



- 
1. **Course number :** 2112-681
  2. **Credit :** 3 credits (3-0-9)
  3. **Course name :** Engineering for Water Disaster Mitigation
  4. **Faculty/ Department :** Faculty of Engineering, Department of Water Resources Engineering
  5. **Semester :** Second Semester
  6. **Academic Year :** 2013
  7. **Name of Instructor :** Assoc. Prof. Dr. Sucharit Koontanakulvong, Dr. Anulak, Dr. Piyatida
  8. **Prerequisite :** Consent of instructor
  9. **Status of the course :** Elective
  10. **Name of program :** Master of Engineering in Water Resources Engineering
  11. **Course level :** Graduate
  12. **Hours/ week :** 3 hours of lecture  
(9 hours of self-study)
  13. **Course content:** Introduction to water disaster resilience, causes and mitigation of flood disaster, basic concept of designing flood mitigation and beach erosion protection, risk in hydrologic, hydraulic and coastal engineering, field trip to water disaster prone areas
  14. **Course description:**
    - 14.1 Objectives: Students are expected to gain
      1. Describe the principles of water disasters occurrences (flood, coastal erosion etc.);
      2. Describe the mitigation measures via literature review and field visit;
    - 14.2 Course outline
      1. Introduction to Water Disaster Mitigation Engineering
      2. Flood Disaster
      3. Land Subsidence
      4. Coastal/river erosion
      5. Water Resources Engineering
      6. Dam Risk Engineering
      7. Field trips (land slides and coastal erosion)
      8. Project presentation
    - 14.3 Teaching method
      - Lecture & presentation
      - Assigned readings
      - Assignments & report writing
      - Site Visit or Special Lectures (if available)
    - 14.4 Evaluation
      - Report 50%
      - System design workshop 30%
      - Presentation 20%

Course Schedule

Week	Day	Topic	Instructors
1	02/11/56	Introduction: Mitigation system and Probability concept	Sucharit/Piyatida
<b>Module 1: Flooding Disaster</b>			
2	09/11/56	Flooding Disaster -1	Sucharit K.
3	16/11/56	Flooding Disaster -2	Sucharit K.
4	23/11/56	Flooding Disaster-3	Sucharit K.
5	30/11/56	Site visit	Sucharit K.
<b>Module 2: Land Subsidence</b>			
6	07/12/56	Land subsidence-1	Noppadol
7	14/12/56	Land Subsidence-2	Noppadol
<b>Module 3: Coastal/river erosion</b>			
8	21/12/56	Coastal erosion-1	Anulak
9	26/12/56	Coastal erosion-2	Anulak
10	04/01/57	Site visit	Anulak
<b>Module 4: Water Resources Engineering</b>			
11	11/01/57	Water Resources Engineering	Tachikawa
<b>Module 5: Sustainable flood mitigation</b>			
12	18/01/57	Flood-2	Vietman
<b>Module 6: Mitigation system design</b>			
13	25/01/57	Mitigation system design	Sucharit
14	01/02/57	Flood system Water Resources system Coastal System Dam system	all
<b>Module 7: Project presentation</b>			
15	08/02/57	Final Project presentation Examination	all

