

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

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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.

[Students interested in graduate work should refer to the Graduate and Professional Bulletin.](#)

## Learning Objectives

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.