

1. LECTURES

1.1 Theory

MOD Theory - Conceptual Framing: vulnerability, resilience, sustainability

- Global Urban and Environmental Change
- Urban Risk and Vulnerability Assessments
- Multidisciplinary perspectives on Urban Resilience
- From Security and Risk Management to Integrated Urban Resilience Thinking

Research Design and Academic Writing Course

1.2 Perspectives

MOD Perspective 1 - Built Environment Resilience

- Critical Infrastructures Interdependency, Planning and Management
- Planning and Design for Climate Resilience
- Build Back Better in Post-Disaster Reconstruction

G.I.S Course - Understanding and Creating Maps

Visit Barcelona Flooding Resilience Underground Rainwater Retention Deposits

MOD Perspective 2 - Resilience and Nature Based Solutions

- Urban Ecosystem Services / Disservices and Nature Based Solution (NBS) Frameworks
- Coastal cities challenges and NBS

Calculating Urban Ecosystem Services Benefits Course

Visit Barcelona green infrastructures and community gardens

MOD Perspective 3 - Economy and Urban Services Resilience

- Economic Resilience: growth, diversification, globalization and shrinkage processes
- Emergency and Post-emergency Recovery Management
- Urban Services Continuity and Co-management Policies

Smart City Dashboard and real-time management of city services

Visit Barcelona Energy Co-production Cooperative and Co-Management public spaces

MOD Perspective 4 - Community Resilience for Sustainability Transitions

- Migration, Inclusiveness and Participatory planning
- Community-lead Initiatives and Transition Movement
- Social Justice and Climate/disaster Resilience

Fuzzy Cognitive Mapping Course - Understanding Networks of Stakeholders Perceptions

Visit Barcelona Community Gardens and Transition Initiatives

1.3 Global Workshop

MOD Implementation - Resilience Implementation and Governance

- Urban Resilience Frameworks, Networks, Leadership, Insurance and Governance Models
- Urban Resilience World ATLAS - Workshop and case studies about resilience implementation challenges from different parts of the world.

Barcelona Workshop - students involved in a specific project in collaboration with local stakeholders addressing critical challenges for the city resilience

6 Months

MOD TEC - Tools & Technical Skills

This module consists in different technical courses in order to learn key skills in using tools and softwares essential for urban resilience

MOD Barcelona - City Resilience Lab

This module firstly introduce Barcelona experience in resilience through sites visits, while in a second part students are involved in a local workshop

2. MASTER THESIS

Students will develop a research thesis, possibly in collaboration with one of the 25 partner city, or a network, in order to dig into some urban resilience challenge (theory or implementation). A range of international supervisors, experts in different resilience sub-topics, will be available for tutoring students works, which will be reviewed by external second readers. The thesis is meant to be an in-dept research work, providing the students the skills and applied knowledge for a successful internship and future career.

1 Months

3. INTERNSHIP

A variety of climate, disaster and city to city learning and climate networks have supported this program and will host students for a minimum period of 3 months internship. Internship could be done also in one of the 25 partner cities, sprawled across the globe and addressing in so doing very different urban resilience challenges.

5 Months