

**Programme:** M. Sc. (Marine Sciences)

**Course Code:** MSO 279

**Title of the Course:** GIS Applications in Marine Science Practical -II

**Number of Credits:** 01

**Effective from AY:** June, 2018-19

<b>Prerequisites for the course:</b>	Students who have undergone semester I of Marine Sciences.	
<b>Objective:</b>	To use GIS techniques in the field of oceanography / meteorology	
<b>Content:</b>	1. The Importance of Acquiring satellite Images of the Appropriate resolution (4 hrs; Ref 3 & 5) 2. CRZ mapping (6 hrs; Ref 2,3 &4) 3. Estimating coral bleaching potential from SST (6 hrs; Ref 1 & 3) 4. Mangrove Leaf-Area Index (LAI) using imageries (6 hrs; Ref 1&3) 5. Geospatial Analysis of Vector data (8 hrs; Ref6)	24 hours
<b>Pedagogy:</b>	Tutorials/ assignments/practicals/field study	
<b>References/ Readings</b>	7. Practical Handbook of Digital Mapping: Terms and Concepts Arlinghaus, 1994 Sandra L., - CRC Press.0-8493-0131-9 8. Coastal and marine geospatial technologies. 2010. Ed. David R Green, Springer, ISBN 978-1-4020-9719-5 9. <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. 10. 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. 11. Essentials of Geographic Information Systems, 2011 - Jonathan Campbell, Michael Shin Publisher: Flat World Knowledge 12. <i>GRASS GIS: a multi-purpose Open Source GIS</i> .Environmental Modelling & Software. 2012 - Neteler, M., Bowman, M.H., Landa, M. and Metz, M.	
<b>Learning Outcomes</b>	Utilization of appropriate resolution for raster image analysis, Delineation of specific zones such as CRZ and the features/parts of feature within that zone, estimating possible impact of ocean warming on corals, capture vegetation in coastal zone.	