Managing Invasive Species Training Course

Professional Development Training Course Outline

Category	Environmental Management and Conservation	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

Invasive species pose a significant threat to global biodiversity, ecosystem stability, and economic prosperity. Managing Invasive Species Training Course is designed to equip professionals, policymakers, and land managers with the knowledge and skills necessary for effective **invasive species management**. By integrating cutting-edge **ecological principles** with practical, hands-on techniques, this training addresses the full spectrum of invasion ecology, from **early detection and rapid response (EDRR)** to long-term control and **habitat restoration**. Participants will gain a deep understanding of the **socio-economic impacts** of biological invasions and learn how to develop and implement holistic, **sustainable management plans** that protect natural resources and public health.

This course emphasizes a **proactive, integrated approach** to combating invasive species. We'll explore the complex pathways of introduction, the ecological and economic damage they inflict, and the legal frameworks governing their control. Through a blend of theoretical knowledge and real-world case studies, you'll learn to identify high-priority invasive threats, apply a range of **integrated pest management (IPM)** strategies, and lead collaborative efforts to prevent, control, and eradicate these harmful organisms. The ultimate goal is to build capacity for **effective conservation** and safeguard our ecosystems for future generations.

Programme Curriculum

Managing Invasive Species Training Course

Introduction

Invasive species pose a significant threat to global biodiversity, ecosystem stability, and economic prosperity. Managing Invasive Species Training Course is designed to equip professionals, policymakers, and land

managers with the knowledge and skills necessary for effective **invasive species management**. By integrating cutting-edge **ecological principles** with practical, hands-on techniques, this training addresses the full spectrum of invasion ecology, from **early detection and rapid response (EDRR)** to long-term control and **habitat restoration**. Participants will gain a deep understanding of the **socio-economic impacts** of biological invasions and learn how to develop and implement holistic, **sustainable management plans** that protect natural resources and public health.

This course emphasizes a **proactive, integrated approach** to combating invasive species. We'll explore the complex pathways of introduction, the ecological and economic damage they inflict, and the legal frameworks governing their control. Through a blend of theoretical knowledge and real-world case studies, you'll learn to identify high-priority invasive threats, apply a range of **integrated pest management (IPM)** strategies, and lead collaborative efforts to prevent, control, and eradicate these harmful organisms. The ultimate goal is to build capacity for **effective conservation** and safeguard our ecosystems for future generations.

Course Duration

5 days

Course Objectives

1. **Define** and differentiate between native, non-native, and **invasive alien species**.
2. Understand the **pathways of introduction** and vectors of spread for terrestrial and aquatic invaders.
3. Analyze the **ecological and economic impacts** of invasive species on biodiversity and natural resources.
4. Master **early detection and rapid response (EDRR)** protocols to prevent establishment and spread.
5. Develop and implement **integrated pest management (IPM)** strategies using mechanical, chemical, and biological control methods.
6. Apply principles of **risk assessment and prioritization** to manage high-threat species effectively.
7. Understand and comply with international and national **biosecurity policies** and regulations.
8. Utilize **GIS mapping** and remote sensing for monitoring and tracking invasive species populations.
9. Develop **habitat restoration plans** to increase ecosystem resilience to invasion.
10. Implement effective **public outreach and citizen science** programs to foster community engagement.
11. Explore **emerging technologies** and innovative solutions in invasive species control.
12. Design and manage a **long-term monitoring and evaluation program** for adaptive management.
13. Lead multi-stakeholder collaboration and **inter-agency partnerships** for large-scale management projects.

Organizational Benefits

- Reducing the negative impacts of invasive species on biodiversity, ecosystem services, and land health.
- Adhering to national and international **biosecurity frameworks** and avoiding potential legal penalties.
- Implementing cost-effective, science-based management plans that save time and resources.
- Safeguarding agricultural yields, forest productivity, water quality, and tourism-dependent industries.
- Empowering staff with the specialized knowledge and skills required for effective **conservation management**.
- Demonstrating a commitment to **environmental stewardship** and corporate social responsibility.

