STUDY PROGRAMME: FURNITURE AND WOOD ENGINEERING

General information

Study programme title	FURNITURE AND WOOD ENGINEERING
Institution	Faculty of design and technology of furniture and interior - Skopje
Duration of studies / ECTS	4 years / 8 semesters / 240 ECTS
Admission criteria	General conditions: In accordance with the legislation and regulations of the University "Ss. Cyril and Methodius "in Skopje
General and specific competences	The Bachelor of science in design and technologies of furniture and interior – study programme: furniture and wood engineering is professionally involved in the following activities: sawmill wood processing, veneerboards manufacturing, chipboards manufacturing, furniture and interior manufacturing, joinery and carpentry manufacturing, packaging and special wood products, chemical wood processing, wood and wood products trading, furniture design and other wood products interior and exterior.
Academic title acquired with graduation	Bachelor of science in design and technologies of furniture and interior – study programme: furniture and wood engineering

Study programme plan: FURNITURE AND WOOD ENGINEERING

I SEMESTER

No.		Course	Lessons	(weekly)	ECTS
NO.	Code	Subject	Lectures	Exercises	ECIS
1	111	Mathematics	3	2	6
2	112	Descriptive Geometry	3	2	6
3	211	Wood Anatomy	2	2	6
4		Elective course (Group A1)	2	2	6
5		Elective course (Group A1)	2	2	6
			12	10	30
No.		Elective course - GROUP A1 (student chooses 2 courses)	Lessons	(weekly)	ECTS
	Code	Subject	Lectures	Exercises	
1	311	Styles and Decoration	2	2	6
2	411	Wood Carving	2	2	6
3	412	Wood Plastification	2	2	6

II SEMESTER

No.		Course	Lessons	(weekly)	ECTS
NO.	Code	Subject	Lectures	Exercises	ECI3
1	221	Chemical Wood Processing	2	2	6
2	121	Technical Properties of Wood	3	2	6
3	122	Technical Mechanics	3	2	6
4		Elective course (Group A2)	2	2	6
5	422	ELECTIVE COURSE - UNIVERSITY LIST	2	2	6
			12	10	30
No.		Elective course - GROUP A2 (student chooses 1 course)	Lessons	(weekly)	ECTS
	Code	Subject	Lectures	Exercises	
1	321	Anthropometry and Ergonomics	2 2		6
2	421	Artistic Expression and Plastic Forming	2	2	6

III SEMESTER

No.		Course	Lessons	(weekly)	ECTS
NO.	Code	Subject	Lectures	Exercises	ECIS
1	231	Theory of Wood Cutting	2	2	6
2	531	Machines and Energetics	3	2	6
3	131	Auxiliary Materials	3	2	6
4		Elective course (Group B1) 2 2		6	
5	432	ELECTIVE COURSE - UNIVERSITY LIST	2	2	6
			12	10	30
No.		Elective course - GROUP B1 (student chooses 1 course)	Lessons	(weekly)	ECTS
	Code	Subject	Lectures	Exercises	
1	431	Wood in Construction	2	2 2	
2	331	Engineering Graphics	2	2 2	
3	332	Elements of Furniture and Interior Design	2	2	6

IV SEMESTER

No.		Course	Lessons	(weekly)	ECTS	
NO.	Code	Subject	Lectures Exercises		LCIS	
1	541	Internal Transport	3	2	6	
2	542	Sawmill and primary wood processing technology	3	2	6	
3		Elective course (Group B2) 2 2		6		
4		Elective course (Group B2) 2 2		6		
5	443	443 ELECTIVE COURSE - UNIVERSITY LIST		2	6	
			12	10	30	
No.		Elective course - GROUP B2 (student chooses 2 courses)	Lessons	(weekly)	ECTS	
	Code	Subject	Lectures	Exercises		
1	441	Technology of Adhesive Wood Bonding	2	2 2		
2	341	Economics	2	2 2		
3	442	Management	2	2	6	

V SEMESTER

No.		Course	Lessons	(weekly)	ECTS	
NO.	Code	Subject	Lectures	Exercises	ECIS	
1	151	Elements of wood joints	3	2	6	
2	551	Veneers and veneered panels	3	2	6	
3	251 Hydro-thermal wood processing		2	2	6	
4		Elective course (Group C1)	2	2	6	
5		ELECTIVE COURSE - UNIVERSITY LIST	2	2	6	
			12	10	30	
No.		Elective course - GROUP C1 (student chooses 1 course)	Lessons	(weekly)	ECTS	
	Code	Subject	Lectures	Exercises		
1	451	Occupational Safety	2	2	6	
2	351 Furniture and Interior Design		2	2	6	

VI SEMESTER

No.		Course	Lessons	(weekly)	ECTS
NO.	Code	Subject	Lectures	Exercises	ECIS
1	161	Furniture and Interior Construction	3	2	6
2	561	Particle boards and fiberboards	3	2	6
3		Elective course (Group C2)	2	2	6
4		Elective course (Group C2)	2	2	6
5	162	Practical work 1	0	4	6
			10	12	30
No.		Elective course - GROUP C2 (student chooses 2 courses)	Lessons	(weekly)	ECTS
	Code	Subject	Lectures	Exercises	
1	461	Doors and windows joinery	2	2	6
2	761	Wood Quality Testing 2 2		6	
3	462	Wooden Prefabricated Objects	2	2	6

VII SEMESTER

No.		Course	Lessons	(weekly)	ECTS
NO.	Code	Subject	Lectures	Exercises	ECIS
1	171	Technology of furniture and final products 4		3	6
2	172	Organization of Production	3	2	6
3		Elective course (Group D1)	2	2	6
4		Elective course (Group D1)	2	2	6
5	173	Practical work 2	0	4	6
			11	13	30
No.		Elective course - GROUP D1 (student chooses 2 courses)	Lessons	(weekly)	ECTS
	Code	Subject	Lectures	Exercises	
1	471	Production Quality Management	oduction Quality Management 2 2		6
2	472	Marketing	2	2	6
3	473	3D Graphics	2	2	6

VIII SEMESTER

No.		Course	Lessons	(weekly)	ECTS
INO.	Code	Subject	Lectures	Exercises	ECIS
1	281	Production Preparation	3	2	6
2	181	Manufacturing Processes Design	3	2	6
3	182	Wood Surface Processing	3	2	6
4		Elective course (Group D2)	2	2	6
5	183	Graduate thesys	-	2	6
			11	10	30
No.		Elective course - GROUP D2 (student chooses 1 course)	Lessons	(weekly)	ECTS
	Code	Subject	Lectures	Exercises	
1	481	Numerically Controlled Machines	2	2	6
2	482	Technology of Upholstered Furniture	2	2	6
3	483	Project Management	2	2	6

COURSE CONTENTS FOR STUDY PROGRAM: - FURNITURE AND WOOD ENGINEERING

1.	Course title		3D (Graphics				
2.	Code		473					
3.	Study group		FWE / DFI					
4.	Organizer of the study prog	ram (unit,	University Ss. Cyril and Methodius in Skopje					
	institute, department)	-	Faculty of Design and Technology of Furniture and Interior				d Interior-	
_			Skop					
	Level (first, second, third cy	/clce)						
	Academic year / semester		IV /			ber of ECTS	6	
	Teacher	4 . f 41		. dr. Goran Zl				
	Prerequisites for enrollmen course			ineering grap				
10.	Course goals (Competences of three-dimensional (3D) dra			e goal is gaini	ng knov	vledge about the	e basic c	oncepts
	 Course outline Lectures: Introduction to three-dimensional (3D) drawing. Working in 3D - coordinate system. Types of 3D coordinates. Transforming 2D to 3D objects. Basic tools of 3D modeling. Modeling of parts and assemblies of 3D objects. Modification of 3D models. Changing the position of the model (displacement, alignment and rotation). Reproduction of the model (mirror replication and multiple copying). Getting information from the 3D model. Switching between coordinate systems. Views in 3D space. Creation of complex models. Exercises: Project assignment – drawing 3D objects; students are introduced to the 3D workspace and use basic tools for three-dimensional drawing modeling and of products. 							
12.	Study methods Lectures, auditory exercises,	consultation, p	rojec	t assignment	, individ	ual self-learning.		
13.	Total available fund of hour	S	180	hours				
14.	Weekly number of classes		2+2					
15.	Teaching activities						30 hours	
				15.2 Exercises (laboratory, auditory), 30 hou seminars, team work				30 hours
16.	Other activities			16.1 Project assignments 4			40 hours	
				16.2 Individual assignments 4			40 hours	
	1			16.3 Study at home				40 hours
17.	Assessment methods	17.1. Seminar	work	<pre>x / project</pre>			10 scor	re
	-	17.2. Classes	activ	ities and atter	ndance		10 scor	re
		17.3. Tests (Fi	inal e	exam / Partial exams)			80 scor	re (2x40)
18.	Assessment criteria (Score/	(Grade)		less than 50			5 (five)	(F)
				from 51 to 6	0 score		6 (six)	(E)
				from 61 to 7	0 score		7 (seve	en) (D)
				from 71 to 8	0 score		8 (eigh	t) (C)
				from 81 to 9	0 score		9 (nine	, , ,
				from 91 to 1			10 (ten) (A)
	Minimum score for signatur	re and final ex	am	· ·		5 15.1 and 15.2		
	Teaching language			Macedonian				
	Course evaluation method			Internal eval	uation a	and student ques	stionnair	es
	Literature							
	. Mandatory literature					1		1
N°	Author			Title		Publishe		Year
1.	И. Неделковски			графика (3D 1 анимација)		УКЛО – Технич факултет, Бите		2008
2.	R.H.Shih	AutoCAD Level: 3D		Tutorial Seco	ond	Schroff Develop Corporation	pment	2010

3.										
22.2	22.2. Additional literature									
N°	Author	Title	Publisher	Year						
1.	A. Watt	3D computer Graphics	Pearson Education Limited	2000						
2.										
3.										

1.	Course title		Ant	hropometry a	and ergonomics			
	Code			321				
	Study group		-	E / DFI				
-	Organizer of the study prog institute, department)	gram (un	nit, Univ Faci	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				
5.	Level (first, second, third c	yclce)	First	t cycle				
6.	Academic year / semester		1/2		7. Number of ECTS	6		
8.	Teacher		Prof	. dr. Violeta E	fremovska			
9.	Prerequisites for enrollmer course	nt of the) –					
10.	Course goals (Competences) Study of human's body anthropometric measures, which are essential in furniture and interior design. They need to be applied in order to design furniture according to the dimensions of the human body, adaptable and convenient as well.							
	. Course outline Meaning of anthropometry and ergonomics. Terms of anthropometry. Sources and types of data. Presentation of data. Percentiles. Dimensions of the human body. Anthropometry of seating. Structural and functional measures, measures at various operating positions. Application of anthropometric measures in the design of furniture in living rooms, dining rooms, facilities for food preparation (kitchen), sleeping rooms, bar counters.							
12.	Study methods	onoultati	ion project	angianment	alabarata individual aa	floornin	~	
12	Lectures, auditory exercises, c Total available fund of hou			assignment-		n-learning	J	
		rs	2+2	180				
	Weekly number of classes		2+2				00 h a	
15.	Teaching activities			,			30 hours	
				seminars, team work			30 hours	
16.	Other activities						40 hours	
				· · · · · · · · · · · · · · · · · · ·			40 hours	
				16.3 Study a	3		40 hours	
17.	Assessment methods	17.1. Se	eminar work			10 scor		
							score	
						80 scor		
18.	Assessment criteria (Score		,	less than 50	,	5 (five)	(F)	
	Υ.	,		from 51 to 6	0 score	6 (six)		
				from 61 to 7		7 (seve		
				from 71 to 8	0 score	8 (eigh	, , ,	
				from 81 to 9		9 (nine	, , ,	
				from 91 to 1	00 score	10 (ten		
19.	Minimum score for signatu	re and fi	inal exam		activities 15.1 and 15.2	- (/ /	
	Teaching language			Macedonian				
	Course evaluation method				uation and student que	stionnair	es	
	Literature							
	. Mandatory literature							
N°	Author			Title	Publish	er	Year	
1.	Julius Panero, AIA ASID i Ma Zelnik AIA ASID	artin Anti	ropoloske n				1990	
2.								
3.								
					I			

22.	22.2. Additional literature								
N^{o}	Author	Title	Publisher	Year					
1.									
2.									
3.									

1.	Course title		Artis	stic expressi	on and plastic moldi	ng		
2.	Code		421		-	-		
3.	Study group		FWE	E / DFI				
4.	Organizer of the study prog institute, department)	yram (unit,	Facu	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				
5.	Level (first, second, third c	yclce)	First	cycle				
6.	Academic year / semester		1/2 7. Number of ECTS 6					
8.	Teacher		Doc. Skoj		unik Kirkov (UKIM- Fac	ulty of Pe	edagogy-	
9.	Prerequisites for enrollmen course	t of the	-					
10.	0. Course goals (Competences) This course aims to develop a visual way of thinking and a sense of space to build the power of perception, to develop creativity among students, which is necessary for creating quality designers. This is achieved through exercises to master the space and the way of view, composition of space etc. Students study the proportions of the human figure with an emphasis on the skeleton construction. They work on the simplification of form and drawing a live model, of course respecting the basic principles of proportion, light, shadow, perspective, line, etc.							
	 Course outline Lectures: Importance and role of the subject, way of viewing space, managing space-format, for composition - composing space-format, for proportion and how to see it, line as mean of expression, depth and distance - perspective, light - shade, surface, architecture of space, proportion of the human figure - anatomy, designing objects (furniture) according to human anatomy, anatomy of the human figure, analysis of the skeleton and movements, human figure in space, making synthesis, simplification of form - stylization. Exercises: The exercises aim to develop a visual way of thinking and a sense of space to build a powerful perception, to develop creativity of students, which is necessary for creating these images. The subject serves as a preparation for History and Art through the styles that denote the preparation of graphics tasks. Study methods 							
12.	Lectures, auditory exercises,	consultation, ir	ndivid	lual self-learn	ing.			
13.	Total available fund of hour	rs	180	hours				
14.	Weekly number of classes		2+2	+2				
15.	Teaching activities		1	15.1. Lectures-theory 30 hours				
				15.2 Exercise seminars, tea	s (laboratory, auditory) m work	,	30 hours	
16.	Other activities		1	16.1 Project a	ssignments		40 hours	
			1	16.2 Individua	I assignments		40 hours	
			1	16.3 Study at	home		40 hours	
17.	Assessment methods	17.1. Seminar	· work	k / project		0 scor	e	
		17.2. Classes	activ	ities and atte	ndance	20 sco	ore	
		17.3. Tests (F	inal e	xam / Partial	exams)	80 sco	re (2x40)	
18.	Assessment criteria (Score	/Grade)	l	ess than 50 s	core	5 (five)	(F)	
			f	rom 51 to 60	score	6 (six)	(E)	
				rom 61 to 70	score	7 (seve	en) (D)	
				rom 71 to 80	score	8 (eigh	t) (C)	
				rom 81 to 90	score	9 (nine		
			f	rom 91 to 100	91 to 100 score 10 (ten) (A)			
19.	Minimum score for signatu exam	re and final	0	Completed activities 15.1, 15.2. and 16.1.				
20.	Teaching language		N	Macedonian				
	······································							

21	. Course evaluation method	Internal evaluation ar	Internal evaluation and student questionnaires				
22	. Literature						
22.	1. Mandatory literature						
N^{o}	Author	Title	Publisher	Year			
1.	Marcel Bačić	Likovno mišljenje	Školska knjiga, Zagreb	2004			
2.	Miroslav Huzjak	Učimo gledati	Školska knjiga, Zagreb	2002			
3.	Marijan Jakubin	Likovni jezik i likovne tehnike	Educa, Zagreb	1999			
22.	2. Additional literature						
N^{o}	Author	Title	Publisher	Year			
1.	Radovan Ivančević	Likovni govor/ Uvod u svijet likovnih umjetnosti	Profil	1997			
2.	Jadranka Damjanov	Vizualni jezik i likovna umjetnost	Školska knjiga, Zagreb	1991			
3.	Jadranka Damjanov	Likovna umjetnost 1 i 2	Školska knjiga, Zagreb	1970			
		http://likovna-kultura.ufzg.unizg.hr/ http://www.moma.org/ http://www.tate.org.uk/					

1.	Course title		Auxiliary m	aterials			
2.	Code		131				
3.	Study group		FWE / DFI				
	Organizer of the study prog institute, department)	gram (unit,			Aethodius in Sko chnology of Fur		d Interior-
5.	Level (first, second, third c	yclce)	First cycle				
6.	Academic year / semester		II / 3 7. Number of ECTS 6				
8.	Teacher		Prof. dr. Kor	nstantin Baho	hevandjiev		
9.	Prerequisites for enrollmen course	nt of the	Technical pr	operties of w	rood		
10.	. Course goals (Competences) Students acquire specialized knowledge about the types and properties of non-wood materials, which, in addition to wood are required for successful design and manufacture of wood products, furniture, joinery and interior.						
	11. Course outline Introduction; Technology of water; Technology of fuels; Lubricants; Glass and enamel; Grinding materials; Textile fibers, yarns and fabrics; Leather; Grease and oils; Waxes; Natural resins; Artificial resins (plastic): polyolefin, polyvinyl, polystyrene, acrylic, phenol, amino, polyester, polycarbonate, epoxy, polyurethane, silicone, teflon, synthetic rubbers, elastomers; Solvents and thinners; Dyes and pigments; Materials for discoloration and fulfillment of the wood; Varnishes; Adhesives; Materials for protection of the wood from destructors; Materials for protection the wood from fire.						
12.	2. Study methods						
42	Lectures, auditory exercises, consultation, project assignment, indiv 13. Total available fund of hours 180				ual sell-learning		
		rs	3+2				
	Weekly number of classes		-	aturaa thaam			15 hours
15.	Teaching activities			, ,			45 hours 30 hours
			seminars, team work				30 110015
16.	Other activities		16.1 Project assignments				35 hours
			16.2 Individual assignments				35 hours
							35 hours
17.	Assessment methods	17.1. Seminar	vork / project 10 scol			e	
		17.2. Classes				10 scor	
1		17.3. Tests (Fi	inal exam / P	artial exams))	80 scor	e
18.	Assessment criteria (Score	``````````````````````````````````````		n 50 score		5 (five)	(F)
1	•	-	from 51	to 60 score		6 (six)	(E)
ĺ			from 61	to 70 score		7 (seve	n) (D)
			from 71	to 80 score		8 (eight	t) (C)
			from 81	to 90 score		9 (nine)) (B)
			from 91	to 100 score		10 (ten) (A)
19.	Minimum score for signatu exam	re and final	Complet	ed activities ?	15.1. and 15.2.		
20.	Teaching language		Macedo	nian			
-	Course evaluation method		Internal	evaluation an	d student quest	onnaires	6
22.	Literature		I		-		
22.1	. Mandatory literature						
N°	Author		Title		Publishe	er	Year
1.	Бахчеванџиев К.	Познаван материјал	ье на помош и	ни	УКИМ-ШФС-С	копје	2002

2.	Bifl M.	Poznavanje materijala II - nedrvni materijali	Sumarski fakultet - Zagreb	1980					
3.	Димитров Д.,, Динкова И.	Синтетски материјали за дрвообработваштајата и мебелната промишленост	ЛТУ - Софија	1973					
22.	22.2. Additional literature								
N^{o}	Author	Title	Publisher	Year					
1.	Kapetanović S.	Hemija drveta i pomočnih materijala	Sarajevo	1972					
2.	Николов С., Панајотов П.	Огнозаштита на дрвесината	ЛТУ - Софија	1984					
3.	Сениќ Р.	Технологија помиочних материјала	Шумарски факултет - Београд	1962					

1.	Course title		Ch	emical wood p	roces	sing		
2.	Code		22	-		•		
3.	Study group		F٧	/E / DFI				
-	Organizer of the study prog institute, department)	gram (unit,	Fa			Aethodius in Sko chnology of Furr		d Interior-
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		1/2 7. Number of ECTS 6					
8.	Teacher		Pro	of. dr. Goran Zla	iteski			
9.	Prerequisites for enrollmen course	t of the	-					
10.	0. Course goals (Competences) Students gain knowledge about wood chemisrty, ways and methods by which the wood chemically will be processed to semicellulose and cellulose, ways and methods of paper and cardboard manufacturing.							
11. Course outline Lectures: General concepts of chemical wood processing. The significance of the chemical processing of wood material in the modern world. Chemical composition of the wood. Technology for technical cellulose production. Bleaching of cellulose. Technology of paper, card layer. Another application of cellulose (artificial fibers, plastics). Hydrolysis of the wood. Thermal decomposition of the wood. Manufacturing of wood resin. Environmental protection in the chemical wood processing.								
12.	Study methods							
40	•		project assignment, individual self-learning.					
	Total available fund of hour	ſS		0 hours				
	Weekly number of classes		2+2					
15.	Teaching activities			15.1. Lectures				30 hours
				seminars, team work				30 hours
16.	Other activities			16.1 Project assignments				40 hours
				16.2 Individual assignments				40 hours
				16.3 Study at home 40 hou				
17.	Assessment methods	17.1. Seminar		. ,			10 scor	-
							10 scor	
		,	inal	al exam / Partial exams) 80 sco				. ,
18.	Assessment criteria (Score	/Grade)		less than 50 so			5 (five)	(F)
				from 51 to 60 s			6 (six)	
				from 61 to 70 s	score		7 (seve	en) (D)
				from 71 to 80 s	core		8 (eigh	t) (C)
				from 81 to 90 s	score		9 (nine) (B)
				from 91 to 100	score		10 (ten) (A)
19.	Minimum score for signatu exam	re and final		Completed act	ivities ?	15.1 and 15.2		
20.	Teaching language			Macedonian				
21.	Course evaluation method			Internal evalua	tion an	id student questi	onnaires	5
22.	Literature							
22.1	. Mandatory literature							
N°	Author			Title		Publishe	er	Year
1.	Ј. Димески	Хемиска г	пре	работка на дрв	ото	УКИМ – Шумар факултет - Ско		2011
2.							,	
		1				L		

3.									
22.	22.2. Additional literature								
N^{o}	Author	Title	Publisher	Year					
1.	J.Legierse	Decoration of Packaging	Pira International Hertordshire	1990					
2.	B. Perić	Poznavanje celuloze i papira	Grmeč DD - Beograd	1993					
3.	M.Križan	Savremena proizvodnja papira	Mrlješ - Beograd	1997					

