

Subject: Urban Flood Management and Flood Hazard Mapping

Course number : DMP2870E

Instructor : Prof. Shigenobu TANAKA

Term / Time : Fall through Spring

1 Course Description

This course is specifically designed to study urban flood management. In the first stage of the course, students will learn about Japanese systems for flood risk management, such as relevant laws, river planning, flood control structures and comprehensive flood control measures for urban areas. The second stage aims to acquire knowledge required to promote early public evacuation with a flood hazard map. Students will also study flood frequency analysis, topography and psychological aspects underlying public behavior during disaster.

2 Course Outline (Course Topics)

Week

1 : Laws for flood risk management in Japan	Prof. TANAKA
2 : Local disaster management plan	Prof. TANAKA
3 : Flood control planning	Prof. TANAKA
4 : Flood control structure	Mr. Kamoto
5 : Case study of comprehensive flood control measures -Tsurumi river-	Mr. Imbe
6 : Flood frequency analysis(1)	Prof. TANAKA
7 : Flood frequency analysis(2)	Prof. TANAKA
8 : Flood frequency analysis(3)	Prof. TANAKA
9 : Flood hazard map	Prof. TANAKA
1 0 : Evacuation Plan with Flood Forecast	Prof. TANAKA
1 1 : Emergency operation	
1 2 : Geomorphology around rivers and alluvial plain (1)	
1 3 : Geomorphology around rivers and alluvial plain (2)	
1 4 : Developments in social sciences on people's reactions and responses to disasters	
1 5 : Examination	

3 Grading

Final Exam (70%) , Attitude in the class(30%)

4 Textbooks

4-1 Required

"Local Disaster Management and Hazard Mapping" (2009), ICHARM

"Hydrological Frequency Analysis" (2015), Tanaka

4-2 Others