

Sustainable Flood Management and Practice

永續洪災管理與實踐

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Offering session & time

28th July- 13th Aug. 2016.

9:00 am-12:00am & 13:00 pm-16:00 pm

Credit(s): 3

Goal of this course

1. To explore the underlying causes of flooding and the range of management strategies, with particular emphasis on a holistic perspective and considering the impacts of climate change.
2. To address the issues by appropriate tools applied with understanding of the capabilities and limitations.
3. To place stakeholders' social, political, economic and cultural realities on the flood management and practice.

Course description

Flood management is not a distinct discipline in itself, but rather involves the understanding of spatial planning, vulnerability, risk, resilience and adaptation to the problem of flooding. This course emphasizes more on the systemic understanding that should underlie flood management and seeks to address issues from a holistic perspective, rather than traditional on-site structure-oriented strategies. As the integration between scientific analysis and local wisdom in the flood management is important, stakeholders' social, political, economic and cultural realities will be covered as well. Through learning processes and experiences sharing, feasible strategies of sustainable flood management can be derived. The course balances advance reading, lecture, fieldwork, and exercises. Students will come play with a working knowledge based on international experiences and an understanding of the theory and tools for further applications.

Course content / outline

Sustainable Flood Management and Practice:

- Historical and Cultural Perspective, History of Tainan, City Development, City Tour.
- Land and Water Management Perspectives, Lowland Flooding, Scenario Analysis, Risk Analysis, Vulnerability Analysis.
- Urban Planning Perspective, Urban Environment, Spatial Planning, Resilient Cities.
- Water Quality Perspective, Water Pollution, Water Quality and Monitoring.
- Ecological Perspective, Ecological Function, Ecosystem Services.
- Public Health Perspective.
- Participatory Planning.

Note: The outline is as the attachment.

Assessment / grading policy

50% In-class Activities

50% Hands-on Project

Teaching methods for this course

Lecture

Exercise

Field Survey

Studio (hands-on)

Textbook & other reference

Class notes