1.	Course title		Descr	iptive geometry				
2.	Code		112					
3.	Study group		FWE /	DFI				
	Organizer of the study prog institute, department)	ram (unit,	Faculty	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				
5.	Level (first, second, third cy	vclce)	First c	ycle				
6.	Academic year / semester		I / 1	7. Num	ber of ECTS	6		
8.	Teacher		Prof. d	r. Vladimir Karanal	kov			
9.	Prerequisites for enrollment course	t of the	-					
10.	Course goals (Competences Learning shapes, their relation		f preser	nting technical drav	ving.			
11.	 Course outline Notion of projection, projection types, Cartesian coordinate system, orthogonal and axonometrical projections of various shapes and their proportions. Introduction and application of international standards in the preparation of technical drawing as a universal technical language. Application of technical drawing in various fields of engineering: architecture, urban planning, mechanical engineering, electrical engineering, especially in the interior and in the making of furniture. 							
12.	Study methods							
	Lectures, graphic exercises, consultation, program tasks, individual self-learning.							
	Total available fund of hour	S		180				
	Weekly number of classes		3+2				[
15.	5. Teaching activities			15.1. Lectures-theory			45	
				15.2. Exercises (laboratory, auditory), seminars, team work			30	
16.	Other activities		16.	16.1 Project assignments			35	
			16.	16.2 Individual assignments			35	
			16.	16.3 Study at home			35	
17.	Assessment methods	17.1. Seminar	work /	project		10		
		17.2. Classes	activitie	es and attendance	10			
		17.3. Tests (Fi	inal exa	am / Partial exams)		80 (2x4	0)	
18.	Assessment criteria (Score/	(Grade)	les	s than 50 score		5 (five)	(F)	
			fro	m 51 to 60 score		6 (six) (E)	
			fro	m 61 to 70 score		7 (seve	n) (D)	
			fro	m 71 to 80 score		8 (eight	:) (C)	
			fro	m 81 to 90 score		9 (nine)) (B)	
			fro			10 (ten) (A)	
19.	Minimum score for signatur exam	e and final	Co	mpleted activities 1	15.1., 15.2. and '	16.1		
20.	Teaching language		Ma	cedonian				
21.	Course evaluation method		Inte	ernal evaluation an	d student questi	onnaires		
22.	Literature							
22.1	. Mandatory literature							
N°	Author		Ti	itle	Publishe	r	Year	
1.	Б. Трпковски и други Authorи	Нацртна г факултет	еомет	рија за Шумарски			1995	
2.	Б. Трпковски, В. Каранаков			о нацртна	УКИМ-Шумарски факултет, Скопје		2001	

1.	Course title		Doc	ors and wind	ows joi	nery			
2.	Code		461						
3.	Study group		FW	E / DFI					
4.	Organizer of the study prog institute, department)	jram (unit,		ulty of Design		/lethodius in Sko chnology of Furr		d Interior-	
5.	Level (first, second, third cy	yclce)	First	t cycle					
6.	Academic year / semester		III / (ô	7. Num	ber of ECTS	6		
8.	Teacher		Prof	. dr. Gjorgi G	ruevski				
9.	9. Prerequisites for enrollment of the course								
10. Course goals (Competences) Acquiring knowledge of the design of various types of joinery and construction of the joinery.									
11.	 11. Course outline Lectures: Basic principles of joinery design, designing joinery, weather protection, noise protection, energy efficiency, classification of windows and balcony doors by material of which are manufactured, structural elements of windows and balcony doors, hardware for windows and balcony doors, shutters for windows and balcony doors, hardware for windows and balcony doors shutters, blinds for windows and balcony doors, interior doors, door hardware. Exercises: making elaborate containing design and construction of several types of joinery. 								
12.	 Study methods Lectures, auditory exercises, consultation, project assignment, individual self-learning. 								
13.	3. Total available fund of hours			180					
14.	Weekly number of classes		2+2						
15.	Teaching activities			15.1. Lectur	es-theo	ry		30 hours	
				15.2. Exercises (laboratory, auditory), 30 hour elaborate, team work			30 hours		
16.	Other activities			16.1 Project assignments 40 ho			40 hours		
				16.2 Individual assignments 40 ho			40 hours		
				16.3 Study at home 40 hou				40 hours	
17.	Assessment methods	17.1. Classes	s activ	activities and attendance 30 score			e		
		17.2. Tests (Final e	exam / Partial	exams))	70 scor	'0 score	
18.	Assessment criteria (Score	/Grade)		less than 50 score 5 (five)			5 (five)	(F)	
				from 51 to 6	0 score		6 (six) ((E)	
				from 61 to 7	0 score		7 (seve	n) (D)	
				from 71 to 8	0 score		8 (eight	t) (C)	
				from 81 to 9	0 score		9 (nine)) (B)	
				from 91 to 1	00 scor	е	10 (ten) (A)	
19.	Minimum score for signatu	re and final e	xam	Completed a	activities	3 15.1 and 15.2.	•		
20.	Teaching language			Macedonian	1				
21.	Course evaluation method			Internal eval	luation a	and student ques	stionnaire	es	
22.	Literature								
22.′	 Mandatory literature 								
N°	Author			Title		Publishe	er	Year	
1.	Тало Груевски Дрвни констр столарија			кции II – Гра	дежна	УКИМ-Шумарс факултет - Ско		1994	
2.									
3.									
22.2	2. Additional literature								
N°							Year		

1.	Bruno Munari, Pjero Polato, Rinaldo Donceli	STOLARIJA	Narodna knjiga- Beograd	2000
2.	Rade Čokić	Okov građevne stolarije	Tehnička knjiga- Zagreb	1980
3.	Katharina Feuer, Jons Messedat	Door Design	Daab	2007
4.	Jons Messedat	Window Design	Daab	2007

1.	Course title		Economics					
2.	Code		341					
3.	Study group		FWE / DFI					
4.	Organizer of the study prog institute, department)	gram (unit,	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				d Interior-	
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		II / 4 7. Number of ECTS 6					
8.	Teacher		Prof. dr. Zhivka Meloska					
9.	Prerequisites for enrollmen course	nt of the	-					
10.	 Course goals (Competences) Introduction to economic laws, determination of the work costs, forming of the prices, as well as respect and practice the basic economic principles - productivity, efficiency and profitability of an enterprise. 							
11.	11. Course outline Lectures: Basic concepts, instruments and goals of macroeconomics; Items, goals and quality of enterprise economy; Types of assets in enterprises - basic and working capital; Definition, classification and dynamics of costs in the enterprise; Calculation of costs and prices of products; Results of reproduction; Allocation of funds for salaries; Economic principles of reproduction; Economy - concept, expression and factors affecting its increase; Productivity - definition, measurement and measures to increase; Profitability - definition. Expression and factors. Exercises: Calculation of fixed assets depreciation; Determination of necessary normative stocks; Calculation of the working costs according on the place of their occurrence and their calculation; Making calculation of costs.							
12.	Study methods Lectures, auditory exercises,	project assignr	ment, consult	ation, individ	ual self-learning	1		
13.	Total available fund of hour	rs	180					
14.	Weekly number of classes		2+2					
15.	Teaching activities		15.1. Leo	15.1. Lectures-theory			30 hours	
			15.2 Exercises (laboratory, auditory), seminars, team work			30 hours		
16.	Other activities		16.1 Proj	16.1 Project assignments			40 hours	
			16.2 Indi	vidual assign	ments		40 hours	
			16.3 Stud	16.3 Study at home			40 hours	
17.	Assessment methods	17.1. Seminar	work / projec	:t		10 scor	e	
		17.2. Classes	activities and	attendance		10 scor	e	
		17.3. Tests (Fi	inal exam / Pa	artial exams)		80 scor 40)	re (2 x	
18.	Assessment criteria (Score	/Grade)	less than	50 score		5 (five)	(F)	
			from 51 t	o 60 score		6 (six)	(E)	
			from 61 t	o 70 score		7 (seve	en) (D)	
			from 71 t	o 80 score		8 (eigh	t) (C)	
				from 81 to 90 score		9 (nine	9 (nine) (B)	
			from 91 t	o 100 score		10 (ten) (A)	
19.	Minimum score for signatu exam	re and final	Complete	Completed activities 15.1 and 15.2.				
20.	Teaching language		Macedor	lian				
21.	Course evaluation method		Internal e	evaluation an	d student quest	ionnaires	6	
22.	Literature							
-	. Mandatory literature				1			
N°	Author		Title		Publish	er	Year	

1.	Д-р Петар Василев, Д-р Митко Зорбоски	ЕКОНОМИКА, Книга 1,	УКИМ, Шумарски факултет - Скопје	2002
2.	Д-р Петар Василев, Д-р Митко Зорбоски	ЕКОНОМИКА , Книга 2,	УКИМ, Шумарски факултет - Скопје	2002
3.				
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Ele	ments of Furniture a	nd Interior Des	ign			
	Code		332			5			
3.	Study group		FW	E / DFI					
	Organizer of the study prog institute, department)	ıram (unit	Fac	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje					
5.	Level (first, second, third c	yclce)	Firs	t cycle					
6.	Academic year / semester		/:	II / 3 7. Number of ECTS 6					
8.	Teacher		Pro	f. dr. Vladimir Karanal	kov				
9.	Prerequisites for enrollment of the course			scriptive geometry					
10.	Course goals (Competence Introduction to the essential e organization in our environme	elements of	f shape a	and space, as well as	principles that a	ffect thei	r		
11.	Course outline Introduction; Basic elements, Dimensional shape transform shape; Defining space with he closeness, view and light, Sp	ations: tra orizontal a	nsformat	ion with the addition a	and subtraction;	Articulati			
12.	Study methods Lectures, graphic exercises, consultation, programe tasks, individual self-learning.								
13.	Total available fund of hours18								
14.	Weekly number of classes		2+2	2+2					
15.	Teaching activities			15.1. Lectures-theory			30		
				15.2 Exercises (labora seminars, team work	atory, auditory),		30		
16.	Other activities		_	16.1 Project assignme	ents		40		
				16.2 Individual assign	iments		40		
				16.3 Study at home		40			
17.	Assessment methods			r work / project 10					
				vities and attendance	10				
			ts (Final	exam / Partial exams)		80 (2x40)			
18.	Assessment criteria (Score	/Grade)		less than 50 score	5 (five)		. ,		
				from 51 to 60 score		6 (six) (
				from 61 to 70 score		7 (seve	, , ,		
				from 71 to 80 score from 81 to 90 score		8 (eight	, , ,		
				from 91 to 100 score	2	9 (nine) 10 (ten)	. ,		
19	Minimum score for signatu	re and fina	al oxam	Completed activities		TO (ten)) (¬)		
	Teaching language			Macedonian	, 10.1 and 10.2.				
	Course evaluation method			Internal evaluation a	and student ques	stionnaire	25		
	Literature								
	. Mandatory literature								
N°	Author			Title	Publishe	er	Year		
	Ц. Симоновска, В. Каранако	мебе.	л и енте	проектирање на риер - и предавања	УКИМ-Шумарски факултет - Скопје		2005		
2.									
3.									

1.	Course title		Elements of w	ood joints				
2.	Code		151					
3.	Study group		FWE / DFI					
	Organizer of the study prog	gram (unit,	University Ss. 0	Cyril and Methodius in Sk	opje			
	institute, department)		Skopje	gn and Technology of Fu	rniture ar	nd Interior-		
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		III / 5	7. Number of ECTS	6			
-	Teacher		Prof. dr. Gjorgi	Gruevski				
9.	Prerequisites for enrollmen course	t of the	Descriptive geo	ometry				
10.	Course goals (Competence Students will learn about the static and strength characteria assembly and disassembly jo drilling for elements assembli	basic elements stics of the app ints, various ty	lied constructive	e joints, types of fixed join	its, types	of		
	11. Course outline Introduction; Materials and semi-manufactured products used in wood joints; Presentation and labeling of areas and sections of details and structural elements; Division of wood products and wood boards; Names of details elements; Profiles and profile elements; Fasteners; Adhesives used in the furniture construction; Hardware for constructive elements installation; Basic structural joints used in construction of furniture, interior, doors and windows; Assembling and gluing objects of workpieces made of solid wood, boards and veneer by: width, length and thickness; Angled and attached board assembling of elements made of solid wood and boards; Lateral-angular and lateral-attached assembling of elements made of solid wood and plates; Crosslike assembly of structural elements; Details and elements construction made of: solid wood, panels, veneer and layer panels, full and hollow boards; Construction of wooden frames; Tests on compositions strength made of the of solid wood and boards.							
12.	Study methods Lectures, auditory exercises,	consultation, p	roject assignme	nt, individual self-learning].			
13.	Total available fund of hour	rs	180					
	Weekly number of classes		3+2					
15.	Teaching activities		15.1. Lectur	45 hours				
			15.2 Exercis елаборат, т		30 hours			
16.	Other activities		16.1 Project	t assignments		35 hours		
			16.2 Individ	ual assignments		35 hours		
			16.3 Study	at home		35 hours		
17.	Assessment methods	17.1. Seminar			10 scc			
			activities and at		10 scc			
			inal exam / Parti	,		re (2x40)		
18.	Assessment criteria (Score	/Grade)	less than 50		5 (five)			
			from 51 to 6		6 (six)			
			from 61 to 7		7 (seve			
			from 71 to 8		8 (eigh			
			from 81 to 9		9 (nine) (B)			
40	Minimum		from 91 to 100 score 10 (ten) (A)					
	Minimum score for signature exam	re and final		activities 15.1 and 15.2.				
	Teaching language		Macedonian					
	Course evaluation method		Internal eva	luation and student quest	tionnaires	3		
	Literature							
22.1	. Mandatory literature							

N°	Author	Title	Publisher	Year
1.	Т.Груевски, Н.Симакоски	Елементи на дрвните конструкции	УКИМ-ШФС-Скопје	2002
2.	Стјепан Ткалец	Конструкције намјештаја	Шумарски факултет - Загреб	1985
3.	Георги Ќучуков	Конструирање на мебели	ЛТУ - Софија	1987
22.	2. Additional literature			
N°	Author	Title	Publisher	Year
1.	Милан Потребиќ	Дрвне конструкције I и II	Шумарски факултет - Београд	1985
2.				
3.				

1.	Course title		Engineering	graphics				
2.	Code		331					
3.	Study group		FWE / DFI					
	Organizer of the study prog institute, department)	ram (unit,			Aethodius in Sko chnology of Fur		d Interior-	
5.	Level (first, second, third cy	/clce)	First cycle					
6.	Academic year / semester		II / 3 7. Number of ECTS 6					
8.	Teacher		Prof. dr. Vlac	limir Koljozo	V			
9.	Prerequisites for enrollmen course	t of the	-					
10.	Course goals (Competence Introduction to computer applications for com	ications design		g engineerin	g technical docu	mentatio	n and	
11.	Course outline Lectures: Introduction to computer systems, operating systems, computer applications for computer aided design. Drawing in two dimensions. Coordinate systems and projections. Presentation of graphic elements. Presentation of point, line, polygon. Presentation of curves. Presentation of geometrical figures. Viewing and editing of drawings. Working with layers, types of lines. Inserting and editing text items. Dimensions. Creating technical drawings and technical documentation. Exercises: Solving programming tasks using applications for computer-aided design.							
12.	2. Study methods Lectures, auditory exercises, consultation, project assignment, individual self-learning.							
13.	Total available fund of hour	180 hours		aar oon toarning	•			
-	Weekly number of classes	-	2+2					
	Teaching activities			tures-theory	,		30 hours	
	5		15.2 Exe		atory, auditory),		30 hours	
16.	Other activities		16.1 Project assignments				40 hours	
			16.2 Individual assignments				40 hours	
			16.3 Study at home				40 hours	
17.	Assessment methods	17.1. Seminar		-				
		17.2. Classes				10 sco	re	
		17.3. Tests (F	inal exam / Pa	artial exams))	80 scor	e (2x40)	
18.	Assessment criteria (Score	(Grade)	less than	50 score		5 (five)	(F)	
			from 51 t	o 60 score		6 (six)	(E)	
			from 61 t	o 70 score		7 (seve	n) (D)	
			from 71 t	o 80 score		8 (eight	t) (C)	
			from 81 t	o 90 score		9 (nine)) (B)	
L			from 91 t	o 100 score		10 (ten) (A)	
19.	Minimum score for signatur exam	e and final	Complete	Completed activities 15.1, 15.2. and 16.1.				
20.	Teaching language	Macedon	Macedonian					
21.	Course evaluation method	Internal evaluation and student questionnaires						
22.	Literature							
	. Mandatory literature							
N°	Author		Title Publisher				Year	
1.	Р.Ташевски	Инженерс	ска графика		УКИМ-Машинс факултет - Ско		2004	

2.	В.Кољозов, З.Трпоски	Практикум за вежби	УКИМ-ФДТМЕ - Скопје	2012						
3.										
22.	22.2. Additional literature									
N^{o}	Author	Title	Publisher	Year						
1.	Programming and instruction manuals for computer-aided design applications.									
2.										
3.										

1.	Course title		Furniture and	d interior co	onstruction		
2.	Code		161				
3.	Study group		FWE / DFI				
4.	Organizer of the study prog institute, department)	gram (unit,			lethodius in Sko chnology of Fur		d Interior-
5.	Level (first, second, third c	yclce)	First cycle				
6.	Academic year / semester		III / 6	7. Num	ber of ECTS	6	
•••	Teacher		Prof. dr. Nack	o Simakosk	i		
9.	Prerequisites for enrollmer course	nt of the	Furniture and	interior des	ign		
	D. Course goals (Competences) Students will study the matter in the field of construction of furniture and interior, familiarization with the materials of which they are made, static and strength characteristics of the applied constructive joints, types of fixed joints, types of assembly and disassembly joints, various types of furniture hardware. Machining of components for assembly in constructive joints for panel and massive furniture.						
11.	11. Course outline The program for this course is divided into 6 chapters, each of which itself represents a certain group of products with its own structure and its own characteristics, divided according to the construction: furniture, tables, chairs, upholstered furniture; beds and all interiors that we encounter in everyday life. Apart from this classification each group of construction products has its own internal classification starting over: Introduction; Key measures of furniture, tables, chairs, upholstered furniture; beds and various interiors. Making all drawings necessary for construction design of each product or interior separately; Dimensioning of each constituent element of design of furniture or furnishings by applying optimal constructive joint.						
12.	Study methods Lectures, auditory exercises,	consultation, p	roject assignm	ent, individu	ual self-learning].	
13.	Total available fund of hou	rs	180 hours				
14.	Weekly number of classes		3+2				
15.	Teaching activities		15.1. Lect				45 hours
				15.2 Exercises (laboratory, auditory), 3 seminars, team work			30 hours
16.	Other activities		16.1 Proje	ct assignme	ents		35 hours
			16.2 Indivi	dual assign	ments		35 hours
			16.3 Study	/ at home			35 hours
17.	Assessment methods	17.1. Seminar	work / project			10 sco	re
			activities and a			10 sco	
			inal exam / Pa			-	re (2x40)
18.	Assessment criteria (Score	e/Grade)	less than t			5 (five)	· · ·
			from 51 to			6 (six)	
			from 61 to			7 (seve	
			from 71 to			8 (eigh	
				100 score	0 score 9 (nine		
19.	Minimum score for signatu	re and final			5.1 and 15.2.	10 (ten) (A)
20	exam Teaching language		Macedonia	an			
	20. Teaching language Imacedoman 21. Course evaluation method Internal evaluation and student questionnaires						
	Literature				a otadoni queot		,
	. Mandatory literature						
N°	Author		Title		Publish	er	Year
	76610		1100				

1.	Тало Груевски, Nacko Simakoski	Конструирање на мебел	УКИМ-ШФС-Скопје	2003						
2.	Стјепан Ткалец	Конструкције намјештаја	Шумарски факултет - Загреб	1985						
3.	Георги Ќучуков	Конструирање на мебели	ЛТУ - Софија	1987						
22.	22.2. Additional literature									
N°	Author	Title	Publisher	Year						
1.	Милан Потребиќ	Дрвне конструкције I и II	Шумарски факултет - Београд	1985						
2.										
3.										

1.	Course title		Fu	rniture and interior	design			
2.	Code		35					
3.	Study group		F۷	VE / DFI				
	Organizer of the study prog institute, department)	ram (unit,	Fa	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior Skopje				
5.	Level (first, second, third cy	vclce)	Fir	st cycle				
6.	Academic year / semester		III	/ 5 7. Nu	mber of ECTS	6		
8.	Teacher P			of. dr. Vladimir Karar	lakov			
9.	Prerequisites for enrollment course	t of the	Ele	ements of Furniture a	Ind Interior Desigr	1		
10.	Course goals (Competences Introduction to the process of		al m	atrix of furniture and	interior design.			
	Course outline Introduction; Definition of con- design of chair; Lying element elements, design of wardrobe bath; Design of object. Study methods	ts, design of b ; Concept of i	oed; nteri	Dining elements, des or; Capture of apartr	sign of dining table nent; Design of kit	e; Stotag	е	
40	Lectures, graphic exercises, o		- -		self-learning.			
	Total available fund of hour	S	18					
	Weekly number of classes		Ζ+	+2				
15.	Teaching activities			,			30 30	
16.	Other activities			16.1 Project assign			40	
				16.2 Individual assi			40	
				16.3 Study at home	-		40	
17.	Assessment methods	17.1. Semina	r wo	-	10			
		17.2. Classes	act				10	
		17.3. Tests (F	inal	exam / Partial exam	s)	80 (2x40)		
18.	Assessment criteria (Score/	Grade)		,			(F)	
				from 51 to 60 score		6 (six)		
				from 61 to 70 score		7 (seve	n) (D)	
				from 71 to 80 score		8 (eigh	t) (C)	
				from 81 to 90 score		9 (nine) (B)	
				from 91 to 100 scor	e	10 (ten) (A)	
19.	Minimum score for signatur exam	e and final		Completed activities	s 15.1 and 15.2.			
20.	Teaching language			Macedonian				
21.	Course evaluation method			Internal evaluation and student questionnaires				
22.	Literature							
	. Mandatory literature						I	
N°	Author			Title	Publishe	er	Year	
1.	Ц. Симоновска, В. Каранаков	мебел и	енте	проектирање на УКИМ-Шумарски ериер - факултет - Скопје ни предавања			2005	
2.	J. Каранаков	Елемент	и на	проектирање	Архитектонски факултет Ског			

1.	Course title		Gra	duate thesys				
	Code		183	. ,.				
3.	Study group		FW	E / DFI				
	Organizer of the study prog institute, department)	ıram (unit,	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje					
5.	Level (first, second, third c	yclce)	First	cycle				
6.	Academic year / semester		IV / 8 7. Number of ECTS 6					
8.	Teacher							
9.	Prerequisites for enrollment of the Accourse			uired 200 ECTS cred	its			
10.	Course goals (Competence Acquiring specialized theoret		al kn	owledge of the releva	ant field.			
	 11. Course outline The procedure for preparation and presentation of the graduate thesys is regulated by the Act or application, preparation and public presentation of graduate thesys, adopted by the Teaching Co the Faculty of Design and Technologies of Furniture and Interior - Skopje. 12. Study methods 							
	Consultation, individual self-le			-				
-				hours				
	Weekly number of classes		0+2					
15.	Teaching activities			15.1. Lectures-theor 15.2. Mentoring con corrections	-		0 hours 30 hours	
16.	Other activities			16.1. Individual worl documentation anal			120 hours	
				16.2. Preparation ar	nd technical editi	ing	28 hours	
				16.3. Public presentation			2 hours	
17.	Assessment methods	17.1. Consulta	ation	and performing tasks	10 scor	e		
							70 score	
		17.3. Public p	resentation 30				e	
18.	Assessment criteria (Score	/Grade)		less than 50 score		5 (five)	(F)	
				from 51 to 60 score		6 (six)	. ,	
				from 61 to 70 score		7 (seve	en) (D)	
				from 71 to 80 score		8 (eigh		
				from 81 to 90 score		9 (nine		
				from 91 to 100 score		10 (ten		
	Minimum score for signatu	re and final ex	am	Passed all exams p	rovided by the st	tudy proę	gram	
	Teaching language			Macedonian				
	Course evaluation method			Internal evaluation a	and student ques	stionnair	es	
	Literature							
22.1 N°	. Mandatory literature			Titlo	Dublich)r	Veer	
N [*] 1.	Author			Title	Publishe	;	Year	
1. 2.								
	. Additional literature							
22.2 N ^o	Author			Title	Publishe	۲	Year	
1.						//	rear	
1.								

