

Course Syllabus

1. Course Title: Computerized Embroidery

2. Course Code: COEM433951

3. Credit Units: 03 (30 hours at classroom, 45 practical hours at computer Lab, 180 self-learning hours)

Duration: 15 weeks (2 hours of theory+1 hours of practice, and 6 hours of self-study per week)

4. Course Instructors

1/ MSc. Tran Thi Cam Tu

5. Course Requirements

Prerequisite courses: Garment Manufacturing Technology, Clothing Manufacturing Preparation

Previous courses: None

Parallel courses: None

6. Course Description

The module refers to basic knowledge on computerized embroidery machines and embroidery design software (Tajima), Basic skills and tools to design simple embroidery patterns on computers.

7. Course Goals

Goals	Goal description	ELOs	Scale
	This subject equips students:		
G1	Professional knowledge in computer embroidery: The concept of "Computer embroidery"; System diagram of computer embroidery; Types of computer embroidery machines; Characteristics of computer embroidery; Advantages & disadvantages of computerized embroidery; Hardware & software of computer embroidery; Basic embroidery stitches; Embroidery design & editing software.	ELO-01	3
G2	Professionally personal characters in the field of printing and embroidery	ELO-05 ELO-06 ELO-07	3 2 3
G3	Teamwork and communication skills	ELO-10	2

8. Course Learning Outcomes (CLOs)

CLOs		CLO Description	ELOs	Scale
G1	CLO1	Collect background knowledge to define, classify, explain in the field of computerized embroidery	ELO-01	3
G2	CLO2	Interpret systematically specifications of embroidery products	ELO-05	3
	CLO3	Show personal skills and attitudes in order to achieve best studying and researching results	ELO-06	2
	CLO4	Apply and communicate various documents such as paper, email, graphic software and presentation	ELO-07	3
G3	CLO5	Explain the important role of technical operations towards environment and society	ELO-10	2

9. Learning Ethics

Students must do homework by themselves. If plagiarism is found students will get zero point.

10. Course Content

Week	Content	CLOs	Scale	Teaching methods	Evaluation methods
	Chapter 1: Introduction to computerized embroidery (3,0,6)				
1	<p>A/ Content and methods in class: (3)</p> <p>Content: INTRODUCTION TO LEARNING - Introduce the objectives and content of the subject - Introduce students to study methods - Introducing references and assessment</p> <p>CHAPTER 1: Introduction to computerized embroidery</p> <p>1. Introduction + What is computer embroidery? + Features of computerized embroidery machines + General characteristics of computerized embroidery machines + Types of computerized embroidery machines + Types of embroidery frames + Main features of computerized embroidery machines + Modern functions and structures of computerized embroidery machines + Advantages of computerized embroidery machines + Limits of computerized embroidery machines</p> <p>Pedagogical methods: + Presentation of lecture + Focus group discussion</p>	CLO1 CLO2 CLO3 CLO5	3 3 2 2	Lecture; PPT; illustrating images	Q&A
	<p>B/ Self-study content: (6) Find documents and images of computerized embroidery machines, embroidery frames and their practical applications.</p>	CLO2 CLO3	3 2		
2	Chapter 1: Introduction to computerized embroidery (3,0,6)				

	<p>A/ Content and methods in class: (6) Content: 2/ Hardware: + System diagram + Explain 3/ Designing on Tajimas software: + Screen design + Embroidery stitch + Repair function + Designing letters + Embroidery design function + Other functions 4/ Embroidery stitch design process 5/ Basic embroidery stitches: Satin; Tatami; Run and style nose shapes. Pedagogical methods: + Presentation of lecture + Group discussion</p>	<p>CLO1 CLO2 CLO3 CLO5</p>	<p>3 3 2 2</p>	<p>Lecture; PPT ; illustration sample</p>	<p>Q&A</p>
	<p>B/ Self-study content: (12) Collect computerized embroidery products and analysis of embroidery stitches have been applied on products.</p>	<p>CLO2 CLO3</p>	<p>3 2</p>		
	<p>Chapter 2: Designing embroidery on Tajimas software (3,0,6)</p>				
3	<p>A/ Content and methods in class: (6) Content: a, Auto design tool group: LETTERING + Text (Alt + O, L, T) + Vertical Line Vertical (Alt + O, L, I) + Arc (Alt + O, L, A) + Circle (Alt + O, L, C) + Three Letter Monogram (Alt + O.L.M) + Angle Line Angle (Alt + O, L, L) b, Drawing tool group: ARTWORD + Pen (Shift + P) + Rectangle (Alt + O, A, R) + Ellipse (Alt + O, A, E) Pedagogical methods: + Presentation of lecture + Group discussion</p>	<p>CLO1 CLO2 CLO3 CLO5</p>	<p>3 3 2 2</p>	<p>Lecture; PPT</p>	<p>Exercises</p>
	<p>B/ Self-study content: (12) Review the operations using tools: Text; Line Vertical; Arc; Circle; Three Letter Monogram; Line Angle; Pen; Rectangle and Ellipse.</p>	<p>CLO2 CLO3</p>	<p>3 2</p>		
4	<p>Chapter 2: Designing embroidery on Tajimas software (3,0,6)</p>				

