



Course Syllabus (Academic Year 2021)

School of Interdisciplinary Studies, Kanchanaburi Campus, Mahidol University

- Course No. and Title** : KAFT 213 Engineering Drawing
Credit (study hours) : 1 (0-3-1)
- Program Name** : Bachelor of Science in Food Technology
- Course Module** : Specific Core Course, Required Subject
Pre/co-requisite : -
- Class Semester** : 1st Semester Academic Year 2021
- Class Schedule & Venue** : Tuesday (13.30-16.30), Webex online
- Class Coordinator** : Assoc. Prof. Dr. Rungtiwa Wongsagonsup
Contact No. : 082-470-7341 Email : rungtiwa.won@mahidol.ac.th

7. Course Description

An introduction to engineering drawing; the use of drawing instruments and lettering; applied geometry, theory of orthographic projection, orthographic drawing; three dimensional drawing (isometric and oblique); conventional practice and dimensioning; sectional views drawing; threaded fasteners; basic knowledge of using software application for computer-aided design; the application of engineering drawing knowledge in food industry; self responsibility; effective time management

8. Course Objectives / Course Learning Outcomes (CLOs)

No.	Objectives / CLOs	Expected Skills / Knowledge			PLOs
		Specific	Generic	Knowledge	
8.1	Describe the basic knowledge and theory of engineering drawing	S2	-	K6	2
8.2	Demonstrate the engineering drawing for parts in an industrial plant	S2	G8	K6	2
8.3	Discuss the engineering drawing knowledge to food industry field	S2	G9	K6	2

9. Class Instructor List

9.1 Name : Aj. Monchai Pumkeaw (MP)
Email : monchai.pum@mahidol.edu

Contact No. : 097-248-8554

10. Course Outline

Week	Date	Contents	CLOs	Teaching & Learning	Instructor's Names
1	10AUG2021	Use of drawing instruments and lettering	8.1	Interactive lecture, drawing practice, and assignment	MP
2	17AUG2021	Applied geometry I	8.1, 8.2		MP
3	24AUG2021	Applied geometry II	8.1, 8.2		MP
4	31AUG2021	Theory of orthographic projection and orthographic drawing I	8.1, 8.2		MP
5	07SEP2021	Theory of orthographic projection and orthographic drawing II	8.1, 8.2		MP
6	14SEP2021	Three dimensional drawing (Isometric and oblique) I	8.1, 8.2		MP
7	21SEP2021	Three dimensional drawing (Isometric and oblique) II	8.1, 8.2		MP
8	28SEP2021	Conventional practice and dimensioning	8.1, 8.2		MP
9	Mid-term Examination (4-8 OCT2021)				
10	12OCT2021	Sectional views drawing I	8.1, 8.2	Interactive lecture, drawing practice, and assignment	MP
11	19OCT2021	Sectional views drawing II	8.1, 8.2		MP
12	26OCT2021	Threaded fasteners	8.1, 8.2		MP
13	02NOV2021	Basic knowledge of using software application for computer-aided design	8.1, 8.2		MP
14	09NOV2021	Application of engineering drawing knowledge in food industry I	8.3		MP
15	16NOV2021	Application of engineering drawing knowledge in food industry II	8.3	MP	

16	23DEC2021	Application of engineering drawing knowledge in food industry III	8.3		MP
17	Final Examination (29NOV-10OCT2021)				

11. Course Assessment

No.	Methods / Activities	Regulations	CLOs	Week	Weight Distribution (%)
11.1	Mid-term exam	<ul style="list-style-type: none"> - Drawing equipments are allowed - Pencil is allowed - Document and calculator are not allowed - At L 323 Drawing room 	8.1, 8.2	1-8	30
11.2	Final exam	<ul style="list-style-type: none"> - Drawing equipments are allowed - Pencil is allowed - Document and calculator are not allowed - At L 323 Drawing room 	8.1, 8.2, 8.3	10-16	30
11.3	Quiz/Test	Individual assignment	8.1, 8.2, 8.3	1-8, 10-16	15
11.4	Report/Exercise/Homework	Individual assignment	8.1, 8.2, 8.3	1-8, 10-16	15
11.5	Class participation and accountability	Instructor evaluation of class participation and accountability		1-8, 10-16	10
				Total	100

12. Grading System

Criterion-referenced evaluation

Grade	Score	Grade	Score	Grade	Score	Grade	Score
A	$\geq 80\%$	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 %

Norm-referenced evaluation

*If use both criterion and norm-referenced evaluation, please tick two boxes.

13. References

13.1 ชัชวาล ศุภเกษม. AUTOCAD 2010 ฉบับสมบูรณ์. ซีเอ็ดดูเคชั่น, กรุงเทพฯ; 2552

13.2 ศิริชัย ต่อสกุล. การเขียนแบบวิศวกรรมพื้นฐาน (Fundamental of Engineering Drawing). ซีเอ็ดดูเคชั่น, กรุงเทพฯ; 2552.

13.3 Bertoline GR, Wiebe EN. Fundamentals of Graphic Communication. 5thed. McGraw-Hill; 2007.