1.	Course title		Hy	dro-thermal v	vood pr	ocessing		
2.	Code		25			•		
3.	Study group		F٧	/E / DFI				
4.	Organizer of the study prog institute, department)	gram (unit,	Fa			lethodius in Sko chnology of Fur		d Interior-
5.	Level (first, second, third c	yclce)	Fir	st cycle			_	
6.	Academic year / semester		III /	5	7. Num	ber of ECTS	6	
8.	Teacher		Pro	of. dr. Goran Z	lateski			
9.	Prerequisites for enrollmer course	t of the	-					
10.	Course goals (Competence The main objective of the co and production of items of fur	urse is to intro				rtance of wood	moisture	in design
11.	 Course outline Lectures: General importance of moisture in the wood when producing solid wood final products. Forms of moisture in the wood. Movement of moisture in the wood. Methods and procedures for determining the moisture in solid wood. Characteristics of medium for evaporation of moisture from the wood. Devices and modes of wood drying. Management and control of the drying process by using computer technology. Moisture in the wood by the field of use. Thermal sterilization of the wood. Errors in the wood occurring in the drying process and ways for their removal. Steaming of saw lumber. Thermal wood in furniture and interior. Exercises: Preparing elaborate on the application of methods for determining the quality of dry wood according to European standards. 							
12.	Study methods Lectures, auditory exercises,		oroje	ect assignment	, individi	ual self-learning	l.	
13.	Total available fund of hour	rs	18	0 hours				
14.	Weekly number of classes		2+	2				
15.	Teaching activities							30 hours
				15.2 Exercises (laboratory, auditory), seminars, team work30			30 hours	
16.	Other activities			16.1 Project assignments			40 hours	
				16.2 Individua	al assign	ments		40 hours
		1		16.3 Study at home			-1	40 hours
17.	Assessment methods	17.1. Seminar					10 sco	
				ivities and atte			10 sco	
			inal	exam / Partia	,		-	re (2x40)
18.	Assessment criteria (Score	/Grade)		less than 50 s			5 (five)	
				from 51 to 60			6 (six)	
				from 61 to 70			7 (seve	
				from 71 to 80			8 (eigh	
				from 81 to 90			9 (nine	
40				from 91 to 100 score 10 (ten) (A)) (A)
	Minimum score for signatu exam	re and final		Completed activities 15.1 and 15.2				
	. Teaching language			Macedonian				
	Course evaluation method			Internal evalu	ation an	d student quest	ionnaires	6
-	Literature							
	. Mandatory literature			-		_		
N°	Author			Title		Publish	er	Year

1.	Б. Рабаџиски, Г. Златески	Хидротермичка обработка на дрвото I дел	УКИМ – Шумарски факултет - Скопје	2007
2.				
3.				
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.	C. Scaar	Water in wood	Springer – Verlag, Berlin	1972
2.	R. Keey	Understanding kiln – seasoning for the benefit of industry	University of Canterbury, New Zeland	1998
3.	J. Denig, E.Wengert, W. Simpson	Drying Hardwood Lumber	University of Madison, Wiskonskin, USA	2000

1.	Course title		Inte	rnal transpo	rt			
2.	Code		541	· ·				
3.	Study group		FWE					
	Organizer of the study prog institute, department)	gram (unit,		ulty of Design		lethodius in Sko chnology of Furr		d Interior-
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		II / 4		7. Num	ber of ECTS	6	
8.	Teacher		Prof	. dr. Zoran Tr	poski			
9.	Prerequisites for enrollmen course	t of the	-					
10.	 Course goals (Competences): Introducing students to the devices and systems for mechanical and pneumatic transport used in the wood processing industry. 							
	1. Course outline Introduction; transport assets for discontinued mechanical transport (cranes); transport assets for continuous mechanical transport (conveyors with: band, tiles, combs, rollers, screw conveyors, elevators, vibrating conveyors); storage assets to stabilize the flow of the material; fundamentals of internal transport design; maintaining assets for internal transport; pneumatic transport; pneumatic transport devices; physical properties of air; modes of convection; hydraulic losses in air flow through pipelines; PTD calculation; characteristics of wood particles; speed floating; concentration of the mixture air-wood particles; critical speed for pneumatic transport; pneumatic transport equipment for suction of wood particles; the main parts of PTD.							
12.	Study methods Lectures, auditory exercises,	consultation, p	projec	t assignment	, individ	ual self-learning.		
13.	Total available fund of hour	rs	180					
14.	Weekly number of classes		3+2					
15.	Teaching activities			15.1. Lectur	es-theoi	гy		45 hours
				15.2 Exercis seminars, te		oratory, auditory) k),	50 hours
16.	Other activities			16.1 Project assignments				20 hours
				16.2 Individual assignments				15 hours
				16.3 Study at home 50 hc				50 hours
17.	Assessment methods	17.1. Seminar	r work	c / project			20 scor	e
		17.2. Classes	activ	ities and atte	ndance		10 scor	e
		17.3. Tests (F	inal e		,	1	70 scor	e
18.	Assessment criteria (Score	/Grade)		less than 50			5 (five)	. ,
				from 51 to 6			6 (six) ((E)
				from 61 to 7			7 (seve	
				from 71 to 8			8 (eigh	t) (C)
				from 81 to 9			9 (nine)	,
				from 91 to 1			10 (ten	, , ,
	Minimum score for signatu	re and final ex	kam	am Completed activities 17.1 and 17.2 (min. 15 score)				
-	Teaching language	Macedonian						
	Course evaluation method			Internal eva	luation a	and student ques	stionnaire	es
	Literature							
	. Mandatory literature					Γ		1
N°	Author			Title		Publishe		Year
1.	Трпоски З., Владимир К.,	Механичн интерна с	•	анспорт во Д та	И -	УКИМ-ФДТМЕ, Скопје		2010

2.	Трпоски З., Владимир К.,	Пневматски транспорт во ДИ - интерна скрипта	УКИМ-ФДТМЕ, Скопје	2010
3.				
4.				
5.				
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Machines and energetics					
2.	Code		531					
3.	Study group		FWE					
4.	Organizer of the study progr institute, department)	ram (unit,	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior Skopje				d Interior-	
5.	Level (first, second, third cy	clce)	First cycle					
6.	Academic year / semester		II /	3	7. Num	ber of ECTS	6	
8.	Teacher		Prof. dr. Zoran Trposki					
9.	Prerequisites for enrollment course	of the	-					
10.		nery for primar	ry processing and final processing, as well introduction to chinery used in the woodworking industry.					
	Course outline Machines for primary processing and final processing of wood; introducing types according to the processing by sawing, grinding, planing, drilling, turning, routing, milling, pressing, bending, joining, varnishing, applying glue. Students choose one or two machines-representatives of the type which are reviewed in details (dimensions, structural parts, method of processing, execution of main motion and feed, calculation of production characteristics.) Power machines and devices. General; steam boiler, steam boiler fuel, energy efficiency, types of steam boilers, steam boiler equipment; turbines, compressors and fans; asynchronous motors and direct current motors.							
	Study methods Lectures, auditory exercises, consultation, project assignment, individual self-learning.							
-	Total available fund of hours 180							
	Weekly number of classes		3+2					
15.	5. Teaching activities			15.1. Lectures-theory				45 hours
				15.2 Exercises (laboratory, auditory), seminars, team work				50 hours
16	6. Other activities			· · ·			20 hours	
10.	Other activities			16.2 Individual assignments				15 hours
				16.3 Study at home				50 hours
17	Assessment methods 17.1. Seminar		wo	vork / project		20 scor		
•••			2. Classes activities and attendance			10 score		
				al exam / Partial exams)		70 score		
18.	8. Assessment criteria (Score/Grade)			less than 50 score		5 (five) (F)		
		/		from 51 to 60 score		6 (six) (E)		
					om 61 to 70 score		7 (seven) (D)	
				from 71 to 80 score		8 (eight) (C)		
				from 81 to 90 score		9 (nine) (B)		
				from 91 to 100 score		10 (ten) (A)		
19.	9. Minimum score for signature and final exam			17.1 and 17.2 (min. 15 score)				
20.	20. Teaching language			Macedonian				
	. Course evaluation method			Internal evaluation and student questionnaires				
22.	Literature							
22.1	. Mandatory literature							
N°	Author	Author		Title Publishe		er	Year	
	Клинчаров Р., Трпоски З., Кољозов В.,	Машини з на дрвото		римарна прера	аботка	Интерна скрипта, ФДТМЕ, Скопје		2004

2.	Трпоски З., Кољозов В.,	Лентовидни пили и нивна употреба во пиланите	Интерна скрипта, ФДТМЕ, Скопје	2011
3.	Клинчаров Р., Трпоски З., Кољозов В.,	Машини за финална обработка на дрвото	Шумарски факултет, Скопје	2002
4.	Клинчаров Р., Трпоски З., Кољозов В.,	Основи на машинство со енергетика	Интерна скрипта, ФДТМЕ, Скопје	2000
5.	Коцев К.	Општа електротехника	Електротехнички факултет, Скопје	1999
22.	2. Additional literature		·	
N^o	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Ма	nagement					
2.	Code		442	2					
3.	Study group		F٧	/E / DFI					
4.	Organizer of the study progr institute, department)	ram (unit,	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interio Skopje					d Interior-	
5.	Level (first, second, third cy	clce)	First cycle						
6.	Academic year / semester		II /	II / 4 7. Number of ECTS 6					
8.	Teacher		Prof. dr. Violeta Efremovska						
9.	Prerequisites for enrollment course	of the	-						
	Course goals (Competences The course objective is introduce this matter will introduce stude at the stage of making busines Course outline	icing students ents to the bas	sic c	oncepts and sta	ages in	the process of r			
11.	Introduction. Basics of manage management level, general ma planning, organizing, motivatir Entrepreneurship.	anager, conta	cts I	manager, enviro	onment	. Elements of m	anagem		
12.	Study methods Lectures, exercises, consultati	on, independe	ent	work					
13.				0 hours					
14.	Weekly number of classes		2+2	2					
15.	Teaching activities		· · · · · · · · · · · · · · · · · · ·					30 hours	
						atory, auditory),		30 hours	
	A (1) (1)			seminars, tean				101	
16.	Other activities		16.1 Project assignments					40 hours	
			16.2 Individual assignments					40 score	
47	A	17.1 Cominer		16.3 Study at home				40 score	
17.	_			work / project 10 sco					
				ivities and atten			10 scor		
40		·	inai	exam / Partial	,		80 scol		
18.	Assessment criteria (Score/	Grade)		less than 50 so			5 (five)		
				from 51 to 60 s			6 (six)		
				from 61 to 70 s			7 (seve	, , ,	
				from 71 to 80 s from 81 to 90 s			8 (eigh	, , ,	
							9 (nine		
40	M'			from 91 to 100			10 (ten) (A)	
19.	Minimum score for signature exam	e and final	Completed activities 15.1. and 15.2.						
20.	Teaching language			Macedonian					
21.	Course evaluation method			Internal evalua	ation an	d student quest	ionnaires	6	
22.	Literature								
22.1	. Mandatory literature								
N°	Author			Title		Publishe	er	Year	
1.	Шуклев Б.	Менаџме	ΗT			УКИМ-Економ факултет - Ско		1999	
	Фити Т. и Василева Марковск В. Милфорд Б.	а Претприе	емни	иштво		-	-	1999	

3.	Станковиќ Ф. :	Предузетништво	1995	
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Ма	nufacturing proc	cesse	es design		
2.	Code		18 [.]	1		-		
3.	Study group		FΝ	/E / DFI				
4.	Organizer of the study prog institute, department)	gram (unit,	Fa	iversity Ss. Cyril a culty of Design an opje				d Interior-
5.	Level (first, second, third c	yclce)	Fire	st cycle				
6.	Academic year / semester		IV .	/ 8 7. 1	Num	ber of ECTS	6	
8.	Teacher		Pro	of. dr. Mira Stanke	evik S	umanska		
9.	Prerequisites for enrollment of the - course							
10.	D. Course goals (Competences) The aim of this course is to enable students to master the basic elements of design and to apply their knowledge acquired during their studies for the design of production processes.							
11.	11. Course outline Production - process and system; flexible manufacturing; design of flexible manufacturing processes; design of basic manufacturing processes (technological process, project work, organization of jobs in the manufacturing process, design of basic manufacturing processes at work, designing the spatial layout of the workplace, economic design, working conditions at work place); design the spatial layout of production (formation of spatial structure, movement of material, spatial distribution of the financial resources, forming a technological base - layout, calculation of the necessary surfaces, making the technological basis), technological organization of flexible production; systems for decision support in the implementation of new technologies.							
12.	Study methods Lectures, auditory exercises,	consultation, p	oroje	ect assignment, inc	dividu	al self-learning.		
13.	Total available fund of hour	rs	180	0 hours				
14.	Weekly number of classes		3+2	2				-
15.	Teaching activities			,			45 hours	
				15.2 Exercises (laboratory, auditory), seminars, team work30 h			30 hours	
16.	Other activities			16.1 Project assignments			40 hours	
				16.2 Individual as	ssigni	ments		25 hours
		Γ		16.3 Study at hor	me			40 hours
17.	Assessment methods	17.1. Seminar		. ,			10 scor	
				ivities and attenda			10 scor	
			inal	exam / Partial exa	,			re (2x40)
18.	Assessment criteria (Score	/Grade)		less than 50 scor			5 (five)	. ,
				from 51 to 60 sco			6 (six) (
				from 61 to 70 sco			7 (seve	, , ,
				from 71 to 80 sco			8 (eight	
						9 (nine)		
40	1			from 91 to 100 so		<u> </u>	10 (ten) (A)
	Minimum score for signatu exam	re and final		Completed activit	ties 1	5.1 and 15.2		
	Teaching language			Macedonian				
	Course evaluation method			Internal evaluation and student questionnaires				
	Literature							
	. Mandatory literature	<u> </u>			i			
N°	Author			Title		Publisher Ye		Year

1.	Šuletić Radovan	Projektovanje preduzeća za preradu drveta, Knjiga 2, Proizvodni procesi	Univerzitet u Beogradu, Šumarski fakultet, Beograd	1991
2.	Šuletić Radovan	Fleksibilni proizvodni sistemi u industriji nameštaja	Univerzitet u Beogradu, Šumarski fakultet, Beograd	2001
3.				
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Mar	rketing					
2.	Code		472						
3.	Study group		FW	E / DFI					
4.	Organizer of the study prog (unit, institute, department)			ulty of Desigr	rril and Methodius in Sko n and Technology of Fu		nd Interior-		
5.	Level (first, second, third c	yclce)	First cycle						
6.	Academic year / semester		IV /	7	7. Number of ECTS	6			
8.	Teacher		Pro	f. dr. Zhivka N	leloska				
9.	Prerequisites for enrollmen course	t of the	-						
	D. Course goals (Competences) The goal of the curriculum in the area of marketing is mastering all activities with respect to satisfying the needs of customers, techniques and ways the new product as soon as possible to reach the consumer, better positioning in the global market, the practice of all promotional activities in order to gain more profits and leadership.								
11. Course outline Lectures: Basic concept and definition of marketing; Development stages of marketing concept; Main components of marketing; Consumption, supply, demand - concept and their basic characteristics; Factors affecting supply, demand and consumption and consumer behavior; Promotion - the types and techniques of promotion; Means and media of economic propaganda; Tools of marketing - product, price, distribution; Stages in the decision-making process when buying; Lifespan of the product; Marketing strategies in the introduction of the product on the market; Basic rules and techniques of international trade in wood and wood products. Exercises: Making elaborate on the basis of real data taken from enterprises in terms of choice of sooodvetna marketing strategy in the process of introducing a new product; analysis of competition and opportunities for better market positioning; analysis of the life of individual products and marketing strategies for each stage; Analysis of promotional activities and recommendations for the selection.									
	Study methods Lectures, auditory exercises,				ı, individual work.				
-	Total available fund of hour	'S	180						
	Weekly number of classes		2+2						
15.	Teaching activities			15.1. Lecture	,		30 hours		
				15.2 Exercise seminars, tea		30 hours			
16	Other activities			16.1 Project a			40 hours		
			-	-	al assignments		40 hours		
			-	16.3 Study at	<u> </u>		40 hours		
17.	Assessment methods	17.1. Seminar				10 sco			
		17.2. Classes			endance	10 sco	re		
		17.3. Tests (F	inal e	exam / Partia	l exams)	80 sco 40)	re (2 x		
18.	Assessment criteria (Score	/Grade)		less than 50 s	score	5 (five)	(F)		
			ŀ	from 51 to 60	score	6 (six)			
			-	from 61 to 70		7 (seve			
				from 71 to 80	score	8 (eigh			
			ŀ	from 81 to 90	score	9 (nine			
			ŀ	from 91 to 10	0 score	10 (ten			
19.	Minimum score for signatu exam	re and final		Completed activities 15.1 and 15.2.					
20.	Teaching language			Macedonian					
	Course evaluation method			Internal evalu	ation and student quest	tionnaires	S		
				Internal evaluation and student questionnaires					

22	. Literature			
22.	1. Mandatory literature			
N°	Author	Title	Publisher	Year
1.	Живка Мелоска	Маркетинг, интерна скрипта	УКИМ, Шумарски факултет - Скопје	2008
2.				
3.				
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.	Јаќовски Б.	Маркетинг	Економски факултет, Скопје	1991
2.	KotlerF.	Upravljanje marketingom – analiza, primena I kontrola	Informator,Zagreb	1999
3.				

1.	Course title		Mathematics					
2.	Code		111					
3.	Study group		FWE / DFI					
	Organizer of the study prog (unit, institute, department)		University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje					
5.	Level (first, second, third cy	/clce)	First cycle					
6.	Academic year / semester		/1	7. Number of ECTS	6			
8.	Teacher		Prof. dr. Gjorgi M	arkoski (UKIM-PMF)				
9.	Prerequisites for enrollmen course	t of the	-					
10.	Course goals (Competence The course objective is to lea		higher mathema	tics.				
	Course outline Introduction to set theory; Intr rational and irrational number analysis such as limits, contin Study methods	s; Introduction t uity, derivative	o the basic functi and integral.	ons and basic concepts				
40	Lectures, auditory exercises,			ing.				
	Total available fund of hour	-	180 hours					
	Weekly number of classes	3+2	theory		45 hours			
15.	Teaching activities	15.1. Lectures 15.2 Exercise seminars, tea	s (laboratory, auditory),		30 hours			
16.	Other activities		16.1 Project a	ssignments		0 hours		
			16.2 Individua	I assignments		50 hours		
			16.3 Study at		55 hours			
17.	Assessment methods	17.1. Seminar	work/project	-				
		17.2. Classes a	activities and atte	ore				
		17.3. Tests (Fir	nal exam / Partial	90 scor	re / (2x45)			
18.	Assessment criteria (Score	/Grade)	less than 50 s	5 (five)	(F)			
			from 51 to 60	score	6 (six)	(E)		
			from 61 to 70	score	7 (seve	en) (D)		
			from 71 to 80		8 (eigh			
			from 81 to 90		9 (nine	, , ,		
			from 91 to 10		10 (ten) (A)		
19.	Minimum score for signatur exam	e and final	Completed ac	tivities 15.1 and 15.2.				
20.	Teaching language		Macedonian					
	Course evaluation method		Internal evalu	ation and student quest	ionnaires	3		
22.	Literature		1	•				
22.1	. Mandatory literature							
N°	Author		Title	Publishe	er	Year		
1.	М. Оровчанец	Математи	<a< th=""><th>УКИМ-Шумаро факултет - Ско</th><th></th><th>2000</th></a<>	УКИМ-Шумаро факултет - Ско		2000		
2.	М. Оровчанец, Б. Крстеска	Збирка рег математик	шени задачи по а	УКИМ-Шумаро факултет - Ско		2000		
3.								

