

Frequently Asked Questions

Tsunami Science and Preparedness Certificate Program

What is the Certificate Program in Tsunami Science and Preparedness?

The Certificate Program in Tsunami Science and Preparedness provides participants with the tools needed to establish and sustain effective tsunami resiliency programs. The curriculum offers a comprehensive view of the essential elements of tsunami science, planning and operational programs.

What is a tsunami?

Tsunamis are ocean waves usually produced by earthquakes or underwater landslides. From an initial tsunami generating source area, waves travel outward in all directions much like the ripples caused by throwing a rock into a pond.

Why is an education in Tsunami Science and Preparedness important?

In order to warn and prepare populations for an imminent tsunami event, a comprehensive understanding of tsunami science and the use of state-of-the-art warning systems technologies are just the beginning of what professionals will need to help people respond to and recover from these disasters. Social, political and cultural knowledge will also become prerequisites for the development and maintenance of tsunami-resilient communities. That's why the University of Washington with the support of the National Oceanic and Atmospheric Administration now offers the Certificate Program in Tsunami Science and Preparedness.

What special expertise allows UWE to offer this program in Tsunami Science and Preparedness?

The Pacific Northwest is a national nexus for tsunami information and research, partly because of the subduction earthquake hazard in this area. Between UW, NOAA and State and Local agencies, UWE can draw on a tremendous center of expertise in tsunami science and hazard reduction. The teaching staff for this program includes professionals from science, engineering and emergency management who have worked extensively with tsunami hazards.

What types of careers are available in Tsunami Science and Preparedness?

Emergency management, warning center, relief organizations, first responders, planners, policy makers, researchers and academics must all understand tsunamis to help achieve sustainable and tsunami resilient communities.

What are the requirements to receive the certificate in Tsunami Science and Preparedness?

All three courses (1- Tsunami Science, 2- Tsunami Warning Systems, and 3- Tsunami Resilient Communities) must be completed to receive the certificate in Tsunami Science and Preparedness. Additionally, a field trip and pre-course work may be required.

What is taught in course 1 (Tsunami Science)?

- Basic explanations of how tsunamis occur, propagate and impact coastlines
- Geology of tsunami hazard zones
- Introduction to models and databases used to assess tsunami hazards

What is taught in course 2 (Tsunami Warning Systems)?

- Introduction to global seismic and tsunami wave monitoring
- Overview of models used to forecast tsunami propagation
- How a tsunami warning center works
- Tsunami warning communication

What is taught in course 3 (Tsunami Resilient Communities)?

- Overview of the four phases of emergency management
- How to promote tsunami education and preparedness in local communities
- Introduction to critical elements necessary in developing tsunami resilient communities

What kinds of classroom activities take place during the program?

Participants explore course topics through a combination of presentations by instructors, group discussions, readings, exercises and hands-on activities. Web-based tools and instructional aids are available to assist in delivery of course materials and completion of class exercises. Because tsunami preparedness and mitigation requires coordination between emergency managers, policy makers, community planners, scientists, engineers and other professionals, the program organizes participants into cross-disciplinary teams. Each team completes a series of short documents that follow the course instruction and are elements of tsunami resilience for a specific community at risk.

What types of field trips are offered?

Past field trips have included: (1) Examining paleo-tsunami evidence along the Washington coast; (2) Visiting the Operations Center of Washington State's Emergency Management Division near the state capitol of Olympia; (3) Meeting with local residents, officials, and emergency managers in a Washington coastal community.

Has this program been offered before?

The first offering of this program was during the summer of 2007 when 32 professionals from Indonesia, Sri Lanka, Thailand, India and the Maldives – the countries most affected by the December 2004 Sumatra tsunami – took part in the inaugural two-week intensive UW program. The Certificate program is a core component of a broader program to support education and training about tsunami hazards both nationally and worldwide.

What types of professionals have earned certificates in this program?

Past participants have included disaster mitigation specialists, seismologists, modelers, warning center personnel, professors and lecturers, disaster response coordinators, NGO personnel, and local and national government officials. The program is designed to provide a comprehensive, integrated summary level overview of essential aspects of tsunami science, emergency planning and operational programs.

What if my background in science is not strong? Will this be a problem?

The program consists of three introductory level courses; therefore participant expertise is not expected in any of the three course topics.

What if I only want to take a few courses in the certificate program?

Acceptance into the certificate program is contingent on the commitment to attend all three courses in a single offering.

What types of accommodations are available if I am from out of town?

University of Washington residence halls will be available for participants needing accommodations. Hotel accommodations are also available. Participants are expected to pay for their accommodations. Information regarding accommodations options will be sent with the program acceptance letter.

How can I apply?

Applicants may apply online, by e-mail or regular mail. For details, see the certificate program website at: www.extension.washington.edu/ext/certificates/tsp/tsp_gen.asp

Who can I contact for more information about the Certificate Program in Tsunami Science and Preparedness?

Please call 206-685-8936 or 1-800-506-1325, or email extnadvising@extn.washington.edu, or visit www.extension.washington.edu/ext/certificates/tsp/tsp_gen.asp