



Curtin Credentials

Environmental DNA Sampling



Start:
30 Sep 2024*



Duration:
150 hours†



Delivery Mode:
Face to face^



Price:
\$2750 (GST excl.)[§]

Gain the knowledge and skills of eDNA sampling needed for decisions on managing ecosystems.

Identification of the organisms present in any environment is fundamental for understanding the living world. Humans have very high levels of control over the ecosystems that we are part of. This means that we have power to decide how to manage our ecosystems, and knowing what is in them improves the chances of making good choices. Decision for managing ecosystems can be for a variety of purposes such as harvesting species; maintaining ecosystem functions; and conserving species or communities. In each of those cases, accurate information on biodiversity or the presence of particular species is invaluable, yet it is often hard information to get.

The living things in our environment all have DNA within them, the molecule that contains the information that an organism needs to grow and function. DNA is being deposited into all environments continuously by the things that live there as their cells go through a cycle of growth, division, and death. DNA sampled from these environmental substrates is called “environmental DNA” (eDNA). Parts of eDNA can be used to identify the species that produced them, so eDNA provides a record of all the things that have lived in an environment.

This credential provides the knowledge and methods required for sampling eDNA, an understanding of the questions that eDNA analysis can answer, and how to collect the samples that can be used to answer the questions.

Please note: This course requires you to attend and participate in a 5 day face-to-face intensive at Curtin in Perth, Western Australia. See below for more information.

Who is this credential for?

This credential is particularly suitable for:

- professionals who have some tertiary-level knowledge of biology and may be working in environmental consultancy, regulation or philanthropy.
- those who are working on, or anticipate working on, an environmental problem that can be addressed with the help of eDNA.
- honours, master degree or doctoral-level students who require enhanced skills in environmental DNA surveying.

What you will learn

By completing this credential you will learn to:

- learn eDNA field sampling methods, sampling controls and preservation strategies
- understand how eDNA samples are analysed
- learn about the information that sampling and analysis can provide
- learn how to plan ecological experiments using eDNA
- learn how to interpret eDNA data
- design an environmental DNA sampling program.

Assessment

To successfully complete this credential, you are required to pass a final assessment. To demonstrate what you have learned, you will design an eDNA sampling program based on an authentic industry question related to biodiversity assessment.

About your 5 day face-to-face intensive

In your five-day intensive will consist of a combination of lectures, discussions and an introduction to eDNA field sampling methods.

Date: 30 September 2024 - 4 October 2024

Time: 09:30 - 17:30 AWST

Location: Curtin University
37 St Georges Tce
Perth WA 6000

Earn a badge

Once you successfully complete and pass the final assessment, you'll earn a digital badge that is instantly shareable to your social networks (including LinkedIn) which showcases your new skills and knowledge mastery.



Essentials

This credential provides foundation knowledge in a discipline and doesn't require previous knowledge.

You will also earn 25 credit points which are in line with Australian Qualification Framework Level 8 criteria (<https://www.aqf.edu.au/framework/aqf-levels#toc-aqf-level-8-criteria-2>), ensuring comprehensive theoretical and/or technical knowledge of the credential. 100 credit points are required to earn a Graduate Certificate at Curtin.

Discover more

Curtin Credentials focus on five themes, which have been carefully curated based on what's most relevant and valuable to professionals today, and in the future. This credential fits within the following theme:



Future of Work

Thrive and adapt in the changing world of work by developing and broadening your skillset in a range of areas including work design and cognitive flexibility.



Innovation

Unleash your inner entrepreneur and blend your creativity and problem-solving skills to create valuable new products and services.

Make tomorrow better.

» creds.curtin.edu.au

This publication is available in alternative formats on request.

* Curtin may cancel or reschedule a credential at any time and for any reason as it sees fit. The Start Date and the other details of this credential are provided as a general guide only and may change from time to time.

† This credential involves 150 hours of online resources, readings, activities and assessments at your own pace. However to pass and gain 25 credit points, you may need to commit further time.

^ Onsite face-to-face learning.

§ Price subject to change. Please check price at time of purchase.

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CRICOS Provider Code 00301U



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Meet your facilitator



Professor Simon Jarman

School of Molecular and Life Sciences (MLS)

Professor Simon Jarman is Professor of Environmental Genomics at Curtin. He researches applications of genomics in environmental research and has worked extensively with eDNA analysis and its application to diverse ecological questions.

Simon has also held research positions at CSIRO, the Australian Antarctic Division, the University of Western Australia and the University of Porto. He has recently finished editing the book Applied Environmental Genomics.



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For more information

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