Target Audience

- Environmental Scientists and Ecologists
- Government Agency Personnel

- Conservation and Non-Profit Staff
- Landscapers and Horticultural Professionals
- Agricultural and Forestry Managers
- Urban Planners and Developers
- Community Leaders and Educators
- Students and Researchers in environmental fields

Course Modules

Module 1: Foundations of Invasion Ecology

- Defining invasive species: plants, animals, and pathogens.
- Understanding pathways and vectors of introduction.
- The invasion curve and its management implications.
- Ecological impacts: competition, predation, and ecosystem alteration.
- Economic and social impacts of biological invasions.
- **Case Study:** The devastating impact of the **brown tree snake** on Guam's native bird populations and infrastructure.

Module 2: Risk Assessment and Prioritization

- Developing a systematic risk assessment framework.
- Prioritizing high-threat species based on invasiveness and impact.
- Horizon scanning: anticipating future invasive threats.
- Utilizing predictive models and climate change data.
- Creating a watchlist of priority species for your region.
- **Case Study:** The global effort to prevent the spread of **Asian carp** in the Great Lakes region.

Module 3: Early Detection & Rapid Response (EDRR)

- Establishing and training an EDRR team.
- Designing effective surveillance and monitoring programs.
- Using technology for mapping and data collection (e.g., GIS, mobile apps).
- Developing and implementing a rapid response plan.
- Communication strategies for public reporting and alerts.
- **Case Study:** The successful **eradication of invasive snails** from Round Lake State Park through public engagement and physical removal strategies.

Module 4: Integrated Pest Management (IPM) Strategies

- Mechanical and manual control methods: pulling, cutting, and trapping.
- Chemical control: herbicide application and best practices.
- Biological control: the use of natural enemies and biocontrol agents.
- Cultural and ecological control methods.
- The principles of an adaptive management cycle.
- **Case Study:** The use of the **Cactoblastis cactorum moth** to control the invasive prickly pear cactus in Australia.

Module 5: Terrestrial Invasive Species

- Common invasive plants: identification and management
- Invasive insects and diseases: Emerald Ash Borer, Spotted Lanternfly.

- Managing invasive animals: feral hogs, Burmese pythons.
- Restoration of invaded terrestrial habitats.
- Preventing spread through recreational and land management practices.
- **Case Study:** Large-scale bullfrog eradication programs in **Yosemite National Park** to protect native amphibians.

Module 6: Aquatic Invasive Species

- Identification of key aquatic invaders
- Prevention strategies for ballast water and recreational boats.
- Control methods for aquatic weeds and animals.
- Restoration of lakes, rivers, and wetlands.
- Legislation and policies for aquatic biosecurity.
- **Case Study:** The multi-faceted control effort against **Giant Salvinia** in Lake Raven, Texas, using an integrated approach.

Module 7: Policy, Legislation, and Public Engagement

- International and national biosecurity frameworks and legal obligations.
- The role of inter-agency cooperation and partnerships.
- Engaging with communities and stakeholders.
- Designing and promoting citizen science initiatives.
- Funding and grant writing for invasive species projects.
- **Case Study:** The collaborative efforts of **public and private agencies** to manage invasive species on Dirk Hartog Island, Australia.

Module 8: Emerging Threats and Future Outlook

- The intersection of **climate change** and invasive species.
- Emerging technologies: DNA monitoring, drones, and AI.
- Developing a **national invasive species strategy**.
- Ethical considerations in invasive species management.
- Career paths and professional development in the field.
- **Case Study: Horizon scanning** to identify potential invasive threats from global trade and climate-induced range shifts.

Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	27 Nov 2026	Online	$1,000
23 Nov 2026	27 Nov 2026	Physical	$1,500
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$3,000
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$4,500
23 Nov 2026	27 Nov 2026	Physical	$6,000
23 Nov 2026	27 Nov 2026	Physical	$6,000

Ready to enroll or request a customized program? Book online or contact us:

Register Online Now

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com