



# Course Outline (Higher Education)

<b>School:</b>	School of Science, Psychology and Sport
<b>Course Title:</b>	FIRE ECOLOGY: BURNING ISSUES FOR SCIENCE AND MANAGEMENT
<b>Course ID:</b>	SCENV3110
<b>Credit Points:</b>	15.00
<b>Prerequisite(s):</b>	60 Credit points in SCENV coded courses
<b>Co-requisite(s):</b>	Nil
<b>Exclusion(s):</b>	None
<b>ASCED:</b>	010999

## Description of the Course :

The role of fire in the ecology of biodiversity and landscapes, particularly from an Australian perspective, is explored. Reflection on the history of fire is used to develop an understanding of the impact of fire on Australian society. The theories and understanding that underpin approaches to fire planning and management that achieve ecological and social outcomes are considered in detail.

**Grade Scheme:** Graded (HD, D, C, etc.)

## Work Experience:

No work experience: Student is not undertaking work experience in industry.

**Placement Component:** No

**Supplementary Assessment:** Yes

Where supplementary assessment is available a student must have failed overall in the course but gained a final mark of 45 per cent or above and submitted all major assessment tasks.

## Program Level:

Level of course in Program	AQF Level of Program					
	5	6	7	8	9	10
Introductory	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intermediate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Advanced	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Learning Outcomes:**

Students undertaking the course are expected to be able to demonstrate the following knowledge and skills.

**Knowledge:**

- K1.** Recognise, interpret and use the language of fire ecology
- K2.** Describe and scrutinise the theory underpinning fire ecology
- K3.** Examine the history of fire in Australia
- K4.** Recognise the social context of fire in Australia, and internationally

**Skills:**

- S1.** Investigate and compile information to address issues in fire management and planning
- S2.** Examine the role of fire ecology in fire management and planning using a science-based approach
- S3.** Apply suitable field-based techniques to address fire planning and management requirements

**Application of knowledge and skills:**

- A1.** Apply knowledge to predict fire behaviour and the outcomes of fires of varying intensity, frequency, size and occurrence
- A2.** Practice the fundamental knowledge, methods, technology and approaches used in fire planning and management
- A3.** Integrate sound ecological thinking to justify fire planning and management decisions

**Course Content:**

Fire ecology: Burning Issues in Science and Management explores the role of fire in the ecology of flora and fauna and how fire is managed in the Australian environment. Fire management forms a key component of environmental management in Australia and this course considers the history and ongoing role of fire from an ecological and social perspective. Students will explore current issues in fire management and will become familiar with current industry standards used by fire management agencies.

Topics may include:

- History of fire in Australia
- Fire behaviour
- Fire regimes and ecological processes
- Fire and flora
- Fire and fauna
- Fire under changing climate
- Fire management
- Burning Issues for Science and Management
- Living with fire: Policy and social issues

**Values:**

- V1.** Engage with current debates on key issues in relation to fire
- V2.** Appreciate the challenges in setting ecological objectives in fire planning and management
- V3.** Reflect on and appreciate the role of fire in Australian society
- V4.** Develop further insight into learning and self-development through reflective practice and self-guided learning

### Graduate Attributes

The Federation University FedUni graduate attributes (GA) are entrenched in the Higher Education Graduate Attributes Policy (LT1228). FedUni graduates develop these graduate attributes through their engagement in explicit learning and teaching and assessment tasks that are embedded in all FedUni programs. Graduate attribute attainment typically follows an incremental development process mapped through program progression. **One or more graduate attributes must be evident in the specified learning outcomes and assessment for each FedUni course, and all attributes must be directly assessed in each program**

Graduate attribute and descriptor		Development and acquisition of GAs in the course			
		Learning Outcomes (KSA)	Code A. Direct B. Indirect N/A Not addressed	Assessment task (AT#)	Code A. Certain B. Likely C. Possible N/A Not likely
GA 1 Thinkers	Our graduates are curious, reflective and critical. Able to analyse the world in a way that generates valued insights, they are change makers seeking and creating new solutions.	K2, S1	A, A	AT1, AT4	A, A
GA 2 Innovators	Our graduates have ideas and are able to realise their dreams. They think and act creatively to achieve and inspire positive change.	A1, A2, S3	A, A, A	AT3	A
GA 3 Citizens	Our graduates engage in socially and culturally appropriate ways to advance individual, community and global well-being. They are socially and environmentally aware, acting ethically, equitably and compassionately.	K3, K4, S2	B, A, A	AT2	A
GA 4 Communicators	Our graduates create, exchange, impart and convey information, ideas, and concepts effectively. They are respectful, inclusive and empathetic towards their audience, and express thoughts, feelings and information in ways that help others to understand.	A2	A	AT3	B
GA 5 Leaders	Our graduates display and promote positive behaviours, and aspire to make a difference. They act with integrity, are receptive to alternatives and foster sustainable and resilient practices.	A3	B	AT3	B

### Learning Task and Assessment:

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1, K2, S1, S2, S3, A1, A2, A3	Review of learning and skills practice	Test	30%-40%
K1, K2, K4, S1, S2, S3, A1, A2, A3	Collation and review of information, field assessment, data analysis, mapping and discussion	Development of a planned fire report to current industry standards	30%-40%

Learning Outcomes Assessed	Learning Tasks	Assessment Type	Weighting
K1, K2, K4, S1, S2, S3, A1, A2, A3	Present the outcomes of the review of information, field assessment, data analysis and mapping as an exercise in information sharing	Presentation	10-20%
K1, K3, K4, S1, A3	Reflection on the issues and literature relevant to fire and associated discussions with peers	Literature review and bibliography development, tutorial discussions and associated freewrites and reflections	20%-30%

**Adopted Reference Style:**

Australian Harvard