

Wollo University
Kombolcha Institute of Technology
Textile Engineering Program

Course title: Productivity and Work Study	Instructor: Mohammed Alebachew
Course code: GrEg 3141	Office location: 303
ECTS Credit: 5	Cell phone:+251923551491
Room: CR1316	
Target group: 3 rd year Garment Engineering Students Lecture Hrs: Local time SECTION A : Monday 2:10 -5:00 & Wednesday 5:10 – 6:00 & 7:40 – 8:30	Consultation Hours: Wednesday : 8:00-10:00 Thursday : 3:00- 4:30 Do not hesitate to come and ask questions if I am available in my office out of the indicated time.

Course Objectives

- ❖ To develop, among students, the understanding of the importance of work study and its application in apparel manufacturing industry for methods improvement and development of time standards.
- ❖ To help students understand concept of productivity, its measurement, how productivity is lost and the factors associated with higher productivity in the apparel industry.

Course description

The course gives clear understanding of productivity increment techniques. It covers different approaches of conducting method study and time measurements. Students will be able to determine standard allowance minute for different types of garments.

Weeks	Lesson Plan	Assessment
	Course Contents Unit-1: introduction to productivity and work study <ul style="list-style-type: none"> - Terminology and conceptual understanding of productivity - Managers task in Apparel Manufacturing Units in regards to quality products, cost effective production and on time delivery - Introduction to Work Study and its development. Application of WorkStudy in the Apparel Industry and basic procedures 	Quize
	Unit- 2: productivity measurement in Apparel Industry <ul style="list-style-type: none"> ▪ Selection of suitable productivity measures for managerial level ▪ Measuring productivity level at plant level up to operator/ staff/ 	

	<p>machine level</p> <p>Factors affecting productivity in Apparel Industry</p> <ul style="list-style-type: none"> • Labour productivity affecting parameters • Factors associated with machine productivity 	
	<p>Unit- 3 : Productivity status in Apparel Industry</p> <ul style="list-style-type: none"> • Apparel productivity in Western World • Global comparison of apparel productivity • Productivity in the Indian Apparel industry • Strategies for productivity improvement for the Apparel Industry • Estimation of productivity improvement potentials • Identification of productivity improvement tools <p>Infrastructural, manpower and system correction for productivity</p>	<p>Test 1 Assignment 1</p>
	<p>Unit-4: Method Study</p> <ul style="list-style-type: none"> • Understanding the approach and need of process analysis for various activities ▪ Principles of motion economy and ergonomic aspects ▪ Tools and measures available for method analysis ▪ Introduction of micro motion studies ▪ Laboratory session to understand and to create abilities to analyze a job and improve operation methodology 	<p>Test 2 Assignment 2 Lab record 1</p>
	<p>Unit-5: Time study and Work Measurement</p> <ul style="list-style-type: none"> • Introduction of production standards and its importance for the managerial level • Time Study as a work measurement technique to determine production standards • Familiarization with tools and measurements available for the Time Study Analyst • Laboratory session for practical work 	<p>Test 3 Assignment 3 Lab record 2</p>
	<p>Unit-6: Introduction to Performance Rating for Time Study</p> <ul style="list-style-type: none"> • Measuring performance - the concept of 100% or normal 	

	performance <ul style="list-style-type: none"> • Assessment and characteristics of a normal operator • Understanding of the concept "Fair day's work and fair day's pay" • Audiovisual practice for performance rating 	
	Unit-7: Allowances in Time Studies <ul style="list-style-type: none"> • Occurrence of non-productive time and time lost and their representation by allowances <ul style="list-style-type: none"> ○ Relation between affectivity and allowances from the managers view point and control mechanisms ○ Calculation of allowances for Time Studies 	Lab record 3
	Unit-8: Work sampling as a work measurement method <ul style="list-style-type: none"> ▪ Work sampling as a tool to establish performance standards ▪ Application and use in Apparel Industry 	Lab record 4
	Unit- 9: Pre determined motion and time systems for the apparel Industry <ul style="list-style-type: none"> ▪ Origin and development of Pre determined motion and time systems ▪ Introduction and objectives of General Sewing Data (GSD) ▪ Visualization of processes through GSD ▪ Exercise to implement GSD for selected sewing operations 	Final exam Project Lab written exam

Assessment Method

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:

Lecture Part

Tests(3):	30 %
Final Examination:	50%
Assignments:	20%
Total	100%

Lab/Practical Part

Lab/Practical Records:	40 %
Lab/Practical Written Examination:	30 %
Demonstration/ Defense:	30 %
Total	100%

Course policy

- A minimum of 85 % attendance during lecture sessions

100% attendance during tutorials class session

References:

- George Kanawaty, 'Introduction to Work Study' ILO
- W. Erwin, Time Study Procedures for the Needle Trade' Bobbin
- Ralf Barnes, 'Motion and Time Study, John Witey & Sons
- Rajesh Bheda ' Managing Productivity in the Apparel Industry', CBS Publishers and distributors.
- Hiba J.C., 'Improving working condition of productivity in the garment Industry', ILO
- Juki Manual
- L. C. PIGAGE, Motion and Time Study, Institute of Labor and Industrial Relations
- Introduction To Work Study, International Labour Office

Approved By**Signature****Mohammed Alebachew**

Course Manager

Mohammed Alebachew

Department Head

Tsegaye M.

Department Quality Assurance

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