STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Timber Structures**		Code **1010115131010110247**
Field of study **Civil Engineering Extramural Second-cycle**	Profile of study (general academic, practical) **(brak)**	Year /Semester **2 / 3**
Elective path/specialty **Construction Engineering and Management**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**
Cycle of study: **Second-cycle studies**	Form of study (full-time,part-time) **part-time**	
No. of hours Lecture: **20** Classes: **-** Laboratory: **-** Project/seminars: **10**		No. of credits **4**
Status of the course in the study program (Basic, major, other) **(brak)**	(university-wide, from another field) **(brak)**	
Education areas and fields of science and art		ECTS distribution (number and %)

Responsible for subject / lecturer:

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Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	The basic knowledge on structural mechanics and strength of materials.
2	**Skills**	Determining of the static model of a structure, determining of inner and support forces, determining of stresses and deflections in structural members.
3	**Social competencies**	Team work ability.

Assumptions and objectives of the course:

The target of the course is to learn structure, elasticity and strength properties of wood, carpentry joints, timber fasteners (nails, bolts,screws, tooth-plate connectors, shear plates), glued joints, methods of wood structure designing, methods of joint designing, beam

structures, purlin roof structures, collar-beam roof structures.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Knowing of specific properties f wood against a background of other materials - [-]
2. Knowing of thermal and moisture working conditions for a designed structure - [-]
3. Knowing of timber joint designing methods resulting from wood properties - [-]

Skills:

1. Determining data, structural analysis and strength analysis of wood structures - [-]
2. Designing structure joints - [-]
3. Making technical drawings of wood structures - [-]

Social competencies:

1. Team work ability. - [-]

Assessment methods of study outcomes

http://www.put.poznan.pl/

Passing the course involves passing project seminars and lectures.
Passing project seminars involves preparation and oral project defence.
Passing lectures involves written final exam.
Exam marks scale in %:
90 very good (A)
85 good plus (B)
75 good (C)
65 satisfactory plus (D)
55 satisfactory (E)
below 54 unsatisfactory/ failed (F)

Course description

Wood as a building material. Structure, elasticity and strength properties f wood. Carpentry joints. Timber fasteners (nails, bolts, screws,toot-plate connectors, shear plates). Glued joints. Methods of wood structure designing. Methods f joint designing. Beam structures. Purlin roof structures. Collar-beam roof structures.

Basic bibliography:

1. Z. Lis, P. Rapp: Drewno i materiały drewnopochodne. Rozdział 10 w: Budownictwo ogólne, tom I, Arkady, Warszawa 2005, 2006.
2. H. Neuhaus: Budownictwo drewniane. Polskie Wydawnictwo Techniczne, Rzeszów 2004.
3. J. Kotwica: Konstrukcje drewniane w budownictwie tradycyjnym. Arkady, Warszawa 2004.
4. Cz. Wajdzik: Więźby dachowe. Wyd. Akad. Roln. we Wrocławiu, Wrocław 2001.
5. W. Nożyński: Przykłady obliczeń konstrukcji budowlanych z drewna. Wyd. 2. WSiP, Warszawa 2004.
6. H. Zobel, T. Alkhafaji: Mosty drewniane. WKŁ, Warszawa 2006.
7. Z. Lis, P. Rapp: Drewno i materiały drewnopochodne. Rozdział 10 w: Budownictwo ogólne, tom I, Arkady, Warszawa 2005, 2006.
8. H. Neuhaus: Budownictwo drewniane. Polskie Wydawnictwo Techniczne, Rzeszów 2004.
9. J. Kotwica: Konstrukcje drewniane w budownictwie tradycyjnym. Arkady, Warszawa 2004.
10. Cz. Wajdzik: Więźby dachowe. Wyd. Akad. Roln. we Wrocławiu, Wrocław 2001.
11. W. Nożyński: Przykłady obliczeń konstrukcji budowlanych z drewna. Wyd. 2. WSiP, Warszawa 2004.
12. H. Zobel, T. Alkhafaji: Mosty drewniane. WKŁ, Warszawa 2006.

Additional bibliography:

1. W. Michniewicz: Konstrukcje drewniane. Arkady, Warszawa 1958.
2. Z. Dziarnowski, W. Michniewicz: Konstrukcje z drewna i materiałów drewnopochodnych, Arkady, Warszawa 1974.
3. Z. Gołębiowski: Konstrukcje drewniane. PWN, Warszawa 1978.
4. W. Michniewicz: Konstrukcje drewniane. Arkady, Warszawa 1958.
5. Z. Dziarnowski, W. Michniewicz: Konstrukcje z drewna i materiałów drewnopochodnych, Arkady, Warszawa 1974.
6. Z. Gołębiowski: Konstrukcje drewniane. PWN, Warszawa 1978.

Result of average student's workload

Activity	Time (working hours)
1. Preparation for passing lectures	30
2. Making projects	95

Student's workload

Source of workload	hours	ECTS
Total workload	125	4
Contact hours	30	0
Practical activities	0	0

http://www.put.poznan.pl/