Course Syllabus (Academic Year 2020)
School of Interdisciplinary Studies, Kanchanaburi Campus, Mahidol University

1. **Course No. and Title** : KAED 373 Control of Floods and Droughts
   Credit (3 Hour) : 3(3-0-6)

2. **Program Name** : Bachelor of Environment Engineering and Disaster Management

3. **Course Module** : Specific course
   Pre/co-requisite : None

4. **Course Semester** : 2/2020

5. **Class Schedule & Venue**: Lecture room

6. **Class Coordinator** :
   1. Yutthana Phankamolsil (PhD)
      Phone: (66) 81 695 4621
      Email: yutthana.pha@mahidol.ac.th

7. **Course Description**

Flood and Drought characteristics and impacts, structural and non-structural flood control measures, flood control and drought control measures to minimize impacts.

8. **Course Learning Outcomes (CLOs)**
   (1) understand accurately flood and drought characteristics. ***[PLOs (1)]***
   (2) understand the flood and drought control measures to minimize impacts. ***[PLOs (1)]***
   (3) learn and apply tools, technique and technology for control flood and drought. ***[PLOs (2)]***

9. **Instructor**
   Yutthana Phankamolsil (PhD) +66 816954621, Email: yutthana.pha@mahidol.ac.th
   9.1 Office Hours : 12:00 Noon – 15:00 PM, Wed
   9.2 Office : L321 Laboratory Building
   9.3 Course Website
   (1) the classroom name is KAED373 in Google Class Room. student have to register google account (xxxx.mahidol.edu) under Mahidol license.
   (2) line group name is KAED373_2020

10. Course Outline

Week No.	Date/time	Contents	Instructor
1	18-Jan-2021 9:00 – 12:00	(1) Introduction to teaching and learning process ▪ CLOs ▪ Course outline ▪ Course assessment (2) Flood and Drought Definition (3) Understanding Climate Variability and Change	YP
2	25-Jan-2021 9:00 – 12:00	Nature of Flood and Damage	YP
3	1-Feb-2021 9:00 – 12:00	Flood control systems (1) structural flood control (2) non-structural flood control	YP
4	8-Feb-2021 9:00 – 12:00	Flood risk and hazard assessment Thailand Flood Monitoring System	YP
5	15-Feb-2021 9:00 – 12:00	Flood learning/GIS (Computer room)	YP
6	22-Feb-2021 9:00 – 12:00	Flood learning/HEC-RAS (Computer room)	YP
7	1-Mar-2021 9:00 – 12:00	Flood learning/HEC-RAS (Computer room)	YP
8	8-Mar-2021 9:00 – 12:00	Flood learning/HEC-RAS (Computer room)	YP
9		Midterm examination	YP

Week No.	Date/time	Contents	Instructor
10	22-Mar-2021 9:00 – 12:00	Flood learning/HEC-Life-Sim (Computer room)	YP
11	29-Mar-2021 9:00 – 12:00	Flood learning/HEC-Life-Sim (Computer room)	YP
12	5-Apr-2021 9:00 – 12:00	Flood learning/HEC-Life-Sim (Computer room)	YP
13	12-Apr-2021 9:00 – 12:00	Nature of Drought ▪ Magnitude, Duration, Frequency Drought Index	YP
14	19-Apr-2021 9:00 – 12:00	Drought Impact Evaluation of Drought Impact	YP
15	26-Apr-2021 9:00 – 12:00	Drought Management	YP
16	3-May-2021 9:00 – 12:00	Case study	YP

Remark: YP (Yutthana Phankamolsil)
LC - Lecture-based approach
PT - Practice-based approach

11. Course Assessment

No	Method/Activates	Regulations	CLOs	Week	Weight Distribution (%)
1	Midterm Exam	- Mid-term exam will cover content from the first week to eight weeks of the semester - Faculty-approved calculator		5	30
2	Final Exam	- Final Exam will cover content from the six weeks to nine weeks of the semester. - Faculty-approved calculator	(1),(2),(3)	10	25
3	Assignment	- All students will be separated into 5-6 groups and will be received project assignments. - All groups need sent progress report on seven and eight week and final report on nine week of semester.	(1),(2),(3)	6-10	30
4	Class participation	Student must attend class more than 80% of course.	(1),(2),(3)	1-10	15

12. Grading System

☑ Criterion-referenced evaluation

Grade	Score	Grade	Score	Grade	Score	Grade	Score
A	≥ 80 %	B	70 – 74.9%	C	60 – 64.9%	D	50 – 54.9%
B+	75 – 79.9%	C+	65 – 69.9%	D+	55 – 59.9%	F	< 50 %

13. Reference

Ashley, R., et al. (2007). Advances in urban flood management, CRC Press.
Grigg, N. S. (1996). Water resources management, Wiley Online Library.