Course Syllabus (Academic Year 2020)

School of Interdisciplinary Studies, Kanchanaburi Campus, Mahidol University

1. Course No. and Title : KAED 371 Disaster and Climate Risk Management
   Credit (study hours) : 3(3-0-6)
2. Program Name : Bachelor of Engineering in Environmental and Disaster Management
3. Course Module : Major Required Course
   Pre/co-requisite : None
4. Class Semester : ☑ 1st Semester ☐ 2nd Semester Academic Year 2020
5. Class Schedule & Venue : Tuesday, 13:00 – 16:00
6. Class Coordinator : Keerati Sripramai
   Contact No : 081-685-0002, Email: keerati.sri@mahidol.edu
7. Course Description

   Global disaster risk situation, climate change and climate-related disaster risk, basic concepts and terminologies used in disaster and climate risk management, disaster risk identification and assessment: hazard, vulnerability, and capacity, disaster risk reduction, decision support tools for climate-related disaster risk reduction, disaster preparedness planning, emergency response management principle and concepts, disaster recovery and reconstruction, principles and types of disaster risk financing such as disasters insurance.

8. Course Objectives / Course Learning Outcomes (CLOs)

No.	Objectives / CLOs	Expected Skills / Knowledge			PLOs	ABET
		Specific	Generic	Knowledge		
8.1	Understanding of the roles of Disaster and Climate Risk Management	SS1	GS1,GS3-GS6	K2,K3,K5	1,2,3,4	B,C,D,F,G,H,I
8.2	Understanding of the roles of state and local governments in disaster planning and policies.	SS2,SS3, SS4,SS5	GS1,GS3-GS6	K5,K6,K7	1,2,3,4	B,C,D,F,G,H,I
8.3	Understanding the data, assessment, and application to	SS1,SS2	GS1,GS3-GS6	K5,K6,K7	1,2,3,4	B,C,D,F,G,H,I

	evaluate the disaster risk management.					
8.4	Understanding of comprehensive emergency response management for resilient recovery and reconstruction.	SS4,SS5	GS1,GS3-GS6,GS8	K6,K7	1,2,3,4	B,C,D,F,G,H,I,K
8.5	Knowledge of the economics of Disaster Risk, Risk management and risk financing	SS1,SS5	GS1,GS3-GS6,GS7	K2,K4,K5, K6,K7	1,2,3,4	B,C,D,F,G,H,I,K

9. Class Instructor List

9.1 Name : Keerati Sripramai Contact No... 08 1685 0002 Email : keerati.sri@mahidol.edu

10. Course schedule

Week	Date	Contents/Discussion	CLOs	Instructor's Names
1	11 Aug 20	Introduction to Disaster and Risk Management	8.1	Keerati Sripramai
2	18 Aug 20	Global disaster risk situation	8.1-8.2	Keerati Sripramai
3	25 Aug 20	Impacts of Climate risk Management	8.1-8.2	Keerati Sripramai
4	1 Sep 20	Planning for Climate change	8.1-8.5	Keerati Sripramai
5	8 Sep 20	Adaptation and mitigation on climate change	8.3-8.5	Keerati Sripramai
6	15 Sep 20	Disaster risk management	88.1-8.5	Keerati Sripramai
7	22 Sep 20	Disaster preparedness and reduction	8.1-8.5	Keerati Sripramai
8	29 Sep 20	Disaster risk assessment	8.1-8.5	Keerati Sripramai
9	Mid-term Examination (5 Oct 20 – 9 Oct 20)			
10	13 Oct 20	Disaster support tools	8.1-8.5	Keerati Sripramai
11	20 Oct 20	Emergency response management	8.1-8.3	Keerati Sripramai
12	27 Oct 20	Environmental emergencies	8.1-8.3	Keerati Sripramai
13	3 Nov 20	Disaster recovery and reconstruction	8.1-8.5	Keerati Sripramai
14	10 Nov 20	Disaster risk financing	8.1-8.5	Keerati Sripramai
15	17 Nov 20	Sustainable Development	8.1-8.5	Keerati Sripramai
16	24 Nov 20	Final discussion and Report	8.1-8.5	Keerati Sripramai
17	Final Examination (30 Nov 20 – 11 Dec 20)			

11. Course Assessment

No.	Methods / Activities	Regulations	CLOs	Week	Weight Distribution (%)
11.1	Mid-term exam	Open-Book	8.1,8.3	9	40
11.2	Final exam	Open-Book	8.1-8.5	17	40
11.3	Quiz / Activities	Quiz and Activities	8.1-8.5	8,15	15
11.4	Class participation	Student must attend class more than 80 % of course	8.1-8.5	16	5
				Total	**100**

12. Grading System

☑ Criterion-referenced evaluation

Grade	Score	Grade	Score	Grade	Score	Grade	Score
A	≥ 80 %	B	70 – 74.99%	C	60 – 64.99%	D	50 – 54.99%
B+	75 – 79.99%	C+	65 – 69.99%	D+	55 – 59.99%	F	< 50 %

13. References

13.1 Patrick L. A., Natural Disasters, 8th edition, New York, McGraw-Hill, 2012

13.2 Roger C. Huder., Disaster operations and decision making , Hoboken, N.J, John Wiley & Sons, 2012

Specific Skill (SS)	
SS1	Understanding Disaster and Climate Risk
SS2	Prevention and Mitigation
SS3	Preparedness
SS4	Response and Relief
SS5	Rehabilitation and Reconstruction
Generic Skill (GS)	
GS1	Systematic Thinking, Problem Solving and Analytical Skills
GS2	Basic Computer Skills
GS3	Environmental and Disaster Risk Awareness
GS4	The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.

GS5	A knowledge of contemporary issues
GS6	an ability to communicate effectively
GS7	the broad education necessary to understand the impact of engineering solutions in a global,
GS8	economic, environmental, and societal context
GS9	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.
GS10	a knowledge of contemporary issues a recognition of the need for, and an ability to engage in life-long learning
Knowledge (K)	
K1	Hazard
K2	Disaster
K3	Climate change
K4	Exposure, Vulnerability and Capacity
K5	Disaster Risk
K6	Risk Assessment
K7	Disaster Risk Reduction
K8	Mainstreaming Disaster Risk Reduction
K9	Sustainable Development
K10	Human behavior