



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

1. **Course No. and Title** : KAED 374 Water Resources Management
Credit (3 Hour) : 3(3-0-6)
2. **Program Name** : Bachelor of Environment Engineering and Disaster Management
3. **Course Module** : Core Course
Pre/co-requisite : None
4. **Course Semester** : 1/2020
5. **Class Schedule & Venue**: Lecture room/Computer Laboratory Room
6. **Class Coordinator** :
 1. Yutthana Phankamolsil (YP), Email: yutthana.pha@mahidol.ac.th
 2. Pensiri Prachakittikul (PP.), Email : pensiri.prc@mahidol.ac.th
7. **Course Description**

Water resource management problems, principle of water resource management, farm water management, Irrigation water management, rainwater management, integrated water management, sustainable water management crisis water management, water management in nation and international scale, learning water management in local and large-scale prototype.
8. **Course Learning Outcomes (CLOs)**
 - (1) aware of the importance of water resources. *[PLOs (1)]*
 - (2) analyze the water resources situation problem. *[PLOs (1)]*
 - (3) learn about the water resources management strategies. *[PLOs (1)]*
 - (4) learn and apply tools, technique and technology for water resources management and planning. *[PLOs (2)]*
9. **Instructor**
 1. Yutthana Phankamolsil (YP), Email: yutthana.pha@mahidol.ac.th
 2. Pensiri Prachakittikul (PP.), Email : pensiri.prc@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 KAED374 in Google Class Room. Student have to register google account (xxxx.mahidol.edu) under Mahidol license.
 - (2) <https://sites.google.com/mahidol.edu/WRM>

10. Course Outline

Week	Date	Contents	CLOs	Teaching & Learning Method	Instructor
1	14 Oct 20	Introduction to teaching and learning process	1	Offline [Clips VDO, assignment] Online [Live meeting on WebEX, MS-team, presentstion]	YP
2	15 Oct 20	Hydrological processes	1		YP
3	21 Oct 20	Water Balance (WB) I ▪ Basin scale	1		YP
4	22 Oct 20	Water Balance (WB) II ▪ Project scale ▪ Local scale	1		YP
5	28 Oct 20	Principle of water resources management	1		YP
6	29 Oct 20	Reservoir operation I	1		YP
7	4 Nov 20	Reservoir operation II	1		YP
8	5 Nov 20	Mid-term Examination			
9	11 Nov 20	Water resources management tools ▪ Techniques ▪ Modeling	1	Offline [Clips VDO, assignment] Online [Live meeting on WebEX, MS-team, presentstion]	YP
10	12 Nov 20	Water Accounting	1		YP
11	18 Nov 20	Water Footprint	1		PP
12	19 Nov 20	Wastewater management I ▪ Techniques ▪ Case study	1		GS
13	25 Nov 20	Wastewater management II ▪ Techniques ▪ Case study	2		GS
14	26 Nov 20	Modeling practice I ▪ WEAP	2		YP
15	2 Dec 20	Modeling practice II ▪ EPANET	2		YP
16	2 Dec 20	Modeling practice III ▪ EPANET	1,2		YP
17	Final Examination				
18					

11. Course Assessment

No	Method/Activates	Regulations	CLOs	Week	Weight Distribution (%)
1	Midterm	Mid-term exam will cover content from the first week to eight weeks of the semester Faculty-approved calculator	(1),(2),(3)	9.5	20
2	Final	Final Exam will cover content from the six weeks to nine weeks of the semester. Faculty-approved calculator	(1),(2),(3)	15.5	20
3	Assignment	Each student will receive assignments or Homework by the given deadline. You will have one week to finish each set of homework.	(1),(2),(3)	1-15	50
4	Class participation	Student must attend class more than 80% of course.	(1),(2),(3)	1-15	10

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

Mays, L. W. (2010). Water resources engineering, John Wiley & Sons.