

## **Subject   Control Measures for Landslide & Debris Flow**

Course number : DPM 384E

Instructor : Dr. Shun Okubo

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 Sabo Works which control both hill slopes and 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**

- 1 . Outline of sediment-related disasters
- 2 . Introduction to Sabo projects
- 3 . Countermeasures for sediment-related disasters
- 4 . Hazard mapping for sediment-related disasters
- 5 . Comprehensive sediment-related disaster measures
- 6 . Countermeasures for earthquake-induced natural dams
- 7 . Sabo works in arid area and reforestation of degraded lands
- 8 . Volcanic Sabo Works
- 9 . Application of Sabo Works and landslide countermeasures to overseas countries
- 1 0 . Introduction of landslides
- 1 1 . Characteristics and topography of landslides
- 1 2 . Stability analysis for landslide
- 1 3 . Survey and emergency response for landslide
- 1 4 . Maintenance measures for roads and reservoirs in landslide areas
- 1 5 . Permanent measures for landslide damage reduction

### **3   Grading**

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

### **4   Textbooks**

4-1 Required

4-2 Others