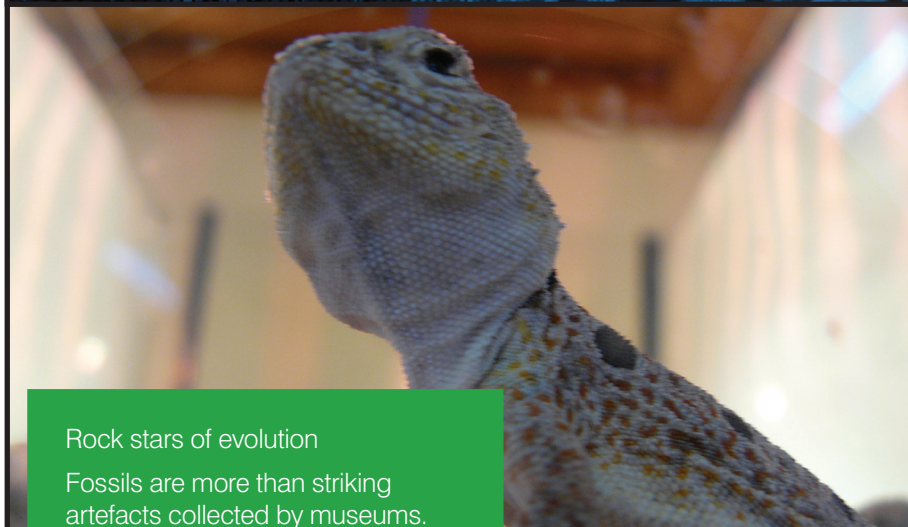




THE UNIVERSITY OF
MELBOURNE

ECOLOGY AND EVOLUTIONARY BIOLOGY

SCIENCES AT MELBOURNE



Rock stars of evolution

Fossils are more than striking artefacts collected by museums. They are an important source of information for scientists studying evolution. Fossils allow scientists to trace evolutionary relationships and work out how plant and animal life have evolved over the last million years.

Some amazing fossils unearthed in Australia recently include a mega-wombat the size of a small car, and a complex eye – like those in living insects – that is over 515 million years old.



Natural ecosystems have developed over millions of years and are continually changing. Biodiversity is dynamic; how species originate and change, where they occur, and why and how they change in abundance is fundamental to understanding how our world works.

Natural ecosystems sustain a wide range of human activities, but many of our activities come at a cost. Humans alter natural landscapes, harvest some species for food, move animals and plants from one place to another, and our broader activities are changing the earth's climate. Understanding how natural ecosystems function and how humans interact with them is central to our living sustainability, and this knowledge will allow us to understand the ecological consequences of climate change.

The Ecology and Evolutionary Biology major will introduce you to the relationships between plants and animals and their environment. You might focus your studies on developing ecological or evolutionary theory, understanding biodiversity, or understanding the ecological effects of humans.

Which courses offer Ecology and Evolutionary Biology?

Bachelor of Science

Breadth in another undergraduate degree

Careers and graduate pathways

Plan A: Careers you can pursue with this major

Ecological knowledge is fundamental to humans being able to interact with their environment sustainably. The Ecology and Evolutionary Biology major provides a springboard for entering research in ecology or biodiversity, or to use your knowledge to manage the natural environment in areas such as conservation and wildlife management, fisheries management and environmental protection, either in government or private sector.

The generic skills gained will also provide opportunities in many other industries such as education and business.

Employment for environmental scientists is projected to be steady leading into 2017.*

*Based on data from the Department of Education, Employment and Workplace Relations accessed August 2013. See www.joboutlook.gov.au

Plan B: Graduate/professionally-oriented courses

Graduate courses following this major can include the Master of Environment or the Master of Management. These courses can lead to careers in, for example, consulting and land use planning.

You can also consider professional courses including the Master of Teaching or the Melbourne Juris Doctor.

Plan C: Research pathways with this major

Masters and Honours pathways to research higher degrees in Ecology and Evolutionary Biology includes the Master of Science (Botany), Master of Science (Geography) and the Master of Science (Zoology). Students can pursue applied research in a number of areas, research questions include: "How do populations respond to human actions?", "How to save species?", and "How will animals and plants respond to climate change?".

Sample course plan

BACHELOR OF SCIENCE (Ecology and Evolutionary Biology)

Year 1	Biology of Cells and Organisms	Chemistry 1	Calculus 1	Breadth or Elective
	Genetics and the Evolution of Life	Chemistry 2	Biology of Australian Flora and Fauna	Breadth
Year 2	Green Planet: Plants and the Environment	Principles of Genetics	Animal Structure and Function	Breadth
	Ecology	Plant Biodiversity	Landscapes and Diversity	Breadth
Year 3	Field Botany	Ecology in Changing Environments	Experimental Marine Biology	Breadth or Elective
	Applied Ecology	Vegetation Management and Conservation	Field Biology of Australian Wildlife	Breadth

Subjects leading to the major

Other science subjects to complement the major

Major subjects

Breadth

These subjects are only examples and suggestions. Keep in mind that, depending on your interests, your course plan might look different from this one and that you will not need to choose your major until the end of second year.

Major: All Bachelor of Science students must complete one major. A major comprises 50 points (four subjects) at third-year level that build on first- and second-year study.

Breadth component: All Bachelor of Science students must take subjects from outside the sciences, technology and engineering systems areas of study. This is referred to as "breadth" and more information can be found at <http://breadth.unimelb.edu.au>

Your breadth subject choices should total at least 50 points (four subjects) of your undergraduate degree. An additional component of 25 points (two subjects) is free to be taken as either core science, breadth, or a combination of the two. You may take no more than 37.5 points (three subjects) of breadth at first-year level.

For a complete overview of subjects available in the Sciences, visit the Course and Subject Handbook website: <http://handbook.unimelb.edu.au>