MARINE RADIOACTIVITY TRAINING PROGRAM

APPLYING RADIOISOTOPES IN THE STUDY OF MARINE PROCESSES

This 2-week course will provide participants with the fundamental concepts of working with radioactive tracers in the ocean.

Who should attend?

The program is suitable for university students, marine scientists, and other professionals who are interested in, or will pursue research and/or management positions that require knowledge of radioactivity and its use in ocean sciences.

Program content

In-depth skills training includes:

- Basics of radioactivity, natural and artificial sources, radionuclide dispersion and deposition models, radioecology and detection of radiation at environmental levels.
- How to use radioisotopes to estimate atmospheric deposition fluxes, particle cycling and fluxes, submarine groundwater discharge, water circulation, paleoceanography and radiochronology.
- Hands-on activities with real samples, including field work, radiochemistry in the laboratory and measurements using alpha and gamma spectrometry, beta and solid scintillation counting.

Short versions of this course have been held by the RiO5 SCOR Working Group (www.whoi.edu/website/CMER/rio5-working-group) in Xiamen (China, 2016), Paris (France, 2017) and Puerto Rico (USA, 2019).

DATES

Monday 18 November – Friday 29 November 2019

TIME

9.00am – 5.00pm daily

VENUE

Environmental Radioactivity Laboratory, School of Science
ECU Joondalup Campus, Building 19, 270 Joondalup Drive, Joondalup, Western Australia

COST

Early Bird – $1,300 + GST (available until close of business Friday 26 July)
Standard – $1,500 + GST
ECU Staff or Student – $1,100 + GST

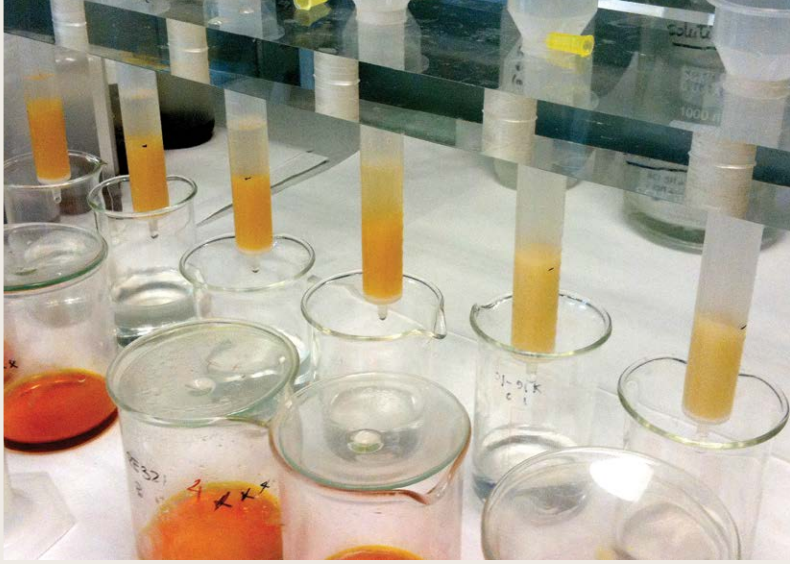
Morning and afternoon tea provided

Sponsored by:

CMER Center for Marine & Environmental Radioactivity

School of **Science**

AUSTRALIA ECU EDITH COWAN UNIVERSITY



ABOUT THE LECTURERS

Professor Pere Masqué

Prof Masqué is a senior researcher with expertise in the use of natural and artificial radioactive isotopes as tracers of environmental processes, mostly in oceans. Pere is the head of ECU's Environmental Radioactivity Laboratory, a cutting-edge facility with instrumentation for radionuclide measurements. He is also a scientific expert for the Technical Cooperation Department of the International Atomic Energy Agency (United Nations), lecturing internationally and on training assignments.

Dr Viena Puigcorbé

Dr Puigcorbé is a postdoctoral research fellow at the Centre of Marine Ecosystems Research at ECU. Her research interests include marine biogeochemistry, natural radionuclides, planktonic community structure and particle fluxes in the open ocean. Viena has extensive experience in multidisciplinary oceanographic voyages and teaching Radiation Physics and Oceanography at university level.

Dr Ken Buesseler

Dr Buesseler is a senior scientist at Woods Hole Oceanographic Institution, studying the fate and distribution of radioactive elements in the ocean. His laboratoy has also been active in response to radioactivity released from disasters such as the Fuksuhima Dai-ichi nuclear power plant, and from earlier sources, such as Chernobyl or atomic weapons testing at the Marshall Islands.

Dr Claudia Benitez-Nelson

Dr Benitez-Nelson is an Associate Dean and Carolina Distinguished Professor in the College of Arts & Sciences at the University of South Carolina. Her research focuses on the biogeochemical cycling of phosphorus and carbon and how these elements are influenced by both natural and anthropogenic processes. A variety of geochemical techniques are used in her laboratory, including radiochemistry and mass spectrometry. Claudia is a diverse scientist, with expertise ranging from radiochemistry to harmful algal bloom toxins, and is highly regarded for her cross-disciplinary research.

MORE INFORMATION

Contact Dr Viena Puigcorbé via phone on (+61) 08 6304 2737 or email v.puigcorbelacueva@ecu.edu.au

HOW TO REGISTER

ECU staff and students

General public

ECUWORLDREADY.COM.AU

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