Fire is an important driver of ecosystem structure and function in Australia, and forms an integral part of ecosystem management. A better understanding of the role of fire is essential for evidence-based policy development and informed management decision-making.

The School of Ecosystem & Forest Sciences in the Faculty of Science provides graduate training in fire science through masters, diploma or certificate-level programs, or you can enrol in individual subjects through the Community Access Program. Knowledge gained will assist land managers to better understand how ecosystems function, the role that fire plays in the maintenance and delivery of ecosystem services, and how fire management can improve the resilience of these systems in the face of global change. Our academic staff have extensive research experience and strong links with industry, ensuring graduates are equipped with the knowledge and skills required to further develop their careers.

We offer three fire-related graduate subjects:

**Bushfire & Climate**
This subject covers the fundamentals of forest fire behaviour and factors affecting it, including fuels, weather, topography, fire size and climatic conditions. This knowledge underpins the planning and execution of prescribed burning for land management and wildfire suppression strategies and tactics.  
See: handbook.unimelb.edu.au/view/current/FRST90025

**Bushfire & Biodiversity**
This subject covers the effects of fire on biodiversity and ecological processes. Managers are developing science-based ecological burning strategies that achieve biodiversity and asset protection objectives. Knowledge of the ecological impacts of fire on plants and animals facilitates a better understanding of how to achieve more effective management.  
See: handbook.unimelb.edu.au/view/current/FRST90026

**Bushfire Planning & Management**
This subject covers the fundamentals of setting and achieving bushfire management objectives for ecological and fire protection purposes in natural ecosystems. Students will learn about the contents of a fire management plan, setting objectives, developing fire prescriptions, and undertaking monitoring and evaluation of the management process.  
See: handbook.unimelb.edu.au/view/current/FRST90017

These three subjects are each taught as two-week intensives at our Creswick campus, and are delivered by the Bushfire Behaviour & Management Group and the Fire Ecology & Biodiversity Group.  
See: bushfirebehaviour.net.au, fireecologyandbiodiversity.com
Masters, diploma and certificate-level courses:

Master of Forest Ecosystem Science

This course offers the knowledge, skills and analytical capabilities to shape the development of forest and natural resource management enterprises worldwide. Students will learn about climate change science, water resource management and biodiversity conservation, and develop the ability to conduct crucial experimental work in the field. The Master of Forest Ecosystem Science will prepare students for management positions within the forest and natural resource management sectors.

Duration: 2 years (part-time option available)

See: courses.science.unimelb.edu.au/study/degrees/master-of-forest-ecosystem-science

Graduate Diploma in Bushfire Planning & Management

This course provides specialised bushfire science, planning, design and management subjects, and meets the urgent need to equip existing professionals with international best practice skills in planning, design and management of fire risk in rural and semi-urban environments. Students are provided with opportunities to participate in case studies of best practice and to develop professional networks in the fire risk management arena.

Duration: 1 year full-time (part-time option available)

See: courses.science.unimelb.edu.au/study/degrees/graduate-diploma-in-bushfire-planning-and-management

Graduate Certificate in Bushfire Planning & Management

This course combines specialised bushfire science with urban planning, design and construction, and fire management subjects to meet the urgent need to equip existing professionals with international best practice skills in managing fire risk across the urban-natural environment interface. Students have the opportunity to develop professional networks in the fire risk management area, and to consolidate learning through participation in case studies.

Duration: 6 months full-time (part-time option available)

See: courses.science.unimelb.edu.au/study/degrees/graduate-certificate-in-bushfire-planning-and-management

Electives

Fire subjects may also be taken as electives within the Master of Environment and the Master of Science (Ecosystem Science).


Do you want to find out more about the School of Ecosystem & Forest Sciences?

See: ecosystemforest.unimelb.edu.au