NAAB International Certification

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

Number & Title of Course (total credits awarded):
DGC201 - Digital Representation - Semester 3 - ECTS 6 - Cicle/Profile: 1st. Cycle/Core - Scientific Area: DGC-Drawing, Geometry and CAD

Course Description (limit 25 words)
Ranges from a basic manipulation of digital files to more elaborated concepts of architecture through representation, including digital fabrication and programming in the architecture drawing realm.

Course Goals & Objectives (list):
Representation in digital environment: taking full advantage of the interaction that the user can perform in the digital spaces, in 2d and 3D formats.
Understand and treat different types of information, both in physical and logical, of a computer and the network.
Understand and master the lexicon of the technical and graphic representation of the architectural design and its variables, namely printing in different media.
Working with pixel and vector formats, in volume and surface modelling applications which incorporates digital 3d modelling into the design process.
Producing architectural documentation in multimedia formats.
Introduction to the concept of computational algorithm for solving architectural representation problems.

Student Performance Criterion addressed (list number and title):
Primary - A.4 Architectural Design Skills; A.5 Ordering Systems; Secondary - A.3 Investigative Skills; A.6 Use of Precedents;

Topical Outline (include percentage of time in course spent in each subject area):
Contact hours of lecturing, critics and final review are 56 and independent work are 150 hours within topics of Networking (10%), Digital drawing (30%), Modelling (25%), Visualization (25%), Programming(5%) and Digital fabrication (5%).

Prerequisites:
It does not have; It does not have;

Textbooks/Learning Resources:
Autocad Tutorials (2022), https://help.autodesk.com/view/ACD/2022/ENU/;
Terzidis, Kostas, (2006), Algorithmic architecture, Oxford; Burlington, MA, USA: Architectural Press;
Menges, Achim. and Ahlquist, Sean, (ed.), (2011), Computational design thinking, West Sussex, United Kingdom: John Wiley & Sons, Ltd.;
Cunha, Luís Veiga (1982). Desenho Técnico, Fundação Calouste Gulbenkian;
Rhinoceros Tutorials (2023): https://www.rhino3d.com/.

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

Faculty assigned (list all faculty assigned during the two academic years prior to the visit):
Carlos Manuel de Almeida Figueiredo; Luís António dos Santos Romão; Nuno Miguel Alão Soares Gomes; Luís António dos Santos Romão; Nuno Miguel Alão Soares Gomes;