TQF 3 Course Specifications

Section 1 General Information

1. Course code and course title

ICCD 130 หลักการออกแบบ 3 มิติ

ICCD 130 3D Design Principles

2. Number of credits 4 (2-4-6)

3. Program and type of subject

3.1 Program Communication Design Program

3.2 Type of Subject Required Course

4. Course Coordinator and Course Lecturer

4.1 Course Coordinator Carol Siatras

4.2 Course Lecturer Carol Siatras

5. Trimester/ Year of Study

5.1 Trimester 2/3

5.2 Course Capacity Approximately 20 students

6. Pre-requisite N/A

7. Co-requisites N/A

8. Venue of Study MUIC Aditayathorn Building

Section 2 Goals and Objectives

1. Course Goals

Communication Design students must be able to successfully produce work that occupies dimension. This requires an awareness of materials, tools and basic construction techniques. Further, students must be able to conceptualize the advanced compositional opportunities of areas of design such as package design, environmental graphics and publication design.

2. Objectives of Course Development/Revision

2.1 Course Objectives

Students will be able to use skills and conceptual analysis to solve problems of three dimensional design. Students will have basic facility in working with tools to construct three dimensional compositions from a variety of simple materials.

2.2 Course-level Learning Outcomes: CLOs

By the end of the course, students will be able to (CLOs)

1. CLO1 Demonstrate acquired manual/technical skills necessary for the practice of three-dimensional design.
2. CLO2 Analyse and discuss three-dimensional forms with instructor and peers using appropriate terminology
3. CLO3 Engage in a three-dimensional design problem-solving process.
4. CLO4 Work safely and efficiently in a workshop environment, understanding proper use of basic hand and power tools.
5. CLO5 Transform linear and planar materials into three-dimensional compositions and forms.

Section 3 Course Management

1. Course Description

A project based class in which students are challenged to apply the principles of design to the creation of the three-dimensional compositions; both simple linear and planar construction materials will be used; an introduction to a variety of tools and techniques; stressing students' achievement in design development, production methods and presentations of the finished works

เรียนรู้โดยใช้งานเป็นฐานในเรื่องของหลักการการสร้างงาน 3 มิติที่ใช้ในองค์ ประกอบศิลป์ ทั้งแบบแนวตรงและแบบโครงสร้าง รวมถึงการเลือกเทคนิค วัสดุ เครื่องมือ กระบวนการในการทำงาน และผลิตงาน พร้อมการนำเสนอผลงาน

2. Credit hours per trimester

Lecture (Hour(s))	Studio (Hour(s))	Self-study (Hour(s))
2	4	6

3. Number of hours that the lecturer provides individual counselling and guidance.

4 Hours/ Week; 48 Hours/Trimester

Section 4 Development of Students' Learning Outcome

1. Short summary on the knowledge or skills that the course intends to develop in students (CLOs)

By the end of the course, students will be able to

1. CLO1 Demonstrate acquired manual/technical skills necessary for the practice of three-dimensional design.
2. CLO2 Analyze and discuss three-dimensional forms with instructor and peers using appropriate terminology
3. CLO3 Engage in a three-dimensional design problem-solving process
4. CLO4 Work safely and efficiently in a workshop environment, understanding proper use of basic hand and power tools
5. CLO5 Transform linear and planar materials into three-dimensional compositions and forms

2. Teaching methods for developing the knowledge or skills specified in item 1 and evaluation methods of the course learning outcomes

CLOs	Teaching methods	Evaluation Methods
CLO1	Demonstration, Example, Project work, Critique	Project work
CLO2	Individual and small-group discussion, Critique	Critique
CLO3	Project work, Critique	Project work, Process book, Critique
CLO4	Lecture, Demonstration, Example, Project work	Practical exam, Project work
CLO5	Demonstration, Example, Project work, Critique	Project work, Process book, Critique

Section 5 Teaching and Evaluation Plans

1. Teaching plan

		Number of Hours				

Week	Topic	Lecture Hours	Lab/Field Trip/ Internship Hours	online sessions	on campus	Teaching Activities/ Media	Lecturer
1	Introduction to course objectives, projects and policies. Begin Project 1 ("Polyhedron Problem"). Introductory lecture on three-dimensional composition and the importance of 2D to 3D and 3D to 2D translation. Demonstration of craftsmanship in measuring, cutting and constructing simple, regular polyhedral forms in paper. Student brainstorming and presentation of possible solutions.	2	4	X		Lecture, Demonstration, Example, Project work/ practice, Individual and small-group discussions	Siatras
2	Continue Project 1. Work in progress with individual in-process critiques. Final presentation and formal critique of project. Process books due.	2	4	X		Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
3	Begin Project 2 ("Perfect Cube, Perfect Tetrahedron"). Demonstration of basic construction methods in cardboard (measuring, cutting, exactness of edge and surface, gluing). Lecture on cutting safety. Students construct cube, cylinder. Student peer-evaluations and critique.	2	4	X		Lecture, Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras

