

Máster online 100%

# Master´s Degree in Continuing Education in Disaster Risk Management and Climate Governance + 60 ECTS Credits

Structuralia

Máster online 100%

# Master´s Degree in Continuing Education in Disaster Risk Management and Climate Governance + 60 ECTS Credits

Modalidad
**Online**

Idiomas
**Inglés**

Duración
**1500 horas (60 ECTS)**

Sin Límite
**Asistente IA**

Instituciones Educativas

Structuralia Engineering eLearning

UCAM Universidad Católica de Murcia

## Resumen

This Master's degree has been designed to provide professionals from different disciplines with the necessary knowledge and skills for applied research, and for the management of means and tools that can be used in the fields of Disaster Risk Management and climate governance. According to the Intergovernmental Panel on Climate Change (IPCC), climate governance is related to mechanisms and voluntary measures destined to run social systems towards prevention, mitigation or adaptation to the risks caused by climate change (Jagers and Steripple, IPCC glossary).

# Temario

## MÓDULO 1. DISASTER RISK MANAGEMENT AND CLIMATE CHANGE. CONCEPTS AND CONTEXT

### 1. UNIDAD DIDÁCTICA 1. RISK MANAGEMENT AND CLIMATE CHANGE MANAGEMENT

1. The International Context of Disaster Risk Management (The Sendai Framework for Disaster Risk Reduction)
2. International Context of Climate Change. The IPCC: Climate Change Generalities and Scenarios.
3. Concepts related to disaster risk management and climate change and articulation levels
4. Lines of action for risk management and structural and non-structural intervention for risk reduction
5. Risk management by scenarios

### 2. UNIDAD DIDÁCTICA 2. RISK OF DISASTER AND CLIMATE CHANGE

1. General basis of climate change
2. The IPCC: Climate change generalities and scenarios
3. Relation development - risk - disasters (risk construction) and the effects and impacts of climate variability and climate change
4. Extensive and Intensive Risks, their impact on human development
5. The inequalities and conditions of vulnerability and the impacts and effects of climate variability and climate change

### 3. UNIDAD DIDÁCTICA 3. SYSTEMIC APPROACH FOR THE MANAGEMENT OF DISASTER RISK AND CLIMATE CHANGE MANAGEMENT

1. Areas for risk management and climate change (to institutional to the sectorial, private, territorial, community sector)
2. Participants and Actions for the management of disaster risk and climate change Risk Management
3. Planning instruments for risk management and climate change
4. Institutionality, Entities and Organizations for the implementation and monitoring of actions
5. Adaptation and mitigation strategies for climate change

### 4. UNIDAD DIDÁCTICA 4. FOCUS OF PROCESSES AND STRATEGIES FOR AN INTEGRAL MANAGEMENT OF THE RISK OF DISASTERS AND ADAPTATION TO CLIMATE CHANGE

1. What does the process-based approach implies (change of the emergency and disasters care approach) in the context of climate variability and change
2. Strategic Processes: Planning, Organization and monitoring
3. Mission processes: Knowledge of risk, reduction of risk and management of disasters
4. Support Processes: strengthening of human resource knowledge, public communication and information
5. Strategies for a comprehensive management of the risk of disasters in the context of climate variability and climate change

## MÓDULO 2. PROSPECTIVE AND CORRECTIVE RISK MANAGEMENT

### 1. UNIDAD DIDÁCTICA 1. CONTEXT AND CONCEPTUALIZATION OF RISK AWARENESS TOWARDS ITS PROSPECTIVE AND CORRECTIVE MANAGEMENT

1. Disaster Risk Management
2. Disaster Risk Management and its internal context
3. Disaster Risk Management and its external context
4. Disaster Risk Management and its process context
5. Disaster Risk criteria

### 2. UNIDAD DIDÁCTICA 2. PROSPECTIVE AND CORRECTIVE MANAGEMENT. RISK ASSESSMENT

1. Disaster Risk Identification
2. Disaster Risk Analysis
3. Disaster Risk Assessment
4. Disaster Risk Monitoring
5. Illustrative Examples of Disaster Risk Assessment

