

Transportation Design and Model making

Faculty
Dwight Collins

NEW Certificate Programs Under Development

The growth of digital technology has opened up many new areas of development in the representation and construction of models, digital simulation and rapid prototyping. The new certificates in industrial, commercial and transportation design are intended to prepare students with the skills necessary to design products and build models using both traditional and emerging technologies. Students will gain a unique insight into both the physical and digital disciplines of modelmaking and design, cultivating technical and arts skills based on critical thinking.

Model making and Transportation Design

This certificate program will engage students in the methods and techniques used to explore, record and communicate the visual information in design. Career options include transportation design modelmaking and digital design simulation and prototyping.

Industrial and Commercial Design

Industrial and commercial design is a valued part of many industries, including architecture, product and packaging, media and entertainment. The core courses in this program study the elements of creative thinking and interpretation used in the design process, including the techniques and methods used to construct prototypes and models. In advanced courses, students will explore a number of options in digital, architectural and media simulation modeling and rapid prototyping. Career options include simulation modeling and modelmaking in architectural design and entertainment, and industrial and commercial design modeling and rapid prototyping.

For further information about these programs, call (949) 451-5450.

Industrial, Commercial and Transportation Design Courses

ICT 200: Introduction to Model Making and Design

1.5 Units

1.5 hours lecture

This course introduces students to career options within the model-making industry. Onsite studio visits, guest speakers and career guides will give students an overview of the job skills and technologies required in the various disciplines of model making. Areas of interest will include entertainment, product design, packaging, transportation, aerospace, medical design and architecture. The goal of the course is to facilitate each student's career path selection. Field trips may be required. NR

ICT 201: Technical Graphics

2 Units

1 hour lecture, 3 hours lab

This course introduces basic blueprint reading, related nomenclature, conventions and graphic practices used throughout the model-making and design industry. Emphasis is on industrial metrology methods and quality-control techniques standard to industry. Students develop basic skills in laying out three-dimensional objects from two-dimensional drawings and sketches. NR

ICT 210: Visual Communication I

3 Units

2 hours lecture, 3 hours lab

This course introduces the principles of three-dimensional design as they relate to model making. Students work with a variety of materials and techniques, exploring three-dimensional description elements: value, texture, lighting, shade, shadow, composition, and perspective. Emphasis is placed on manual skill and dexterity. The course also introduces the fundamentals and techniques of ideational sketching. NR

ICT 220: Model Making I

3 Units

2 hours lecture, 3 hours lab

This course focuses on developing forms and shapes using a variety of basic model-making materials and hand fabrication techniques, with an emphasis on wood, plastic and metal processes. In addition to modeling with basic materials, students begin to develop skills using quick, visual model-development materials, including foam core, cardboard and clay. NR

ICT 221: Model Making II

3 Units

2 hours lecture, 3 hours lab

Prerequisite: ICT 220. This course focuses on more advanced and complex methods used throughout the model-making industry. The course covers thermoforming, reinforced plastics, two-dimensional routing and engraving, and a variety of flexible tooling techniques used to make complex molds and parts. Students learn techniques for working with advanced casting materials, and surface preparation with textures, plating and painting. NR

ICT 260: Materials and Processes I

2 Units

1 hour lecture, 3 hours lab

This course introduces the many universal plastic materials and fabrication processes currently used in design and modeling. Emphasis is on the applications, fabrication techniques, and properties of many common plastic materials used today as well as emerging materials and their processes. NR