4	Advanced forms. Experimentation with simple curved planes and related geometric forms. Demonstration of additional construction methods such as scoring and bracing. Students construct cylinder, arch, cone. Critique.	2	4	X		Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
5	Begin Project 3 (“House-lizard House”). Presentation of examples with lecture on compositional terms and form/function relationship. Brainstorming, sketching and concept development.	2	4	X		Lecture, Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
6	Continue Project 3. Evaluation of designs/ concepts in Marquette format. Beginning of construction of project.	2	4	X		Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
7	Continue Project 3. Continuation of construction with in-process critique. Final presentation and formal critique of project. Process books due.	2	4	X		Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
8	Begin Project 4 “Drawing in Space”. Presentation of examples with lecture on using wire as linear constructional element. Demonstration of tools, techniques and safety practices. Student research to choose subject matter and produce Marquette. Work in progress and small group critiques of technique and craftsmanship.	2	4	X		Lecture, Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras

9	Continue Project 4. Work in progress. In-process critiques.	2	4	X		Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
10	Continue Project 4. Work in progress. In-process critiques. Final presentation and formal critique of project. Process books due.	2	4	X		Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
11	Begin Project 5 “Abstraction/Expression” Lecture on communicative sculptural forms with examples from modern and contemporary sculpture. Introduction of balsa wood material and demonstration of tools, techniques and safety. Brainstorming, workshop to develop concepts and produce maquettes. Work in progress, construction and finishing of final forms. In-process critiques.	2	4	X		Lecture, Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
12	Continue Project 5 Work in progress, construction and finishing of final forms. In-process critiques. Formal presentation and final critique. Process books due.	2	4	X		Demonstration, Example, Project work/ practice, Individual and small-group discussions, Critique	Siatras
	Total	24	48				

2. Plan for Assessing Course Learning Outcomes

2.1 Assessing and Evaluating Learning Achievement

a. Formative Assessment

For this and all studio classes, formative assessment is based on regular (daily) individual interaction with each student. Assessment takes place as instructor observes students effort in the daily practical work sessions and during the frequent critiques, in which students must both articulate their own process of design problem-solving and analyse that of their peers. Therefore

formative assessment is based on both visual and verbal evidence in an ongoing manner. Essentially each draft/revision/solution (and the discussion it instigates) is an opportunity for formative assessment.

b. Summative Assessment

(1) Tools and Percentage Weight in Assessment and Evaluation

Learning Outcomes	Assessment Methods	Assessment Ratio (Percentage)	
CLO1 Demonstrate acquired manual/technical skills necessary for the practice of three-dimensional design.	Project work	20	20
CLO2 Analyze and discuss three-dimensional forms with instructor and peers using appropriate terminology	Critique	20	20
CLO3 Engage in a three-dimensional design problem-solving process	Project work	20	30
	Process book	10	
CLO4 Work safely and efficiently in a workshop environment, understanding proper use of basic hand and power tools	Assessment of student practice	10	10
CLO5 Transform linear and planar materials into three-dimensional compositions and forms	Project work	10	20
	Critique	10	
Total			100

(2) Grading System (Rubric)

Letter grades A-F according to MU/MUIC standards

Process Criteria	**Excellent (A)**	**Good (B to B+)**	**Fair (C to C+)**	**Poor (D to D+)**	**Fail (F)**

Effort	Excellent effort extended on assigned task	Good effort extended on assigned task	Fair effort extended on assigned task	Poor effort extended on assigned task	Lack of effort extended on assigned task
Research	Excellent effort in investigation of references and sources, organization of information, analyzation and implementation	Good effort in investigation of references and sources, organization of information, analyzation, and implementation	Fair effort in investigation of references and sources, organization of information, analyzation, and implementation	Poor effort in investigation of references and sources, organization of information, analyzation, and implementation	Lack of effort in investigation of references and sources, organization of information, analyzation, and implementation
Creativity	Excellent effort in the creation of design solutions and executions	Good effort in the creation of design solutions and executions	Fair effort in the creation of design solutions and executions	Poor effort in the creation of design solutions and executions	Lack of effort in the creation of design solutions and executions
Concept Development	Excellent effort in concept development	Good effort in concept development	Fair effort in concept development	Poor effort in concept development	Lack of effort in concept development

