



ORIGINAL COURSE IMPLEMENTATION DATE: September 2024
 REVISED COURSE IMPLEMENTATION DATE:
 COURSE TO BE REVIEWED (six years after UEC approval): January 2030
 Course outline form version: 28/10/2022

OFFICIAL UNDERGRADUATE COURSE OUTLINE FORM

Note: The University reserves the right to amend course outlines as needed without notice.

Course Code and Number: ENV 345	Number of Credits: 4 Course credit policy (105)												
Course Full Title: Invasive Species Management Course Short Title: Invasive Species Management													
Faculty: Faculty of Science	Department: Planning, Geography, and Environmental Studies												
Calendar Description: Students will learn how to identify, assess, and manage for invasive species that are devastating local ecosystems in the Fraser Valley and beyond. Global and multicultural examples, techniques, and perspectives are discussed. Communication strategies are reviewed to understand the conflict resolution skills needed in this field. Note: Field trips outside of class time will be required. Please refer to department website for field trip scheduling information. Note: Students with credit for GEOG 300X cannot take this course for further credit.													
Prerequisites (or NONE):	45 university-level credits.												
Corequisites (if applicable, or NONE):	NONE												
Pre/corequisites (if applicable, or NONE):	NONE												
Antirequisite Courses <i>(Cannot be taken for additional credit.)</i> Former course code/number: GEOG 300X Cross-listed with: Equivalent course(s): <i>(If offered in the previous five years, antirequisite course(s) will be included in the calendar description as a note that students with credit for the antirequisite course(s) cannot take this course for further credit.)</i>	Course Details Special Topics course: No <i>(If yes, the course will be offered under different letter designations representing different topics.)</i> Directed Study course: No <i>(See policy 207 for more information.)</i> Grading System: Letter grades Delivery Mode: Face-to-face only Expected frequency: Annually Maximum enrolment (for information only): 28												
Typical Structure of Instructional Hours <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Lecture/seminar</td> <td style="width: 20%; text-align: center;">25</td> </tr> <tr> <td>Tutorials/workshops</td> <td style="text-align: center;">25</td> </tr> <tr> <td>Experiential (field trip)</td> <td style="text-align: center;">10</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td style="text-align: right;">Total hours</td> <td style="text-align: center;">60</td> </tr> </table>	Lecture/seminar	25	Tutorials/workshops	25	Experiential (field trip)	10					Total hours	60	Prior Learning Assessment and Recognition (PLAR) PLAR is available for this course.
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Tutorials/workshops	25												
Experiential (field trip)	10												
Total hours	60												
Scheduled Laboratory Hours Labs to be scheduled independent of lecture hours: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	Transfer Credit <i>(See bctransferguide.ca.)</i> Transfer credit already exists: No Submit outline for (re)articulation: Yes <i>(If yes, fill in transfer credit form.)</i>												
Department approval	Date of meeting: September 2023												
Faculty Council approval	Date of meeting: October 6, 2023												
Undergraduate Education Committee (UEC) approval	Date of meeting: January 26, 2024												

Learning Outcomes *(These should contribute to students' ability to meet program outcomes and thus Institutional Learning Outcomes.)*

Upon successful completion of this course, students will be able to:

- Evaluate the multisectoral challenges and opportunities of invasive species due to climate change and globalization.
- Discuss Indigenous land stewardship values and importance of native plant species.
- Identify and prioritize components of risk assessments as they pertain to the introduction and spread of invasive species.
- Evaluate invasive species management options from different stakeholder perspectives.
- Synthesize multiple different kinds of input in invasive species management decision-making and planning.
- Demonstrate how to do an invasive species inventory and assessment.
- Identify communication techniques to engage the public on invasive species management strategies.

Recommended Evaluation Methods and Weighting *(Evaluation should align to learning outcomes.)*

Assignments:	40%	Quizzes/tests:	20%	Field evaluation:	40%
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Details: Assignments may include weekly journals, invasive system mapping, and invasive communication plans. Field evaluation may include field assessments, invasive species removal and maintenance, and stakeholder engagement. Each week will feature outdoor experiential learning opportunities at the UFV campus and within Fraser Valley communities.

NOTE: The following sections may vary by instructor. Please see course syllabus available from the instructor.

Typical Instructional Methods *(Guest lecturers, presentations, online instruction, field trips, etc.)*

Lectures are delivered in the classroom and then outdoor field work is used to see and apply principles from the lectures. Various local invasive species environmental groups/agencies are associated with this course as guest speakers and field site hosts.

Texts and Resource Materials *(Include online resources and Indigenous knowledge sources. [Open Educational Resources](#) (OER) should be included whenever possible. If more space is required, use the [Supplemental Texts and Resource Materials form](#).)*

Type	Author or description	Title and publication/access details	Year
1. Textbook	Martin et al	Community-based control of invasive species	2019
2. Textbook	Barker, K., Francis, R.	Routledge handbook of biosecurity and invasive species	2021
3. Other	Grenz, J. B.	Healing the land by reclaiming Indigenous ecology: a journey exploring the application of the Indigenous worldview to invasion biology and ecology	2020
4. Textbook	Le Roux, J.	The evolutionary ecology of invasive species	2022
5. Article	Bellis et al	Beyond biodiversity: the cultural context of invasive species initiatives in Gwaii Haanas	2017

Required Additional Supplies and Materials *(Software, hardware, tools, specialized clothing, etc.)*

Students should be prepared for outdoor field work and wear appropriate clothing and shoes. Other necessary tools will be supplied.

Course Content and Topics

Module 1: Invasive and native species foundational concepts

- Terminology and theory
- Invasion process
- Botany and plant ID
- Invasive plant inventory

Module 2: Prevention

- Intentional and unintentional pathways of introduction
- Vectors of spread
- Risk and impact assessment
- EDRR
- From local to multinational - Policies, legislation, and regulations
- Monitoring – role of citizens and Indigenous communities

Module 3: Management and implementation

- Manual, cultural, chemical and biological control strategies
- Communicating with multiple stakeholder and Indigenous groups
- Approaching collaborative management using different perspectives (including Indigenous perspectives)
- Management prioritization and identification of appropriate management goals
- Decision analysis and sustainable management
- Invasive species management plan development

Module 4: Multiple perspectives on invasive species and their management

- Indigenous perspectives on invasive species
- Novel ecosystems and restoration
- Assessing the benefits of invasive species