uc3m | Universidad Carlos III de Madrid

Vicerrectorado de Estudios Apoyo a la docencia y gestión del grado

| COURSE: Lightweight Structures | | |
|--|---------|---------|
| DEGREE: Bachelor in Mechanical Engineering | YEAR: 4 | TERM: 2 |

| WEEKLY PLANNING | | | | | | | | | |
|------------------|-----------------------|---|----------------------|--------------------------------------|--|---|------------------------------------|---|--|
| | S | DESCRIPTION | TEACHING (mark X) | | SPECIAL ROOM | WEEKLY PROGRAMMING FOR STUDENT | | | |
| W E E K | E S I O N | | L E C T U R E S | S E M I N A R S | FOR SESSION (Computer class room, audio-visual class room) | DESCRIPTION | CLASS HOURS (1,66=50+50 min) | HOMEWORK HOURS (Max. Estim. 3,25h) | |
| 1 | 1 | TOPIC 1: Bending of thin-walled beams | Х | | No | Study of basic concepts on bending of thin- walled beams | 1.66 | 3.25 | |
| 2 | 2 | Exercises and questions related to concepts of session 1 | х | | No | Exercises and problems related to concepts of session 1 | 1.66 | 3.25 | |
| 3 | 3 | TOPIC 2: Torsion of thin-walled shafts | Х | | No | Study of basic concepts on torsion of thin-walled shafts | 1.66 | 3.25 | |
| 4 | 4 | Exercises and questions related to concepts of session 3 | Х | | No | Exercises and problems related to concepts of session 3 | 1.66 | 3.25 | |
| 5 | 5 | TOPIC 3: Basic notions of composite and sandwich beam theory (I) | Х | | No | Study of basic concepts on composite beams | 1.66 | 3.25 | |
| 6 | 6 | TOPIC 3: Basic notions of composite and sandwich beam theory (II) | Х | | No | Study of basic concepts on sandwich beam theory | 1.66 | 3.25 | |
| 7 | 7 | Exercises and questions related to concepts of session 5 and 6 | Х | | No | Exercises and problems related to concepts of session 5 and 6 | 1.66 | 3.25 | |
| 8 | 8 | Partial Exam | Χ | | No | | 1.66 | 3.25 | |

| DESCRIPTION LAB 1: Numerical calculation of a torsion box LAB 2: Evaluation of different design solutions for a torsion box | (ma | HING rk X) S E M I N A R S | SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room) | DESCRIPTION | CLASS HOURS (1,66=50+50 min) | HOMEWORK HOURS (Max. Estim. 3,25h) |
|---|--|--|---|---|--|---|
| LAB 1: Numerical calculation of a torsion box | C T U R E S | E M I N A R | FOR SESSION (Computer class room, audio-visual class room) | DESCRIPTION | (1,66=50+50 | HOURS (Max. Estim. |
| | | | No | | | |
| LAB 2: Evaluation of different design solutions for a torsion box | | | | Report on lab session 1 | 1.66 | 3.25 |
| | Х | | No | Report on lab session 2 | 1.66 | 3.25 |
| TOPIC 4: Introduction to the Theory of Plates (I) | | Х | INF | Study of basic concepts on the theory of plates | 1.66 | 3.25 |
| TOPIC 4: Introduction to the Theory of Plates (II) | Х | | No | Study of basic concepts on the structural behaviour of like-plate elements | 1.66 | 3.25 |
| Exercises and questions related to concepts of sessions 11 and 12 | Х | | No | Exercises and problems related to concepts of session 11 and 12 | 1.66 | 3.25 |
| Basic Notions on Shells Theory | Х | | No | Study of basic notions on the theory of shells | 1.66 | 3.25 |
| Additional session: Discussion on the course works | Х | | No | | 1.66 | |
| Subtotal 1 Total 1 (Hours of class plus student homework) | | | | | | |
| | | | | | | |
| Tutorials, Hariania III, Ctt | | | | | 1.0 | |
| Assessment | | | | | 4 | 4 |
| 18 Subtotal 2 | | | | | | 4 |
| Total 2 (Hours of class plus student homework) | | | | | | 0 |
| | TOPIC 4: Introduction to the Theory of Plates (I) TOPIC 4: Introduction to the Theory of Plates (II) Exercises and questions related to concepts of sessions 11 and 12 Basic Notions on Shells Theory Additional session: Discussion on the course works Tutorials, handing in, etc Assessment | TOPIC 4: Introduction to the Theory of Plates (II) Exercises and questions related to concepts of sessions 11 and 12 X Basic Notions on Shells Theory X Additional session: Discussion on the course works X Tutorials, handing in, etc | TOPIC 4: Introduction to the Theory of Plates (I) X TOPIC 4: Introduction to the Theory of Plates (II) X Exercises and questions related to concepts of sessions 11 and 12 X Basic Notions on Shells Theory X Additional session: Discussion on the course works X Tutorials, handing in, etc | TOPIC 4: Introduction to the Theory of Plates (I) X INF TOPIC 4: Introduction to the Theory of Plates (II) Exercises and questions related to concepts of sessions 11 and 12 X No Basic Notions on Shells Theory Additional session: Discussion on the course works X No Tutorials, handing in, etc | TOPIC 4: Introduction to the Theory of Plates (I) X INF Study of basic concepts on the theory of plates TOPIC 4: Introduction to the Theory of Plates (II) X No Study of basic concepts on the structural behaviour of like-plate elements Exercises and questions related to concepts of sessions 11 and 12 X No Exercises and problems related to concepts of session 11 and 12 Basic Notions on Shells Theory X No Study of basic concepts on the structural behaviour of like-plate elements Exercises and problems related to concepts of session 11 and 12 No Study of basic notions on the theory of shells No Study of basic notions on the theory of shells Total 1 (Hours of class plus student homework) Tutorials, handing in, etc | TOPIC 4: Introduction to the Theory of Plates (I) X No Study of basic concepts on the theory of plates TOPIC 4: Introduction to the Theory of Plates (II) X No Study of basic concepts on the structural behaviour of like-plate elements Exercises and questions related to concepts of sessions 11 and 12 X No Exercises and problems related to concepts of sessions 11 and 12 X No Study of basic concepts on the theory of plates Exercises and problems related to concepts of session 11 and 12 X No Study of basic notions on the theory of shells 1.66 Additional session: Discussion on the course works X No Total 1 (Hours of class plus student homework) 7 Tutorials, handing in, etc Assessment Subtotal 2 6 |

TOTAL (<u>Maximun 83 horas</u>)

80

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|------------------|----------------------------|---|--------------------------------------|--------------------------------------|--|--------------------------------|------------------------------------|---|--|--|
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