Università degli Studi della Basilicata
Scuola di Ingegneria

COURSE: Steel and Wood constructions				
TEACHER: Prof. Felice Carlo Ponzo				
e-mail: felice.ponzo@unibas.it		website: http://www2.unibas.it/ponzo/Sito/MAIN.html		
Language: Italian				
ECTS: 6	n. of hours: 54	Academic year: 2014-15	Campus: Potenza	Semester: 2nd

TOPICS

The course provides basic knowledge and specialized information on techniques for the design and production of civil and industrial steel structures and mixed concrete-steel structures, even in seismic area, and basic knowledge on the behaviour of the timber and glue laminated timber structures.

TEACHING METHODS (please tick one or more options)

x Theoretical lessons
x Tutorials in classroom
x Tutorials in laboratory
x Project works
x Technical visits
Other activities (please specify) _____

TEXTBOOKS

- "STRUTTURE IN ACCIAIO" di G.Ballio – F.M. Mazzolani; ISEDI – Arnoldo Mondadori Editore
- "PROGETTO E VERIFICA DELLE STRUTTURE IN ACCIAIO", C. Bernuzzi, Hoepli
- "COLLEGAMENTI SALDATI" Costa, Daddi, Mazzolani, Cisia.
-"I COLLEGAMENTI CHIODATI, BULLONATI E SALDATI", V. Perrone, Hevelius Edizioni.
- Normative: CNR UNI 10011, D.M. 14 gennaio 2008 (Norme tecniche per le costruzioni)
- "TECNICA DELLE COSTRUZIONI IN LEGNO", Giordano G., Hoepli, MI
- "PROGETTAZIONE E CALCOLO DELLE STRUTTURE IN LEGNO LAMELLARE" De Angelis, Dei.
- "COSTRUIRE CON IL LEGNO", Davoli P., Hoepli
- D.M. 14 gennaio 2008 (Norme tecniche per le costruzioni)

ON-LINE EDUCATIONAL MATERIAL

web address: http://www2.unibas.it/ponzo/Sito/Costruz._in_Acciaio_e_Legno.html

LEARNING OUTCOMES

The course aims at deepening the knowledge in the areas of design, analysis, implementation and control of structures in civil and industrial applications, in particular those made of steel, mixed concrete - steel, timber and glue laminated timber, considering standard actions and exceptional ones (fire, earthquake etc..).
To provide students with the ability to understand the spatial behaviour of the structures and to manage complex phenomena related to the particular type of the considered materials.

REQUIREMENTS

The students must have passed "Strength of Materials" and "Reinforced Concrete Structures" exams.

EVALUATION METHODS (please tick one or more options)

□ Intermediate verifications
□ Written examination
x Discussion of a project work
□ Practical test
x Oral examination
Other methods (please specify) _____

DETAILED CONTENT

- With regard to the steel structures: structural systems, multi-storey buildings, single-storey buildings, the structural reliability, calculation models, the semi-probabilistic method, the material, forms and types of structural steels, resistance criteria, loads and actions, verification methods, welded joints, bolted joints, general principles for resistance of structural elements, imperfections, links, resistance of structural elements, stability of structural

elements, fire resistance, normative references, design of a steel building in seismic area.
- With regard to the timber structures: Mechanics of timber and glue laminated timber structures, glues laminated timber elements production technology, static-constructive patterns, connections and joints, normative references, tutorials.

SEMINARS BY EXTERNAL EXPERTS YES x NO ☐

FURTHER INFORMATION