### 3. UNIDAD DIDÁCTICA 3. REDUCING RISKS THROUGH PROSPECTIVE INTERVENTIONS

1. Context and conceptualization of Disaster Risk Reduction
2. Current and Future Risk Processes
3. Prospective intervention
4. Risk Reduction Measures - Prospective Intervention (Future Risk)
5. Disaster Risk Reduction and Resilience

### 4. UNIDAD DIDÁCTICA 4. REDUCING RISKS THROUGH CORRECTIVE INTERVENTIONS

1. Corrective intervention (mitigation of current risk)
2. Reducing vulnerability and improving resilience and capability through structural and non-structural measures
3. Financial protection
4. Social actors against Disaster Risk reduction
5. Illustrative examples of corrective interventions

## MÓDULO 3. CLIMATE VARIABILITY AND CLIMATE CHANGE

### 1. UNIDAD DIDÁCTICA 1. THE CLIMATE SYSTEM

1. Introduction to the Climate System
2. Structure and Components of the Climate System
3. The Atmosphere and Life on Earth
4. The Importance of the Hydrological Cycle in Climate Regulation
5. Natural Drivers of Climate Change

### 2. UNIDAD DIDÁCTICA 2. WEATHER, CLIMATE AND CLIMATE CHANGE

1. Energy Balance in the Climate System
2. Changes in the Climate System
3. The Oceans and Atmosphere: Essential Interactions for weather

4. Climate Variability
5. Weather, Climate and Climate Change in Strategic Systems

### 3. UNIDAD DIDÁCTICA 3. CLIMATE CHANGE

1. Anthropogenic Drivers of Climate Change
2. History of Climate Change
3. Observed Trends of Climate Change: First-Tier Effects
4. Global Scenarios of Climate Change
5. The Importance of the 1.5ºC

### 4. UNIDAD DIDÁCTICA 4. VULNERABILITY ANALYSIS AND CLIMATE CHANGE RISK (CCR)

1. Expected Trends of Climate Change: Second-Tier Effects
2. Climate Change Vulnerability
3. Vulnerability Dimensions and Climate Change Risk
4. Disaster Risk (DR) and Climate Change Risk (CCR)
5. Examples

## MÓDULO 4. ICT AND GIS APPLIED IN THE MANAGEMENT OF DISASTER RISK AND CLIMATE CHANGE

### 1. UNIDAD DIDÁCTICA 1. INTRODUCTION TO IT, GIS, GPS, DB, AND TELECOM

1. Introduction to Information Technology and Tech Advances
2. Databases / DB, data storage, and database management systems.
3. GIS, GPS and Coordinate Systems
4. Using Google Earth Pro to Locate Coordinates and Maps
5. GPS Essentials App and how to collect Data from GPS with Android smartphones.

### 2. UNIDAD DIDÁCTICA 2. BASIC TOOLS TO COLLECT GEOLOCALIZED DATA IN A DATABASE

1. Creating a Data Collection Form: Recommendations to Create Data Storage Structures
2. Kobotoolbox
3. Typeform
4. GISCLOUD
5. Fullcrum App

### 3. UNIDAD DIDÁCTICA 3. QGIS DESKTOP TOOL AND THE CREATION OF WEB GEOSERVICES WITH GEOSERVER.

1. QGIS Basic Tools (I)
2. QGIS Basic Tools (II)
3. What are WMS and WFS Geoservices?
4. Creating WMS or WFS with Geoserver and their Applications (I)
5. Creating WMS or WFS with Geoserver and their Applications (II)

### 4. UNIDAD DIDÁCTICA 4. CREATING MAPS. LAYERS, CARTOGRAPHY, CADASTRE, CENSUS AND GIS ANALYSIS TO OBTAIN HAZARD, VULNERABILITY AND RISK MAPS

1. Relation between Risk Management, Cadastre, Census and Cartography

2. Creating Urban Land Use and Critical Infrastructure Maps.
3. GIS Analysis with QGIS and ArcGIS Desktop Demonstration
4. Susceptibility, Hazard, Vulnerability and Risk Maps: Differences, Map Types and Mapping Methodologies
5. Climate Models and Climate Trends