Design Criteria	**Excellent (A)**	**Good (B to B+)**	**Fair (C to C+)**	**Poor (D to D+)**	**Fail (F)**
Communication	Excellent communication of hierarchic information from the design work	Good communication of hierarchic information from the design work	Fair communication of hierarchic information from the design work	Poor communication of hierarchic information from the design work	Lack of communication of hierarchic information from the design work
Composition	Demonstrate excellent skill in arranging the appropriate design composition	Demonstrate good skill in arranging the appropriate design composition	Demonstrate fair skill in arranging the appropriate design composition	Demonstrate poor skill in arranging the appropriate design composition	Complete lack of skill in arranging the appropriate design composition

Design Solution / Execution	Demonstrate excellent ability to investigate, analyze, refine, and designate the appropriate design solution/ execution	Demonstrate good ability to investigate, analyze, refine, and designate the appropriate design solution/ execution	Demonstrate fair ability to investigate, analyze, refine, and designate the appropriate design solution/ execution	Demonstrate poor ability to investigate, analyse, refine, and designate the appropriate design solution/ execution	Complete lack of ability to investigate, analyse, refine, and designate the appropriate design solution/ execution
Craftsmanship	Demonstrate excellent craftsmanship in designing final work	Demonstrate good craftsmanship in designing final work	Demonstrate fair craftsmanship in designing final work	Demonstrate poor craftsmanship in designing final work	Very poor craftsmanship in designing final work

Critique Criteria	**Excellent (A)**	**Good (B to B+)**	**Fair (C to C+)**	**Poor (D to D+)**	**Fail (F)**
Participation	Highly engaged throughout the critique session	Engaged throughout the critique session	Moderately engaged throughout the critique session	Disengaged throughout the critique session	Lack of engagement throughout the critique session
Communication	Excellent communication skills and articulation of information/ concept / message	Good communication skills and articulation of information/ concept / message	Average communication skills and articulation of information/ concept / message	Poor communication skills and articulation of information/ concept / message	Lacking communication skills and articulation of information/ concept / message

Insight	Generation of various innovative ideas, thoughtful suggestions for possible solutions	Generation of some innovative ideas, thoughtful suggestions for possible solutions	Generation of few innovative ideas, thoughtful suggestions for possible solutions	Limited generation of innovative ideas, thoughtful suggestions for possible solutions	No innovative ideas or thoughtful suggestions for possible solutions
Comprehension	Synthesis of information for creative solutions/ executions	Partial ability to synthesize information for creative solutions/ executions	Moderate ability to synthesize information for creative solutions/ executions	Minimal ability to synthesize information for creative solutions/ executions	Lack of ability to synthesize information for creative solutions/ executions
Professionalism	Keen ability to partake in critique session in a competent and objective manner	Good ability to partake in critique session in a competent and objective manner	Fair ability to partake in critique session in a competent and objective manner	Minimal ability to partake in critique session in a competent and objective manner	Inability to partake in critique session in a competent and objective manner

Presentation Criteria	**Excellent (A)**	**Good (B to B+)**	**Fair (C to C+)**	**Poor (D to D+)**	**Fail (F)**
Communication / Overall Delivery	Exceptionally clear explanation of work	Clear explanation of work	Explanation of work could be clearer	Very unclear explanation of work	Failure to explain the work
Articulation of ideas / Content	Intelligible commentary on the work	Good commentary on the work	Fair commentary on the work	Poor commentary on the work	Lack of commentary on the work

Persuasiveness	Very impactful approach in promoting and defending the work	Effective approach in promoting and defending the work	Moderately effective approach in promoting and defending the work	Not very effective in promoting and defending the work	Not effective at all in promoting and defending the work
Visuals	Outstanding use of images / text / graphics to support the presentation	Good use of images / text / graphics to support the presentation	Average use of images / text / graphics to support the presentation	Poor use of images / text / graphics to support the presentation	Very little to no use of images / text / graphics to support the presentation
Attendance Criteria	**Excellent (A)**	**Good (B to B+)**	**Fair (C to C+)**	**Poor (D to D+)**	**Fail (F)**
	Attended all classes	Attended 90% of classes (missed 2)	Attended 85% of classes (missed 4)	Attended 80% of classes (missed 5)	Attended less than 80% of classes (more than 5)

Class Participation Criteria	**Excellent (A)**	**Good (B to B+)**	**Fair (C to C+)**	**Poor (D to D+)**	**Fail (F)**
	Often answered questions, made insightful observations, and involved in class discussions	Sometimes answered questions and involved in class discussions when called	Occasionally involved in class discussions	Rarely involved in class discussions, and sometimes disengaged in class	Never involved in class discussions and disengaged in many class sessions

(3) Re-examination (If course lecturer allows to have re-examination)

N/A - (Not applicable with MUIC)

3. Student Appeals

Student may appeal according to MUIC policy.

