

# GRADUATE CERTIFICATE IN CLIMATE ADAPTATION AND RISK MANAGEMENT (CARMA)

NR 678 Advanced Ecological Restoration

Program Total Credits:

10-13

\*This certificate may have courses in common with other graduate certificates. A student may earn more than one certificate, but a given course may be counted only in one certificate.

The online Graduate Certificate in Climate Adaptation and Risk Management (CARMA) provides post-baccalaureate students and professionals from a variety of disciplines with advanced knowledge of adaptive climate change solutions within the context of risk management and social considerations. This online certificate will prepare the students with scientifically-based knowledge, tools, methods, theories, and tactics to identify, compare, evaluate, and apply climate-adaptive strategies across a diverse suite of ownerships, rights holders, sectors and land-uses at the local, state, regional, and global levels.

## Learning Outcomes

After successfully completing the graduate certificate, students will be able to:

1. Assess, quantify, and understand how climate change has affected and will likely impact social and ecological systems and the linkages between them.
2. Identify, compare, and evaluate climate models, risk management frameworks, and adaptive planning approaches for ecological and social systems.
3. Develop climate adaptation plans to inform decision making that incorporate scientific, social, economic, and policy considerations across temporal and spatial scales.
4. Identify and analyze social justice implications, historical/legacy considerations, policy approaches, and communication strategies related to climate adaptation, mitigation, and risk assessments.
5. Demonstrate effective written, oral, and visual communication skills that contribute to lifelong learning skills regarding how to access, evaluate, utilize, and disseminate relevant and high-quality scientific information for the benefit of the public, policymakers, stakeholders and rights-holders, and decision-makers in the public and private sectors.

## Requirements Effective Fall 2023

Additional coursework may be required due to prerequisites.

Code	Title	Credits
ESS 516/NR 516	Climate Justice and Policy	2
ESS 543/ATS 543	Global Climate Change	2
NR 517/NRRT 517	Climate Change Communication and Engagement	2
NR 518	Climate Impacts and Risk Assessments	3
Select one course from the following:		1-4
F 574	Climate Adaptive Forest Management	
FW 579	Wildlife Conservation Policy--Current Events	
NR 501	Leadership and Public Communications	
NR 535	Action for Sustainable Behavior	