	

References/ Readings	1. Exercises in sedimentology, 1982 Freidman, G. M. and Johnson K. G., John wiley& sons. 2. A practical approach to sedimentology, 1987 Londholm, R., CBS Publication and Distributors. 3. Practical manual of sedimentary petrology, 1987 Babu S. K. and Sinha, D. K., CBS Publication and Distributors. 4. Procedures in sedimentary petrology, 1971 Carver, R. F., Wiley Interscience. 5. Text book of sedimentary petrology, 1981 Varma, V. K. and Prasad, C., Intl. Book Distribution. 6. Scientific method of analysis of sediments, 1987 Griffiths, J. C., McGraw – Hill. 7. The study of rocks in thin sections, 1985 Moorhouse, W. W., CBS Publication and Distributors. 8. Rutley's elements of mineralogy, 1984 Read, H. H., CBS Publication and Distributors.	
Learning Outcomes	1. Conducting laboratory experiments. 2. Analysis of data to understand paleo-current direction, facies, stratigraphic correlation, sedimentary structure, depositional environments. 3. Ability to interpret data sets to understand processes.	