1.	Course title		Nu	merically con	trolled	machines			
2.	Code		48	1					
3.	Study group		F٧	VE / DFI					
4.	Organizer of the study prog institute, department)				University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				
5.	Level (first, second, third cy	yclce)	Fir	st cycle					
6.	Academic year / semester		IV	/ 8	7. Num	ber of ECTS	6		
8.	Teacher		Pro	of. dr. Vladimir	Koljozo	v			
9.	Prerequisites for enrollmen course	-							
10.	. Course goals (Competences) Introducing students to the fundamentals of NC and CNC machines, programming and basic features of CAD/CAM systems.								
	Course outline Introduction to Numerical Corr of numerically controlled mac machines. Basic methods of centers - types, basic parts at computer aided design and m Exercises: Development of pr	hines. Principle programming c nd features. Pr nanufacturing -	e of of Cl ogra CA	operation of C NC machines. amming of mac D/CAM system	NC mai Axes ar chining o is.	chines. Componend coordinate systems. Basics c	ents of C stems. N	NC lachining	
	Study methods Lectures, auditory exercises,		roje	ect assignment,	individ	ual self-learning.			
	. Total available fund of hours			0 hours					
14.	Weekly number of classes		2+	2					
15.	Teaching activities			15.1. Lectures	-theory	,		30 hours	
				15.2 Exercises seminars, tear		atory, auditory),		30 hours	
16.	Other activities			16.1 Project assignments				40 hours	
			16.2 Individual assignments					40 hours	
				16.3 Study at home				40 hours	
17.	Assessment methods	17.1. Seminar					10 sco		
			. Classes activities and attendance		10 score				
			Final exam / Partial exams)				80 scor	、 ,	
18.	Assessment criteria (Score	/Grade)		less than 50 s			5 (five)	. ,	
				from 51 to 60			6 (six) (
				from 61 to 70			7 (seve	, , ,	
				from 71 to 80			8 (eight		
				from 81 to 90			9 (nine)		
10	Minimum occurs for signature	ro and final		from 91 to 100		15 1 and 15 0	10 (ten) (A)	
	Minimum score for signature exam	re and final		Completed ac	uviues	15.1 and 15.2.			
	20. Teaching language			Macedonian					
	Course evaluation method			Internal evalua	ation an	id student questi	onnaires	5	
	Literature								
	I. Mandatory literature					1		1	
N°	Author			Title		Publishe		Year	
1.	В.Кољозов, З.Трпоски	Нумеричн машини -	-	правување на рипта		УКИМ-Шумарс факултет - Ско		2007	

2.	В.Кољозов, З.Трпоски	Програмирање на СNC машини и дрвообработувачки центри - практикум за вежби	УКИМ-ФДТМЕ- Скопје	2011					
3.									
22.	22.2. Additional literature								
N^{o}	Author	Title	Publisher	Year					
1.	J.Stenerson, K.Curran	Computer Numerical Control	Prentice Hall Inc.	1996					
2.	Програмски упатства за користење и програмирање на CNC машини								
3.									

1.	Course title		Оссі	upational Sa	afetv				
2.	Code		451						
3.	Study group		FWE	/ DFI					
	Organizer of the study prog institute, department)	gram (unit,		Ilty of Design		Aethodius in Sko chnology of Furr		d Interior-	
5.	Level (first, second, third c	yclce)	First	cycle					
6.	Academic year / semester		III / 5	5	7. Num	ber of ECTS	6		
8.	Teacher		Prof.	dr. Violeta E	Iremove	ska			
9.	Prerequisites for enrollmen course	nt of the	-						
	Course goals (Competence Introducing students and futu planning, designing, organizi processing as well as design	ire engineers wing and execut	ion of p	production p	rocesse				
	Course outline Introduction, Physiological as adjustment of the worker and protection. Accidents at work woodworking facilities.	the work. Pro	tection	n of workers	in produ	ction processes.	Legal a	spects of	
12.	Study methods Lectures, exercises, consulta	ation, individua	l self-le	earning.					
13.				180 hours					
14.	Weekly number of classes	2+2							
15.	Teaching activities		1	15.1. Lectures-theory 30 hou					
				5.2 Exercise eminars, tea		atory, auditory),		30 hours	
16.	Other activities		1	16.1 Project assignments				40 hours	
			1	16.2 Individual assignments				40 hours	
			1	16.3 Study at home 40 hours					
17.	Assessment methods	17.1. Semina	ır work	vork / project 10 sco					
				ctivities and attendance 10 sco				ore	
		17.3. Tests (F			,		80 scor		
18.	Assessment criteria (Score	e/Grade)		ess than 50 s			5 (five)		
				rom 51 to 60			6 (six) (
				rom 61 to 70			7 (seve	, , ,	
				rom 71 to 80			8 (eight		
				rom 81 to 90			9 (nine)	. ,	
			fr	rom 91 to 10	0 score		10 (ten)) (A)	
19.	Minimum score for signatu exam	ire and final							
20.	Teaching language		N	lacedonian					
21.	Course evaluation method								
22.	Literature								
	. Mandatory literature								
N°	Author			Title		Publishe	r	Year	
4						ЛТУ - Софија 1		1992	
1.	Брезин Веселин	Охрана н дрвообра				лту - Софија		1992	

3.	Средства за лична заштита на раду			1979						
22.2. A	22.2. Additional literature									
N°	Author	Title	Publisher	Year						
1.	Закон за безбедност и здравје									

1.	Course title		Or	ganization of produc	tion		
2.	Code		172	2			
3.	Study group		FW	/E / DFI			
4.	Organizer of the study prog institute, department)	ıram (unit,	Fac	iversity Ss. Cyril and I culty of Design and Te opje			d Interior-
5.	Level (first, second, third c	yclce)	Fire	st cycle			
6.	Academic year / semester		IV /	7 7. Nun	nber of ECTS	6	
8.	Teacher		Pro	of. dr. Violeta Efremov	ska		
9.	Prerequisites for enrollmen course	t of the	-				
	Course goals (Competence The study of organizational is organizing the production me organization of production. Course outline	sues of enterp					
	Basic elements of the organiz production, production and te factors, methods and types o equipment, timing of operatio movements, planning and ma managing inventory, organiza and liquidation, management	chnological pro f research, and ns, standardiza anagement of p ation of enterpr	oces alysi: atior prod ises	s, job, improvement of s and study of the time n, rationalization of wo uction processes, cyc , establishment of cor	of material produce of operation, fu ork procedures, st le of production, mpany, transform	ction, stu nd-time, tudies of optimal c ation, ba	dy work, recording deadlines, ankruptcy
	Study methods Lectures, auditory exercises, c			-	ial work.		
-	Total available fund of hour	rs) hours			
	Weekly number of classes		3+2				
15.	Teaching activities			15.1. Lectures-theory 15.2 Exercises (labor		45 hours	
					30 hours		
16	Other activities			seminars, team work 16.1 Project assignm		45 hours	
10.			16.2 Individual assignments				30 hours
				16.3 Study at home	linents		30 hours
17	Assessment methods	17.1. Seminar	- wo	,	10 scor		
				vities and attendance		10 scor	
				exam / Partial exams		80 scor	
18.	Assessment criteria (Score			less than 50 score	/	5 (five)	
		,		from 51 to 60 score		6 (six) (
				from 61 to 70 score		7 (seve	
				from 71 to 80 score		8 (eight	
				from 81 to 90 score		9 (nine)	
				from 91 to 100 score		10 (ten)	
19.	Minimum score for signatu	re and final		Completed activities	15.1. and 15.2.		
20.	Teaching language			Macedonian			
	21. Course evaluation method			Internal evaluation ar	nd student questi	onnaires	
	Literature				•		
	1. Mandatory literature						
N°	Author			Title	Publishe	r	Year

2.	Figurik M	Organizacija rada u drvnoj industriji		1967				
3.	Vila A	Planirnje proizvodnje i kontrola rokova		1972				
22.	22.2. Additional literature							
N^o	Author	Title	Publisher	Year				
1.								
2.								
3.								

	Course title		Particle boards and fiberboards					
2.	Code		561					
3.	Study group		FWE					
4.	Organizer of the study prog institute, department)	gram (unit,	Faculty of Des Skopje					
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		III / 6	7. Number of ECTS	6			
	Teacher		Prof. dr. Borch					
9.	Prerequisites for enrollmen course	t of the	Signature: Wo	ood anatomy / Technical pr	operties	of wood		
 10. Course goals (Competences) Introducing students to theoretical foundations and procedures in the production of boards from wood particles, boards from wood fiber, processing of boards surface, as well as methods and standards for testing of physical, mechanical and chemical properties of the boards. Also, students receive basic knowledge about pressed wood products from wood particles, wood-plastic composites, briquettes and pellets. 11 Course outline 								
 11. Course outline Lectures: General terms on the production of wood particle boards. Definition and classification of the wood particle boards. Technological operations and stages in the production of wood particle boards. Raw materials for manufacturing of wood particle boards. Crushing and fragmenting of the raw materials. Binders and additives. Procedures in the production of wood particle boards. Surface processing of wood particle boards. Examining the properties of the wood particle boards and standards. Boards with oriented strand (OSB). General terms for the production of wood fiber boards. Definition and classification of wood fiber boards. Technological operations and stages in the production of wood fiber boards. Raw material for production of wood fiber boards. Fibering of raw material. Binders and additives. Procedures in the production of wood fiber boards. Surface processing of wood fiber boards. Raw material for production of wood fiber boards. Surface processing of wood particle boards. Raw material for production of wood fiber boards. Surface processing of wood products from wood particle board. Wood-plastic composites. Briquetting and peleting of fragmented wood. Exercises: Solving tasks and problems related to the subject content, development of standards for testing the properties of the boards and other products from wood particles and fibers, laboratory tests on the properties of the boards and checking the acquired knowledge through two partial exams. 12. Study methods 								
12.	Exercises: Solving tasks and testing the properties of the b on the properties of the board Study methods Lectures, auditory exercises,	problems relat poards and othe ds and checking	ed to the subje er products fror g the acquired	ect content, development of n wood particles and fibers knowledge through two pa	f standaro s, laborato rtial exan	f ds for ory tests ns.		
	Exercises: Solving tasks and testing the properties of the board on the properties of the board Study methods Lectures, auditory exercises, individual self-learning.	problems relat boards and othe ds and checking laboratory exe	ed to the subje er products fror g the acquired rcises, consult	ect content, development of n wood particles and fibers knowledge through two pa ation, project assignment (s	f standaro s, laborato rtial exan	f ds for ory tests ns.		
13.	Exercises: Solving tasks and testing the properties of the board on the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour	problems relat boards and othe ds and checking laboratory exe	ed to the subje er products fror g the acquired rcises, consulta 6 EKTC × 30 I	ect content, development of n wood particles and fibers knowledge through two pa	f standaro s, laborato rtial exan	f ds for ory tests ns.		
13. 14.	Exercises: Solving tasks and testing the properties of the board on the properties of the board Study methods Lectures, auditory exercises, individual self-learning.	problems relat boards and othe ds and checking laboratory exe	ed to the subje er products fror g the acquired rcises, consult 6 EKTC × 30 I 45+30+35+35	ect content, development of n wood particles and fibers knowledge through two pa ation, project assignment (s nours = 180 hours +35 = 180 hours	f standaro s, laborato rtial exan	f ds for ory tests ns.		
13. 14.	Exercises: Solving tasks and testing the properties of the board on the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes	problems relat boards and othe ds and checking laboratory exe	ed to the subje er products fror g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lecto 15.2. Exer	ation, project assignment (s	f standard s, laborato rtial exan	f ds for ory tests ns. work),		
13. 14. 15.	Exercises: Solving tasks and testing the properties of the board on the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes	problems relat boards and othe ds and checking laboratory exe	ed to the subje er products fror g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lecto 15.2. Exer seminars,	ect content, development of n wood particles and fibers knowledge through two pa ation, project assignment (s nours = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory)	f standard s, laborato rtial exan seminar v	f ds for ory tests ns. work), 45 hours		
13. 14. 15.	Exercises: Solving tasks and testing the properties of the board on the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities	problems relat boards and othe ds and checking laboratory exe	ed to the subject of products from g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lecto 15.2. Exert seminars, 16.1. Project	ect content, development of n wood particles and fibers knowledge through two pa ation, project assignment (s nours = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work	f standard s, laborato rtial exan seminar v	f ds for ory tests ns. work), 45 hours 30 hours		
13. 14. 15.	Exercises: Solving tasks and testing the properties of the board on the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities	problems relat boards and othe ds and checking laboratory exe	ed to the subject of products from g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lecto 15.2. Exert seminars, 16.1. Project	ect content, development of n wood particles and fibers knowledge through two pa ation, project assignment (s nours = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar v idual assignments	f standard s, laborato rtial exan seminar v	f ds for ory tests ns. work), 45 hours 30 hours 35 hours		
13. 14. 15. 16.	Exercises: Solving tasks and testing the properties of the board on the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities	problems relat boards and othe ds and checking laboratory exe	ed to the subject of products from g the acquired rcises, consulta 6 EKTC × 30 H 45+30+35+35 15.1. Lecto 15.2. Exert seminars, 16.1. Project 16.2. Indiv	ect content, development of n wood particles and fibers knowledge through two pa ation, project assignment (s nours = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar v idual assignments	f standard s, laborato rtial exan seminar v	f ds for ory tests ns. work), 45 hours 30 hours 35 hours 35 hours 35 hours		
13. 14. 15. 16.	Exercises: Solving tasks and testing the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities	problems relat boards and othe ds and checking laboratory exe rs 17.1. Seminar	ed to the subject of products from g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lectu 15.2. Exert seminars, 16.1. Projet 16.3. Stud	ation, project assignment (s nours = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar v idual assignments y at home	f standard s, laborate rtial exan seminar v	f ds for ory tests ns. work), 45 hours 30 hours 35 hours 35 hours re		
13. 14. 15. 16.	Exercises: Solving tasks and testing the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities	problems relat boards and othe ds and checking laboratory exe rs 17.1. Seminar 17.2. Classes	ed to the subje er products fror g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lectu 15.2. Exer seminars, 16.1. Proje 16.2. Indiv 16.3. Stud	ect content, development of n wood particles and fibers knowledge through two pa ation, project assignment (s nours = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar widual assignments y at home attendance	f standard s, laborate rtial exan seminar v seminar v), work) 10 scol 10 scol	f ds for ory tests ns. work), 45 hours 30 hours 35 hours 35 hours re		
13. 14. 15. 16. 17.	Exercises: Solving tasks and testing the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities	problems relat boards and othe ds and checking laboratory exe rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	ed to the subject products from g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lectu 15.2. Exert seminars, 16.1. Project 16.3. Stud work / project activities and a	ation, project assignment (s nours = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar v idual assignments y at home attendance rtial exams)	f standard s, laborate rtial exan seminar v seminar v), work) 10 scol 10 scol	f ds for ory tests ns. work), 45 hours 30 hours 35 hours 35 hours re re re re (2×40)		
13. 14. 15. 16. 17.	Exercises: Solving tasks and testing the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	problems relat boards and othe ds and checking laboratory exe rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	ed to the subject of products from g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lectu 15.2. Exert seminars, 16.1. Project 16.3. Stud work / project activities and a inal exam / Par	ation, project assignment of nours = 180 hours +35 = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar widual assignments y at home attendance rtial exams) 50 score	f standard s, laborate rtial exan seminar v seminar v n, work) 10 scol 10 scol 80 scol	f ds for ory tests ns. work), 45 hours 30 hours 35 hours 35 hours re re re re (2×40) 0 (F)		
13. 14. 15. 16. 17.	Exercises: Solving tasks and testing the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	problems relat boards and othe ds and checking laboratory exe rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	ed to the subject products from g the acquired arcives, consultation of the subject of the acquired of the acq	ation, project assignment (s nours = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar v idual assignments y at home attendance rtial exams) 50 score 60 score	f standard s, laborate rtial exan seminar v seminar v n, work) 10 scol 10 scol 5 (five)	f ds for ory tests ns. work), 45 hours 30 hours 35 hours 35 hours re re re (2×40) (F) (E)		
13. 14. 15. 16. 17.	Exercises: Solving tasks and testing the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	problems relat boards and othe ds and checking laboratory exe rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	ed to the subject of products from g the acquired rcises, consulta 6 EKTC × 30 I 45+30+35+35 15.1. Lecto 15.2. Exert seminars, 16.1. Project 16.3. Stud work / project activities and a inal exam / Part [less than 5] from 51 to	ation, project assignment of n wood particles and fibers knowledge through two pa ation, project assignment (s nours = 180 hours +35 = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar widual assignments y at home attendance rtial exams) 50 score 60 score 70 score	f standard s, laborate rtial exan seminar v seminar v n, work) 10 scol 10 scol 5 (five) 6 (six) 7 (seve	f ds for ory tests ns. work), 45 hours 30 hours 35 hours 35 hours 35 hours re re re re (2×40) (F) (E) en) (D)		
13. 14. 15. 16. 17.	Exercises: Solving tasks and testing the properties of the board Study methods Lectures, auditory exercises, individual self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	problems relat boards and othe ds and checking laboratory exe rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	ed to the subject products from g the acquired arcives, consultation of the subject of the acquired of the acq	ation, project assignment (s nours = 180 hours +35 = 180 hours +35 = 180 hours ures-theory cises (laboratory, auditory) team work, field work ect assignments (Seminar v idual assignments y at home attendance rtial exams) 50 score 60 score 70 score 80 score	f standard s, laborate rtial exan seminar v seminar v n, work) 10 scol 80 scol 5 (five) 6 (six)	f ds for ory tests ns. work), 45 hours 30 hours 35 hours 35 hours 35 hours re re re (2×40) 0 (F) (E) en) (D) tt) (C)		

19	. Minimum score for signature exam	and final	Completed activities 15.1, 15.2 and 16.1.				
20	. Teaching language		Macedonian				
21	. Course evaluation method		Internal evaluation an	d student questionnaires			
22	. Literature						
22.	1. Mandatory literature						
N°	Author		Title	Publisher	Year		
1.	Димески, Ј.	Производи о дел	д иситнето дрво I	Универзитет "Св. Кирил и Методиј" - Скопје	2003		
2.	Димески, Ј., Илиев, Б.		д иситнето дрво II влакнатици и	Универзитет "Св. Кирил и Методиј" - Скопје Шумарски факултет - Скопје	2007		
3.	Димески, Ј., Илиев, Б.	Производи од иситнето дрво I дел -плочи од иверки. Практикум.		Универзитет "Св. Кирил и Методиј" - Скопје Шумарски факултет - Скопје	1993		
22.	2. Additional literature						
N٥	Author		Title	Publisher	Year		
1.	Miljković, J.	Kompozitni m drveta – iveri	aterijali od usitnjenog ce	Naučna kniga - Beograd	1991		
2.	Bruči, V., Jambreković, V.	Ploče iverice	i vlaknatice	Sveučilište u Zagrebu Šumarski fakultet - Zagreb	1996		
3.	Йосифов, Н.	Производств дървесни ча	ю на плочи от стици	"Земиздат" - София	1975		
4.	Дончев, Г.	Производств дървесни вл	ю на плочи от акна	"Техника" - София	1982		
5.	Miljković, J. Crnogorac, O.	Praktikum za oplemenjivan		Univerzitet u Beogradu Šumasrki fakultet - Beograd	1998		
6.	Klyosov, A.	Wood-Plastic	Composite	"Wiley" Publication - USA	2007		

1.	Course title		Pra	actical work 1					
2.	Code		16	2					
3.	Study group		F٧	/E / DFI					
-	Organizer of the study prog institute, department)	gram (unit,	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				d Interior-		
5.	Level (first, second, third c	yclce)	Fir	st cycle					
6.	6. Academic year / semester			6	7. Num	ber of ECTS	6		
8.	Teacher								
9.	Prerequisites for enrollmer course	nt of the	-						
10.	Course goals (Competence Acquire technical and practic		of th	e relevant area	a of study	y program.			
	11. Course outline Practical field work in a small or medium enterprise specializing in the study program. Making elaborate report of the practical work.								
	Study methods Consultation, making elabora				1				
13.	Total available fund of hou	rs	18	0 hours					
14.	Weekly number of classes		0+	4					
15.	Teaching activities			15.1. Lectures				0 hours	
				seminars, team work, fieldwork			60 hours		
16.	Other activities			16.1 Consulting for preparation of report			30 hours		
				16.2 Independent work - preparation of repor			<u> </u>		
		Γ		16.3 Public p	3 Public presentation of the report			2 hours	
17.	Assessment methods			ork activities ar			10 sco		
								10 score	
		17.3. Final rep	oort					30 score	
18.	Assessment criteria (Score	/Grade)					5 (five) (F)		
							6 (six) (()	
				from 61 to 70			7 (seve	, , ,	
				from 71 to 80			8 (eight		
				from 81 to 90			9 (nine)		
19.	Minimum score for signatu	re and final		from 91 to 100 score10 (ten) (A)Completed activities 15.2. and 16.					
	exam								
	Teaching language			Macedonian					
	Course evaluation method			internal evalu	ation and	d student quest	ionnaires	6	
	Literature								
22.1 N ^o	. Mandatory literature Author			Titlo		Dublich	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Veer	
1.	Author	Title Publisher Appropriate documentation of the company where fieldwork is done. Image: Company and Co			Year				
22.2	2. Additional literature	Company wile			ю.				
22.2 N ^o	Author			Title		Publishe	r	Year	
1.				THUC .			~1	i cai	
1.									