## MÓDULO 5. DISASTER RISK FINANCIAL MANAGEMENT AND CLIMATE FINANCE

### 1. UNIDAD DIDÁCTICA 1. CONTEXT AND CONCEPTUALIZATION OF DISASTER RISK FINANCIAL PROTECTION AND CLIMATE FINANCE

1. Conceptualization of Disaster Risk Financial Protection
2. Conceptualization of Climate Finance
3. Disaster Risk Financial Protection and Climate Finance as Components of Fiscal Management
4. Legal Framework of Disaster Risk Financial Protection and Climate Finance
5. Benefits from Grouping Risks

### 2. UNIDAD DIDÁCTICA 2. DISASTER RISK FINANCIAL PROTECTION IN PUBLIC INVESTMENT

1. Disaster Risk Financial Protection Strategies
2. Disaster Risk Retention Tools
3. Disaster Risk Financing Tools
4. Disaster Risk Transfer Tools
5. Disaster Risks Analysis and Climate Change Criteria in Public Investment

### 3. UNIDAD DIDÁCTICA 3. DISASTER RISK FINANCIAL PROTECTION IN PRIVATE INVESTMENT

1. Risk Management
2. Insurance
3. Insurance Types
4. Disaster Contingency Plans against Disaster Occurrence
5. Finance perspective of Environmental and Social Risks

### 4. UNIDAD DIDÁCTICA 4. CLIMATE FINANCE

1. Possible Impacts due to Climate Events
2. Inclusion of Climate Event Considerations in the Planning Process
3. Financial Tools to Respond to Climate Events
4. Tax Management to Promote Climate Change Adaptation
5. Green Funds/Green Bonds

## MÓDULO 6. DISASTER MANAGEMENT AND RECOVERY

### 1. UNIDAD DIDÁCTICA 1. CONTEXT AND CONCEPTS OF DEVELOPMENT-ORIENTED DISASTER MANAGEMENT AND RECOVERY

1. Concepts of Emergencies and Disasters
2. Concepts of Development-Oriented Recovery
3. Context of Development-Oriented Disaster Response and Recovery
4. Effects and Impacts of Climate Variability and Climate Change on Disaster Response and Recovery

5. Cross-Cutting issues associated Development-Oriented Disaster Management

### 2. UNIDAD DIDÁCTICA 2. DISASTER MANAGEMENT AND RECOVERY PLANNING

1. Disaster Management and Recovery Processes
2. Preparedness and Alerts
3. Emergency Response Processes
4. Post- Disaster Recovery Planning Process
5. Territorial Levels and Work Areas

### 3. UNIDAD DIDÁCTICA 3. INFORMATION MANAGEMENT, AND RESPONSE AND RECOVERY ASSESSMENTS

1. Response Information
2. Instruments and Needs Assessments
3. Information Management in Development-Oriented Recovery
4. Damages, Loss and Recovery Needs Assessment
5. Recovery: Assessment from the Government's Perspective, the Private Sector and Communities

### 4. UNIDAD DIDÁCTICA 4. DISASTER MANAGEMENT AND DEVELOPMENT-ORIENTED RECOVERY STRATEGIES AND INSTRUMENTS

1. Disaster Management and the Humanitarian Agenda Strategies
2. Emergency Response and Disaster Management Instruments
3. Post- Disaster Development-Oriented Recovery Strategies
4. Post-Disaster Development-Oriented Recovery Planning and Implementation Instruments
5. Disaster Response and Recovery Actions. Technical and Resource Implementation Needs

## MÓDULO 7. CLIMATE GOVERNANCE

### 1. UNIDAD DIDÁCTICA 1. WHY IS CLIMATE GOVERNANCE NECESSARY?

1. What Is the Governance?
2. Differences between Government, Governability and Governance
3. Social, Environmental and Climate Governance
4. Climate Governance Levels: Global, Regional and Local
5. Governance Gaps

### 2. UNIDAD DIDÁCTICA 2. GOVERNANCE: COUNTRIES, CITIES AND COMMUNITIES

1. The Need for Effective Climate Change Response in Countries with Diverse Contexts
2. Climate Action Barriers
3. Governance in Countries and Cities
4. Community-based Governance
5. Examples

