

Subject: Control Measures for Landslide & Debris Flow

Course number : DMP 3840E

Instructor : Prof. Koichi KONDO

Term / Time : Fall through Winter

1 Course Description

This course provides the necessary knowledge and understanding of landslide and debris flow phenomena and their control measures necessary to exercise the IFRM. The lecture will illustrate the devastating phenomena and the causes of landslides and debris flows and provide the basic concepts of the measures for sediment-related disasters, so-called Sabo Works which is executed in the hill slopes and the channels. It will cover the important role of hazard mapping for sediment-related disasters in both structural and non-structural measures.

2 Course Outline (Course Topics)

Week

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| 1 . Outline of sediment-related disasters and Sabo projects | Prof. Kondo |
| 2 . Sediment yield, transport and deposition in a river basin | Prof.Sasahara |
| 3 . Sabo planning and control of sediment transport | Prof.Sasahara |
| 4 . Planning and design of Sabo facilities | Prof. Sasahara |
| 5 . Restoration of vegetation on wasteland and its effects | Dr.Osanai |
| 6 . Countermeasures for earthquake-induced natural Dams | Dr. Osanai |
| 7 . Introduction of landslides | Dr. Tsunaki |
| 8 . Survey and emergency response for landslides | Dr.Tunaki |
| 9 . Permanent measures for landslide damage reduction | Dr. Tsunaki |
| 1 0 . Warning and evacuation system for sediment-related disasters | Dr.Hara |
| 1 1 . Hazard mapping for sediment-related disasters | Dr. Takanashi |
| 1 2 . Training of hazard mapping for sediment-related disasters (1) | Dr. Takanashi |
| 1 3 . Training of hazard mapping for sediment-related disasters (2) | Dr. Takanashi |
| 1 4 . Application of Sabo/landslide projects to other countries (1) | Prof.Kondo |
| | Dr. Osanai |
| 1 5 . Application of Sabo/landslide projects to other countries (2) | Prof.Kondo |
| | Dr. Osanai |

3 Grading

Class participation (30%) Report and final examination (70%)

4 Textbooks

4-1 Required

4-2 Others