

# SPACE WEATHER AND ENVIRONMENT CERTIFICATE

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## Space Weather and Environment: Science, Policy and Communication

Space Weather and Environment: Science, Policy and Communication (SWEN) is a **fully online** five course, 15-credit-hour graduate certificate program for clientele that includes broadcast meteorologists and other weather-casters, emergency responders, military personnel, federal and state policy advisors, legislative assistants, science journalists, and any professional whose career may be enhanced with a greater understanding of this subject area. Guided by the National Space Policy of the United States of America, this program will be an avenue for professional development and advancement for those seeking to deepen and broaden their knowledge-base and understanding of the Earth-Sun-Space environment as well as the impact space weather can have on infrastructure, communication and commerce.

## WHY STUDY THIS PROGRAM?

If you are responsible for communication and power grids, transportation systems, navigation systems including space-based assets, commerce, and other infrastructure, this program is for you. Additionally, this program will assist individuals to be better prepared to communicate these issues to policy-makers, stakeholders and the public. The international scope of the SWEN will help prepare individuals for positions in the government, private, commercial and academic sectors. The program should be especially interesting for broadcast meteorologists who are seeking to gain knowledge and proficiency in space weather to better communicate to their market audience.

## WHAT YOU WILL LEARN?

Those who have completed the SWEN program will possess the ability to:

- Demonstrate base knowledge of natural or environmental hazards, including space weather hazards and associated risks;
- Describe solar and space weather phenomena, including but not limited to: aurora, coronal holes, coronal mass ejections (CME), solar flares, sunspots, solar cycle, geomagnetic storms, characteristics of the magnetosphere, and behavior of the interaction between different elements;
- Relate impacts of space weather phenomena to existing and emerging fields, including the variety of customers and operations most vulnerable;
- Organize existing protocols and design new protocols for preparing and responding to space weather events;
- Describe and apply the products, data and graphics to communicate for specific space weather events; and
- Develop new video products that will communicate space weather to specific audiences – a capstone experience.