

MODULE SPECIFICATION

Module code	
Module title in Polish	Konstrukcje drewniane
Module title in English	Timber Structures
Module running from the academic year	2016/2017

A. MODULE IN THE CONTEXT OF THE PROGRAMME OF STUDY

Field of study	Civil Engineering
Level of qualification	First cycle <i>(first cycle, second cycle)</i>
Studies profile	Academic <i>(academic/practical)</i>
Mode of study	Full-time <i>(full-time / part-time)</i>
Specialism	
Organisational unit responsible for module delivery	The Department of Strength of Materials, Concrete Structures and Bridges
Module co-ordinator	Artur Wójcicki, PhD, Eng.
Approved by	Marek Iwański, Professor

B. MODULE OVERVIEW

Module type	Core module <i>(core/programme-specific/elective HES*)</i>
Module status	Compulsory module <i>(compulsory / non-compulsory)</i>
Language of module delivery	English
Semester in the programme of study in which the module is taught	Semester 4
Semester in the academic year in which the module is taught	Summer semester <i>(winter / summer)</i>
Pre-requisites	None <i>(module code/module title, where appropriate)</i>
Examination required	No <i>(yes / no)</i>
ECTS credits	2

Mode of instruction	lectures	classes	laboratories	project	others
Total hours per semester	15			15	

* elective HES – elective modules in the Humanities and Economic and Social Sciences

C. LEARNING OUTCOMES AND ASSESSMENT METHODS

Module aims	The aim of the module is to master basic scope of designing traditional and modern timber structures.
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Module outcome code	Module learning outcomes	Mode of instruction (l/c/lab/p/others)	Corresponding programme outcome code	Corresponding discipline-specific outcome code
W_01	A student has knowledge as regards the classification of timber structures. Moreover, a student has mastered the issues of dimensioning simple timber structures.	l	B_U02	T1A_U11; T1A_U13
W_02	A student has knowledge of shaping and designing roof timber structures (both traditional and modern ones).	l/p	B_W09 B_W10	T1A_W03; T1A_W04; T1A_W05; T1A_W07; T1A_W08
U_01	A student has the ability of calculating and dimensioning simple timber structures, poles, and beams made with the use of traditional technologies as well as modern structures from glued laminated timber.	l/p	B_U02 B_U14	T1A_U03; T1A_U04; T1A_U05; T1A_U11; T1A_U13 T1A_U14; T1A_U16
U_02	A student has the ability of correctly selecting timber structures for preparing building projects. Moreover, a student can build roof timber structures in diverse construction systems.	l/p	B_U02 B_U14	T1A_U03; T1A_U04; T1A_U05; T1A_U11; T1A_U13 T1A_U14; T1A_U16
K_01	A student can work independently.	p	B_K01	T1A_K01; T1A_K03; T1A_K04
K_02	A student is communicative in formulating conclusions and the given presentations.	p	B_K04	T1A_K01; T1A_K07

Module content:

1. Topics to be covered in the lectures

No.	Topics	Module outcome code
1.	Timber as a construction material. A microscopic and a macroscopic timber structure. physico-mechanical properties of timber. The classification of constructional timber as well as the conditions of work as regards the structure.	W_01 U_01
2.	Boundary load bearing and utilisation states as regards timber construction elements. Static calculations and dimensioning.	W_01 U_01
3.	Connections in timber structures. The classification of gain joints; connections for mechanical joints; glued joints; the types and construction principles.	W_01 W_02 U_01
4.	Timber structures in civil engineering. The types and the technology of manufacturing walls and timber ceilings. Sample realisations of traditional and modern structures.	W_02 U_02 K_01
5.	Roof timber structures. The classification of rafter framing. The principles of calculating and constructing. Sample realisations of traditional and modern rafter framings.	W_02 U_02 K_01

		K_02
6.	Timber structures from glued laminated timber. The principles of designing and construction. The examples of glued structures.	W_02 U_02 K_01

2. Topics to be covered in the classes
3. Topics to be covered in the laboratories
4. Topics to be covered in the projects

Project number	Topics	Module outcome code
1	Preparing a project of a complex timber ceiling.	W_01 W_02 U_01 U_02 K_01 K_02

Assessment methods

Module outcome code	Assessment methods <i>(Method of assessment; for module skills – reference to specific project, laboratory and similar tasks)</i>
W_01	A final test on dimensioning simple structures
W_02	Defending a project
U_01	A final test on dimensioning simple structures
U_02	Defending a project
K_01	Defending a project
K_02	Defending a project

C. STUDENT LEARNING ACTIVITIES

ECTS summary		
	Type of learning activity	Study time/credits
1	Contact hours: participation in lectures	15
2	Contact hours: participation in classes	
3	Contact hours: participation in laboratories	
4	Contact hours: attendance at office hours (2-3 appointments per semester)	
5	Contact hours: participation in project-based classes	15
6	Contact hours: meetings with a project module leader	5
7	Contact hours: attendance at an examination	
8		
9	Number of contact hours	35 <i>(total)</i>
10	Number of ECTS credits for contact hours <i>(1 ECTS credit =25-30 hours of study time)</i>	1.4
11	Private study hours: background reading for lectures	2
12	Private study hours: preparation for classes	
13	Private study hours: preparation for tests	5
14	Private study hours: preparation for laboratories	

15	Private study hours: writing reports	
16	Private study hours: preparation for a final test in laboratories	
17	Private study hours: preparation of a project/a design specification	15
18	Private study hours: preparation for an examination	
19		
20	Number of private study hours	22 <i>(total)</i>
21	Number of ECTS credits for private study hours <i>(1 ECTS credit =25-30 hours of study time)</i>	0.9
22	Total study time	57
23	Total ECTS credits for the module <i>(1 ECTS credit =25-30 hours of study time)</i>	2
24	Number of practice-based hours <i>Total practice-based hours</i>	40
25	Number of ECTS credits for practice-based hours <i>(1 ECTS credit =25-30 hours of study time)</i>	1.6