Subject: Practice on Flood Forecasting and Inundation Analysis

Course number：DMP2890E
Instructor：Assoc. Prof. Takahiro SAYAMA
Term / Time：Fall through Spring

1　Course Description

The objective of this course is to introduce the basic technique for undertaking flood forecasting and inundation analysis in poorly-gauged basins using state-of-the-art global information and technologies. The course consists of three components: introduction of Rainfall-Runoff-Inundation (RRI) modeling, practice on Integrated Flood Analysis System (IFAS) and Block-wise use of TOPMODEL (BTOP) for runoff analysis at different scales.

2　Course Outline (Course Topics)

Week

　　　1：Basics of Flood Hazard Models
　　　2：Rainfall-runoff-inundation modeling (1) Data preparation
　　　3：Rainfall-runoff-inundation modeling (2) Running model
　　　4：Rainfall-runoff-inundation modeling (3) Parameter setting
　　　5：Rainfall-runoff-inundation modeling (4) Analysis of simulation results
　　　6：Runoff analysis with IFAS (1) Basic concept
　　　7：Runoff analysis with IFAS (2) Data preparation
　　　8：Runoff analysis with IFAS (3) Running model
　　　9：Runoff analysis with IFAS (4) Parameter setting
　　　10：Runoff analysis with IFAS (5) Analysis of simulation results
　　　11：Large-scale Runoff analysis with BTOP (1) Basic concept
　　　12：Large-scale Runoff analysis with BTOP (2) Data preparation
　　　13：Large-scale Runoff analysis with BTOP (3) Running model
　　　14：Large-scale Runoff analysis with BTOP (4) Parameter setting
　　　15：Large-scale Runoff analysis with BTOP (5) Analysis of simulation results

3　Grading

　　　Reports (100%)

　　　If a report is late for the deadline, it will be not evaluated.

4　Textbooks

　4-1 Required

　4-2 Others

　　　Material made by the instructors