

Course Syllabus

EARLY WARNING SYSTEMS

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Program: Oceanographic Engineering

1. Course number and name

OCEG1023 - EARLY WARNING SYSTEMS

2. Credits and contact hours

3 credits and 3 contact hours

3. Instructor's course or coordinator's name

JONATHAN MARCELO CEDEÑO OVIEDO

4. Text book, title, author, and year

- Jochen Zschau, Andreas N. Kiippers (Eds.). Early Warning Systems for Natural Disaster Reduction (1st Edition)
 - a. Other supplemental materials
 - Gladys T. Michel, Ivy Beltrán, Javier Gonzales, Ivar Arana, Oscar Paz. Guía para la conformación de Sistemas Municipales de Alerta Temprana ()
 - David Rogers, Vladimir Tsirkunov. Implementing Hazard Early Warning Systems (GFDRR WCIDS Report 11-03)
 - Reid Basher. Global early warning systems for natural hazards: systematic and people-centred ()
 - IFCR. Community early warning systems: guiding principles ()

5. Specific course information

- a. Brief description of the content of the course (catalog description)

This course seeks a detailed understanding of the 4 components or mainstays of an Early Warning System (EWT) its methods, monitoring tools and skills required to make a diagnosis, forecast, communicate and prepare the answers to different types of climate threats; floods, droughts, mass movements, coastal storms, epidemics, coastal hazards.

- b. This course is: Selected elective

6. Specific goals for the course

- a. Specific outcomes of instruction

1.- Know the different elements of an Early Warning System (EWS) and mechanisms for planning, prevention, and development of contingency and response plans.

2.- Understand the risk analysis approach, based on threats, exposure, susceptibility and adaptive capacity of human systems.

3.- Develop the ability to articulate, communicate and collaborate with communities and key actors in the development of plans to prevent, contingency and respond to extreme climate and non-climate events.

- b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other



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outcomes are addressed by the course

7. Brief list of topics to be covered

- 1.- Introduction to Early Warning Systems for Climate Risks and Threats
- 2.- Elements of an Early Warning System
- 3.- Hydro-meteorological Early Warning Systems: floods, droughts, landslides
- 4.- Early Warning Systems for Non-climate and multi-threat events
- 5.- Community-based Early Warning System
- 6.- Visit to an Early Warning System: monitoring station, communication and response system

