

# Biodiversity & Ecosystem Service Assessment in the Coastal Margin (BESA)

Course Outline 15<sup>th</sup> – 20<sup>th</sup> Feb 2015

	Morning	Afternoon	Evening
<b>Sun</b> <b>15th</b>		Arrivals	Free time (ice-breaker)
<b>Mon</b> <b>16th</b>	<p><u>Introduction</u></p> <p>Course objectives outcomes &amp; scope</p> <p><u>'How to design a field campaign?'</u></p> <p>Group session</p>	<p><u>Introduction to CBESS &amp; sampling techniques for salt marsh &amp; mudflat habitats (UoStA<sup>1</sup> &amp; UoS<sup>2</sup>)</u></p> <p>Measuring system properties (e.g cryo-techniques)</p> <p>Methods for determining ecosystem services (e.g. CSM, NDVI, Gas flux, kaolin patches)</p> <p>Biodiversity measures (e.g. macrobenthos)</p> <p><u>Health &amp; safety</u></p>	<p><u>Sample design (UoS)</u></p> <p>Co-varying &amp; co-linear factors, controlling for variation &amp; applying random or stratified sampling across a habitat</p>
<b>Tues</b> <b>17th</b>	<p><u>Saltmarsh ecology (BU<sup>3</sup> &amp; CEH<sup>4</sup>)</u></p> <p>Field work: sampling a patchy community, field techniques, vegetation mapping</p>	<p><u>Mudflat ecology (UoStA)</u></p> <p>Field work: sampling of mudflat and mudflat/saltmarsh transition zone</p>	<p><u>Analysis of data collected in field (UoStA &amp; UoS)</u></p>

<sup>1</sup> University of St Andrews

<sup>2</sup> University of Southampton

<sup>3</sup> Bangor University

<sup>4</sup> Centre for Ecology and Hydrology

	<b>Morning</b>	<b>Afternoon</b>	<b>Evening</b>
<b>Wed 18th</b>	<p><u>Further processing &amp; analysis of data samples (UoStA &amp; UoS)</u></p> <p><u>Saltmarsh &amp; mudflat macrofauna sorting (UoS)</u></p> <p>Sorting macrofauna collected in the field into morphospecies</p>	<p><u>Macrofauna identification (UoS)</u></p> <p>Identification of key species and the function they provide</p> <p><u>Biological Traits Analysis (UoStA)</u></p> <p>Measuring functional diversity using life history, morphological &amp; behavioural characteristics</p>	<p><u>Valuing coastal defence (UoStA)</u></p> <p>Lecture from a PhD student</p>
<b>Thurs 19th</b>	<p><u>UAV sampling of intertidal habitats (SAMS<sup>5</sup>)</u></p> <p>Case study using CBESS data</p> <p><u>Up-scaling biodiversity distribution (SAMS)</u></p> <p>Using point measurements of biodiversity to inform management of ecosystem services at a landscape</p>	<p><u>Field visit to RSPB<sup>6</sup> Leighton Moss Reserve (RSPB)</u></p> <p>Management &amp; conservation priorities for coastal areas</p>	<p><u>Course Dinner at local pub Albion</u></p>
<b>Fri 20th</b>	<p><u>'How to design a field campaign?' review</u></p> <p>Group session</p> <p><u>Summary, wrap up &amp; feedback session</u></p>	<p>Departures after lunch</p>	

NB: Course outline may change

<sup>5</sup> Scottish Association for Marine Science

<sup>6</sup> Royal Society for the Protection of Birds