



NAAB International Certification

Appendix 1: Template for Course Descriptions [limit 1 page per course]

Number & Title of Course (total credits awarded):

TECH102 - Statics - Semester 2 - ECTS 3 - Cycle/Profile: 1st. Cycle/Core - Scientific Area: TAUD-Technologies of Architecture, Urbanism and Design

Course Description (limit 25 words)

Conditions of static equilibrium on particles and rigid bodies. Basic structural systems. Support reactions and internal forces on structures. Illustrative examples, in particular, trusses and cables.

Course Goals & Objectives (list):

To develop the ability to define structural systems associated with architectural forms.

Explanation of fundamental concepts: the structure as an inseparable part of any building, the conditions of static equilibrium, the path of loads along a structure.

Analysis of statically determinate systems subjected to static loads: drawing up free-body diagrams to determine support reactions and internal forces (axial force, shear force and bending moment).

Application, with emphasis on graphic methods, to basic structural typologies in which the axial force is the predominant load transmission mechanism (trusses and cables).

Student Performance Criterion addressed (list number and title):

Primary - B.5 Structural Systems; Secondary - B.1 Pre-Design;

Topical Outline (include percentage of time in course spent in each subject area):

Equilibrium of particles: 15%

Equilibrium of rigid bodies: 20%

Planar framed structures: Fundamentals: 35%

Trusses: 15%

Cables: 15%

Prerequisites:

It does not have;

Textbooks/Learning Resources:

MENDES, P. (2022): Set of documents transmitted to students through the MOODLE platform.

Offered (semester and year):

1st Year - Spring;

Faculty assigned (list all faculty assigned during the two academic years prior to the visit):

António José Batista Cardoso; João Manuel Neto dos Santos; Jorge de Novais Telles Faria Correa Bastos; Jorge Manuel Tavares Ribeiro; Pedro António Martins Mendes;