## Name of the Programme: M. Sc.Marine Sciences Course Code: MSC 524 Title of the Course: Marine Geochemistry Practical Number of Credits: 01 Effective from AY: 2022-23

Prerequisites for the course:	Degree of Bachelor of Science of this University or an examination of any other uni recognized as equivalent.	versity
Objectives:	To determine quantitatively the composition of Earth and to discover laws which control the distribution of individual elements. The chemical analysis of sediment to analyze the concentration of different constituents.	
Content:	Determination of organic carbon in sediment by titrimetric method. (6 hours; References 1, 3) Determination of phosphorus in sediment. (6 hours; References 1, 2, 3) Digestion of sediment using HF:HNO <sub>3</sub> :HClO <sub>4</sub> acid mixture. (8 hours; References 3, 6) Estimation of Cr in sediment (5 hours; References 3, 4, 5, 6) Estimation of Zn in sediment (5 hours; References 3, 4, 5, 6)	30 hrs.
Pedagogy:	Demonstrations/ Laboratory experiments	
References/ Readings	<ol> <li>Grasshoff, K., Ehrhardt, M., Kremling, K. (1983). Methods of Seawater Analysis. VerlagChemie, Weinheim.</li> <li>Parsons, T. R., Maita, Y., Lalli, C. M. (1984). A Manual of Chemical and Biological Methods for Seawater Analysis. Oxford: Pergamon Press.</li> <li>Loring, D. H., Rantala, R. T. (1992). Manual for Geochemical Analysis of Marine Sediments and Suspended Particulate Matter. Earth Science Reviews, 32, 235- 283.</li> <li>Riley, J. P., Skirrow, G. (1975). Chemical Oceanography. Academic Press.</li> <li>S.Rice, E. W., Bridgewater, L. (2012). Standard Methods for the Examination of Water and Waste Water Analysis. Washington DC: American Public Health Association.</li> <li>Jarvis, I., Jarvis, K. E. (1985). Rare-Earth Element Geochemistry of Standard Sediments: A Study Using Inductively Coupled Plasma Spectrometry. Chemical Geology, 53, 335-344.</li> </ol>	
Course Outcome:	1.To develop an ability to analyze marine sediment constituents.	