1.	Course title		Pra	actical work 2					
2.	Code		17	3					
3.	Study group		F٧	/E / DFI					
	Organizer of the study prog institute, department)	gram (unit,	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje					d Interior-	
5.	Level (first, second, third c	yclce)	Fir	st cycle					
6.	5. Academic year / semester			/7	7. Num	ber of ECTS	6		
8.	Teacher								
9.	9. Prerequisites for enrollment of the course								
10.	Course goals (Competence Acquire technical and practic		of th	e relevant area	a of study	y program.			
	11. Course outline Practical field work in a small or medium enterprise specializing in the study program. Making elaborate report of the practical work.								
	Study methods Consultation, making elabora				1				
13.	Total available fund of hou	rs	18	0 hours					
14.	Weekly number of classes		0+	4					
15.	Teaching activities			15.1. Lectures				0 hours	
				seminars, team work, fieldwork			60 hours		
16.	Other activities			5 1 1			30 hours		
				16.2 Independent work - preparation of report					
		1		16.3 Public presentation of the report			1	2 hours	
17.	Assessment methods			ork activities an			10 score		
							10 sco	10 score	
		17.3. Final rep	oort				80 scor		
18.	Assessment criteria (Score	/Grade)					. ,	5 (five) (F)	
							6 (six) (、	
				from 61 to 70 score		7 (seve	, , ,		
				from 71 to 80			8 (eight		
				from 81 to 90			9 (nine)	. ,	
19.	Minimum score for signatu	re and final		from 91 to 100 score10 (ten) (A)Completed activities 15.2. and 16.					
	exam								
	Teaching language			Macedonian	-				
	Course evaluation method Literature			internal evalu	alion an	d student questi	onnaires	5	
22.1 N°	. Mandatory literature Author			Titlo		Publishe)r	Year	
1.	Autio	Title Appropriate documentation of the company where fieldwork is done.				51	i edi		
22.2	2. Additional literature							I	
N ^o	Author			Title		Publishe	er	Year	
1.	,								
· · ·									

1.	Course title		Production	preparation				
2.	Code		281	· ·				
3.	Study group		FWE / DFI					
4.	Organizer of the study prog institute, department)	ıram (unit,		s. Cyril and Methodius in Sk esign and Technology of Fu		nd Interior-		
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		IV/8	7. Number of ECTS	6			
8.	Teacher		Prof. dr. Gjo	rgi Gruevski				
9.	Prerequisites for enrollmen course	t of the	Construction	of furniture and interior				
	D. Course goals (Competences) Students learn the subject in the area of preparation and management of production process of furniture and interior. Also, students through this course will build the complete documentation for main and auxiliary material needed to produce a product. They will be introduced in certain diagrams (gantograms etc.), through which they will follow the process and execution of production.							
	11. Course outline The program on this subject is divided into two chapters: Technical preparation and operational preparation. The technical preparation is divided into three parts: Constructive, Material and Technological preparation. Through these three parts students will develop the constructive documentation (dimensioning elements, connections, compositions, and more.), material documentation (specifications and quantity of basic and additional materials) and technological documentation, which wil be used to determine the number and order of operations, procedures and operating mode, the number of jobs, machines, tools, transport devices and the time required for preparation of the product. Operational preparation will enable students to learn about the operational planning and preparation of material through the documentation issue, preparing, restoring indented material is done here also making forward planning, calculation of the production cycle, issuing work orders and so on.							
12.	Study methods Lectures, auditory exercises,	consultation, p	roject assign	ment, individual self-learning	g.			
13.	Total available fund of hour	ſS	180					
14.	Weekly number of classes		3+2					
15.	Teaching activities			ctures-theory		45 hours		
			15.2 Exe study, tea	rcises (laboratory, auditory) am work	, case	30 hours		
16.	Other activities		16.1 Proj	ject assignments		35 hours		
			16.2 Indi	vidual assignments		35 hours		
			16.3 Stu	dy at home		35 hours		
17.	Assessment methods	17.1. Seminar			10 sco	ore		
		17.2. Classes			10 sco			
		17.3. Tests (F		,		re (2x40)		
18.	Assessment criteria (Score	/Grade)		1 50 score	5 (five)	(F)		
				to 60 score	6 (six)			
			from 61 t	from 61 to 70 score 7 (s		en) (D)		
				from 71 to 80 score 8 (eigh		t) (C)		
			from 81 t	from 81 to 90 score 9 (nine) (B)				
			from 91 t	to 100 score	10 (ter	ı) (A)		
19.	Minimum score for signatu exam	re and final	Complete	Completed activities 15.1 and 15.2.				
20.	20. Teaching language Macedonian							
			evaluation and student ques	tionnaire	S			
22.	Literature							

22.	1. Mandatory literature			
N°	Author	Title	Publisher	Year
1.	Алтарац Шалом	Студија рада	Шумарски факултет - Загреб	1975
2.	Крстиќ Драгољуб	Техничка припрема рада у дрвној индустрији за производње, I,II,III и IV дел	Шумарски факултет - Загреб	1961
3.	Фигуриќ.Младен	Производни сустави у дрвној индустрии	Шумарски факултет - Загреб	1992
22.	2. Additional literature		· · · · · · · · · · · · · · · · · · ·	
N^{o}	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Pro	oduction qua	lity man	agement		
2.	Code		47 [.]		<u> </u>			
3.	Study group		F٧	/E / DFI				
-	Organizer of the study prog institute, department)	ram (unit,	Fa Sk	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				
5.	Level (first, second, third cy	/clce)	Fir	st cycle				
6.				/7	7. Num	ber of ECTS	6	
-	Teacher		Pro	of. dr. Violeta I	Efremov	ska		
9.	Prerequisites for enrollmen course	Prerequisites for enrollment of the - course						
10.	Course goals (Competence Introducing students to metho knowledge will enable future of	ds, ways and						
	 11. Course outline Introduction, Development of quality control. Quality management of production, activities in quality management, situation analysis, phases in quality assurance, preconditions for quality assurance, control systems, methods of statistical quality control, economic aspects of quality control, new trends in quality management. 12. Study methods 						nce,	
40	Lectures, auditory exercises, c		1		ndividua	l self-learning.		
	Total available fund of hour	S) hours				
	Weekly number of classes		2+2					
15.	Teaching activities			15.2 Exercises (laboratory, auditory), seminars, team work			30 hours 30 hours	
16	Other activities							
10.	Other activities			16.2 Individual assignments				40 hours 40 hours
						iments		40 hours
47	Assessment methods	17.1 Comino	r	16.3 Study at	nome		10 sco	
17.	Assessment methods						10 score	
				ctivities and attendance				
10	Accessment criteria (Secre	ι,	mai	,			80 score (2x40) 5 (five) (F)	
10.	Assessment criteria (Score	Grade)		from 51 to 60			. ,	. ,
				from 61 to 70			6 (six)	
				from 71 to 80			7 (seve	
				from 81 to 90			8 (eigh	
							9 (nine) (B)	
19.	Minimum score for signatur	e and final		from 91 to 100 score10 (ten) (A)Completed activities 15.1. and 15.2.				
20	Teaching language			Macedonian				
	Course evaluation method			Macedonian Internal evaluation and student questionnaires				
	Literature				adon ul			-
	I. Mandatory literature							
N ^o	Author			Title		Publishe	er	Year
	Bakija,I	Kontrola k	kvali			Sumarski fakultet - Zagreb		1978
2.	Juran, J. M., Gryna, F.M	Planiranie	eiar	naliza kvaliteta	3			1947
	Zlatkovik,B	Upravljan						1984
	2. Additional literature							

N°	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Project manac	Project management					
2.	Code		483						
3.	Study group		FWE / DFI						
	Organizer of the study prog institute, department)	gram (unit,		Cyril and Methodius in Sk gn and Technology of Fu		nd Interior-			
5.	Level (first, second, third c	yclce)	First cycle						
6.	Academic year / semester		IV / 8	7. Number of ECTS	6				
8.	Teacher		Prof. dr. Mira S	tankevik Sumanska					
9.	Prerequisites for enrollmer course	it of the	-						
	0. Course goals (Competences) The main objective of the course is to enable students to learn basic terminology, methods and techniques of project management. The students will also learn about the basic principles of planning, execution and following of investment projects realization.								
 11. Course outline Project - concept and definition; types of projects; management of project; lifespan of the project; life cycle in management projects; project management; organizing the project area; methods and techniques of project management; investment - concept, features and importance; management of investment projects; process of investing - a common methodology; pre-investment study (analysis of development possibilities and capabilities of the investor, market analysis, technological - technical analysis, location, economic - financial analysis); Investment program; Study on implementation of projects; methods for evaluation of investment projects (repayment period, the average rate of return, net present value, profitability index, internal rate of return); risk and investment - concept and types of risks; methods of adjusting the project risk (sensitivity analysis, scenario analysis, adjusting the discount rate risk threshold of profitability). 12. Study methods 									
	Lectures, auditory exercises,	consultation, p	roject assignme	ent, individual self-learning] .				
13.	Total available fund of hour	rs	180 hours						
14.	Weekly number of classes		2+2						
15.	Teaching activities		15.1. Lectu	res-theory		30 hours			
			15.2 Exercises (laboratory, auditory), seminars, team work			30 hours			
16.	Other activities		16.1 Projec	t assignments		40 hours			
			16.2 Individ	ual assignments		40 hours			
			16.3 Study	at home		40 hours			
17.	Assessment methods	17.1. Seminar	work / project		10 sco	re			
			activities and at		10 sco	re			
		,	inal exam / Part	,	80 sco	re (2x40)			
18.	Assessment criteria (Score	/Grade)	less than 50		5 (five)				
			from 51 to 6		6 (six)				
			from 61 to 7		7 (seve				
			from 71 to 8	30 score	8 (eigh				
			from 81 to 9		9 (nine	, , ,			
			from 91 to 1	100 score	10 (ten) (A)			
19.	Minimum score for signatu exam	re and final	Completed activities 15.1 and 15.2						
20.	Teaching language		Macedonian						
21.	Course evaluation method		Internal evaluation and student questionnaires						
22.	Literature								
22.1	 Mandatory literature 								

N^{o}	Author	Title	Publisher	Year
1.	Василев Петар	Планирање на инвестициони проекти	УКИМ-Шумарски факултет -Скопје	2004
2.	Šuletić Radovan		Univerzitet u Beogradu, Šumarski fakultet, Beograd	1991
3.	Šuletić Radovan	Razvojni ciklusi preduzeċa za preradu drveta	Univerzitet u Beogradu, Šumarski fakultet, Beograd	2001
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Sawmill and	d primary wood processing	g techno	logy		
2.	Code		542		0	0,		
3.	Study group		FWE					
	Organizer of the study prog institute, department)	gram (unit,						
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		II / 4	7. Number of ECTS	6			
8.	Teacher		Prof. dr. Brai	nko Rabadziski				
9.	Prerequisites for enrollmen course	t of the	-					
	Course goals (Competences) The aim of this course is to introduce students to the field of sawmill wood processing. More specifically, the storage of raw materials, methods of processing, sawmills plants, plans and programs for sawmill processing, as well as technological schemes of sawmill capacities. Course outline							
Sources of raw material for sawmill processing. Transportation of raw materials to processing facilities. Sawmills plants. Position of the sawmill plant. Storage of raw material. Dry storage. Ordering of the dry storage. Wet storage. Combined storage of raw material. Integrated storage. Timber storage. Sawmill building. Working machines and devices for transport at the sawmill facility. Logs processing technology. Processing disposition. Plan and program of sawmill processing. Sawmills assortments. Utilization of raw material. Quantitative utilization. Qualitative utilization. Value utilization. Financial utilization. Technology for secondary processing of sawn timber assortments. Secondary processing of broadleaf species. Secondary processing of coniferous species. Width dispersing of assortments. Classic technological process of processing raw materials. Modern technological processes of processing raw materials. Sawn lumber stock. Storage of sawn timber assortments. Technological processes of sawn lumber stock. Technology of the production of special types of sawn material. Friezes for parquet. Parquet. Wooden pallets. Wooden packaging. Railway sleepers.								
12.	Study methods Lectures, auditory exercises,	consultation, p	roject assigni	ment, individual self-learning].			
13.	Total available fund of hour	rs	180 hours					
14.	Weekly number of classes		3+2					
15.	Teaching activities		15.1. Leo	ctures-theory		45 hours		
				15.2 Exercises (laboratory, auditory), seminars, team work				
16.	Other activities		16.1 Proj	iect assignments		35 hours		
			16.2 Indiv	vidual assignments		35 hours		
			16.3 Stud	dy at home	1	35 hours		
17.	Assessment methods	17.1. Seminar			10 sco	ore		
		17.2. Classes			10 sco			
		17.3. Tests (F				re (2x40)		
18.	Assessment criteria (Score	/Grade)		50 score	5 (five)	. ,		
				o 60 score	6 (six)			
				o 70 score	7 (seve			
				o 80 score	8 (eigh			
				o 90 score	9 (nine			
				o 100 score	10 (ter	n) (A)		
	Minimum score for signatu exam	re and final		ed activities 15.1 and 15.2.				
	20. Teaching language Macedonian							
21. Course evaluation method Internal evaluation and student question			tionnaire	s				
22.	Literature							

22.	1. Mandatory literature			
N°	Author	Title	Publisher	Year
1.	Стефановски В., Рабаџиски Б.	Примарна преработка на дрвото, I дел, Пиланска преработка на дрвото	УКИМ-Шумарски факултет - Скопје	1994
2.	Николиќ М.	Прерада дрвета на пиланама I и II дел	Шумарски факултет - Београд	1983
3.	Благоев Г.	Технология на фасонираните материали и изделия от дъвесина	ЛТУ - Софија	2001
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Styl	es and deco	ration			
2.	Code		311	311				
3.	Study group		FW	FWE / DFI				
	Organizer of the study prog institute, department)	gram (unit,	Fac	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interio Skopje				
5.	Level (first, second, third c	yclce)	First	t cycle	1			
6.	Academic year / semester		I / 1		7. Number of ECTS	6		
8.	Teacher		Prof	f. dr. Elena Ni	ikoljski Panevski			
9.	Prerequisites for enrollmer course	nt of the	-					
10.	Course goals (Competence The aim of this course is to in		nts to	the history o	f art, style and decorat	ion.		
	1. Course outline Introduction to art history, fine arts, civilization, culture; civilizations of Babylon and Mesopotamia, Egyptian civilization; Civilization of Ancient Greece; Ancient Rome; Byzantium; Byzantium Macedonia; Medieval furniture, Romanesque; Gothic; Renaissance (Italy, France, Tudor, Germany); Baroque (Italy, France, Germany, the Netherlands, Philip IV Spanish era of James I and Charles I, Louis XIII, the English Restoration, Louis IV (William and Mary Anna Stewart, regency style, Kent and early period of George I; Rococo (Italy, Germany, Louis IV, Chippendale, Liege XVIII, American colonial style, a Canadian furniture XVIII); neoclassicism (transitional style, Louis XVI, English neoclassical style, Empire, Regency, bidermaer and restoration, neo-Gothic style, Louis Philippe, Victorian style Napoleon III; art Nouveau (movement "aesthetics" William Morris and the movement "art and craft" America and art Nouveau); XX century - 1900 (De style, Bauhaus, organic design by Frank Lloyd Wright) art Deco (modern Scandinavian style retro style) 1925 - International style (radically modern style, new modernism); contemporary movements (pop style, 60s, 70s, 80s, 90s, post modern functionalism, minimalism - to date).							
	Study methods Lectures, auditory exercises, Total available fund of hou			t assignment hours	, independent work			
	Weekly number of classes	15						
	Teaching activities		2+2 15.1. Lectures-theory				30 hours	
10.			•	15.2 Exercises (laboratory, auditory), seminars, team work			30 hours	
16.	Other activities			16.1 Project assignments			40 hours	
			•	16.2 Individual assignments			40 hours	
			•	16.3 Study at	home		40 hours	
17.	Assessment methods	17.1. Seminar	r worl	k / project		10 sco	re	
		17.2. Classes	activ	vities and atte	ndance	10 sco	re	
		17.3. Tests (F	inal e	exam / Partial	exams)	80 sco	re (2x40)	
18.	Assessment criteria (Score	/Grade)	I	ess than 50 s	score	5 (five)) (F)	
		-	f	from 51 to 60	score	6 (six)	(E)	
			f	from 61 to 70	score	7 (seve		
				from 71 to 80		8 (eigh		
				from 81 to 90				
					rom 81 to 90 score 9 (nine) (B rom 91 to 100 score 10 (ten) (A			
19.	Minimum score for signatu exam	re and final			ctivities 15.1 and 15.2.		<u>, , , ,</u>	
20.	20. Teaching language Macedonian							
	Course evaluation method				ation and student ques	stionnaire	s	
	Literature скрипта "Истори	іја на уметнос	1		· · · ·			
	. Mandatory literature		,		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1 4		

N^{o}	Author	Title	Publisher	Year
1.	Venturi, L.	Histoire de la critique d`art	Flammarion, Paris, France	1969
2.	Savage, G.	Unutrashnja dekoracija, kratak istorijski pregled	Izdavacki zavod, Beograd, Jugoslavija	1975
3.	Doordan, p.D.	Design history:an antology	Cambridge, Massachusets	1995
4.	Leksikografski zavod	Enciklopedija Likovnih umetnosti I (1959), II (1962), III (1964), IV (1966)	Zagreb	
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.	Akoka, G.et.al.	Decoration	Edilec, Paris, France	1978
2.	Ackerman, J.	Art & Archaeology	Englewood Cliffs, London	1963
3.	Janson, H.W.	Istorija Umetnosti	Beograd, Jugoslavija	1966

1.	Course title	Technical mechanics			
	Code	122			
3.	Study group	FWE / DFI			
4.	Organizer of the study program (unit, institute, department)	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje			
5.	Level (first, second, third cyclce)	First cycle			
6.	Academic year / semester	1/2 7. Number of ECTS 6			
8.	Teacher	Prof. dr. Nacko Simakoski			
9.	Prerequisites for enrollment of the course	-			
	movements of solid objects and the reasons microstructural changes in the matter of the strength of the wood substance that is used interior. Course outline: Introduction; Goal and divis	ations in the classical mechanics, which studies the s for the movements (the forces), not taking into account the objects, as well as explanations of the fundamental as constructive material in structures for furniture and sion of mechanics; Historical development of the echanics: Force and vector: Projection and coordinates of			
	vector; Scalar product; Vector product; Vect (analytical and graphical); Equilibrium of a p at a common point; Statics of rigid body; Sta of coplanar forces, forces act at one point; E method and plan of forces; Parallel forces; A transformation; Reduction of a force and con Equilibrium of arbitrary coplanar system; Re Centroid of material line; Centroid of part of trapezium (analytical); Centroid of trapezium circular quadrant; Centroid of circular ring at friction; Rolling resistance; Rope friction. Sin Classification of loads; Static variables: M, T loaded with concentrated forces; Simple bea with triangular distributed load; Graphic solv simple beam; Cantilever beam loaded with distributed load; Cantilever beam loaded with framework (general); Ritter's method; Meth- line of reactions in simple beam; Shear diag beam; Influent line of reactions in cantilever moment diagram in cantilever beam. Introdu object of strength of materials; Basic assum loads. Geometric characteristics of flat secti Axial moment of inertia; Polar moment of ine Change of moments of inertia during axis ro ellipse of inertia; Moment of inertia of rectan Axial stress (pressure and tension); Normal Hooke's Law; Experimental determination of Stresses in two directions; Graphic determir and deformation of its own weight; Experime bonds for making panel elements. Stresses determination of the shear strength of some stress; Stress, deformations and deformatio determination of the bending strength of the load bending; Normal and tangential stresse Dimensioning; Bending strength; Torsion of Eccentric pressure; Core of intersection; Cri	circular cross-sections; Coil springs; Inclined bending; tical force; Dimensioning allowed stresses, Euler, Tetmaer ns of elastic line; Elastic line of simple beam loaded with			

12.	Study methods: Lectures: elaborate using catalogs and evercises: Independent press	l profe	essional jour	nals; Self-study and pr			
13	exercises; Independent prepa Total available fund of hour			80 hours			
	13. Total available fund of nours10.14. Weekly number of classes3+2						
	15. Teaching activities		15.1. Lectures-theory: Visual theory classes with LCD projector and smart table			45	
				15.2 Exercises (laboratory, auditory), seminars, team work: Auditorial and group work 20-30 students in a group with teamwork for each task			30
16.	Other activities			16.1 Project assignme	ents		30
				16.2 Individual assign	iments		60
				16.3 Study at home			15
17.	Assessment methods	17.1	. Seminar wo	ork / project		10 scor	e
		17.2	. Classes ac	tivities and attendance		10 scor	e
		17.3	. Tests (Fina	I exam / Partial exams))	80 scor	e
18.	Assessment criteria (Score	/Gra	de)	less than 50 score		5 (five)	
				from 51 to 60 score		6 (six) 0	or E
				from 61 to 70 score		7 (seve	n) or D
				from 71 to 80 score		8(eight)) or C
				from 81 to 90 score		9(nine)	or B
				from 91 to 100 score		10(ten)	or A
19.	Minimum score for signatu exam	re an	d final	Signature: min 30 sc exercises attendanc seminar work 10 scor	e 7 score, ac		
20.	Teaching language			Macedonian			
21.	Course evaluation method			Control and audit in the exams by the Dean a			
22.	Literature						
	1. Mandatory literature						
N^{o}	Author			Title	Publishe	r	Year
1.	Атанасова-КоцеваЛ.; Симовски В; Аврамов А,		• •	ени задачи од трето издание., еханика статика, Универзитет Св."Кирил и Методиј" Скопје			1989
2.	Гугуловски М; Ончевска С.; Сибиновиќ Б; Битраков Д.		Збирка решени задачи по техничка механика - статика,		второ издание Универзитет Св."Кирил и Ме Скопје		1986
3.	Симакоски Нацко		Техничка механика I и II-дел статика и јакост на материјалите,		(умножени предавања за студентите од Шумарскиот факултет), Ско	опје	1998
22.	2. Additional literature						
N°	Author		Title		Publishe	r	Year
1.	Gojkovic Milan		Drvene kons	trukcije	Naucna kniga, Beograd		1985
2.	Brcic Vlatko		Otpornost m	aterijala	Naucna kniga, Beograd		1978