	<p>A/ Content and methods in class: (6) Content: b, Drawing tool group: ARTWORD (cont) + Import Artwork (Alt + O, A, I) + Auto Trace (Alt + O, A, U) + Import True Type Font (Alt + O, A, T) c, Quick design tool group: PUNCHING + Enhanced Column (F12) + Column (F8) + Manual (F5) + Run (F6) + Complex Fill (F11) Pedagogical methods: + Presentation of lecture + Group discussion</p>	<p>CLO1 CLO2 CLO3 CLO5</p>	<p>3 3 2 2</p>	<p>Lecture; PPT</p>	<p>Exercises</p>
	<p>B/ Self-study content: (12) Review the operation using tools: Import Artwork; Auto Trace; Import True Type Font; Column; Enhanced Column; Manual; Run and Complex Fill.</p>	<p>CLO2 CLO3</p>	<p>3 2</p>		
	<p>Chapter 2: Designing embroidery on Tajimas software (3,0,6)</p>				
5	<p>A/ Content and methods in class: (6) Content: d, Quick design tool group: PUNCHING ▪ Steil (F7) ▪ Cross – stitch (Alt + O,P,C) ▪ Star ▪ Satin Path (Ctrl+F9) ▪ Applique ▪ Applique Cut (Shift + F7) ▪ Line Carving (Shift+F10) ▪ Region Carving (Ctrl+F10) ▪ Symbol (Shift+F9) Pedagogical methods: + Presentation of lecture + Group discussion</p>	<p>CLO1 CLO2 CLO3 CLO5</p>	<p>3 3 2 2</p>	<p>Lecture; PPT</p>	<p>Exercises</p>
	<p>B/ Self-study content: (12) Review operations using tools: Steil; Cross - stitch; Star; Satin Path; Applique; Applique Cut; Line Carving; Region Carving and Symbol.</p>	<p>CLO2 CLO3</p>	<p>3 2</p>		
	<p>Chapter 2: Designing embroidery on Tajimas software (3,0,6)</p>				
6	<p>A/ Content and methods in class: (3) Content: e, Show group: SHOW ▪ Show Commands ▪ Show dots (P) ▪ Show Beads (Ctrl +B)</p>	<p>CLO1 CLO2 CLO3 CLO5</p>	<p>3 3 2 2</p>	<p>Lecture; PPT</p>	<p>Exercises</p>

	<ul style="list-style-type: none"> ▪ Show stitches (X) ▪ Show Outline (Shift + X) ▪ Show grid ▪ Change Background Color ▪ Hides/ Shows the draw ribbon ▪ Show 3-D Stitches ▪ Segment Filter <p>Pedagogical methods: + Presentation of lecture + Group discussion</p>				
	<p>B/ Self-study content: (12) Review operations using tools: Show Commands; Show dots; Show Beads; Show stitches; Show Outline; Show grid; Change Background Color; Hides/ Shows the draw ribbon; Show 3-D Stitches; Segment Filter.</p>	CLO2 CLO3	3 2		
	Chapter 3: Embroidery Editing (3,0,6)				
7	<p>A/ Content and methods in class: (3) Content: 1/ Editing group: EDITING</p> <ul style="list-style-type: none"> ▪ Select ▪ Lasso Select (Alt + S) ▪ Vertex Select (N) ▪ Angle Lines (D) ▪ Slice Artwork (E) ▪ Insert Trim at End <p>Pedagogical methods: + Presentation of lecture + Group discussion</p>	CLO1 CLO2 CLO3 CLO5	3 3 2 2	Lecture; PPT	Exercises
	<p>B/ Self-study content: (12) Review operations using tools: Select; Lasso Select; Vertex Select; Angle Lines; Slice Artwork and Insert Trim at End.</p>	CLO2 CLO3	3 2		
	Chapter 3: Embroidery Editing (3,0,6)				
8	<p>A/ Content and methods in class: (3) Content: 1/ Editing group: EDITING (conts)</p> <ul style="list-style-type: none"> ▪ Set Start / Stop ▪ Merge Design ▪ Backdrop Select ▪ Copy the settings from selected segments ▪ Past the settings from selected segments <p>2/ Group of tools to support editing: VIEW</p> <ul style="list-style-type: none"> ▪ Zoom (Z) ▪ Back to 1:1 (1) ▪ Fit to Window (W) ▪ Measure (Ctrl + M) <p>3/ Stitch select: STITCH</p>	CLO1 CLO2 CLO3 CLO5	3 3 2 2	Lecture; PPT	Exercises

