NAAB International Certification

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

Number & Title of Course (total credits awarded):
TECH202 - Physics and New Materials for Architecture - Semester 4 - ECTS 6 - Cicle/Profile: 1st. Cycle/Core - Scientific Area: TAUD-Technologies of Architecture, Urbanism and Design

Course Description (limit 25 words)
Physical components of building, terminology, definition and classifications, physical phenomena associated, new building materials, sustainability, ecologic and bioclimatic approach

Course Goals & Objectives (list):
- Acquisition a foundation of knowledge enabling the student, from both a technical and culture perspective, to understand the main elements and components of building.
- Understanding and relate the funcional requirements and physical phenomena that occur within a building.
- Recognizing the role that the "constructive envelope" plays in defining the architectural space as a determining factor for its protection, safety and comfort.

Student Performance Criterion addressed (list number and title):
Primary - B.7 Building Envelope Systems and Assemblies; B.8 Building Materials and Assemblies; Secondary - B.1 Pre-Design; B.3 Codes and Regulations;

Topical Outline (include percentage of time in course spent in each subject area):
Lectures - 28 hours (18,5 %)
Studio - 28 hours (18,5 %)
Independent work - 95 hours (63%)
Total workload - 151 hours

Prerequisites:
TECH112 - Building Materials; TECH112 - Building Materials;

Textbooks/Learning Resources:
Heino Hengel - Sistemas Estruturais, editorial Gustavo Gili, janeiro de 2001
Ching, Francis - Architecture, Form, Space & Order, 4a. N.Y., EUA, John Wiley & Sons Inc., 2014
Szokolay, Steven - Introduction to Architectural Science, The basis of Sustainnable design, Architectural Press, Elsevier Press, 2008
Vanderberg, Maritz e Elder, A.J. Handbook of Building Enclosure, London, ed The Architectural Press, 2011
V. Brophy and J.O. Lewis, A Green Vitruvius, Principles and Pratice of Sustainable Architectural Design, 2nd ed. Washington DC, USA, Earthscan 2011

Offered (semester and year):
2nd Year - Fall;

Faculty assigned (list all faculty assigned during the two academic years prior to the visit):
Alexandrino José Basto Diogo; Carlos Alexandre Coutinho Mesquita; Carlos Filipe Chambel Duarte; João Cottinelli Telmo Pardal Monteiro; Vitor Manuel Vieira Lopes dos Santos; Alexandrino José Basto Diogo; Carlos Alexandre Coutinho Mesquita; Carlos Filipe Chambel Duarte; João Cottinelli Telmo Pardal Monteiro; Vitor Manuel Vieira Lopes dos Santos;