### 3. UNIDAD DIDÁCTICA 3. STRATEGIC SECTOR GOVERNANCE

1. Agricultural Governance
2. Agricultural Governance Examples
3. Water Governance
4. Water Governance Examples
5. Coastal Area Climate Governance

### 4. UNIDAD DIDÁCTICA 4. CAPACITIES AND CHALLENGES OF CLIMATE GOVERNANCE

1. Required Country Transformations: Opportunities and Challenges
2. Other Actors and their Perspectives
3. Participatory Governance and Consultation Processes
4. Governance Systems and Sustainable Development
5. Climate Governance and Disaster Risk Governance

## MÓDULO 8. GLOBAL WARMING MITIGATION TOOLS

### 1. UNIDAD DIDÁCTICA 1. THE CLOSE LINK BETWEEN GREENHOUSE GAS (GHG) AND GLOBAL WARMING (GW)

1. Atmospheric Pollution
2. Global warming and Climate Change
3. Global Greenhouse Gas Emissions
4. What is Global Warming Mitigation?
5. Policy Approaches to Mitigation

### 2. UNIDAD DIDÁCTICA 2. INTERNATIONAL MITIGATION MECHANISMS

1. Nationally Determined Contributions
2. Carbon Emission Trade or Bond law
3. Clean Development Mechanisms
4. Joint Action and Adaptation Fund
5. Non-market-based Compensation Mechanisms. Voluntary market

### 3. UNIDAD DIDÁCTICA 3. SECTORAL MITIGATION STRATEGIES

1. Energy Sector
2. Industry Sector
3. Transportation Sector
4. Housing and Construction Sectors
5. Agriculture, Forestry and other Land Use Sectors

### 4. UNIDAD DIDÁCTICA 4. MITIGATION BENEFIT AND OPPORTUNITIES

1. Mitigation in Asia
2. Mitigation Measures in the American Continent
3. Mitigation Measures in Africa
4. Mitigation Measures in Europe
5. Mitigation Measures in Oceania

## MÓDULO 9. CLIMATE CHANGE ADAPTATION TOOLS

### 1. UNIDAD DIDÁCTICA 1. CLIMATE CHANGE RISKS IN TERMS OF ANALYSIS AND VULNERABILITY

1. Climate change risks to water resources
2. Climate change risks to biodiversity and ecosystem services
3. Climate change risks to food safety and manufacturing systems
4. Climate change risks to human settlements and infraestructures

5. Climate change risks to human health

## 2. UNIDAD DIDÁCTICA 2. ADAPTATION TO CLIMATE CHANGE

1. What is climate change adaptation? Resilience
2. Climate change approaches
3. Climate adaptation options
4. Implementing adaptation
5. The thin line between development and adaptation

## 3. UNIDAD DIDÁCTICA 3. INTERNATIONAL EXPERIENCE IN CLIMATE CHANGE ADAPTATION

1. UNFCCC: Commitments and progress in global climate change adaptation
2. Warsaw international mechanisms for loss and damage
3. International strategies: Euroclima +
4. National adaptation programmes of action (NAPA) and adaptation plans (NAP)
5. Cities and climate change adaptation

## 4. UNIDAD DIDÁCTICA 4. SECTORAL ADAPTIVE STRATEGIES

1. Adaptive strategies in comprehensive water resource management
2. Adaptive strategies in biodiversity and ecosystem services
3. Adaptive strategies in human settlements and infraestructura
4. Adaptive strategies in productive systems and food security
5. From climate crisis to climate action: where are we going now?

## MÓDULO 10. MFP. MASTER´S DEGREE IN DISASTER RISK MANAGEMENT AND CLIMATE GOBERNANCE

# Titulación

Master´s Degree in Continuing Education in Disaster Risk Management and Climate Governance with 60 ECTS Credits awarded by the Catholic University of Murcia in collaboration with Structuralia