Skopjé 5. Level (first, second, third cyclce) First cycle 6. Academic year / semester I / 2 7. Number of ECTS 6 8. Teacher Prof. dr. Mitko Nacevski 9 9. Prerequisites for enrollment of the course - - 10. Course goals (Competences) To introduce students to the errors, the physical and mechanical properties of wood which coruse value. 11. Course outline Lectures: Task and development of the subject. Natural wood errors: errors in stem shape, anatomical and histological structure of the wood, cracks in the wood. Corol, brightness, smell and Physical properties of wood properties. Aesthetic properties of wood: color, brightness, smell and other properties of wood. Hooke's law. Static wood strength: hardness, strength on dynamic impact. Factors that condition variations in mechanical properties of wood. Exercises: Measuring basic physical and mechanical properties of wood. Mathematical-processing of the measurement data. Solving tasks in the field of physical and mechanical proverties of wood. 12. Study methods 15.1 Lectures-theory 14. Weekly number of classes 3 + 2 15. Teaching activities 15.1. Lectures-theory 16.2 Individual assignments 16.3 Study at home 17.2. Tests (Final exam / Partial exams) 80 score 18. Assessment criteria (Score/Grade) less than 50 score 5 (five) from 51 to 60 s			
4. Organizer of the study program (unit, institute, department) University Ss. Cyril and Methodius in Skopje 5. Level (first, second, third cyclce) First cycle 6. Academic year / semester 1/2 7. Number of ECTS 6. Academic year / semester 1/2 7. Number of ECTS 7. Prerequisites for enrollment of the course Prof. dr. Mitko Nacevski 9. 9. Prerequisites for enrollment of the course - - 10. Course goals (Competences) - - 17. introduce students to the errors, the physical and mechanical properties of wood which cor use value. - 11. Course outline Lectures: Task and development of the subject. Natural wood errors: errors in stem shape, anatomical and histological structure of the wood, cracks in the wood. Errors of wood caused by fardin; insects and higher plants. Errors caused by main, insects and higher plants. Errors caused by main, insects and higher plants. Static wood strength: hardness, strength, shear strength, compression strength and flexural strength. Dynamic strength of the strength on dynamic impact. Factors that condition variations in mechanical properties of wood. 12. Study methods 15.2 Exercises (laboratory, auditory), 115.2 Exercises (laboratory, auditory), 116.2 Individual assignments 16. Other activities 17.1. Classes activities and attendance 20 score 17.2. Tests (Final exam / Partial exams) 80 score 6 (six) from 61 to 90			
institute, department) Faculty of Design and Technology of Furniture and Skopje 5. Level (first, second, third cyclce) First cycle 6. Academic year / semester 1 / 2 7. Number of ECTS 6 8. Teacher Prof. dr. Mitko Nacevski 9 9 9. Prerequisites for enrollment of the course - - - 10. Course goals (Competences) To introduce students to the errors, the physical and mechanical properties of wood which cor use value. - 11. Course outline Lectures: Task and development of the subject. Natural wood errors: errors in stem shape, anatomical and histological structure of the wood, cracks in the wood. Errors of wood caused b factors. Error caused by fungi, insects and higher plants. Errors caused by man. Basic math statistical data on wood properties. Aesthetic properties of wood: strength. hardness, strength, shear strength, compression strength and flexural strength. Dynamic strength of th strength on dynamic impact. Factors that condition variations in mechanical properties of wood. Exercises: Measuring basic physical and mechanical properties of wood. Mathematical- processing of the measurement data. Solving tasks in the field of physical and mechanical prop wood. 12. Study methods Lectures, laboratory exercises , consultation, individual self-learning. 15.1 Lectures-theory 15.2 Exercises (laboratory, auditory), 16 Other activities 16.1 Project assignments 16.3 Study at home 17. Assessment methods 17.1. Classes activities and attendance 17.2. Tests (Final exam / Par			
6. Academic year / semester I / 2 7. Number of ECTS 6 8. Teacher Prof. dr. Mitko Nacevski 9. Prerequisites for enrollment of the course 10. Course goals (Competences) To introduce students to the errors, the physical and mechanical properties of wood which cor use value. 11. Course outline Lectures: Task and development of the subject. Natural wood errors: errors in stem shape, anatomical and histological structure of the wood, cracks in the wood. Errors of wood caused b factors. Error caused by fungi, insects and higher plants. Errors caused by man. Basic math statistical data on wood properties. Aesthetic properties of wood: color, brightness, smell and Physicial properties of wood. prostly, density, humidity, resizing, saturation point and other properties of wood properties of wood. Hooke's law. Static wood strength: hardness, strength, shear strength, compression strength and flexural strength. Dynamic strength of the strength on dynamic impact. Factors that condition variations in mechanical properties of wood. 12. Study methods Lectures, laboratory exercises , consultation, individual self-learning. 13. Total available fund of hours 180 14. Weekly number of classes 3 + 2 15. Teaching activities 17.1. Classes activities and attendance 20 score 16.2 Individual assignments 16.3 Individual assignments 16.3 Individual assignments 16.3 Study at home 17.1. Classes activities and attendance 20 score from 51 to 60 score 6 (six) from 51 to 60 score 6 (Faculty of Design and Technology of Furniture and Interior-		
8. Teacher Prof. dr. Mitko Nacevski 9. Prerequisites for enrollment of the course - 10. Course goals (Competences) To introduce students to the errors, the physical and mechanical properties of wood which cor use value. - 11. Course outline Lectures: Task and development of the subject. Natural wood errors: errors in stem shape, anatomical and histological structure of the wood, cracks in the wood. Errors of wood caused b factors. Error caused by fungi, insects and higher plants. Errors caused by man. Basic math statistical data on wood properties. Aesthetic properties of wood: color, brightness, smell and Physical properties of wood: porosity, density, humidity, resizing, saturation point and other properties. Mechanical properties of wood. Hooke's law. Static wood strength: hardness, strength, shear strength, compression strength and flexural strength. Dynamic strength of the strength on dynamic impact. Factors that condition variations in mechanical properties of wood. 12. Study methods Lectures, laboratory exercises , consultation, individual self-learning. 13. Total available fund of hours 180 14. Weekly number of classes 3 + 2 15. Teaching activities 17.1. Classes activities and attendance 20 score 17. Assessment criteria (Score/Grade) less than 50 score 5 (five) from 51 to 60 score 18. Assessment criteria (Score/Grade) less than 50 score 5 (five) from 51 to 60 score 6 (six) from 61 to 70 score 19. Minimum score for signature and final exam			
9. Prerequisites for enrollment of the course - 10. Course goals (Competences) To introduce students to the errors, the physical and mechanical properties of wood which cor use value. 11. Course outline Lectures: Task and development of the subject. Natural wood errors: errors in stem shape, anatomical and histological structure of the wood, cracks in the wood. Errors of wood caused b factors. Error caused by fungi, insects and higher plants. Errors caused by man. Basic math statistical data on wood properties. Aesthetic properties of wood: color, brightness, smell and Physical properties of wood: porosity, density, humidity, resizing, saturation point and other properties. Mechanical properties of wood. Hocke's law. Static wood strength: hardness, strength, ondynamic impact. Factors that condition variations in mechanical properties of wood. Exercises: Measuring basic physical and mechanical properties of wood. Mathematical-processing of the measurement data. Solving tasks in the field of physical and mechanical properties of wood. 12. Study methods Lectures, laboratory exercises , consultation, individual self-learning. 13. Total available fund of hours 180 14. Weekly number of classes 3 + 2 15. Teaching activities 15.1. Lectures-theory 16.3 Study at home 16.3 Study at home 17. Assessment methods 17.1. Classes activities and attendance 20 score 18. Assessment criteria (Score/Grade) less than 50 score 5 (five) from 51 to 60 score 6 (six) from 61 to 70 score 19. Minimum score for signature and final			
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14. Weekly number of classes 3 + 2 15. Teaching activities 15.1. Lectures-theory 16 Other activities 16.1 Project assignments 16.2 Individual assignments 16.2 Individual assignments 17. Assessment methods 17.1. Classes activities and attendance 20 score 18. Assessment criteria (Score/Grade) less than 50 score 5 (five) 18. Assessment criteria (Score/Grade) less than 50 score 5 (gipt) 19. Minimum score for signature and final exam Completed activities 15.1 and 15.2 20 20. Teaching language Macedonian Macedonian			
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17.Assessment methods17.1. Classes activities and attendance20 score17.2. Tests (Final exam / Partial exams)80 score18.Assessment criteria (Score/Grade)less than 50 score5 (five)18.Assessment criteria (Score/Grade)less than 50 score6 (six)17.from 51 to 60 score6 (six)17.from 61 to 70 score7 (sever17.from 81 to 90 score9 (nine)19.Minimum score for signature and final examCompleted activities 15.1 and 15.220.Teaching languageMacedonian	0 hours		
17.Assessment methods17.1. Classes activities and attendance20 score17.2. Tests (Final exam / Partial exams)80 score18.Assessment criteria (Score/Grade)less than 50 score5 (five)18.Assessment criteria (Score/Grade)from 51 to 60 score6 (six)17.1.from 61 to 70 score7 (sever17.2.from 81 to 90 score9 (nine)19.Minimum score for signature and final examCompleted activities 15.1 and 15.220.Teaching languageMacedonian	50 hours		
17.2. Tests (Final exam / Partial exams) 80 score 18. Assessment criteria (Score/Grade) less than 50 score 5 (five) from 51 to 60 score 6 (six) from 61 to 70 score 7 (sever from 71 to 80 score 8 (eight) from 91 to 100 score 9 (nine) from 91 to 100 score 10 (ten) 19. Minimum score for signature and final exam Completed activities 15.1 and 15.2 20. Teaching language Macedonian	55 hours		
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19. Minimum score for signature and final exam Completed activities 15.1 and 15.2 20. Teaching language Macedonian			
20. Teaching language Macedonian			
21. Course evaluation method Internal evaluation and student questionnaires			
22. Literature			
22.1. Mandatory literature			
N° Author Title Publisher	Year		

1.	Живоин Георгиевски	Анатомија и технички својства на дрвото – II дел, Технички својства на дрвото	УКИМ-Шумарски факултет - Скопје	1994
2.				
3.				
22.	2. Additional literature			
N°	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Те	chnology of adhe	esive	bonding		
2.	Code		44 ⁻			•		
3.	Study group		FΜ	FWE / DFI				
	Organizer of the study prog institute, department)	jram (unit,	Fa	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior Skopje				d Interior-
5.	Level (first, second, third c	yclce)	Fire	st cycle				
6.	Academic year / semester		II /	4 7. I	Num	ber of ECTS	6	
8.	Teacher		Pro	of. dr. Konstantin E	Bahcł	nevandjiev		
9.	Prerequisites for enrollmen course	t of the	Те	chnical properties	of wo	bod		
	Course goals (Competence Students acquire professiona materials, which besides wo wood industry, furniture, inter	al and education od, are required	ed 1					
	11. Course outline Introduction; Glued structures - glued materials; Adhesives; General; Natural adhesives; Synthetic adhesives; Theories and parameters of gluing; Terminology and definitions; Properties of adhesive layer; Tension of adhesive layer; Impact on: construction of wood, temperature, humidity; Static tensile load and internal stress; Examination of adhesives and adhesive layer; Physical and physico-chemical properties of adhesives; Strength of gluing; Non-destructive methods; Adhesive bonding technology of wood products; Adhesive bonding of: longitudinal extension of wood frames, massive boards, bars and stools, housings, veneer coating and foil coating, bent laminated products, upholstering products, other adhesive bonding.							Tension of ernal stress; adhesives; ; Adhesive
12.	Study methods Lectures, auditory exercises,	consultation, p	-		dividu	al self-learning.		
13.	Total available fund of hour	rs	180					
14.	Weekly number of classes		2+2	2				
15.	Teaching activities			15.1. Lectures-the				30 hours
				15.2 Exercises (laboratory, auditory), seminars, team work			30 hours	
16.	Other activities		16.1 Project assignments				40 hours	
			16.2 Individual assignments			40 hours		
				16.3 Study at home				40 hours
17.	Assessment methods	17.1. Seminar	wo	rk / project			10 scor	e
		17.2. Classes	acti	activities and attendance		10 score		
		17.3. Tests (Fi	inal	exam / Partial exa	exam / Partial exams)		80 scor	e
18.	Assessment criteria (Score	/Grade)		less than 50 scor	e		5 (five)	(F)
				from 51 to 60 sco	ore		6 (six)	(E)
				from 61 to 70 score			7 (seve	, , ,
				from 71 to 80 sco			8 (eigh	, , ,
				from 81 to 90 sco	ore		9 (nine)) (B)
				from 91 to 100 score 10 (ten) (A)) (A)	
19.	Minimum score for signature exam	re and final		Completed activit	ties 1	5.1. and 15.2.		
20.	Teaching language			Macedonian				
21.	Course evaluation method			Internal evaluatio	on and	d student questi	onnaires	6
22.	22. Literature							
	. Mandatory literature							
N°	Author			Title		Publishe	r	Year
1.	Backovič M.			eta u polju ine električne struj	je	Masinski fakulte Sarajevo	et -	1965

2.	Backovič M.	Lijepljenje drveta zagrijavanjem elektrootpornim kontaktnim grijačima	Masinski fakultet - Sarajevo	1968
3.	Backovič M.	Uticajni faktori na proces i kvalitet lijepljenja furnira	Masinski fakultet - Sarajevo	1976
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.	Бахчеванџиев К.	Познавање на помошни материјали	УКИМ-ШФС-Скопје	2002
2.	Лјулјка Б.	Lijepljenje u tehnologiji finalnih proizvoda	Sumarski fakultet - Zagreb	1978
3.				

-	Course title		Technology of	furniture and final pro	ducte		
	Course titleTechnology of furniture and final productsCode171						
	Study group		FWE / DFI				
	Organizer of the study prog institute, department)	gram (unit,	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				
5.	Level (first, second, third c						
6.	Academic year / semester		IV / 7 (FWE) III / 5 (DFI)	7. Number of ECTS	6		
8.	Teacher		Prof. dr. Konstar	ntin Bahchevandjiev			
9.	Prerequisites for enrollmer course	t of the	-				
10.	Course goals (Competence Study of the general princ processes for the producti examples.	iples of final					
	1. Course outline Introduction, definition and classification; Structure of manufacturing processes; Tolerances and contact surface; Accuracy of processing; Leveling; Processing basic parts - details. From sawing lumber: cutting, over-measurement, surfacing, width processing, fasteners, holes, profiling, curvilinear processing, bending, turning, threading, rotating bodies, sculpting. From boards: cutting, equalization, veneer details, making covers, veneering, grinding. Compilation of sub-assemblies, frames, boards, adhesive bonding with HF current, assembling metal bonds. Finish sub-assemblies of boards: shaping, edge banding, drilling, anchoring. Final assembly. Technology of solid wood furniture: chair (cut, turned, bent), table, fronts for kitchens cabinets sideboards. Technology of panel furniture: refined, veneered, softforming and postforming. Technology of lamellated wood: panels, blocks, beams. Technology of joinery: window, balcony door, room door, floor and wall coverings. Furniture and carpentry of alternative materials, metal and plastic. Technology of packaging: crate, barrel. Quality control of furniture and joinery: purpose, characteristics, methods for products, labeling.						
12.	and plastic. Technology of p	backaging: cra	te, barrel. Quality				
	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises,	backaging: cra products, labeli consultation, p	te, barrel. Quality ng. project assignmen	y control of furniture a	nd joinery		
13.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour	backaging: cra products, labeli consultation, p	te, barrel. Quality ng. project assignmen 180	y control of furniture a	nd joinery		
13. 14.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes	backaging: cra products, labeli consultation, p	te, barrel. Quality ng. project assignmen 180 4 + 3	y control of furniture a t, individual self-learnin	nd joinery	y: purpose,	
13. 14.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour	backaging: cra products, labeli consultation, p	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture	y control of furniture a t, individual self-learnin es-theory	nd joinery g.	y: purpose,	
13. 14. 15.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities	backaging: cra products, labeli consultation, p	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work	nd joinery g.	y: purpose, 60 hours 45 hours	
13. 14. 15.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes	backaging: cra products, labeli consultation, p	te, barrel. Quality ng. 0roject assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments	nd joinery g.	y: purpose, 60 hours 45 hours 25 hours	
13. 14. 15.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities	backaging: cra products, labeli consultation, p	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments	nd joinery g.	y: purpose, 60 hours 45 hours 25 hours 25 hours	
13. 14. 15. 16.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities	oackaging: cra products, labeli consultation, p r s	te, barrel. Quality ng. 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments	g.	y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours	
13. 14. 15. 16.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities	oackaging: cra products, labeli consultation, p r s 17.1. Seminar	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments t home	nd joinery g.), 10 sco	y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re	
13. 14. 15. 16.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and atte	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments t home endance	nd joinery g. , 10 sco 20 sco	y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re	
13. 14. 15. 16. 17.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and attea inal exam / Partia	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments t home endance il exams)	nd joinery g. 10 sco 20 sco 70 sco	y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re re	
13. 14. 15. 16. 17.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a r work / project activities and attea inal exam / Partia less than 50	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments t home endance il exams) score	nd joinery g. 10 sco 20 sco 70 sco 5 (five)	y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re re (F)	
13. 14. 15. 16. 17.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and attea inal exam / Partia less than 50 from 51 to 60	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments t home endance il exams) score) score	nd joinery g. 10 sco 20 sco 70 sco 5 (five) 6 (six)	y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re re (F) (E)	
13. 14. 15. 16. 17.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and attea inal exam / Partia less than 50 from 51 to 60 from 61 to 70	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments al assignments t home endance il exams) score) score	nd joinery g. 10 sco 20 sco 70 sco 5 (five) 6 (six) 7 (seve	y: purpose, 60 hours 45 hours 25 hours 25 hours re re re (F) (E) en) (D)	
13. 14. 15. 16. 17.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercises seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and attea inal exam / Partia less than 50 from 51 to 60 from 71 to 80	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments t home endance il exams) score) score) score) score	nd joinery g. 10 sco 20 sco 70 sco 5 (five) 6 (six) 7 (seve 8 (eigh	y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re re (F) (E) en) (D) t) (C)	
13. 14. 15. 16. 17.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and attea inal exam / Partia less than 50 from 51 to 60 from 61 to 70 from 81 to 90	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments al assignments t home endance l exams) score) score) score) score	nd joinery g. 10 sco 20 sco 70 sco 5 (five) 6 (six) 7 (seve 8 (eigh 9 (nine	 y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re re (F) (E) (C) (B) 	
13. 14. 15. 16. 17. 18.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods Assessment criteria (Score	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F /Grade)	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercises seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and attea inal exam / Partia less than 50 from 51 to 60 from 71 to 80 from 91 to 10	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments t home endance il exams) score) score) score) score) score) score) score) score) score) score	nd joinery g. 10 sco 20 sco 70 sco 5 (five) 6 (six) 7 (seve 8 (eigh	 y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re re (F) (E) (C) (B) 	
13. 14. 15. 16. 17. 18. 19.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods Assessment criteria (Score Minimum score for signatu exam	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F /Grade)	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercise seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and attea inal exam / Partia less than 50 from 51 to 60 from 61 to 70 from 81 to 90 from 91 to 10 Completed a	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments al assignments t home endance l exams) score) score) score) score	nd joinery g. 10 sco 20 sco 70 sco 5 (five) 6 (six) 7 (seve 8 (eigh 9 (nine	 y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re re (F) (E) (C) (B) 	
13. 14. 15. 16. 17. 18. 19. 20.	and plastic. Technology of p characteristics, methods for p Study methods Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods Assessment criteria (Score Minimum score for signatu	oackaging: cra products, labeli consultation, p rs 17.1. Seminar 17.2. Classes 17.3. Tests (F /Grade)	te, barrel. Quality ng. project assignmen 180 4 + 3 15.1. Lecture 15.2 Exercises seminars, tea 16.1 Project 16.2 Individu 16.3 Study a work / project activities and attea inal exam / Partia less than 50 from 51 to 60 from 71 to 80 from 91 to 10 Completed a Macedonian	y control of furniture a t, individual self-learnin es-theory es (laboratory, auditory) am work assignments al assignments t home endance il exams) score) score) score) score) score) score) score) score) score) score	nd joinery g. 10 sco 20 sco 70 sco 5 (five) 6 (six) 7 (seve 8 (eigh 9 (nine 10 (ten	y: purpose, 60 hours 45 hours 25 hours 25 hours 25 hours re re re (F) (E) en) (D) (t) (C) (E) (B) (a) (A)	

22	Literature			
22.	1. Mandatory literature			
N°	Author	Title	Publisher	Year
1.	Бахчеванџиев К., Стефановски В.	Финална обработка на дрвото	УКИМ-Шумарски факултет - Скопје	1994
2.	Ljuljka B.	Tehnologija proizvodnje namjestaja	SIZ obrazovanja Zagreb	1977
3.				
22.	2. Additional literature			
N°	Author	Title	Publisher	Year
1.	Skakic D. Krdzovic A.	Finalna prerada drveta	Sumarski Fak. Beograd	2002
2.	Кавалов А., Русанов Х.	Технологија на мебелите	Издател.кшта БМСофија	1996
3.	Kollmann F.	Princilpes of Wood Science and Tehnology	Springer-Verlag Berlin	1975

1.	Course title		Technology of upholst	ered furniture			
2.	Code 482						
3.	Study group		FWE / DFI				
	Organizer of the study prog institute, department)	ram (unit,	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interior- Skopje				
5.	Level (first, second, third cy	vclce)	First cycle				
6.	Academic year / semester		IV / 8 7. Nun	nber of ECTS	6		
8.	Teacher		Prof. dr. Konstantin Bah	chevandjiev			
9.	Prerequisites for enrollment course	t of the	-				
10.	Course goals (Competences Students will learn the basic upholstered furniture, the use	techniques an		ogy of upholstery	and pro	oduction of	
	 Course outline General about upholstered furniture and upholstery technology; Styles of furniture; Quality and standards; Upholstery technology clasification on special procedures; Materials for upholstered furniture technology; Preparation of materials; Technology of upholstered furniture; Properties and quality of materials and finished products; Occupational safety and environment protection. Study methods 						
13	Lectures, auditory exercises, of Total available fund of hours	· · · ·	180				
	Weekly number of classes	5	2+2				
	Teaching activities					30 hours	
			,			30 hours	
16.	Other activities		16.1 Project assignments			40 hours	
			16.2 Individual assignments			40 hours	
			16.3 Study at home			40 hours	
17.	Assessment methods	17.1. Seminar				score	
		17.2. Classes				10 score	
		17.3. Tests (Fi	nal exam / Partial exams)	80 scor	e	
18.	Assessment criteria (Score/	Grade)	less than 50 score		5 (five)	(F)	
			from 51 to 60 score		6 (six)	(E)	
			from 61 to 70 score	from 61 to 70 score		en) (D)	
			from 71 to 80 score		8 (eight	t) (C)	
			from 81 to 90 score		9 (nine)) (B)	
			from 91 to 100 score		10 (ten) (A)	
19.	Minimum score for signatur exam	e and final	Completed activities 15.1. and 15.2.				
-	Teaching language		Macedonian				
21.	Course evaluation method		Internal evaluation ar	nd student questi	onnaires	6	
22.	Literature						
	. Mandatory literature			T			
N°	Author		Title	Publishe	er	Year	
	Илчев, Х.	декоратер		ЛТУ - Софија		1970	
2.	Ljuljka, B.	Tehnologij namještaja	a proizvodnje a	Sumarski fakuli Zagreb	tet -	1981	

3.	Манев, Т.		УКИМ-Шумарски факултет - Скопје	2000
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.				

