

Bringing ocean observations to the classroom – student access to open data

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For the past 4 years the Sydney Institute of Marine Science, a partnership of four Australian Universities (Macquarie University, the University of NSW, the University of Sydney and the University of Technology Sydney) has been running a Master's degree course called Topics in Australian Marine Science (TAMS). This course is unique in that the core of the course is built around research infrastructure – the Integrated Marine Observing System (IMOS). IMOS, established in 2007, is collecting unprecedented volumes of multi-disciplinary oceanographic data in the ocean and on the continental shelf which is made freely available across the web; IMOS frequently runs 'data user workshops' throughout Australia to introduce scientists and managers to the wealth of observations available at their fingertips.

The SIMS Masters course gives students an understanding of how different measurement platforms work and they explore the data that these platforms collect. Students combine attending seminars and lectures with hands on practical and personal assignments, all built around access to IMOS data and the many tools available to visualise and analyse. The course attracts a diverse class with many mature students (i.e. > 25 years old) from a range of backgrounds who find that the ease of discovering and accessing data, coupled with the available tools, enables them to easily study the marine environment without the need for high level computational skills. Since its inception the popularity of the course has increased with > 30 students undertaking the subject in 2016. The consensus from students and lecturers is that integrating 'real' observations into the classroom is beneficial to all, and IMOS is seeking to extend this approach to other university campuses. Similarly, the Institute of Marine and Antarctic Studies at the University of Tasmania is building IMOS data access into its Marine Ecology Masters course.

The talk will describe the experiences from the TAMS & IMAS courses and highlight the IMOS approach to data discovery, availability and access through course examples.