



Unit Outline (Higher Education)

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| Institute / School: | Institute of Innovation, Science & Sustainability |
| Unit Title: | INVASIVE SPECIES: ECOLOGY, MANAGEMENT AND CHALLENGES |
| Unit ID: | SCENV2804 |
| Credit Points: | 15.00 |
| Prerequisite(s): | Nil |
| Co-requisite(s): | Nil |
| Exclusion(s): | (SCENV2800) |
| ASCED: | 050901 |

Description of the Unit:

This unit provides a detailed coverage of the impact, ecology, control and management of invasive species in diverse settings, including natural and protected areas, agricultural landscapes and in human society. The impacts explored include ecological, commercial and financial impacts through to the impacts that invasive species have on native species management, including the significant threats posed to native species conservation. The ongoing impacts and future scenarios in the face of a changing climate are considered.

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

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 Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment

Course Level:

| Level of Unit in Course | AQF Level of Course | | | | | |
|-------------------------|---------------------|---|---|---|---|----|
| | 5 | 6 | 7 | 8 | 9 | 10 |
| Introductory | ■ | ■ | ■ | ■ | ■ | ■ |
| Intermediate | ■ | ■ | ✓ | ■ | ■ | ■ |

| Level of Unit in Course | AQF Level of Course | | | | | |
|-------------------------|---------------------|---|---|---|---|----|
| | 5 | 6 | 7 | 8 | 9 | 10 |
| Advanced | ■ | ■ | ■ | ■ | ■ | ■ |

Learning Outcomes:

Knowledge:

- K1.** Distinguish between native and non-native species and recognise invasive species that are significant in Australia and other parts of the world.
- K2.** Identify and critically evaluate the impact of invasive species in natural and modified environments.
- K3.** Develop a broad knowledge of invasive species, particularly their control and management strategies (including associated challenges).

Skills:

- S1.** Develop survey strategies to understand invasive species ecology and management.
- S2.** Evaluate control methods and approaches to manage elevated invasive species populations and identify suitable management strategies.
- S3.** Demonstrate the capacity to critically evaluate the literature on invasive species control and management, including challenges, and present research findings to a relevant audience.

Application of knowledge and skills:

- A1.** Critically evaluate literature on invasive species management and associated challenges.
- A2.** Apply knowledge of critical reading, citation and referencing skills to the development of written assignments.
- A3.** Contextualise knowledge and skills developed during fieldtrip and tutorials to engage in a meaningful way with Industry and community.

Unit Content:

The content of this unit explores issues related to invasive species, including mammalian predators, rabbits and other herbivores, agricultural pests (including pests of commercial crops and silviculture pests of forest resources), introduced and native birds as pests, terrestrial and aquatic invertebrates as pests, diseases and invertebrate pests of plants, the ecology of invasive plants, pasture grasses and weeds of cultivation, woody weeds, biological controls (case studies), climate change and the prospective associated changes in pest invasions, as well as landholder perspectives on invasive weeds and pest species.

FEDTASKS

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**tttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all must be directly assessed in each Course.*

| FEDTASK attribute and descriptor | | Development and acquisition of FEDTASKS in the Unit | |
|---|---|---|-----------------------|
| | | Learning Outcomes (KSA) | Assessment task (AT#) |
| FEDTASK 1 Interpersonal | Students will demonstrate the ability to effectively communicate, interact and work with others both individually and in groups. Students will be required to display skills in-person and/or online in: <ul style="list-style-type: none"> • Using effective verbal and non-verbal communication • Listening for meaning and influencing via active listening • Showing empathy for others • Negotiating and demonstrating conflict resolution skills • Working respectfully in cross-cultural and diverse teams. | S 1, S3, A3 | Tasks 1, 2 |
| FEDTASK 2 Leadership | Students will demonstrate the ability to apply professional skills and behaviours in leading others. Students will be required to display skills in: <ul style="list-style-type: none"> • Creating a collegial environment • Showing self-awareness and the ability to self-reflect • Inspiring and convincing others • Making informed decisions • Displaying initiative | Not applicable | Not applicable |
| FEDTASK 3 Critical Thinking and Creativity | Students will demonstrate an ability to work in complexity and ambiguity using the imagination to create new ideas. Students will be required to display skills in: <ul style="list-style-type: none"> • Reflecting critically • Evaluating ideas, concepts and information • Considering alternative perspectives to refine ideas • Challenging conventional thinking to clarify concepts • Forming creative solutions in problem solving | K1, K2, K3, S1, S2, S3, A1, A2 | Tasks 1, 2, 3 |
| FEDTASK 4 Digital Literacy | Students will demonstrate the ability to work fluently across a range of tools, platforms and applications to achieve a range of tasks. Students will be required to display skills in: <ul style="list-style-type: none"> • Finding, evaluating, managing, curating, organising and sharing digital information • Collating, managing, accessing and using digital data securely • Receiving and responding to messages in a range of digital media • Contributing actively to digital teams and working groups • Participating in and benefiting from digital learning opportunities | S1, S2, S3, A1, A2 | Tasks 1, 2, 3 |
| FEDTASK 5 Sustainable and Ethical Mindset | Students will demonstrate the ability to consider and assess the consequences and impact of ideas and actions in enacting ethical and sustainable decisions. Students will be required to display skills in: <ul style="list-style-type: none"> • Making informed judgments that consider the impact of devising solutions in global economic environmental and societal contexts • Committing to social responsibility as a professional and a citizen • Evaluating ethical, socially responsible and/or sustainable challenges and generating and articulating responses • Embracing lifelong, life-wide and life-deep learning to be open to diverse others • Implementing required actions to foster sustainability in their professional and personal life. | K3, S2, S3 | Tasks 1, 2, 3 |

Learning Task and Assessment:

The Assessment in this unit includes the following Learning Tasks.

| Learning Outcomes Assessed | Assessment Tasks | Assessment Type | Weighting |
|----------------------------|---|-----------------|-----------|
| K1, K2, S2, S3, A1, A2, A3 | Task 1. Pest/Invasive plant ecology, management and bio-control study | Assignment | 20-35% |
| K1, K2, S2, S3, A1, A2, A3 | Task 2. Pest/Invasive animal management review and oral presentation | Assignment | 20-35% |
| K1, K3, S1, A1 | Task 3. Review of learning, understanding and skills practices. | Test | 40-60% |

Alignment to the Minimum Co-Operative Standards (MiCS)

The Minimum Co-Operative Standards (MiCS) are an integral part of the Co-Operative University Model. Seven criteria inform the MiCS alignment at a Course level. Although Units must undertake MiCS mapping, there is NO expectation that Units will meet all seven criteria. The criteria are as follows:

1. Co-design with industry and students
2. Co-develop with industry and students
3. Co-deliver with industry
4. FedTASK alignment
5. Workplace learning and career preparation
6. Authentic assessment
7. Industry-link/Industry facing experience

MiCS Course level reporting highlights how each Course embraces the principles and practices associated with the Co-Operative Model. Evidence of Course alignment with the MiCS, can be captured in the Course Modification Form.

MICS Mapping has been undertaken for this Unit No

Date:

Adopted Reference Style:

APA

Refer to the [library website](#) for more information

Fed Cite - [referencing tool](#)