1	Course title		Theory of wo	od cutting		
	Code		231	ou outling		
	Study group		FWE / DFI			
	Organizer of the study prog institute, department)	gram (unit,	University Ss.	Cyril and Methodius in Sko ign and Technology of Fur		d Interior-
5.	Level (first, second, third c	yclce)	First cycle			
6.	Academic year / semester		II / 3	7. Number of ECTS	6	
8.	Teacher		Prof. dr. Vladir	nir Koljozov		
9.	Prerequisites for enrollmer course	nt of the	-			
	Course goals (Competence Introducing students to the back Also, students are introduced setting up and fixing on the n Course outline	asic knowledge				
12.	Lectures: Basic concepts of v basic cutting types, basic cut Dynamics of the cutting proce cutting resistance and specifi factors on the cutting operation processes of wood cutting or frame saws, band saws and and classification of tools for cutting part of the tool, sharp and attaching to the working Exercises: Preparation of a s cutting, calculation of the cutt grinding. Study methods	ting directions, ess, cutting fore ic cutting powe on, the formation saw with set a circular saws, r woodworking, ening work tool machine. tudy on the bas	cutting kinema ces between the r in closed and on of cutting chi and swaged tee milling machine material for ma I individually for sic methods and	tics, absolutely sharp and it e cutting tool and the work open cutting processes, in ps in various cutting direct th, processing and calcula s, drills, lathes, grinders. G king cutting tools, increasing each tool with its preparated d processes of cutting and	real shar piece, sp npact of s ions. Ma tion of m General co ng the du tion, shar kinemati	p tool. ecific specific in odes in oncept rability of pening ics of
	-					
	Lectures, auditory exercises,			ent, individual self-learning].	
	Lectures, auditory exercises, Total available fund of hou		180 hours	ent, individual self-learning].	
14.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes		180 hours 2+2].	
14.	Lectures, auditory exercises, Total available fund of hou		180 hours 2+2 15.1. Lectu	ires-theory		30 hours
14.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes		180 hours 2+2 15.1. Lectu	ires-theory ises (laboratory, auditory),		30 hours
14. 15.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes		180 hours 2+2 15.1. Lectu 15.2 Exerci seminars, 1 16.1 Project	ires-theory ises (laboratory, auditory), team work ct assignments		30 hours 40 hours
14. 15.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities		180 hours 2+2 15.1. Lectu 15.2 Exerciseminars, 1 16.1 Project 16.2 Individ	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments		30 hours 40 hours 40 hours
14. 15. 16.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities	rs	180 hours 2+2 15.1. Lectu 15.2 Exerci seminars, 1 16.1 Project 16.2 Individ 16.3 Study	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments		30 hours40 hours40 hours40 hours
14. 15. 16.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities	rs 17.1. Seminar	180 hours 2+2 15.1. Lectu 15.2 Exerciseminars, f 16.1 Project 16.3 Study r work / project	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments r at home	10 scc	30 hours 40 hours 40 hours 40 hours re
14. 15. 16.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities	rs 17.1. Seminar 17.2. Classes	180 hours 2+2 15.1. Lectu 15.2 Exerci seminars, f 16.1 Project 16.3 Study r work / project activities and a	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments r at home ttendance	10 scc 10 scc	30 hours 40 hours 40 hours 40 hours re
14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities Assessment methods	rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	180 hours 2+2 15.1. Lectu 15.2 Exerciseminars, f 16.1 Project 16.2 Individ 16.3 Study r work / project activities and a inal exam / Par	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments at home ttendance tial exams)	10 scc 10 scc 80 sco	30 hours 40 hours 40 hours 40 hours ore ore re (2x40)
14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities	rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	180 hours 2+2 15.1. Lectu 15.2 Exerci seminars, f 16.1 Project 16.2 Indivio 16.3 Study r work / project activities and a inal exam / Par less than 5	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments dual assignments at home ittendance tial exams) i0 score	10 scc 10 scc 80 sco 5 (five)	30 hours 40 hours 40 hours 40 hours re re (2x40) (F)
14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities Assessment methods	rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	180 hours 2+2 15.1. Lectu 15.2 Exerciseminars, f 16.1 Project 16.2 Individ 16.3 Study r work / project activities and a final exam / Par less than 5 from 51 to	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments at home ttendance tial exams) 50 score 60 score	10 scc 10 scc 80 sco	30 hours 40 hours 40 hours 40 hours re re (2x40) (F)
14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities Assessment methods	rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	180 hours 2+2 15.1. Lectu 15.2 Exerciseminars, f 16.1 Project 16.2 Individ 16.3 Study r work / project activities and a inal exam / Par less than 5 from 51 to from 61 to	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments at home ittendance tial exams) i0 score 60 score 70 score	10 scc 10 scc 80 sco 5 (five) 6 (six) 7 (seve	30 hours 40 hours 40 hours 40 hours re (2x40) (F) (E) (E) (D)
14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities Assessment methods	rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	180 hours 2+2 15.1. Lectu 15.2 Exerciseminars, fill 16.1 Project 16.2 Individ 16.3 Study r work / project activities and a final exam / Par less than 5 from 51 to from 71 to	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments dual assignments at home ttendance tial exams) i0 score 60 score 70 score 80 score	10 scc 10 scc 80 sco 5 (five) 6 (six)	30 hours 40 hours 40 hours 40 hours re (2x40) (F) (E) (E) (D)
14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities Assessment methods	rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	180 hours 2+2 15.1. Lectu 15.2 Exerciseminars, f 16.1 Project 16.2 Individ 16.3 Study r work / project activities and a inal exam / Par less than 5 from 51 to from 61 to	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments dual assignments at home ttendance tial exams) i0 score 60 score 70 score 80 score	10 scc 10 scc 80 sco 5 (five) 6 (six) 7 (seve	30 hours 40 hours 40 hours 40 hours re re (2x40) (F) (E) en) (D) t) (C)
14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities Assessment methods	rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	180 hours 2+2 15.1. Lectu 15.2 Exerciseminars, fill 16.1 Project 16.2 Individ 16.3 Study r work / project activities and a final exam / Par less than 5 from 51 to from 71 to	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments at home ttendance tial exams) i0 score 60 score 70 score 80 score 90 score	10 scc 10 scc 80 sco 5 (five) 6 (six) 7 (seve 8 (eigh	30 hours 40 hours 40 hours 40 hours ore ore (E) (E) (E) (C) (B)
14. 15. 16. 17. 18.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities Assessment methods	17.1. Seminar 17.2. Classes 17.3. Tests (F 9/Grade)	180 hours2+215.1. Lecture15.2 Exerciseseminars, fright16.1 Project16.2 Individe16.3 Studyr work / projectactivities and ainal exam / Parless than 5from 51 tofrom 71 tofrom 81 tofrom 91 to	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments at home ttendance tial exams) i0 score 60 score 70 score 80 score 90 score	10 scc 10 scc 80 sco 5 (five) 6 (six) 7 (seve 8 (eigh 9 (nine	30 hours 40 hours 40 hours 40 hours ore ore (E) (E) (E) (C) (B)
14. 15. 16. 17. 18. 19.	Lectures, auditory exercises, Total available fund of hou Weekly number of classes Teaching activities Other activities Assessment methods Assessment criteria (Score Minimum score for signatu	17.1. Seminar 17.2. Classes 17.3. Tests (F 9/Grade)	180 hours2+215.1. Lecture15.2 Exerciseseminars, fright16.1 Project16.2 Individe16.3 Studyr work / projectactivities and ainal exam / Parless than 5from 51 tofrom 71 tofrom 81 tofrom 91 to	ures-theory ises (laboratory, auditory), team work ct assignments dual assignments dual assignments at home ttendance tial exams) i0 score 60 score 60 score 70 score 80 score 90 score 100 score 1 activities 15.1 and 15.2	10 scc 10 scc 80 sco 5 (five) 6 (six) 7 (seve 8 (eigh 9 (nine	30 hours 40 hours 40 hours 40 hours ore ore (E) (E) (E) (C) (B)

22.	Literature			
22.	1. Mandatory literature			
N°	Author	Title	Publisher	Year
1.	Р.Клинчаров, З.Трпоски, В.Кољозов	Теорија на режење на дрвото	УКИМ-Шумарски факултет - Скопје	2000
2.	Р.Клинчаров, З.Трпоски, В.Кољозов	Алат за механичка обработка на дрвото	УКИМ-Шумарски факултет - Скопје	2000
3.				
22.	2. Additional literature		·	·
N°	Author	Title	Publisher	Year
1.				
2.				
3.				

	1. Course title Veneers and veneered panels							
	Code		551					
3.	Study group		FWE					
	Organizer of the study prog institute, department)	gram (unit,		Cyril and Methodius in Sk ign and Technology of Fu		nd Interior-		
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		III / 5	7. Number of ECTS	6			
8.	Teacher		Prof. dr. Borche Iliev					
9.	Prerequisites for enrollmen course	nt of the	Signature: Wo	od anatomy, Technical pr	operties o	of wood		
	Course goals (Competence Introducing students to theore boards, carpentry boards, spe will also get acquainted with to properties of veneered and car	etical foundatio ecial kinds ven the methods ar	eer boards and nd standards for	other layered wood produ	ucts. The	students		
	11. Course outline Lectures: General terms for veneer production. Raw material for production of cut (refined) and peeled (constructive) veneers. Storage of raw material. Protection of raw material. Preparation of raw material for processing into veneers: mechanical preparation, hydro-thermal preparation. Technological systems for producing veneers: system for production of cut veneer, system for production of peeled veneers. Drying of veneers. Finishing cut veneers. Other types of veneers. Veneer panels: definition and clasification. Technological operations in the production of veneer panels. Storage of veneer panels. Using the raw material in manufacturing of veneer plates. Properties of veneer panels: physical, mechanical. Examining the properties of veneer panels and standards. Special types of veneer panels. Carpenter panels: definition and clasification. Standard carpenter panels. Special types carpenter panels. Properties of carpenter panels: physical, mechanical. Examining the properties of carpenter panels. Other layered wood products. Exercises: Solving tasks and problems related to the subject content, development of standards for testing the properties of the panels, laboratory tests of panels properties and checking the acquired							
	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and	and clasification er panels: phys layered wood p problems relat panels, laborato	n. Standard carr sical, mechanica products. ed to the subject	penter panels. Special typ al. Examining the properti ct content, development o	es carpe es of carp f standar	nter pentry ds for		
12.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p	and clasification er panels: phys layered wood p problems relat panels, laborato al exams.	n. Standard carp sical, mechanica products. red to the subject ory tests of pane	penter panels. Special typ al. Examining the properti et content, development o els properties and checkir	es carpe es of carp f standar ig the acc	nter pentry ds for quired		
	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises,	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises,	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pr	penter panels. Special typ al. Examining the properti et content, development o els properties and checkir	es carpe es of carp f standar ig the acc	nter pentry ds for quired		
13.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning.	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises,	n. Standard carp sical, mechanica products. ded to the subject ory tests of pane consultation, pr 6 EKTC × 30 h	penter panels. Special typ al. Examining the properti et content, development o els properties and checkir oject assignment (semina	es carpe es of carp f standar ig the acc	nter pentry ds for quired		
13. 14.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises,	n. Standard carp sical, mechanica products. ded to the subject ory tests of pane consultation, pr 6 EKTC × 30 h	oenter panels. Special typ al. Examining the properti et content, development o els properties and checkir roject assignment (semina ours = 180 hours +35 = 180 hours	es carpe es of carp f standar ig the acc	nter pentry ds for quired		
13. 14.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises,	n. Standard carp sical, mechanica products. ted to the subject ory tests of pane consultation, pr 6 EKTC × 30 h 45+30+35+35- 15.1. Lectu 15.2. Exerc	oenter panels. Special typ al. Examining the properti et content, development o els properties and checkir roject assignment (semina ours = 180 hours +35 = 180 hours	es carpe es of carp f standar ig the acc ar work), i	nter pentry ds for quired individual		
13. 14. 15.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises,	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pr 6 EKTC × 30 h 45+30+35+35- 15.1. Lectu 15.2. Exerc seminars, t	benter panels. Special typ al. Examining the properti et content, development o els properties and checkir roject assignment (semina ours = 180 hours ⊧35 = 180 hours ires-theory cises (laboratory, auditory	es carpe es of carp f standar ig the acc ar work), i	nter pentry ds for quired individual 45 hours		
13. 14. 15.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises,	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pr 6 EKTC × 30 h 45+30+35+35- 15.1. Lectu 15.2. Exerc seminars, t	ct content, development of els properties and checkin roject assignment (semina ours = 180 hours +35 = 180 hours res-theory cises (laboratory, auditory eam work, field work ct assignments (seminar	es carpe es of carp f standar ig the acc ar work), i	nter pentry ds for quired individual 45 hours 30 hours		
13. 14. 15.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises,	n. Standard carp sical, mechanica products. ted to the subject ory tests of pane consultation, pr 6 EKTC × 30 h 45+30+35+35- 15.1. Lectu 15.2. Exerc seminars, t 16.1. Proje	center panels. Special typ al. Examining the properti ct content, development o els properties and checkin roject assignment (semina ours = 180 hours +35 = 180 hours +35 = 180 hours res-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks	es carpe es of carp f standar ig the acc ar work), i	nter pentry ds for quired individual 45 hours 30 hours 35 hours		
13. 14. 15. 16.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises, rs	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pr 6 EKTC × 30 h 45+30+35+35- 15.1. Lectu 15.2. Exerc seminars, t 16.1. Proje 16.2. Indivi	center panels. Special typ al. Examining the properti ct content, development o els properties and checkin roject assignment (semina ours = 180 hours +35 = 180 hours +35 = 180 hours res-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks	es carpe es of carp f standar ig the acc ar work), i	nter pentry ds for quired individual 45 hours 30 hours 35 hours 35 hours 35 hours		
13. 14. 15. 16.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises, rs 17.1. Seminar	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pr 6 EKTC × 30 h 45+30+35+35- 15.1. Lectu 15.2. Exerciseminars, t 16.1. Proje 16.2. Indivi 16.3. Study	penter panels. Special typ al. Examining the properti et content, development of els properties and checkin roject assignment (semina ours = 180 hours +35 = 180 hours +35 = 180 hours tres-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks y at home	es carpe es of carp f standar ig the acc ar work), i), work)	nter pentry ds for quired individual 45 hours 30 hours 35 hours 35 hours ore		
13. 14. 15. 16.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities	and clasification er panels: phys layered wood p problems relat panels, laborato al exams. lab exercises, rs 17.1. Seminar 17.2. Classes	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pro- 6 EKTC × 30 h 45+30+35+35- 15.1. Lectu 15.2. Exerc seminars, t 16.1. Proje 16.2. Indivi 16.3. Study	benter panels. Special typ al. Examining the properti et content, development of els properties and checkin roject assignment (semina ours = 180 hours +35 = 180 hours +35 = 180 hours +35 = 180 hours tres-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks v at home ttendance	es carpe es of carp f standar g the acc ar work), i ar work)), work)	nter pentry ds for quired individual 45 hours 30 hours 35 hours 35 hours ore ore		
13. 14. 15. 16. 17.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities	and clasification er panels: phys layered wood p problems relat oanels, laborato al exams. lab exercises, rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	n. Standard carp sical, mechanica products. ted to the subject ory tests of pane consultation, pr 6 EKTC × 30 h 45+30+35+35- 15.1. Lectu 15.2. Exercise seminars, t 16.1. Proje 16.2. Indivi 16.3. Study work / project activities and a	penter panels. Special typ al. Examining the properti et content, development o els properties and checkin roject assignment (semina ours = 180 hours +35 = 180 hours +35 = 180 hours +35 = 180 hours tres-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks v at home ttendance tial exams)	es carpe es of carp f standar g the acc ar work), i , work) 10 sco 10 sco 80 sco	nter pentry ds for quired individual 45 hours 30 hours 35 hours 35 hours ore ore		
13. 14. 15. 16. 17.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	and clasification er panels: phys layered wood p problems relat oanels, laborato al exams. lab exercises, rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pro- 6 EKTC × 30 h 45+30+35+35- 15.1. Lectur 15.2. Exerc seminars, t 16.1. Proje 16.2. Indivi 16.3. Study work / project activities and a inal exam / Pare	benter panels. Special typ al. Examining the properti et content, development of els properties and checkin roject assignment (semina ours = 180 hours +35 = 180 hours +35 = 180 hours +35 = 180 hours tres-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks v at home ttendance tial exams) 0 score	es carpe es of carp f standar ig the acc ar work), i ar work), i 10 sco 10 sco 80 sco (2×40)	nter pentry ds for quired individual 45 hours 30 hours 35 hours 35 hours ore ore ore (F)		
13. 14. 15. 16. 17.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	and clasification er panels: phys layered wood p problems relat oanels, laborato al exams. lab exercises, rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	n. Standard carp sical, mechanica products. ted to the subject ory tests of pane consultation, pr <u>6 EKTC × 30 h</u> 45+30+35+35- <u>15.1. Lectu</u> 15.2. Exercise seminars, t <u>16.1. Proje</u> <u>16.2. Indivi</u> <u>16.3. Study</u> work / project activities and a inal exam / Part	penter panels. Special typ al. Examining the properti et content, development o els properties and checkir roject assignment (semina ours = 180 hours +35 = 180 hours +35 = 180 hours +35 = 180 hours +35 = 180 hours tres-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks v at home ttendance tial exams) 0 score 60 score	es carpe es of carp f standar ig the acc ar work), i ar work), i 10 sco 10 sco 10 sco (2×40) 5 (five) 6 (six)	nter pentry ds for quired individual 45 hours 30 hours 35 hours 35 hours ore ore ore () (F)		
13. 14. 15. 16. 17.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	and clasification er panels: phys layered wood p problems relat oanels, laborato al exams. lab exercises, rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pro- 6 EKTC × 30 h 45+30+35+35- 15.1. Lectur 15.2. Exerc seminars, t 16.1. Proje 16.2. Indivi 16.3. Study work / project activities and a inal exam / Part less than 5 from 51 to	benter panels. Special typ al. Examining the properti et content, development of els properties and checkin roject assignment (semina ours = 180 hours +35 = 180 hours +35 = 180 hours +35 = 180 hours res-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks v at home ttendance tial exams) 0 score 60 score 70 score	es carpe es of carp f standar ig the acc ar work), i ar work), i 10 sco 10 sco 10 sco (2×40) 5 (five) 6 (six)	nter pentry ds for quired individual 45 hours 30 hours 35 hours 35 hours 35 hours ore ore ore (E) (E) en) (D)		
13. 14. 15. 16. 17.	panels. Properties of carpent panels and standards. Other Exercises: Solving tasks and testing the properties of the p knowledge through two partia Study methods Lectures, auditory exercises, self-learning. Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	and clasification er panels: phys layered wood p problems relat oanels, laborato al exams. lab exercises, rs 17.1. Seminar 17.2. Classes 17.3. Tests (F	n. Standard carp sical, mechanica products. red to the subject ory tests of pane consultation, pr <u>6 EKTC × 30 h</u> 45+30+35+35- <u>15.1. Lectu</u> 15.2. Exercise seminars, t <u>16.2. Indivi</u> 16.3. Study work / project activities and a inal exam / Part less than 5 from 51 to from 61 to	benter panels. Special typ al. Examining the properti et content, development of els properties and checkir roject assignment (seminal ours = 180 hours +35 = 180 hours +35 = 180 hours +35 = 180 hours tres-theory cises (laboratory, auditory eam work, field work ct assignments (seminar dual tasks y at home ttendance tial exams) 0 score 60 score 70 score 80 score	es carpe es of carp f standar ig the acc ar work), i , work) 10 sco 10 sco (2×40) 5 (five) 6 (six) 7 (seve	nter pentry ds for quired individual 45 hours 30 hours 35 hours 35 hours 35 hours ore ore ore (E) (E) (E) (en) (D) nt) (C)		

19.	19. Minimum score for signature and final exam		Completed activities 15.1., 15.2. and 16.1.			
20	. Teaching language		Macedonian			
21	. Course evaluation method		Internal evaluation and student questionnaires			
22	Literature					
22.	1. Mandatory literature					
N°	Author		Title	Publisher	Year	
1.	Стефановски, В., Рабаџиски, Б.		оеработка на дрвото ири и слоевити	Универзитет "Св. Кирил и Методиј" - Скопје Шумарски факултет - Скопје	1994	
22.	2. Additional literature					
N°	Author		Title	Publisher	Year	
1.	Mešić, N.	Furniri, furnirs	ske i stolarske ploče	"Grafika Šaran" - Sarajevo	1998	
2.	Nikolić, M.	Furniri i slojev	vite ploče	"Građevinska knjiga - Beograd	1988	
3.	Шишков, И.	Технология н слоестата дъ	на фурнира и ървесина	"Земиздат" - София	1994	

1.	Course title		Woo	od anatomy			
2.	Code		211	•			
3.	Study group		FWE	E / DFI			
4.	Organizer of the study prog institute, department)			ulty of Design and	d Methodius in Sko Technology of Fur		d Interior-
5.	Level (first, second, third c	yclce)	First	cycle			
6.	Academic year / semester		I / 1	7. N	umber of ECTS	6	
	Teacher		Prof	. dr. Mitko Nacevs	ki		
9.	Prerequisites for enrollmen course	t of the					
	Course goals (Competence Students are introduced to the basis of its physical and mech identification of tree species of Course outline	e macroscopic, hanical properti	ies. A	lso, students are			
	Lectures: Task and developm microscopic structure of wood systematics. Microscopic structure broadleaf species wood. Grow of durable items. Microscopic structure of the cell membran of wood. Tilly and resin chann Exercises: Microscopic identi	d. Samples for i icture of the cor wth of wooden structure of the ie. Annual ring. nels. Sapwood,	identi niferc plant e cell Impa mari	ification of wood s ous species wood s. Primary growth membrane and it act of the annual r row and mature w	pecies. Fundamen Microscopic struct Secondary growth s properties. Subm ng width on the teo ood.	tals of pl ture of th n. Establ hicroscop	e ishment iic
12.	Study methods Lectures, laboratory exercises	s . consultation	. indi	vidual self-learnin	a.		
13.	Total available fund of hour		180		5.		
	Weekly number of classes		2+2				
	Teaching activities			15.1. Lectures-th	eorv		30 hours
	U				aboratory, auditory)	30 hours
16.	Other activities			16.1 Project assi		,	0 hours
				16.2 Individual as	signments		60 hours
				16.3 Study at ho	ne		60 hours
	Assessment methods	17.1. Classes	activ	ities and attendan	се	20 sco	re
17.		17.2. Tests (Fi	nal e	xam / Partial exa	ns)	80 sco	re (2x40)
18.	Assessment criteria (Score	/Grade)		less than 50 sco	e	5 (five)	
				from 51 to 60 sco	ore	6 (six)	
				from 61 to 70 sco	ore	7 (seve	en)
				from 71 to 80 sco	ore	8 (eigh	t)
				from 81 to 90 sco	ore	9 (nine)
				from 91 to 100 se	ore	10 (ten)
19.	Minimum score for signatu	re and final ex	am	Completed activi	ties 15.1 and 15.2		
	Teaching language			Macedonian			
21.	Course evaluation method			Internal evaluation	n and student que	stionnair	es
22.	Literature						
	. Mandatory literature						
N°	Author			Title	Publishe	er	Year
1.	Живоин Георгиевски			ехнички својства , Анатомија на	на УКИМ-Шумаро факултет - Ско		1994
2.							

