



Department of forestry

College of Agriculture Engineering Sciences

University of salahddin

Subject: Wood technology

Course Book – 4th Year

**Lecturer name: Assist lecturer. Shaymaa H.
Mahmood**

Academic Year: 2021/2022

Course Book

1. Course name	Wood technology
2. Lecturer in charge	Assist Lecturer Shaymaa Hani Mahmood
3. Department/ College	Forestry / Agriculture Engineering Sciences
4. Contact	e-mail: shaymaa.mahmood@su.edu.krd Tel: (optional)
5. Time (in hours) per week	Theory: 0 Practical: 3
6. Office hours	Sunday , Monday
7. Course code	
8. Teacher's academic profile	I finished my B.Sc in Erbil Salahddin University-Agriculture college-Forestry department 2012-2013. I started my M.Sc (Wood Industry) in Salahddin University-Agriculture college-forest 2014-2015.Now a day I am working as assistant lecturer in agriculture engineering science college-Forestry department.
9. Keywords	
10. Course overview:	
<ul style="list-style-type: none"> ▪ The importance of studying the subject ▪ Understanding of the fundamental concepts of the course ▪ Principles and theories of the course ▪ A sound knowledge of the major areas of the subject ▪ Sufficient knowledge and understanding to secure employment 	
11. Course objective:	
<p>This course comprises studying anatomical, chemical, physical and mechanical properties of wood seasoning</p> <ol style="list-style-type: none"> 1- Deepen and improve their knowledge and skills of wood technology with the emphasis on economics, management and business communication. 2- become skilled at planning, organizing, managing and controlling the production process, material and production flows, 3- Learn about the importance of the organization of the working process together with quality. 4- Improve their theoretical and practical professional knowledge gained during the previous years of education. 	
12. Student's obligation	
The student must attend the classes and prepare for the tests, assignment reports, and quizzes.	

<p>13. Forms of teaching Laptop is used to explain the lecturers, using the power point. Moreover the bond is also used sometime.</p>	
<p>14. Assessment scheme Distribution of grades for this subject during the course are as follows:-</p> <p>1. 35 degree distributed as follow:</p> <p>a. 5 degrees activities. b. 5 Quiz c. 5 degrees report. d. 20 Exam</p>	
<p>15. Student learning outcome:</p>	
<p>16. Course Reading List and References: operation -Logging. From Wikipedia, the free online encyclopedia. Accessed 14/12/2011 at http://en.wikipedia.org/wiki/Logging -David E. Baker^{2,3} and Bruce E. Cutter (undated). Felling, Limbing and Bucking trees. MU Extension Publications g1958. University of Missouri. Columbia. Revised by H.E. Hank Steltzer. Accessed 14/12/2011 at http://extension.missouri.edu/explorepdf/agguides/agengin/g01958.pdf -Forest Guide 2,3. Steps involved in felling a tree. Accessed online 14/12/2011 at http://forestry.about.com/od/chainsaws/ss/fell_tree.htm - Chainsaws—Safety, Operation, Tree Felling Techniques (1997). STATE & EXTENSION FORESTRY, KANSAS STATE UNIVERSITY. -Tom and Gordon(1991). Wisconsin woodlands: safe tree harvesting, Wisconsin county extension office or agricultural bulletin, university of Wisconsin extension. -Others from net.</p>	
17. The Topics:	Lecturer's name
None	
18. Practical Topics (If there is any)	
<p>Week1: corss book and general explanation about wood technology. Week2: The Relationship between Wood and Water. 1- Introduction.</p>	<p>Lecturer's name Shaymaa H. Mahmood (3 hrs)</p>

2- Forms of Water In Wood.
3- Moisture Content (MC).
4- Water movement in wood.
5- Equilibrium Moisture Content (EMC) Relationship
Week3: Physical Properties of wood (part1)
1- General description.
2- Directional Properties
3- Dimensional Stability.
a-Shrinkage.
b- Swelling.
4- Density.
5- Specific gravity.
Week4: Physical Properties of wood (part2)
1-Thermal Properties:
a- Thermal Conductivity (K).
b- Thermal Insulating value (R).
c- Thermal expansion (α).
2- Ignition of Wood.
3- Fuel value.
Week5: wood Anatomy (part 1)
1- The Tree.
2- Sapwood and Heartwood .
4- Axial and Radial Systems .
5- Vascular Cambium .
Week6:--- -First mid-semester exam.
Week7: wood Anatomy (part 2)
1- Growth Rings .
2- Microscopic Structure of Softwoods and Hardwoods.
a- Soft woods.
b- Hardwoods.
Week8: Chemical Composition of Wood.
Week 9: Mechanical properties of wood (part1).
1- General description.
2-Compression.
3- Tension.
Week10: Mechanical properties of wood (part2).
1- Bending.
a- Modulus of Elasticity (MOE).
b- Modulus of Rupture (MOR).
Week 11: ----Second mid-semester exam

Week12: visiting local wood market in Erbil.

19. Examinations examples :

1- Define the following terms?

2- Fill the blanks with suitable word?

3- Answer the following questions?

4- Answer the following True or False and corrected the False statements.

5- Calculate the percent of volumetric swelling and green density of piece of wood, from the following information?

6- Write the difference between.

7- Enumerate the following.

20. Extra notes:

The course needs labs in future.

21. Peer review

پیداچوونہوہی ھاوہل