



## **NAAB International Certification**

### **Appendix 1: Template for Course Descriptions - Electives [limit 1 page per course]**

**Number & Title of Course (total credits awarded):**

ELTECH4&504 - Geology and Geotechnics - Semester - ECTS - Cicle/Profile: - Scientific Area:

**Course Description (limit 25 words)**

Provide understanding of the Soil Mechanics, Geotechnics and Hydrogeology basic concepts, establishing the relationship with the Architecture Design and Construction Technologies.

**Course Goals & Objectives (list):**

Geology provides the understanding of the terrestrial surface constitution, its internal dynamics, and the natural geological phenomena of transformation and alteration of rocks and soils.

Geotechnics provides the knowledge of Eurocodes 7 and 8 and develops the ability to analyze and select the suitable techniques to better know the geological substrate as well as the best constructive solutions to apply in practical cases.

**Student Performance Criterion addressed (list number and title):**

Primary - A.4 Architectural Design Skills; A.6 Use of Precedents; Secondary -

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

Lecturing - 50%;

Studio Work - 30%;

Site Visits - 10%;

Readings - 10%

**Textbooks/Learning Resources:**

Eurocode 7 □ Geotechnical Design □ Part 1: General Rules

Eurocode 8 □ Design of Structures for Resistance to Earthquakes □ Part 1: General Rules, Seismic Actions, and Rules for Buildings

Tarbuck, Edward J.; Lutgens, Frederick K. (2005). Ciencias de la Tierra. Pearson Educación, Madrid

Xiao, M. (2015). Geotechnical Engineering Design. Wiley-Blackwell

**Offered (semester and year):**

2nd Year - Fall;

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

Jorge Manuel Tavares Ribeiro;