# Objetivos

- This program's objective is to equip the students with the knowledge and skills to:
- Understand Disaster Risk Management as a continuous process built upon social, cultural, economic and institutional circumstances, and that operates in contexts of constant hazard, climate variability and climate change.
- Identify and analyze the actions and measures required for prospective and corrective risk management.
- Understand disaster risk finance management, climate finances and post-disaster recovery processes after a disaster.
- Understand the role and operations of technological and information tools relevant to risk management, climate variability and climate change.
- Understand the climate change context and its relationship with Disaster Risk Management.
- Analyze the global climate governance challenges, the key players and the required mechanisms and measures to address such challenges.
- Understand the different adaptive climate governance tools and measures applied by territorial, sectorial, institutional, public, private and communal agencies.
- Encourage the creation of knowledge to promote research and the development of risk management and climate governance approaches

## ¿Para qué te prepara?

Therefore, acquiring knowledge and skills in this subject is highly relevant in a world more and more exposed to climate-related phenomena

## ¿A quién va dirigido?

The main groups of interest include engineers, architects, experts on Earth science, economic science, social science, environmental science, ecologists, sociologists, biologists, hydrologists, educators, geographers and other professionals interested in developing their competences in risk management and climate governance.

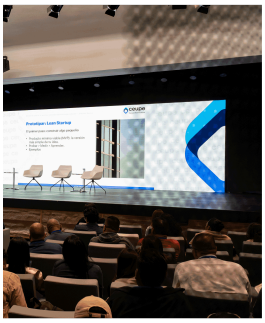
## Carácter Oficial

La presente formación no está incluida dentro del ámbito de la formación oficial reglada (Educación Infantil, Educación Primaria, Educación Secundaria, Formación Profesional Oficial FP, Bachillerato, Grado Universitario, Master Oficial Universitario y Doctorado). Se trata por tanto de una formación complementaria y/o de especialización, dirigida a la adquisición de determinadas competencias, habilidades o aptitudes de índole profesional, pudiendo ser baremable como mérito en bolsas de trabajo y/o concursos oposición, siempre dentro del apartado de Formación Complementaria y/o Formación Continua siendo siempre imprescindible la revisión de los requisitos específicos de baremación de las bolsa de trabajo público en concreto a la que deseemos presentarnos.

# Salidas Profesionales

- At the end of the program, the students of this program will have the necessary knowledge and skills to: • Conduct research with Disaster Risk Management and climate governance tools and assets. • Prepare, implement, and evaluate Disaster Risk Management and climate governance technical studies, diagnosis, projects, programs and measures. • Formulate disaster risk mitigation and adaptation strategies • Provide consultancy consulting services • Become a specialized educator or public official.







Vive Madrid

# Vive la Semana Internacional

Como complemento adicional a tu formación, podrás formar parte de la SIM: Semana Internacional en Madrid. Un encuentro único que reúne a estudiantes de todo el mundo. Durante siete días podrás vivir una experiencia académica y cultural en el corazón de Europa, culminando con el acto de graduación en Madrid.

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- Networking con alumnos de diferentes países
- Actividades culturales y descubrimiento de Madrid
- Acto de graduación

# Structuralia

Structuralia es una institución educativa líder en formación online de posgrado y alta especialización, enfocada en los ámbitos de la ingeniería, la arquitectura, la construcción, la energía, la tecnología y la transformación digital.

Fundada en 2001 con un fuerte ADN industrial, fruto de la colaboración entre grandes empresas del sector y la Universitat Politècnica de Catalunya (UPC), desde hace más de 25 años acompañamos a profesionales técnicos en su desarrollo académico y profesional mediante una formación práctica, flexible y alineada con la realidad del mercado laboral.

uestra propuesta formativa conecta conocimiento técnico avanzado, empleabilidad real y proyección internacional, actuando como apoyo clave en la evolución profesional de quienes buscan especializarse, crecer profesionalmente y generar impacto en su sector, con un firme compromiso con la democratización del acceso a la excelencia técnica.

