



## SYLLABUS OF AN ACADEMIC DISCIPLINE

### Current Problems of Woodworking

Academic degree - **Master's**

Specialty **187 "Woodworking and Furniture Technologies"**

Academic program **Woodworking and Furniture Technologies**

Year of study **2**, semester **3**

Form of study **full-time, part-time**

Number of ECTS credits **4**

Language(s) of instruction **English**

**Lecturer of the discipline**

**Lecturer's contact**

**information (e-mail)**

**URL of the e-learning**

**course on the NULES e-**

**learning portal**

PhD Andrii Spirochkin

spirochkin@nubip.edu.ua

https://elearn.nubip.edu.ua/course/view.php?id=4604

## ACADEMIC DISCIPLINE DESCRIPTION

(up to 1000 symbols)

*Aim formation of students' knowledge, abilities and skills to solve production tasks using a foreign language*

*Objectives: solving the problems of manufacturing technologies: sawn products from wood of various species, value-added products, board materials, structural materials, paper, energy and residential complexes based on wood;*

*knowledge and use of English terminology in the field of woodworking and furniture production*

### **Competences of the discipline:**

*Integral competence (IC):The ability to solve complex tasks and problems in professional, educational, scientific, research and innovation activities related to the production of woodworking products, furniture and wood products, research on wood, wood and non-wood materials, as well as research, design and implement relevant resource-saving and environmentally friendly technological processes characterized by uncertainty of conditions and requirements.*

*General competences (GC):GC 02 Ability to identify, pose and solve problems.*

*GC 03 Ability to conduct research at an appropriate level.*

*GC 04 The ability to generate new ideas and implement them in the form of sound innovative solutions.*

*GC 11 The ability to communicate in a foreign language in professional (scientific and technical) activities.*

*Special (professional) competences (SC): SC 2 The ability to use modern mathematical and optimization methods of research in woodworking and furniture industries to solve complex technological problems related to the development and improvement of technological processes.*

*SC 5 Ability to analyze existing production processes, design and implement new efficient processes of woodworking and furniture production.*

*SC 7 The ability to solve engineering tasks related to special woodworking productions and the design of wooden structures.*

*SC 10 The ability to develop and implement measures for the use of wood residues and waste at the enterprises of the industry.*

**Expected Learning Outcomes (ELO):**ELO 03 Ability to conduct research at an appropriate level.

ELO 08 Determination and persistence in relation to assigned tasks and assumed responsibilities.

ELO 11 The ability to communicate in a foreign language in professional (scientific and technical) activities.

ELO 12 The ability to make scientific and scientific and technical reports based on the results of the work.

### ACADEMIC DISCIPLINE STRUCTURE

Topic	Hours (lectures/practical/individual work )	Learning outcomes	Tasks	Assessment
<b>3<sup>rd</sup> semester</b>				
<b>Module 1 Wood Structure and Processing</b>				
<b>Topic1 Wood Structure</b>	2/-/10	To know the structure of wood, how the tree makes wood, the furniture manufacturing process, different types of machines used To be able to speak about the main elements in the wood structure and equipment used in the furniture manufacturing process	Submitting practical work	Completed assignments for practical work make up a grade of 30%, and the module test makes up 70%
<b>Topic2 Wood Processing</b>	2/-/10			
<b>Topic3 Furniture Manufacturing Process</b>	2/8/-			
<b>Topic4 Woodworking Equipment</b>	2/-/12			
<b>Module 2 Wood Science</b>				
<b>Topic1 Development of Wood Science</b>	1/7/20	To know the actual problems of the woodworking processes To be able to speak about current scientific research in woodworking technologies, to find scientific publications dealing with current problems of woodworking	Submitting practical work	Completed assignments for practical work make up a grade of 30%, and the module test makes up 70%
<b>Topic2 Actual Problems of Wood Cutting</b>	2/-/8			
<b>Topic3 Actual Problems of Wood Drying</b>	2/-/15			
<b>Topic4 Actual Problems of Wood-Based Composite Materials Manufacturing</b>	2/-/15			
<b>Total for 3<sup>rd</sup> semester</b>	15/15/90			<b>70</b>
<b>Examination</b>				<b>30</b>
<b>Total for the course</b>				<b>100</b>

## ASSESSMENT POLICY

<b><i>Deadlines and exam retaking policy:</i></b>	Works that are submitted late without valid reasons will be assessed with a lower grade. Module tests may be retaken with the permission of the lecturer if there are valid reasons (e.g. a sick leave).
<b><i>Academic integrity policy:</i></b>	Cheating during tests and exams is prohibited (including using mobile devices). Term papers and essays must have correct references to the literature used
<b><i>Attendance policy:</i></b>	Attendance is mandatory. For objective reasons (e.g.: sick leave, international internship) teaching can take place individually (online, under a warrant from the Institute's Director)

## SCALE FOR ASSESSING STUDENTS 'KNOWLEDGE AND SKILLS

Student's rating, points	National grading of exams and credits	
	exams	credits
90-100	excellent	pass
74-89	good	
60-73	satisfactorily	
0-59	unsatisfactorily	fail

## RECOMMENDED SOURCES OF INFORMATION

1. Borg Madsen P. Structural Behavior of Timber. Timber Engineering LTD, North Vancouver, 1992, 405 p.
2. General Technical Report. Wood Handbook. Wood as an Engineering Material. Madison, WI: U.S. Department of Agriculture, Forest Service, Forest Products Laboratory, 2010, 508 p.
3. Dry Kiln Operator's Manual. Agricultural Handbook # 188. Department of Agriculture, Forest Service, Forest Products Laboratory, 1991, 274 p.
4. Бехта П.А., Бехта І.А. Англо-український українсько-англійський словник деревообробної промисловості. – Київ: Основа, 2003. – 634 с.
5. Adkins, Miles. Woodworking for Beginners: An Essential Guide to Learn the Art of Woodworking, Its Processes and How to Produce Incredible DIY Projects. N.p., Independently Published, 2020, 102 p