



# **Wollo University**

## **Kombolcha Institute of Technology**

### **School of Textile, Garment, Leather and Fashion Design**

#### **Fashion Design Department**

**CAD in Pattern Making Course Guide Book.**

**Course Code Fdes 2114**

	<b>Name</b>	<b>Signature</b>
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<b>Course Number</b>	<b>Fdes 2114</b>		
<b>Course Title</b>	<b>CAD in Pattern Making</b>		
<b>Degree Program</b>	B. A in Fashion Design		
<b>Module</b>	<b>11: Patternmaking- Men</b>		
<b>Lecturer</b>	Michael Reta	<b>Phone No.</b> 0920390206,0915988033	
<b>ECTS=5</b>	<b>Credit Hrs=5</b>	<b>Email.</b> <a href="mailto:michaelr@kiot.edu.et">michaelr@kiot.edu.et</a>	
<b>Contact Hours</b>	<b>Lecture Hr.</b>	<b>Tutorial Hr.</b>	<b>Lab Practice Hr.</b>
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<b>Pre-requisites</b>	Basic Pattern making I & II		
<b>Semester</b>	4 <sup>th</sup>		
<b>Status of Course</b>	Compulsory		
<b>Teaching &amp; Learning Methods</b>	✓ Lectures ✓ Demonstration ✓ Lab/practical class ✓ Assignments /project work		

## **Course Justification**

In the Textile and garment manufacturing sector the work is so much sophisticated and time taking to do everything manually. So, to make these most complex and sophisticated works simple and easier the better way is integrating computers and machineries to every specific task. This technique of getting help from the computers is called CAD/ CAM (Computer aided design/ Computer aided manufacturing).

In this course we are trying to see and learn the pattern making methods from pattern drafting to plotting in CAD software through demonstration and practical exercising from the very beginning to the end. We use same drafting procedures with the manual pattern making methods on the drafting. So, manual pattern making (drafting) concepts and skills are very necessary steps required to go much further on covering all the features of the course as well as the software.

## **Objectives of the Course and Competencies to be acquired at the end**

This course enables the students to have deep knowledge and practical skill on pattern making software's.

At the end of this course the students have to be capable of applying pattern making techniques and principles for analysing, interpreting, and converting the advanced designer's idea or sketches in to production patterns using CAD software's especially by Lectra software.

In general, at the end of the semester the students should've to

- ❖ Be able to apply and increase the pattern making skill on CAD (Lectra software)
- ❖ Be able to Make the pattern for all cut pieces
- ❖ Demands of General Quality Guidelines
- ❖ Be able to Grade pattern
- ❖ Be able to Prepare production lay plan (marker making)
- ❖ Plotting pattern from software.

### **Work plan and activities**

<b>Week No.</b>	<b>Lecture session</b>	<b>Practical session</b>	<b>Remarks</b>
	<b>Chapter One: Introduction</b>		
1.	Introduction to CAD (Computer Aided Design) and CAM (Computer Aided Manufacturing) The benefits of CAD	Introducing rules and regulations of the lab Introduction to Modaris <ul style="list-style-type: none"> <li>○ Devices to make (Keyboard&amp; Mouse)</li> <li>○ The modaris Home screen layout</li> <li>○ Navigating the home screen: X&amp;Y-axes</li> <li>○ Bringing up different screen and controlling</li> </ul>	
2.	...Cont. <ul style="list-style-type: none"> <li>○ The difference between manual and computerised pattern making</li> <li>○ The role of pattern in clothing manufacture</li> <li>○ Introduction to different pattern making software's.</li> </ul> Digital Pattern Grading	<b>Title blocks in Lectra Modaris pattern making software</b> <ul style="list-style-type: none"> <li>○ Introduction: Information for patterns</li> <li>○ Title blocks</li> <li>○ Model identification sheet</li> <li>○ Individual sheet</li> <li>○ Variant</li> </ul>	
	<b>Chapter Two: Introduction to Lectra Software</b>		
3.	Introduction to Lectra Software <ul style="list-style-type: none"> <li>○ Introduction to Modaris</li> <li>○ Devices to make (Keyboard&amp; Mouse)</li> <li>○ The modaris Home screen layout</li> </ul>	<ul style="list-style-type: none"> <li>○ Creating folder (path for the document) for sourcing and saving</li> <li>○ Creating work area</li> <li>○ Introducing and practicing tool boxes on modaris</li> </ul>	

