

Programme: M. Sc. (Marine Sciences) Course Code: MSO 278 Number of Credits: 01 Effective from AY: June, 2018-19		
Title of the Course: GIS Applications in Marine Science Practical - I		
Prerequisites for the course:	Students who have undergone semester I of Marine Sciences.	
Objective:	To use GIS techniques in the field of oceanography / meteorology	
Content:	1. GIS, GIS software familiarization and image properties (8 hrs; Ref 1&2) 2. Data acquisition and integration in GIS software (6 hrs; Ref 1&3) 3. Image edge detection, Transects, spectra and time series images (6 hrs; Ref 3) 4. Contrast stretching, Colour palettes, smoothing satellite images(4 hrs; Ref 3 & 4) 5. Digitizing Vector maps (6 hrs; Ref 6)	24 hours
Pedagogy:	Tutorials/ assignments/practicals/field study	
References/ Readings	1. Practical Handbook of Digital Mapping: Terms and Concepts Arlinghaus, 1994 Sandra L., - CRC Press.0-8493-0131-9 2. Coastal and marine geospatial technologies. 2010. Ed. David R Green, Springer, ISBN 978-1-4020-9719-5 3. <i>Remote Sensing Handbook for Tropical Coastal Management</i> . Coastal Management Source books 3.2004.Edmund P. Green, Peter J. Mumby, Alasdair J. Edwards and Christopher D. Clark, UNESCO, Paris. 4. Principals of Geographic information systems- An introductory text book, 2009 - Eds :ottoHuisman and Roff A. de By (ed.) International Institute for Geo-Information and Earth Observation, Netherlands. 5. Essentials of Geographic Information Systems, 2011 - Jonathan Campbell, Michael Shin	

Publisher: Flat World Knowledge

6. **GRASS GIS: a multi-purpose Open Source GIS. Environmental** Modelling & Software. 2012 - Neteler, M., Bowman, M.H., Landa, M. and Metz, M.

Learning Outcomes Characterize data into line/ point / polygon feature. Geo-reference and image, integrate data into GIS, Digitization of Vector maps, identification of line from specific distance from high tide line,