Name of the Programme: M. Sc.Marine Sciences
Course Code: MSC 528
Title of the Course: Principles of Mineralogy and Geochemistry Practical
Number of Credits: 1
Effective from AY: 2022-23

Prerequisites for the course:	Degree of Bachelor of Science of this University or an examination of any other university recognized as equivalent.	
Objectives:	1. This course deals with the megascopic and petrographic identification of minerals. 2. It also deals with the use of instruments (Spectrophotometer, flame photometer) for analyses of different chemical constituents in water/soil/rocks.	
Content:	Observing and recording properties of representative minerals in hand specimens (7 hours; Reference 1, 3). Observation and recording of optical properties of rock forming minerals (7 hours; Reference 1, 2, 3). Determination of different chemical constituents in water/soil/rock using flame photometer and spectrophotometer. Reading of plots/graphs (8 hours; Reference 4). Numerical problems on partition coefficient, calculation of isotope ratios (8 hours; Reference 1, 2, 3).	30 hrs.
Pedagogy:	Megascopic and microscopic identification of minerals/Demonstrations/Laboratory experiments/Plotting and Interpretations.	
References/Readings	1.Mackenzie, W. S. (2015). *Atlas of the rock-forming minerals in thin section*. Routledge. 2.Barker, A. J. (2017). *A key for identification of rock-forming minerals in thin section* 3.Deer, W. A., Howie, R. A., and Zussman, J. (1992). *An introduction to the rock-forming minerals.* 2nd ed. Harlow, Essex, England. New York, NY. Longman Scientific and Technical. 4.Khandpur, R. S. (2006). *Handbook of analytical instruments*. New York, N.Y. McGraw-Hill Education LL	
Course outcome:	1. The student will learn the technique to identify minerals using physical and optical properties.	