

TEng3155: FABRIC STRUCTURE AND DESIGN

Department of Textile Engineering				
Wollo University				
Course Number	TEng3155			
Course Title	Fabric Structure and Design			
Degree Program	B. Sc. in Textile Engineering			
Module	15: Weaving Technology			
Module Coordinator	N.N.			
Lecturer	N.N.			
ECTS Credits	5			
Contact Hours (per week)	Lecture	Tutorial	Laboratory or Practice	Home study
	2	2	3	2
Course Objectives & Competences to be Acquired	The course aims to introduce students to the principles and applications of Design in the context of Fabric structure and Design To study the fabric structure in depth. To understand the concepts of production of fabrics with these structures. To know the characteristics and application/end uses of the fabric with these structures. To impart exposure about color theory this is relevant in production of fabrics with various color combinations and designs. To study the mechanism or motions of the loom, loom attachments, like dobby/jacquard for the production of fabrics with these structures.			
Course Description/ Course Contents	Fabric analysis; Fabric construction; Elements of woven design/fabric representation; Basic fabric construction: plain weaves, twill weaves; Satin/sateen weaves; Plain			

	weave derivatives: rib weaves, basket/hopsack weaves; Twill weave derivatives: Waved and Diamond twills, Herringbone and Diaper twills, Elongated twills, Curved twills; Satin/Sateen weave derivatives: reinforced Satin/Sateen, Rearranged Satin/ Sateen; Miscellaneous structures: Honeycomb weaves, Huckaback weaves, Mock- leno weaves, Crepe weaves; color and weave effects.																						
Pre-requisites	TEng3151: Woven Fabric Manufacturing I & TEng3152: Woven Fabric Manufacturing Practical I																						
Semester	2 nd Semester, 3 rd year																						
Status of Course	Compulsory																						
Teaching & Learning Methods	Lectures, Tutorials and Laboratory/Practical exercises supported by assignments																						
Assessment/ Evaluation &Grading System	The Lecture, Tutorial 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 : <u>Lecture Part (Weight 25%)</u> <table> <tr> <td>Mid-Term Examination:</td><td>40 %</td></tr> <tr> <td>Final Examination:</td><td>60 %</td></tr> <tr> <td>Total</td><td>100 %</td></tr> </table> <u>Lab/Practical Part (Weight 37.5%)</u> <table> <tr> <td>Lab/Practical Written Examination:</td><td>40 %</td></tr> <tr> <td>Demonstration/ Defense:</td><td>30 %</td></tr> <tr> <td>Lab/Practical Records:</td><td>30 %</td></tr> <tr> <td>Total</td><td>100%</td></tr> </table> <u>Tutorial Part (Weight 37.5%)</u> <table> <tr> <td>Project/Seminar:</td><td>40 %</td></tr> <tr> <td>Assignment (Minimum: 3):</td><td>30 %</td></tr> <tr> <td>Quiz :</td><td>30 %</td></tr> <tr> <td>Total</td><td>100 %</td></tr> </table>	Mid-Term Examination:	40 %	Final Examination:	60 %	Total	100 %	Lab/Practical Written Examination:	40 %	Demonstration/ Defense:	30 %	Lab/Practical Records:	30 %	Total	100%	Project/Seminar:	40 %	Assignment (Minimum: 3):	30 %	Quiz :	30 %	Total	100 %
Mid-Term Examination:	40 %																						
Final Examination:	60 %																						
Total	100 %																						
Lab/Practical Written Examination:	40 %																						
Demonstration/ Defense:	30 %																						
Lab/Practical Records:	30 %																						
Total	100%																						
Project/Seminar:	40 %																						
Assignment (Minimum: 3):	30 %																						
Quiz :	30 %																						
Total	100 %																						

Attendance Requirements	A minimum of 85 % attendance during lecture and tutorial sessions 100% attendance during lab/practical class sessions
Literature	1. Grosicki Z., “<i>Watson’s Textile Design&Color: Elementary Weaves & Figures</i>”,Blackwell Science, Commerce place, 1998. 2. H. Nisbet, “<i>Grammar of Textile Design</i>”, Tarporevala sons& Co. Pvt. Ltd., 1994.