

COMPUTATIONAL COUTURE

INTRODUCTION

Computational design methods towards a new reinterpretation of textiles, garments and accessories for fashion design, inspired by a new digital design methodology.

Computational couture introduces the creation of exclusive custom-fitted clothing (typical of haute couture) through the lens of a systemic approach, extending the sartorial techniques with 3D modelling and computation-based approaches developed in Rhinoceros and the visual programming environment Grasshopper.

UNIT OUTLINE

Working alongside selected industry collaborators with an expertise in computational design and sartorial techniques, students will research, ideate, prototype and present speculative prototypes. The unit is a blend of theoretical and practical lessons on software has the aim to develop a project of Computational Couture in five steps: file preparation, parts testing and pre-assembly, dress fabrication and assembly, and finalization of the dress. This exchange of knowledge enables students to value their knowledge and experience by understanding all the processes of the product development. Additionally, it provides students with the opportunity to work alongside industry in a simulated professional environment.

The successful completion of the Design Process unit is a pre-requisite of Computational Couture. The knowledge and skills required in this unit compliments the units 3D Software and Prototyping, and Interaction Design

INDICATIVE CONTENT AND TEACHING AND LEARNING METHODS

- Introduction to algorithms and computational design for creative disciplines
- Basics of 3D modelling in Rhinoceros
- Basics of Grasshopper
- Introduction to basic sartorial techniques
- Computational design methods
- Reinterpretation of textiles, garments and accessories
- New digital design methodology

Lectures, workshops, interdisciplinary group work, problem-based learning, and self-directed learning.

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LEARNING OUTCOMES

Upon successful completion of the unit, students will be able to:

1. Evidence understanding of the impact of computations couture on fashion products;
2. Demonstrate knowledge and skills in Rhinoceros and Grasshopper;
3. Acquire basic sartorial techniques;
4. Acquire and develop knowledge and understanding of design methodology and design theory with respect to both experimental and professional work in relation to fashion-tech design.

ASSESSMENT METHODS

- Portfolio preparation;
- Parts testing and pre-assembly;
- Dress fabrication and assembly;
- Finalization of the dress;
- Final presentation.

All the steps of the project will be evaluated through observation and individual reviews.

READING AND RESOURCE LIST

Essential Reading and Resources

Amitai, P. and Seymour, S. (2014), Computational Fashion: Topics in fashion and wearable technology, Paperback.