3.				
22.	2. Additional literature			
N°	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Wood ca	arving			
2.	Code		411	•			
3.	Study group		FWE / DI	=1			
4.	Organizer of the study prog institute, department)	ıram (unit,		y Ss. Cyril and N f Design and Te			d Interior-
5.	Level (first, second, third c	yclce)	First cycl	е			
6.	Academic year / semester		I / 1	7. Num	ber of ECTS	6	
8.	Teacher		Prof. dr.	Konstantin Baho	hevandjiev		
9.	Prerequisites for enrollmen course	t of the	-				
10.	Course goals (Competence Introduction to basic techniq works by wood carving, prote	ues and proce			vood carving, p	roductior	n of artistic
11.	Course outline Generally about carving and data about wood as a raw m and accessories, Maintenand Types of carvings; Technolog totems; Figurative-decorative protection of the carvings; restoration; Petrification; Wor	aterial for this ce and sharper gy of carving; plastics; scul polychromatic	purpose, ning of too Carving o oture carv	Supply and stor ols, Preparation rnaments; Wood ing and working	age of wood, W and treatment o d-carving and x with natural fig	/orking s of wood f lografy; ures; Fir	pace, tools for carving, Masks and hishing and
	Study methods Lectures, auditory exercises,		project ass	ignment, individ	ual self-learning		
13.	Total available fund of hour	rs	180				
14.	Weekly number of classes		2+2				
15.	Teaching activities		15.1.	Lectures-theory			30 hours
				Exercises (labor nars, team work	atory, auditory),		30 hours
16.	Other activities		16.1	Project assignme	ents		40 hours
			16.2	Individual assigr	nments		40 hours
			16.3	Study at home			40 hours
17.	Assessment methods	17.1. Seminar	work / pr	oject		10 scor	re
		17.2. Classes	activities	and attendance		10 scor	re
		17.3. Tests (F	inal exam	/ Partial exams)		80 scor	re
18.	Assessment criteria (Score	/Grade)		han 50 score		5 (five)	(F)
				51 to 60 score		6 (six)	. ,
			_	61 to 70 score		7 (seve	
				71 to 80 score		8 (eigh	, , ,
				81 to 90 score		9 (nine	, , ,
				91 to 100 score		10 (ten) (A)
19.	Minimum score for signature exam	re and final		oleted activities	15.1. and 15.2.		
	Teaching language		Mace	donian			
21.	Course evaluation method		Interr	al evaluation an	id student quest	ionnaires	3
22.	Literature						
	. Mandatory literature				1		
N°	Author		Title	9	Publishe	er	Year
	Петков. И.	Да се нау		оворезба	Софија		1988
2.	Ќорнаков. Д.	Македоно	ска резба		Скопје		1988

3.	Шеди. В.	Художествено обработване на дрвото	Софија	1982
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.	Крстески. З., Крстески. Ј.	Тајните во копаничарството	Битола	2002
2.	Манев. Т.	Резбарство, Интерна скрипта	УКИМ-Шумарски факултет, Скопје	2001
3.				

1.	Course title		Wood in C	onstruction						
2.	Code		431							
3.	Study group		FWE / DFI							
4.	Organizer of the study prog institute, department)	gram (unit,		Ss. Cyril and Methodius in S Design and Technology of F		nd Interior-				
5.	Level (first, second, third c	yclce)	First cycle							
6.	Academic year / semester		II / 3	7. Number of ECTS	6					
8.	Teacher		Prof. dr. Bo	rche Iliev						
9.	Prerequisites for enrollmer course	nt of the	Signature ir	n descriptive geometry and	technical r	nechanics				
10.	Course goals (Competence Introducing students to techn elements, wood products and	ical wood, its a			, wooden s	structural				
12.	Technical wood. Technical po structures, function, classifica roof truss constructions. Glue and protection from moisture Application of insulation mate classification and constructio floors. Lightweight walls: func wood, wood panels, wood-co classification and installation. ceiling surfaces with wooden Wooden stairs: function, class Exercises: Solving problems from appropriate chapters (pre exams.	ation, forms and ed laminated we . Materials for p erials in objects n. Wooden floo ction, classificat onstruction pane . Interior doors: linings. Low, m sification, forms and tasks rela roject assignme	d constructio ood beams. protection ag wooden de or coverings: tion and con els and plast function, cla nedium and l s and constr ted to the co ents) and che	n. Classic wooden roof cor Sound and thermal protect ainst heat, sound, fire and eck floor structures and ceil marine floors, parquet floo struction. Lightweight partit erboard panels. Windows: assification and installation. high wall coating. Hanging uction. Design of wooden s purse content, preparation of ecking knowledge acquired	nstructions. on, fire pro moisture. ings: funct rs and lam ion walls n function, Coating on ceiling pan tairs. of graphic e through tw	Wooden otection ion, inate nade of f walls and els. exercises				
40	Lectures, auditory exercises,		, ,		ng.					
-	Total available fund of hou	rs		0 hours = 180 hours						
	Weekly number of classes		I	40+40 = 180 hours						
15.	Teaching activities			ctures-theory		30 hours				
				ercises (laboratory, auditor s, team work	ry),	30 hours				
16.	Other activities			oject assignments		40 hours				
				, ,		40 hours				
			16.3. St	udy at home		<u>`</u>				
17.	Начин на оценување									
		17.1. Project assignments10 score17.2. Classes activities and attendance10 score				40 hours re				
				d attendance	10 sco 10 sco	re				
			activities an			re re re				
18.	Assessment criteria (Score	17.2. Classes 17.2. Tests (F	activities an inal exam / F		10 sco 80 sco	re re re				
18.	Assessment criteria (Score	17.2. Classes 17.2. Tests (F	activities an inal exam / F less tha	Partial exams)	10 sco 80 sco (2×40)	re re re (F)				
18.	Assessment criteria (Score	17.2. Classes 17.2. Tests (F	activities an inal exam / F less tha from 51	Partial exams) n 50 score	10 sco 80 sco (2×40) 5 (five 6 (six)	re re re (F)				
18.	Assessment criteria (Score	17.2. Classes 17.2. Tests (F	activities an inal exam / F less tha from 51 from 61	Partial exams) n 50 score to 60 score	10 sco 80 sco (2×40) 5 (five 6 (six)	re re (F) (E) en) (D)				
18.	Assessment criteria (Score	17.2. Classes 17.2. Tests (F	activities an inal exam / F less tha from 51 from 61 from 71	Partial exams) n 50 score to 60 score to 70 score	10 sco 80 sco (2×40) 5 (five) 6 (six) 7 (sev	re re (F) (E) en) (D) it) (C)				
18.	Assessment criteria (Score	17.2. Classes 17.2. Tests (F	activities an inal exam / F less tha from 51 from 61 from 71 from 81	Partial exams) n 50 score to 60 score to 70 score to 80 score	10 sco 80 sco (2×40) 5 (five 6 (six) 7 (sev 8 (eigh	re re (F) (E) en) (D) it) (C) e) (B)				

20	. Teaching language		Macedonian		
21	. Course evaluation method		Internal evaluation and student questionnaires		
22	. Literature				
22.	1. Mandatory literature				
N^{o}	Author		Title	Publisher	Year
1.	Илиев, Б., Јакимовска Поповска, В.	Дрвноиндуст градежништи	риско во-Интерна скрипта	УКИМ-Шумарски факултет - Скопје	2009
22.	2. Additional literature	·		·	
N°	Author		Title	Publisher	Year
1.	Киријас, Т.	Дрвени конс	грукции	УКИМ - Скопје	1978
2.	Томиќ, Љ., Пљаковски, Д. Филиповски, Љ.	Архитектонс	ки конструкции I дел	УКИМ - Скопје	1985
3.	Gojković, M.	Drvene konst	rukcije	Građevinski fakultet - Beograd Naučna knjiga - Beograd	1985

1.	Course title		Wood plast	ification		
2.	Code		412			
3.	Study group		FWE / DFI			
	Organizer of the study prog institute, department)	gram (unit,		s. Cyril and Methodius in Sk esign and Technology of Fu		d Interior-
5.	Level (first, second, third c	yclce)	First cycle			
6.	Academic year / semester		1/2	7. Number of ECTS	6	
8.	Teacher		Prof. dr. Bra	inko Rabadziski		
9.	Prerequisites for enrollmen course	it of the	-			
	Course goals (Competence Students will be introduced to methods. Attention will focus modern methods and techno Course outline General on thermal wood pro	o bending the w on thermal pro logies in proces	cessing of th ssing.	e raw material in the form of	logs in u	sing
	heat changes. Methods of ca heated. Temperature change of the wood. Plastification of and equipment for steaming of devices. Plastification of saw steaming of sawn assortment technological analysis of steat Methods and modes for boilin wood. Technical and technological wood. Plastification of wood we the wood for bending.	is in the phase wood by steam of logs and pris in timber assort ts. Methods for amer for sawn t ing of wood. De ogical analysis	of cooling. P ning. Plastifica ms. Technica ments. Stear plastification imber assort vices for boil of the pool for	lastification of the wood. The ation of logs and prisms. Wo al and technological analysis ning of sawn timber assortments of sawn timber assortments ments. Plastification of wood ing of wood. Plastification he or boiling of wood. Features	ermal plas rking tech s of steam ents. Dev s. Technic I by boilin eat for boi of plastisi	stification nnique ning vices for cal and g. ling the zed
12.	Study methods Lectures, auditory exercises,	consultation, p	project assign	ment, individual self-learning	g.	
13.	Total available fund of hour	rs	180 hours			
	Weekly number of classes		2+2			
15.	Teaching activities			ctures-theory		30 hours
				ercises (laboratory, auditory) s, team work	,	30 hours
16.	Other activities		16.1 Pro	ject assignments		40 hours
			16.2 Ind	ividual assignments		40 hours
			16.3 Stu	dy at home		40 hours
17.	Assessment methods	17.1. Seminar	work / proje	ct	10 scc	ore
		17.2. Classes	activities and	d attendance	10 scc	ore
		17.3. Tests (F			80 sco	re (2x40)
18.	Assessment criteria (Score	/Grade)		n 50 score	5 (five)	(F)
			from 51	to 60 score	6 (six)	(E)
			from 61	to 70 score	7 (seve	en) (D)
			from 71	to 80 score	8 (eigh	t) (C)
			from 81	to 90 score	9 (nine) (B)
			from 91	to 100 score	10 (ten) (A)
19.	Minimum score for signatu exam	re and final	Complet	ed activities 15.1, 15.2 and ²	16.1.	
20.	Teaching language		Macedo	nian		
21.	Course evaluation method		Internal	evaluation and student ques	tionnaires	6
22	Literature		1	·		

22.	22.1. Mandatory literature								
N^{o}	Author	Title	Publisher	Year					
1.	Б. Рабаџиски, Г. Златески	Хидротермичка обработка на дрвото, II дел – Пластификација на дрвото	УКИМ-ФДТМЕ-Скопје	2012					
2.									
3.									
22.	2. Additional literature								
N°	Author	Title	Publisher	Year					
1.									
2.									
3.									

1.	Course title		Wo	od quality te	sting			
2.	Code		761					
3.	Study group		FW	FWE				
	Organizer of the study prog institute, department)	ram (unit,	Fac	University Ss. Cyril and Methodius in Skopje Faculty of Design and Technology of Furniture and Interio Skopje				
5.	Level (first, second, third cy	vclce)	Fire	First cycle				
6.	Academic year / semester		III /			ber of ECTS	6	
8.	Teacher		Pro	of. dr. Mitko Na	cevski			
9.	Prerequisites for enrollment course	t of the	-	-				
	Course goals (Competences Determination of quality levels to manufacture certain wood of the success of the production.	to form a bas or wood-based						
	11. Course outline Lectures: Testing the quality of wood in terms of anatomical and technical properties, according to standards for wood and IMRAD organizational structure. Methods for determination of: wood density, wood pressure strength, wood bending strength, wood splitting strength, wood impact strength and wood shear strength. Quality levels: static level, pressure strength level, rigidity level, dynamic level, splitting level, shear level. Wood quality classification and posibilities for use. Factors cause variations in wood quality. Wood quality of species with economic importance. Exercises: Solving task for determining the quality and use value of the wood.							lensity, and level,
	Study methods Lectures, laboratory exercises		1		arning.			
	Total available fund of hours	S	180					
	Weekly number of classes		2+2					
15.	15. Teaching activities			, ,			30 hours	
				, , , , , , , , , , , , , , , , , , ,			30 hours	
16.	Other activities			16.1 Project assignments				40 hours
							40 hours	
		47.4 0100000	ti	16.3 Study at home stivities and attendance			00	40 hours
17.							20 scor	
10	Assessment criteria (Score/		IIIai	exam / Partial exams) less than 50 score			80 scor 5 (five)	re (2x40)
10.	Assessment chiena (Score/	Glaue)		from 51 to 60 score		6 (six)		
				from 61 to 70 score		7 (seve	n)	
			·	from 71 to 80 score		8 (eight	,	
				from 81 to 90 score		9 (nine	,	
							10 (ten	,
19.	Minimum score for signatur exam	e and final		Completed ac		15.1 and 15.2		/
20.	Teaching language			Macedonian				
	Course evaluation method				ation an	d student questi	onnaires	5
	Literature					1		
	. Mandatory literature							
N°	Author			Title		Publishe	r	Year
	Живоин Георгиевски	дрвото – дрвото, II	Анатомија и технички својства на УКИМ-Шумарски дрвото – I дел Анатомија на факултет – Скопје дрвото, II делТехнички својства на дрвото			1994		

2.				
3.				
22.2. Ad	ditional literature			
N°	Author	Title	Publisher	Year
1.				
2.				
3.				

1.	Course title		Wood surfa	ce processi	ng			
2.	Code		182					
3.	Study group		FWE / DFI					
	Organizer of the study prog institute, department)	ıram (unit,						
5.	Level (first, second, third c	yclce)	First cycle					
6.	Academic year / semester		IV / 8	7. Num	ber of ECTS	6		
8.	Teacher		Prof. dr. Kon	stantin Baho	hevandjiev			
9.	Prerequisites for enrollmen course	t of the	-					
10.	Course goals (Competences) Students will learn about the theoretical and practical foundations and procedures in surface processing of the production of furniture and interior, surface preparation and application of materials for surface processing with protective and aesthetic role in the technology of final products of furniture and interior.							
	11. Course outline General terms for surface processing of wood; Quality and standards; Wood as a base for surface processing; Test and control of materials before application, during application and after application and their hardening; Materials and methods for preprocessing; Materials and methods for protective and decorative processing; Drying and hardening of applied materials; Machining of hardened materials on wood surfaces; Technological processes in the surface processing of wood; Surface processing of the interior; Surface processing of the exterior; Working conditions and hygienic-technical safety measures.							
12.	Study methods Lectures, auditory exercises,	consultation, p	roject assignr	nent, individ	ual self-learning			
13.	Total available fund of hour		180		0			
14.	Weekly number of classes		3+2					
	Teaching activities		15.1. Lectures-theory 45 hours					
	-		15.2 Exercises (laboratory, auditory), 30 seminars, team work			30 hours		
16.	Other activities		16.1 Project assignments 35 hours			35 hours		
			16.2 Individual assignments				35 hours	
			16.3 Study at home 35 ho				35 hours	
17.	Assessment methods	17.1. Seminar	r work / project 10 sco			10 scor	e	
		17.2. Classes	activities and	activities and attendance 10 score			e	
		17.3. Tests (F	inal exam / Pa	al exam / Partial exams) 8			80 score	
18.	Assessment criteria (Score	/Grade)	less than	less than 50 score		5 (five) (F)		
			from 51 to	from 51 to 60 score		6 (six)	(E)	
			from 61 to	from 61 to 70 score		7 (seven) (D)		
			from 71 to	from 71 to 80 score		8 (eight	t) (C)	
			from 81 to	from 81 to 90 score 9 (nin		9 (nine)) (B)	
			from 91 to	from 91 to 100 score 10 (ten) (A)) (A)	
19.	Minimum score for signatu exam	re and final	Complete	ed activities	15.1. and 15.2.			
20.	Teaching language		Macedon	ian				
21.	Course evaluation method		Internal e	valuation an	id student questi	onnaires	3	
22.	Literature							
	. Mandatory literature							
N°	Author		Title		Publishe	er	Year	
1.	Jaić, M., Zivanović, R.		a obrada drve naterijala; Kva		Sumarski fakul Beograd	tet -	1993	

2.	Jaić, M., Zivanović-Trbojević, R.		Sumarski fakultet - Beograd	2000
3.	Janković, A.:		Sumarski fakultet - Beograd	1975
22.	2. Additional literature			
N^{o}	Author	Title	Publisher	Year
1.	Ljuljka, B.	Površinska obrada drva	Sumarski fakultet - Zagreb	1990
2.	Т. Манев	Површинска обработка на дрвото, Интерна скрипта	Скопје	1993
3.				

	Course title		Woo	den prefab	ricated objects		
2.	Code		462				
3.	Study group		FWE	FWE / DFI			
	Organizer of the study prog institute, department)	gram (unit,		Ity of Desigr	ril and Methodius in Sko n and Technology of Fur		nd Interior-
5.	Level (first, second, third c	yclce)	First	cycle			
6.	Academic year / semester		III / e	6	7. Number of ECTS	6	
8.	Teacher		Prof.	dr. Borche	lliev		
9.	Prerequisites for enrollmer course	nt of the	Sign	ature in dese	criptive geometry and te	chnical n	nechanics
	Course goals (Competence Students are introduced to th prefabricated objects, as well are introduced to the structur Course outline	e theoretical fo as constructio	n sys	tems of woo	den prefabricated objec		
	Lectures: Basic knowledge on construction of wooden prefabricated objects. Wood and wood materials for construction of wooden prefabricated objects. Non-wood materials in the construction of wooden prefabricated objects. Wooden prefabricated objects: purpose and classification. General requirements of wooden prefabricated objects: functional, technical, economic. Construction of wooden prefabricated objects for living. Structural systems of prefabricated wooden objects. Modern systems. Panel and skeleton systems. Fine-panel system system. Huge-panel system. Physics of wooden structures: sound and thermal protection, fire protection and protection from moisture. Materials for protection against heat, sound, fire and moisture. Application of materials for protection. Construction elements of the objects: foundations, waterproofing, foundation ring, floor construction, floor coverings, walls-external and internal, ceilings (deck floor structures), roof construction. Joints construction-joints details: connecting walls, walls with foundation ring, walls with ceiling. Wooden sustainable construction: sustainable wood, ecological dimension, durability, security and adaptability, economy in energy terms. Exercises: Solving problems and tasks related to the course content, preparation of graphic exercises from appropriate chapters (project assignments) and checking knowledge acquired through two partial						
12.	exams. Study methods Lectures, auditory exercises, consultation, project assignment, individual self-learning.						o partial
	-	consultation, p	projec	t assignmen	t, individual self-learning		o partial
	-				t, individual self-learning urs = 180 hours		o partial
13.	Lectures, auditory exercises,		6 EC	TS × 30 hou			o partial
13. 14.	Lectures, auditory exercises, Total available fund of hour		6 EC	TS × 30 hou	urs = 180 hours 0 = 180 hours		o partial
13. 14.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes		6 EC	TS × 30 hou 30+40+40+4 15.1. Lectur	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor	J	
13. 14. 15.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes		6 EC	CTS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor	J	30 hours
13. 14. 15.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities		6 EC	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work	J	30 hours 30 hours
13. 14. 15.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities		6 EC	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work ot assignments dual assignments	J	30 hours 30 hours 40 hours
13. 14. 15. 16.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities		6 EC	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec 16.2. Indivic 16.3. Study	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work ot assignments dual assignments	J	30 hours 30 hours 40 hours 40 hours 40 hours
13. 14. 15. 16.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities	rs	6 EC 30+3	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec 16.2. Individ 16.3. Study ments	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work of assignments dual assignments at home	y),	30 hours 30 hours 40 hours 40 hours 40 hours re
13. 14. 15. 16.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities	rs 17.1. Project a	6 EC 30+3 assign	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec 16.2. Indivic 16.3. Study ments ties and atte	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work et assignments dual assignments at home endance	y), 10 sco	30 hours 30 hours 40 hours 40 hours 40 hours re re
13. 14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities	17.1. Project a 17.2. Classes 17.2. Tests (F	6 EC 30+3 assign	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec 16.2. Indivic 16.3. Study ments ties and atte	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work of assignments dual assignments at home endance I exams)	y), 10 sco 10 sco 80 sco	30 hours 30 hours 40 hours 40 hours 40 hours re re re
13. 14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	17.1. Project a 17.2. Classes 17.2. Tests (F	6 EC 30+3 assign	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec 16.2. Individ 16.3. Study ments ties and atte xam / Partia	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work of assignments dual assignments at home endance I exams)	y), 10 sco 10 sco (2×40)	30 hours 30 hours 40 hours 40 hours 40 hours re re re (F)
13. 14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	17.1. Project a 17.2. Classes 17.2. Tests (F	6 EC 30+3 assign	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec 16.2. Indivic 16.3. Study ments ties and atter xam / Partia less than 50	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work of assignments dual assignments at home endance I exams) 0 score	y), 10 sco 10 sco (2×40) 5 (five)	30 hours 30 hours 40 hours 40 hours 40 hours re re re (F) (E)
13. 14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	17.1. Project a 17.2. Classes 17.2. Tests (F	6 EC 30+3 assign	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec 16.2. Indivic 16.3. Study ments ties and atte xam / Partia less than 50 from 51 to 6	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work et assignments dual assignments at home endance I exams) 0 score 50 score 70 score	y), 10 sco 10 sco (2×40) 5 (five) 6 (six)	30 hours 30 hours 40 hours 40 hours 40 hours re re (F) (E) (E) (D)
13. 14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	17.1. Project a 17.2. Classes 17.2. Tests (F	6 EC 30+3 assign	TS × 30 hou 30+40+40+40 15.1. Lectur 15.2. Exerc seminars, te 16.1. Project 16.2. Indivice 16.3. Study ments ties and attents ties and attents ties than 50 from 51 to 6 from 61 to 7	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work of assignments dual assignments at home endance I exams) 0 score 00 score 70 score 80 score	y), 10 sco 10 sco (2×40) 5 (five) 6 (six) 7 (seve	30 hours 30 hours 40 hours 40 hours 40 hours re re re (F) (E) (E) (C)
13. 14. 15. 16. 17.	Lectures, auditory exercises, Total available fund of hour Weekly number of classes Teaching activities Other activities Assessment methods	17.1. Project a 17.2. Classes 17.2. Tests (F	6 EC 30+3 assign	TS × 30 hou 30+40+40+4 15.1. Lectur 15.2. Exerc seminars, te 16.1. Projec 16.2. Indivic 16.3. Study ments ties and attend xam / Partia less than 50 from 51 to 6 from 61 to 7 from 71 to 8	urs = 180 hours 0 = 180 hours res-theory ises (laboratory, auditor eam work ot assignments dual assignments at home endance I exams) 0 score 30 score 30 score 30 score 30 score	y), 10 sco 10 sco 2×40) 5 (five) 6 (six) 7 (seve 8 (eigh	30 hours 30 hours 40 hours 40 hours 40 hours re re re (F) (E) (E) (E) (E) (C) (B)

20. Teaching language			Macedonian			
21. Course evaluation method Internal evaluation and student questionnair				s		
22	Literature					
22.	1. Mandatory literature					
N°	N° Author		Title	Publisher	Year	
1.	Илиев, Б., Јакимовска Поповска, В.	Дрвноиндустриско градежништво-Интерна скрипта		Универзитет "Св. Кирил и Методиј" - Скопје Шумарски факултет - Скопје	2009	
22.	2. Additional literature					
N°	Author		Title	Publisher	Year	
1.	Ivković, V.	Drvene zgrade		ICS - Beograd	1998	
2.	Todorović, B.	Konstruktivni e zgrade	lementi drvene	DGA - Beograd	2001	