MERCURY

Strength of Materials

19 - 20 May 2025
London (UK)

Istanbul - Turkey: +90 539 599 12 06
Amman - Jordan: +962 785 666 966
London - UK: +44 748 136 28 02

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Strength of Materials

Ref.: 15295_250116 **Date:** 19 - 20 May 2025 **Location:** London (UK) **Fees:** 5800 **Euro**

Introduction:

This program provides in depth knowledge about the science and engineering aspects of strength of materials and the tests that are carried out in this field, what are their practical applications in public life, and what is the desired scientific benefit from these experiments.

Targeted Groups:

- This program provides an in-depth understanding of the concept of strength of materials and its application on the ground in practical life and benefit from it in public life and the use of this science in public safety in practical life in construction, design and manufacturing processes and the role of this science in the field of
- Aeronautical engineers in all its branches
- Mechanical engineers with its broad comprehensive concept
- Civil engineers
- Engineers of marine and oil and gas extraction

Course Objectives:

- Introduction to strength of materials.
- To Learn about the 12 scientific experiments that take place within the framework of material resistance
- The practical application of each experiment on the ground and the use of each experience in the general engineering life and the type of engineering that can be conducted in this field
- To identify the equipment used in the examinations
- To explain the benefits and importance of using these experiences in practical life
- To gain a comprehensive understanding of the concept of strength of materials and its scientific aspects.

Course Content:

Unit 1: Introduction to strength of materials engineering and sciences

- Stresses and forces
- Strains and deformations
- Material failure
- General theory of elasticity

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Unit 2: Provide an explanation of 12 scientific experiments related to the resistance of materials

- Hardness
- Tensile
- Compression
- Impact
- Buckling
- Bending
- Fatigue
- Creep
- Burst Testing
- Torsion test
- Thin Walled pressure vessel
- Metallographic Analysis
- NDT

Unit 3: Linking each experience to practical engineering reality in public life, according to demand.

- Compund Stresses
- Deflection of beams
- Special beam problems
- Cylinders and curved bars
- Buckling
- Experimental Elasticity

Unit 4: Application of this field in the area of inspection and regular maintenance.

- Monitoring plan and considerations
- Surveys of structure sections above the water level
- Underwater surveys
- Evaluation of structure condition and performance
- General Maintencance considerations
- Repair and rehabilitation of rock-armoured structures
- Majour rehabilitation strengthening

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Registration form on the : Strength of Materials

code: 15295 **From:** 19 - 20 May 2025 **Venue:** London (UK) **Fees:** 5800 **Euro**

Complete & Mail or fax to Mercury Training Center at the address given below

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