

LABORATÓRIO CAD

Code: 333043

Main Scientific Area: Product Development

Lecturer: Carlos António Antunes Ferreira

Language of Instruction: Portuguese

Regime: S1

Contact Hours: 30h Total Workload: 45h

ECTS: 3,0

Objectives

CAD systems are usually thought for industrial applications (engineering, product design, construction (architecture, civil Engineering), but this technology began to be implemented in less traditional subjects such as medical, sports and even on fashion design industries. There are currently 2D and 3D CAD tools that allow a different work methodology and even a complementary work methodology to the existent ones in the world of fashion design. The objective of this course is that students will be able to acquire technical and theoretical knowledge that allows them to create 3D and 2D models of importance in the fashion design. These models have the objective to assist and enhance student's efficiency in their creative and productive process. The course also has the objective to demonstrate the students how to use in real context the CAD software, allowing the creation of clothing models and other components necessary for the creation of a collection.

Learning Outcomes

Understand the concept of 2D and 3D CAD modeling;

Understand the concept of 3D techniques related to fashion design manufacturing.

Understand concepts related to 3D solids.

Course Contents

- 1 - Introduction to CAD systems. Fields of application and development of CAD systems in creative and productive processes.
- 2 - Creation of vector drawings aimed at the most modern drawing systems. Vector construction of clothing models.
- 3 - Creation of two-dimensional drawings - The technical drawing.
- 4 - Creation of three-dimensional drawings using the most modern drawing systems. Case study development.
- 5 - Graphic manipulation of designs with the garment application. Practical exercises on the preparation of files with the cutting of raw material by the process of stamping.
- 6 - Creation of models, preparation of materials and applications in products.

Recommended Bibliography

Sandra Burke, Fashion Computing: Design Techniques and CAD, Burke Publishing , April 2005
Kevin Tallon- Creative Fashion Design with Illustrator, Batsford. 2006, ISBN-10: 0713490225, ISBN- 13:978-0713490220

Susan Lazear Adobe- Illustrator for Fashion Design, Prentice Hall. 2008. ISBN-10: 0131192744, ISBN-13: 978-

0131192744

Sham Tickoo- SolidWorks 2008 for Designers. Cadcim.2008. ISBN-10: 1932709428, ISBN-13: 978- 1932709421

Introdução à utilização de sistema CAD de modelação tridimensional: Conceitos de Computação Gráfica e prática, SAMPAIO, A.Z, 2005, Relatório ICIST, DTC no 08/05, Lisboa 2005, ISSN: 0871-7869. Computer graphics: principles and practice , FOLEY, VAN DAM, FEINER, HUGHES, 1997, 2oed in C, Addison Wesley, 1997, ISBN 0201848406.

Griffiths L. Understanding Marvelous Designer: a guide for CG artists. Wild Web Works; 1st Ed.

Learning and Teaching Methods

The introduction to 3D CAD main tools, key concepts and terminologies. Students will learn the terminologies used in CAD, and then assimilate and control them through individual and group works.

Assessment Methods

The evaluation method is continuous, with class exercises, two individual practical assignments and a group practical assignment. The qualitative intervention of the student in the classes and their presence and punctuality are also valued.

Formula for percentage management:

Behavioural factors: 10%

Learning Assessment: 10%

Individual Work 1: 20%

Individual Work 2: 25%

Group work: 35%