Section 6 Teaching Materials and Resources

1. Textbooks and/or other documents/materials

As a practical studio course this course has no textbooks or lengthy required readings.

2. Recommended textbooks and/or other documents/materials

1) B. Martinex (1994). *Visual forces: an introduction to design*. London: Pearson
2) P. Zelanski & M. Fisher (2006). *Shaping space.* California: Wadsworth Publishing
3) M. Stewart (2011). Launching the imagination: an introduction to three-dimensional design. London: McGraw Hill

3. Other Resources (If any)

N/A

Section 7 Evaluation and Improvement of Course Management

1. Strategies for evaluating course effectiveness by students

Students will be given opportunity to anonymously evaluate course at end of term. Lecturer may also solicit informal verbal feedback by students throughout the term.

2. Strategies for evaluating teaching methods

Lecturer will consider student evaluations and student performance in evaluating teaching methods. Lecturer may also solicit peer evaluation based on class observation.

3. Improvement of teaching methods

Lecturer will consider student evaluations and student performance in order to gauge the need for improvement of teaching methods. Lecturer may also respond to suggestions derived from class observation.

4. Verification process for evaluating students' standard achievement outcomes in the course

When the course is being taught by multiple Lecturers, the group will convene to present student outcomes and agree on assessment standards across sections.

5. Review and plan for improving the effectiveness of the course

Lecturer will professionally evaluate all forms of feedback and criticism from students, peers and combine these with self-observation of student performance and achievement. Studio- based education requires the lecturer to frequently observe the visual products of the creative thinking process of the student. Deficiencies in course effectiveness will thus be quickly apparent and can be addressed in a timely fashion and per individual student needs.

Appendix

Alignment between Courses and General Education courses

Table 1 The relationship between course and Program Learning Outcomes (PLOs)

3D Design Principles	Program Learning Outcomes (PLOs)									
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
ICCD 130	I, R	I, R		I, R		I			I, R	

I = PLO is Introduced and Assessed
R = PLO is Reinforced and Assessed
P = PLO is Practiced and Assessed
M = Level of Mastery is Assessed

Table 2 The relationship between CLOs and PLOs (Number in table = Sub LOs)

ICCD 130	Learning Outcomes									
	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CLO1 Demonstrate acquired manual/technical skills necessary for the practice of three-dimensional design.		2.2 2.3		4.4						
CLO2 Analyze and discuss three-dimensional forms with instructor and peers using appropriate terminology	1.2			4.3						

CLO3 Engage in a three-dimensional design problem-solving process	1.1	2.1 2.2 2.3		4.1 4.2						
CLO4 Work safely and efficiently in a workshop environment, understanding proper use of basic hand and power tools		2.2								
CLO5 Transform linear and planar materials into three-dimensional compositions and forms		2.2 2.3							9.1, 9.2	

Table 3 Program Learning Outcomes (PLOs)

1. Classify the design problem in order to set the scope of work	1.1 Identify the practical design problem and define the appropriate target group to be able to search for a design solution 1.2 Develop potential visual research and analyze accurate information

2. Create and develop solutions for design problems	2.1 Generate initial ideas effectively responding to the complex design problem 2.2 Apply design theories and principles in developing the concept, and create various executions and solutions with the appropriate techniques, technology, and media choices 2.3 Assemble the final work, as well as present, critique, and revise the design
4. Solve design problems with an innovative approach	4.1 Develop original and innovative design solutions with a unique approach using creativity enhancing exercises 4.2 Transform raw information from research into new insights 4.3 Apply critical thinking skills in preparing the design solution 4.4 Demonstrate and adapt use of appropriate technology in the design solution
9. Employ sustainability, including concepts and practices	9.1 Be able to reply to sustainable approach in design work on a conceptual level 9.2 Make use of environmentally concerned materials and media as an essential part of the design execution