Subject: Practice on Hydraulics

Course number：DMP285E
Instructor：Prof. Tadaharu ISHIKAWA
Term / Time：Fall through Spring

1 Course Description

This course is review and discussion about Open Channel Hydraulics, which is a branch of applied fluid mechanics to support river management and improvement works for flood disaster prevention and water environment conservation. This helps students understand deeply about topics explained in DMP281E “Hydraulics”, as well as Quiz.

2 Course Outline (Course Topics)

Week

1 ：Mathematic 1 (Ordinary Differential equations)
2 ：Mathematic 2 (Partial Differential equations)
3 ：review of Advection and Diffusion
4 ：review of General transport equations
5 ：discussion about Quiz1
6 ：review of One dimensional energy equation
7 ：review of Specific Energy
8 ：review of Gradually varied flow
9 ：discussion about Quiz-2
10 ：review of Specific force
11 ：review of Hydraulic jump, Junction and Diversion
12 ：review of Composite channel flow
13 ：review of Secondary flow
14 ：review of Density currents
15 ：discussion about Examination

3 Grading

Class participation (30%), Quiz (30%), Examination (40%)

4 Textbooks

4-1 Required

4-2 Others