		<ul style="list-style-type: none"> <li>○ F1: creating lines and points, plus uses of the keys under F1</li> </ul>	
4.	Manual made patterns insertion methods and medias <ul style="list-style-type: none"> <li>○ What is Digitizer? and how it works?</li> </ul>	<ul style="list-style-type: none"> <li>○ F2: Notches, orientations and Geometric shapes, the uses of keys listed under F2</li> <li>○ F3: Modifying lines and points, the uses of keys listed under F3</li> </ul>	
5.		<ul style="list-style-type: none"> <li>○ F4: Finishing, seam allowances, corners and grain lines</li> <li>○ F5: Derived pieces</li> </ul>	
6.		<ul style="list-style-type: none"> <li>○ F6: Grading</li> <li>○ F7: Evolution system</li> <li>○ F8: Measuring and assembly</li> </ul>	
7.		Starting making easy patterns Using Lectra software T-shirt pattern making and practice using keys from F1 to F8	Assignment 1: Skirt pattern making
8.	<b>Mid Examination Week</b>		
9.	Introduction to Marker making (lay planning) software (Diamino) <ul style="list-style-type: none"> <li>○ What is marker making? Why marker making is necessary?</li> </ul>	Drafting Long sleeve Shirts & adding seam allowance, naming and putting pattern information's on every pattern pieces.	
10.	Introduction to Plotting: pattern printing software (Just Print) <ul style="list-style-type: none"> <li>○ What is pattern plotter? Why do we need pattern plotter?</li> </ul>	Sourcing grading information from working folder path and Grading Long sleeve shirt	Assignment 2: Hoody Sweater
11.		Drafting Trouser pattern & adding seam allowance, naming and putting pattern information's on every pattern pieces.	

12.		Exporting patterns to Diamino Software and marker making	
13.	Revision on the lecture part	Marker making for lay planning Exporting finished marker for printing	
14.		Sourcing finished marker and setting up for print (plot)	Give Project work
15.	<b>Project work</b>		
16.	<b>Final Examination Week</b>		

### **Assessment/Evaluation & Grading System**

The Lecture and Lab/Practical parts of the course will each be evaluated separately for 100 % and the final marks will be arrived at by giving weights according to the hours allocated to the Lecture and Lab/Practical parts. The details are given below:

<b><u>Lecture Part (Weight:25%)</u></b>	<b><u>Lab/ Practical (Weight:75%)</u></b>
Quiz #1: 10%	Practical Evaluation #1: 10%
Quiz #2: 10%	Practical Evaluation #2: 10%
Mid-exam: 30%	Assignment #1: 15%
Final Exam: 50%	Assignment #2: 15%
	Final Project Work:50%
	Defence: 10%
<b>Total= 100%</b>	<b>Total: 100%</b>

### **Attendance Requirements**

Minimum of 85 % attendance during lecture hours; and 100 % attendance during Tutorial/ Practical/ Laboratory sessions, except for some unprecedented mishaps (wherever applicable)

### **Course Policy**

All students are expected to abide by the code of conduct of students throughout this course. Academic dishonesty, including cheating, fabrication, and plagiarism will not be tolerated and will attract disqualification of marks or values. It is expected from students to do all the assignments and activities they are supposed to accomplish. Students are required to submit and present the assignments provided according to the time table indicated. Teachers give directions and instruction about assignments and other responsibilities of students.

## **REFERENCE BOOKS**

- ❖ M. Stott, 2012, Pattern cutting for clothing using CAD
- ❖ Lori A. Knowles (2006). The practical Guide to Patternmaking for Fashion Designers. MensWear. USA Fair Child Publication .INC
- ❖ Armstrong, H.J (2009). Pattern making for Fashion Design: Pearson education, Inc.
- ❖ Gareth Kershaw (2013). Pattern making for Menswear. United Kingdom: Laurence king publishing
- ❖ Grafis CAD Manual
- ❖ Websites