Programme: M. Sc. (Marine Sciences)
Course Code: MSC 168Title of the Course: Marine Geology Practical I
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 introduces to experiments tomeasure parameters to understand near-shore and beach dynamics; bathymetry and heavy minerals.	
Content:	1. Field survey (Beach) - locating a station using compass and GPS; Beach profile measurement and sediment sample collection from different parts of the beach (4 hrs; Ref 2) 2. Plotting station locations on the base map and beach profile; volume computation from the given data (2hrs; Ref 2) 3. Conning and quartering, pre-treatment of sediment sample to remove calcium carbonate, organic matter and ferruginous material (2hrs; Ref 1, 6) 4. Grain size analysis (sand) using Ro-tap sieve shaker – batch I (8 hrs; Ref 1, 6) 5. Computation of weight and cumulative percentages, plotting frequency and probability graphs, computation of modes of transport and grain size parameters and interpretation (4 hrs; Ref 1, 6) 6. Heavy mineral separation from different fractions of sand and interpretation (4 hrs; Ref 1, 9) 7. Plot bathymetry lines and interpret geomorphology (4 hrs; Ref 4)	24 hours
Pedagogy:	Field surveys and sampling / Laboratory experiments / Computations / Plotting and Interpretations	

References/ Readings	1. Exercises in sedimentology, 1982 Freidman, G. M. and Johnson K. G., John wiley and sons. 2. Beach processes and sedimentation, 1976 Komar, P. D., Prentice Hall 3. Flume studies on the transport of sediments in estuarine shoaling processes-A report, 1962 Hydraulic 4. Practical manual of sedimentary petrology, 1987 Babu, S. K. and Sinha, D. K., CBS, Publishers and Distributors, Delhi. 5. The mineral sources of the sea, 1965 Mcro, J. L., Elsevier, Amsterdam.	
Learning Outcomes	1. Conducting field survey and sampling 2. Conducting laboratory experiments 3. Ability to interpret data sets to understand processes.	