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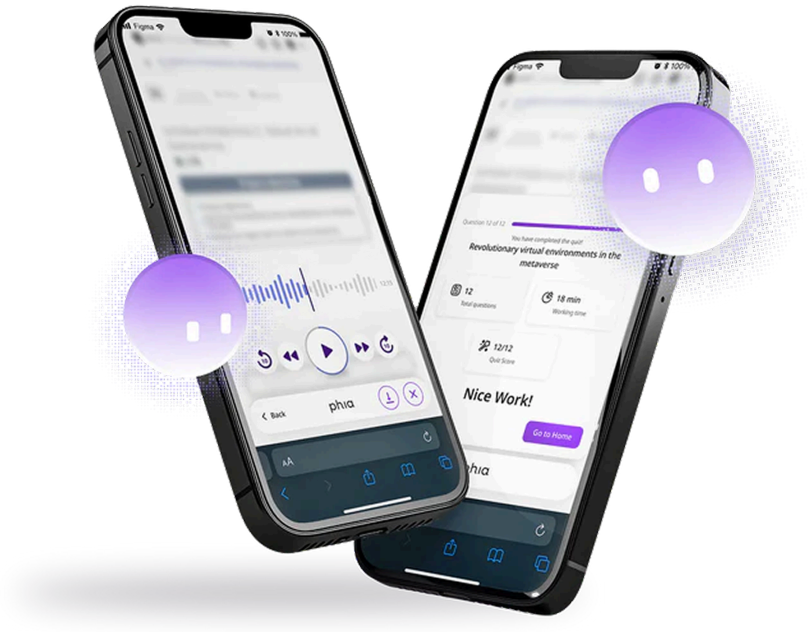
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# Conoce a PHIA, tu asistente de aprendizaje personalizado

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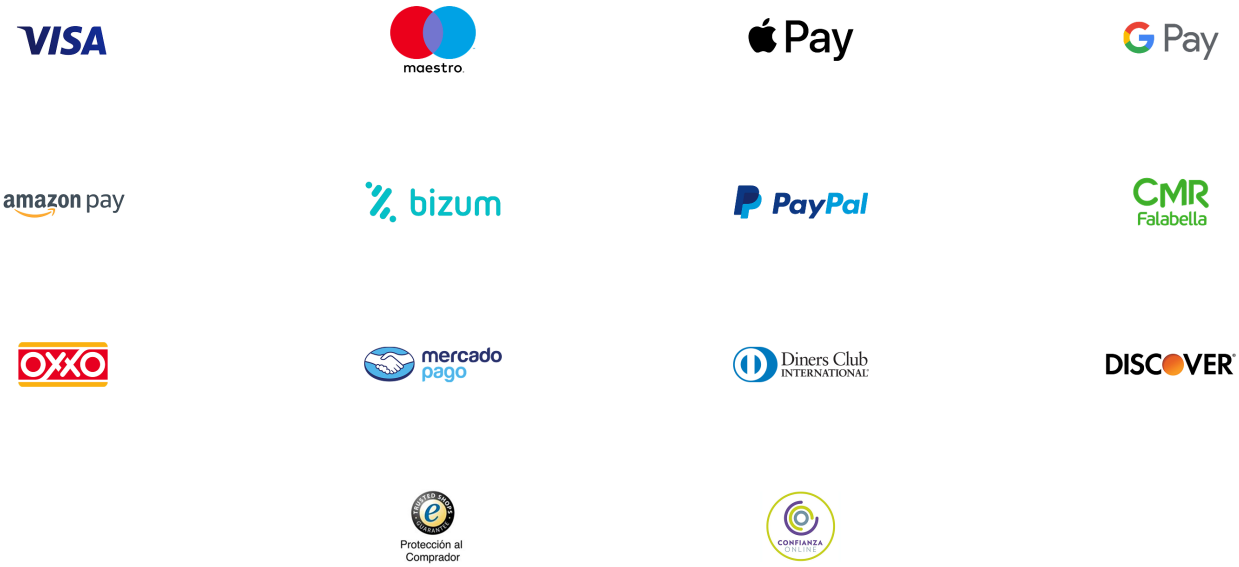
EDUCA EDTECH Group lidera la revolución digital en la educación, impulsando el aprendizaje continuo y la transformación tecnológica. El grupo está formado por reconocidas instituciones de formación y tiene como misión democratizar el acceso a la educación, fomentar la transferencia de conocimiento, el desarrollo tecnológico y la investigación.

Con la experiencia acumulada a lo largo de más de 20 años, hemos perfeccionado nuestra plataforma de aprendizaje EDUCA LXP (Learning Experience Platform), la base de nuestra metodología educativa, que brinda a los estudiantes una formación online práctica y significativa.



# Descubre todas las facilidades de pago

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