Programme: M. Sc. (Marine Sciences)
Course Code: MSO 273 Title of the Course: Marine Chemistry Practical II
Number of Credits: 01
Effective from AY: June 2018-19

Prerequisites for the course:	Degree of Bachelor of Science of this University or an examination of any other University recognized as equivalent.	
Objective:	This course deals with the Analytical Chemistry of Seawater.	
Content:	1. Spectrophotometric determination of dissolved inorganic phosphate in seawater by ammonium molybdate – ascorbic acid method (6 hrs; Ref 1) 2. Spectrophotometric determination of nitrite in seawater by sulphanilamide – diamine method (6 hrs; Ref 1) 3. Spectrophotometric determination of nitrate in seawater by reduction to nitrite using copper – coated cadmium reduction column (6 hrs; Ref 1) 4. Spectrophotometric determination of ammonia in seawater by indophenol blue method (6 hrs; Ref 1) 5. Spectrophotometric determination of dissolved inorganic silicate in seawater by ammonium molybdate – ascorbic acid – oxalic acid method (6 hrs; Ref 1)	24 hours
Pedagogy:	Laboratory experiments/ field studies	
References/ Readings	1. Methods of Seawater Analysis, 1983, 1999 – Grasshoff, K., Ehrhardt, M. and Kremling, K.; Verlag Chemie, Weinheim. 2. Instrumental Methods of Chemical Analysis, 1981 – Ewing, G. W.; McGraw-Hill, New York.A 3. Manual of Chemical and Biological Methods for Seawater Analysis, 1984 – Parsons, T. R., Maita, Y. and Lalli, C. M.; Pergamon Press, Oxford.	

Learning Outcomes	1. Develop analytical skills to determine the concentrations of micro-nutrient elements (P, N and Si) in seawater/aqueous systems. 2. Apply techniques to seawater/natural waters to study the biogeochemistry of the marine environment/aquatic systems.	