



# THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

## *Department of Forestry and Wood Technology*

### **FWT 415–Furniture Design and Production**

#### **COURSE PARTICULARS**

**Course Code:** FWT415

**Course Title:** Furniture Design and Production.

**No. of Units:** 2

**Course Duration:** One hour of theory and three hours of practicals per week for 15 weeks.

**Status:** Compulsory

**Course Email Address:** fwt415@gmail.com

**Course Webpage:** <http://www.fwt.futa.edu.ng/courseschedule.php?coursecode=FWT%20204>

**Prerequisite:** NIL

#### **COURSE INSTRUCTORS**

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and

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#### **COURSE DESCRIPTION**

This course is an introduction into the principles of furniture design using ergonomic and anthropometry applications. The use of wood and other materials in furniture production will be studied. Students will be instructed in the use of design software in computer-aided design. Manual tools and machine processing of wood form an integral part of the course. As a practical course, the focus is to impart useful skills on the students in order to make themselves self-reliant.

## COURSE OBJECTIVES

The objectives of this course are to:

- introduce students to the use of software in furniture design; and
- provide students with opportunities to develop basic practical skills with respect to material preparation, use of machines and tools.

## COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course, the student will be able to:

*(Knowledge based)*

- explain the requirements of furniture design
- classify and explain the function of different materials and tools in furniture production;
- understand purpose and functions body-size measurements in design
- carry out simple furniture design and prepare cutting list for estimate preparation and machining;

*(Skills)*

- use software to design furniture:
  - Auto-cad;
  - Pro100 furniture design and
  - Sweet-home software
- Use machine to prepare timber
- Produce different types of wood joints;

## GRADING SYSTEM FOR THE COURSE

**This course will be graded as follows:**

Practicals	20%
Assignments	10
Test(s)	10%
<u>Final Examination</u>	<u>60%</u>
<b><u>TOTAL</u></b>	<b><u>100%</u></b>

## GENERAL INSTRUCTIONS

**Attendance:** It is expected that every student will be in class for lectures and also participate in all practical exercises. Attendance records will be kept and used to determine each person's qualification to sit for the final examination. In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with any of the instructors, indicating the reason for the absence.

**Academic Integrity:** Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances are prohibited. You are not allowed to make copies of another person's work and submit it as your own; that is plagiarism. All cases of academic dishonesty will be reported to the University Management for appropriate sanctions in accordance with the guidelines for handling students' misconduct as spelt out in the Students' Handbook.

**Assignments and Group Work:** Students are expected to submit assignments as scheduled. Failure to submit an assignment as at when due will earn zero for the assignment. Only under extenuating circumstances, for which a student has notified any of the instructors in advance, will late submission of assignments be permitted.

**Code of Conduct in Lecture Rooms and Laboratories:** Students should turn off their cell phones during lectures. Students are prohibited from engaging in other activities (such as texting, watching videos, etc.) during lectures. Food and drinks are not permitted in the laboratories.

## READING LIST

Recommended texts:

John A. Walton<sup>1</sup> Wood in theory and practical Gorge G. Harrad and Co. Ltd

Adejuyigbe Sam. B. (2002).<sup>5</sup> Production management (Design planning, implementation and control Topfun publications, Akure

Charles H. Hayward (1977)<sup>5</sup>. English period furniture, Evans Brother Limited London.

Allsteel Henrytallor (2005).<sup>3</sup>Ergonomics and design. A relevance guide.  
[www.allsteeloffice.com/ergo](http://www.allsteeloffice.com/ergo)

### Legend

- 1- Available in the University Library
- 2- Available in Departmental/School Libraries
- 3- Available on the Internet.
- 4- Available as Personal Collection
- 5- Available in local bookshops.

## COURSE OUTLINE

Week	Topic	Remarks
1	Principles of furniture design. Design concepts and fundamental	During this first class, the expectation of the students from the course will also be documented.
2 & 3	Classification of furniture and furniture products; Home, Office, School, lab etc	Students attention will be drawn to the usefulness of furniture in all aspects of human living
4	Computer aided design: Use of software in furniture design	Students will be taught the use of software assignment on different furniture items will be given.
5	History of furniture/ English period furniture styles	Trace the history of furniture from the English period styles to contemporary styles and factors influencing change of styles
6 & 7	Ergonomics and factors influencing contemporary furniture sizes/ Basic furniture sizes	Relate Ergonomics and anthropometry to furniture as furniture designed must suit and fit the users effect of poorly designed furniture will be discussed
8	Materials used in furniture production: Wood and non-wooden materials	Furniture as production is not only wooden method of fastening in production will be on practical exercises on joint constructions and applications
<b>MID-SEMESTER TEST</b>		
9	Construction solution/ Tool application	Emphasis will be on practical exercises on joint constructions and applications
10	Production conditions and interchange ability of furniture parts;	Production sequence and furniture parts: Knock down (KD) assembly process will be assemblies will be taught
11	Basic forms of furniture construction: Flat frame, table/ stool and flat frame	Categorisation of furniture items under various forms and emphasised. Practicals and drawing exercises to be conducted
12	Production process: Mass production mechanization, standardization, quality control/assembly line	Students will be introduced to factors of production, workshop/ production flow path
13	Factory layout	Operation sequence to reduce and maximise production time

14	Furniture finishing: Finishes and application methods	Students will be taught finishing process and methods: Brushing dipping, spraying and flow coating.
15	Revision	