

## TEACHING MODULES INFORMATION

### EMJMD WACOMA (academic year 2018/19)

1.	<b>Module Title:</b> Complex satellite monitoring of coastal zones										
2.	<b>Module Code:</b>										
3.	<b>Maximum Number of Students:</b> No limit										
4.	<b>Total ECTS Credits:</b> 2 ECTS										
5.	<b>Month:</b> First year, second semester										
6.	<p><b>Notional Learning Hours (Please fill a number in box):</b>            (a) Contact Time - e.g in the classroom, or fieldwork            (b) Private Study - reading time, preparing and taking assessments</p> <p><b>Format of Teaching:</b></p> <table style="width: 100%; border: none;"> <tr> <td>Lectures</td> <td style="text-align: right;">6 Hours (a)</td> </tr> <tr> <td>Laboratories or Practicals</td> <td style="text-align: right;">Hours</td> </tr> <tr> <td>Other (computer workshops)</td> <td style="text-align: right;">8 Hours (a)</td> </tr> <tr> <td>Other (tutorials)</td> <td style="text-align: right;">Hours</td> </tr> <tr> <td>Other (private study)</td> <td style="text-align: right;">36 Hours (b)</td> </tr> </table> <p><b>Teaching Strategy:</b>            Theoretical lectures in support of practical exercises in the computer laboratory.            Lectures: general background on Remote Sensing applied to the Earth Observation with emphasis on the coastal zone.            Computer workshops: practical lessons related to the lectures content. Use of Bilko software for satellite data and image processing.</p>	Lectures	6 Hours (a)	Laboratories or Practicals	Hours	Other (computer workshops)	8 Hours (a)	Other (tutorials)	Hours	Other (private study)	36 Hours (b)
Lectures	6 Hours (a)										
Laboratories or Practicals	Hours										
Other (computer workshops)	8 Hours (a)										
Other (tutorials)	Hours										
Other (private study)	36 Hours (b)										
7.	<b>Convener:</b> Jesús Gómez-Enri										
8.	<b>Institution:</b> University of Cadiz										
9.	<b>Level:</b> MASTER										
10.	<b>Language(s) of Tuition:</b> ENGLISH										
11.	<b>Pre-requisites:</b> Basic computer skills.										
12.	<b>Co-requisites:</b> None										

13.	<p><b>Programme(s) for which module is core:</b> Erasmus Mundus Joint Master Degree in Water and Coastal Management (WACOMA)</p>
14.	<p><b>Module Description - The Purpose or Aims:</b></p> <p>Understanding the basis of Remote Sensing applied to Earth Observation:</p> <ul style="list-style-type: none"> <li>- Introduction</li> <li>- Electromagnetic Radiation</li> <li>- Useful concepts in Remote Sensing</li> <li>- Ocean Remote Sensing techniques</li> <li>- Applications (satellite monitoring of coastal zones)</li> </ul>
15.	<p><b>Learning Outcomes:</b></p> <p>At the end of this course the students should:</p> <ul style="list-style-type: none"> <li>- Know the basic principles of Remote Sensing</li> <li>- Know the main techniques for Ocean Remote Sensing</li> <li>- Know how to process satellite data</li> </ul>
16.	<p><b>Summary of Course Content:</b></p> <p>Theory:</p> <ul style="list-style-type: none"> <li>- Introduction</li> <li>- Electromagnetic Radiation</li> <li>- Useful concepts in Remote Sensing</li> <li>- Ocean Remote Sensing techniques</li> <li>- Applications (satellite monitoring of coastal zones)</li> </ul> <p>Computer workshops</p> <ul style="list-style-type: none"> <li>- Bilko: Introduction to Bilko. Basic principles of satellite image analysis.</li> <li>- Bilko: Practical lesson related to the monitoring of coastal zones.</li> </ul>
17.	<p><b>Key Skills Taught:</b></p> <ul style="list-style-type: none"> <li>- Ability to process Ocean Remote Sensing data</li> <li>- Ability to monitor the coastal zones using satellite data</li> </ul>
18.	<p><b>Assessment Methods:</b></p> <p>Students will answer questions in the practical lessons. Their score will be based upon the correctness of their answers.</p>

19.	<p><b>Assessment Criteria:</b> A successful candidate should have or be able to do the following:</p> <p><i>Threshold</i> A basic understanding of the appropriate science and modelling approach and a reasonable understanding of the model results and their implications.</p> <p><i>Good</i> A good understanding of the science and correct model results which are presented and interpreted to a good standard, with some reference to independent literature data and results.</p> <p><i>Excellent</i> A good to excellent understanding of the science and correct model results which are presented and interpreted to a high standard, with plenty of references used for comparisons and to critically evaluate the results.</p>
20.	<p><b>Resource Implications of Proposal and Proposed Solutions:</b></p> <p><i>Core texts</i></p> <p>Robinson, I (2004). Measuring the Oceans from Space. Springer-Verlag Berlin Heidelberg. 670 pp. Robinson, I. (2010). Discovering the Ocean from Space. Springer-Verlag Berlin Heidelberg. 638 pp.</p>
21.	<p><b>Does this module replace existing provision? If so, please indicate modules to be replaced:</b></p> <p>This module fits in the area of “Environmental Impacts and Management”.</p>
22.	<p><b>Start Date:</b> First year, second semester</p>
23.	<p><b>Is it intended that the module be available every year?</b> Yes</p>