	<ul style="list-style-type: none"> ▪ Stitch Select (M) ▪ Lasso Stitch Select ▪ Activates the Delete Stitch tool <p>Pedagogical methods:</p> <ul style="list-style-type: none"> + Presentation of lecture + Group discussion 				
	<p>B/ Self-study content: (12) Review operations using tools: Set Start / Stop; Merge Design; Backdrop Select; Copy the settings from selected segments; Past the settings from selected segments; Zoom; Back to 1:1; Fit to Window; Measure; Stitch Select; Lasso Stitch Select; Activates the Delete Stitch tool.</p>	CLO2 CLO3	3 2		
9	Chapter 3: Embroidery Editing (3,0,6)				
	<p>A/ Content and methods in class: (3) Content: 4/ Connection function (Combine) + Concentric copy function (Offset) + Rotation function (Rotate) 5/ Edit function (Power Edit) + Duplicate function (Duplicate) + Power copy function + Move function (Move) + Symmetric function (Reflect) Pedagogical methods: + Presentation of lecture + Group discussion</p>	CLO2 CLO3 CLO4 CLO5	3 2 3 2	Lecture; PPT	Exercises
	<p>B/ Self-study content: (12) Review operations using tools: Combine; Offset; Rotate; Power Edit; Duplicate; Power copy; Move; Reflect.</p>	CLO2 CLO3	3 2		
10	Chapter 3: Embroidery Editing (3,0,6)				
	<p>A/ Content and methods in class: (3) Content: 5/ Function of inserting objects (Insert) 6/ Icon creation function (Save Symbol) 7/ Function to compare objects 8/ Function to check the steps taken 9/ Segment Setting card ♣ Satin Card ♣ Satin Path / Column Effects tab ♣ Quality Control Card 10/ Commands tab ♣ Custom Corner Card ♣ Pull compensation card ♣ Underlay Card ♣ Increase or decrease the size of each object or the</p>	CLO2 CLO3 CLO4 CLO5	3 2 3 2	Lecture; PPT	Exercises

	entire sample ♣ Save function (Save As) 10/ Export to A floppy disk for embroidery Pedagogical methods: + Presentation of lecture + Group discussion				
	B/ Self-study content: (12) 1/ Review functions used in design: inserting objects (Insert); create icon (Save Symbol); compare objects; Check the steps taken. 2/ Review the functions in the Segment Setting: Satin card; Satin Path / Column Effects; Quality Control; Commands; Custom Corner; Pull compensation; Underlay. 3/ Functional box: Increase or decrease the size of each object or the whole sample; Save the design; Export the design to A floppy disk for embroidery.	CLO1 CLO2 CLO3 CLO5	3 3 2 2		
11	Practicing day 1 (9,0,18) 09 practical hours at computer Lab				
	A/ Content and methods in class: (9) Content: + Practice using LETTERING and ARTWORK Tools	CLO2 CLO3 CLO4 CLO5	3 2 3 2	Modeling and practice.	Exercises
	B/ Self-study content: (18) Read the manual using Punching tool	CLO2 CLO3	3 2		
12	Practicing day 1 (9,0,18) 09 practical hours at computer Lab				
	A/ Content and methods in class: (9) Content: + Practice using Punching tools	CLO2 CLO3 CLO4 CLO5	3 2 3 2	Modeling and practice.	Exercises
	B/ Self-study content: (18) Read the Textbook about all tools and functions	CLO2 CLO3	3 2		
13, 14, 15	Practicing day 1 (9,0,18) 09 practical hours at computer Lab				
	A/ Content and methods in class: (9) Content: Practical application combines all the tools and functions of Tajimas software to design simple embroidery patterns	CLO2 CLO3 CLO4 CLO5	3 2 3 2	Modeling and practice.	Exercises
	B/ Self-study content: (18) Read the Textbook about all tools and functions	CLO2 CLO3	3 2		

11. Learning Resources

- Textbooks:

1. Textbook of Embroidery Computerized. Vu Minh Hanh. HCMC National University Press, 2015.

- References:

1. TAJIMA DG/ML by Pulse, 2009.

12. Student Assessment

- Grading scale: **10**

- Assessment plan:

Type	Content	Timeline	CLOs	Scale	Evaluation method	Evaluation tool	Rate (%)
Processing test							40
Task#1	Explain the System diagram of Computer Embroidery; Embroidery stitches, basic embroidery directions; Compare similar & different points between two toolbars.	Week 5	CLO1 CLO2 CLO3 CLO4 CLO5	3 3 2 3 2	Test	Answer	20
Task#2	Compare similarities & different functions between embroidery design & editing toolbars.	Week 12	CLO3 CLO4 CLO5	2 3 2	Test	Answer	20
Final exam							60
	- Content covers all important course learning outcome - Time to work 60 minutes.		CLO1 CLO2 CLO3 CLO4 CLO5	3 3 2 3 2	Seft-examination	Answer	

CLOs	Assessment Types		
	Task#1	Task#2	Final exam
CLO1	x		x
CLO2	x		x
CLO3	x	x	x
CLO4	x	x	x
CLO5	x	x	x

13. Date of first approval: June 15, 2018

14. Approved by

Dean

Head of Department

Compiler





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15. Date and Up-to-date content

	Instructor:
	Head of Department: